

SADLER SUPP_1

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In The Matter Of:

*Applications 81719, 81720, 81825, 82268, 82570, 82571,
82572 and 82573*

Public Hearing - Monday

Vol. 1

November 18, 2013

Capitol Reporters

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Carson City, Nevada 89703

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1 STATE OF NEVADA
2 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
3 DIVISION OF WATER RESOURCES
4 BEFORE SUSAN JOSEPH-TAYLOR, HEARING OFFICER
5
6
7 IN THE MATTER OF APPLICATIONS
8 81719, 81720, 81825, 82268,
8 82570, 82571, 82572 and 82573
9 _____ /
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11 TRANSCRIPT OF PROCEEDINGS
12 PUBLIC HEARING
13 VOLUME I
14 MONDAY, NOVEMBER 18, 2013
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1 APPEARANCES:
2 Jason King, State Engineer
3 Susan Joseph-Taylor, Deputy Administrator
4 Malcolm Wilson, Assistant Hearing Officer
5 Rick Felling, Chief Hydrologist
6 Kristen Geddes, Hearing Officer
7 Section of the Division of Water Resources
8 Steve Walmsley, Water Resource Specialist
9
10 For Sadler Ranch, LLC: Taggart & Taggart, Ltd.
11 By: Paul G. Taggart, Esq.
12 For Daniel Venturacci: Thorndal, Armstrong, Delk,
13 Balkenbush & Eisinger
By: Brent Kolvet, Esq.
14 For Kenneth Benson,
15 Diamond Cattle Company
15 and Etcheverry Family
16 Limited Partnership: Schroeder Law Offices P. C.
By: Therese A. Ure, Esq.
17 For Diamond Natural
18 Resources Protection and
18 Conservation Association: Bob Burnham
19 For James Gallagher: James Gallagher
20 For Mark Moyle Farms: Mark Moyle
21 For Eureka County: Allison MacKenzie, et al.
22 By: Karen A. Peterson, Esq.
23 Also present: Theodore Beutel, Esq.
24 Chairman Ithurralde
24 Vice Chairman Goicoechea
24 Dale Bugenig
25 Jake Tibbitts

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1 MS. PETERSON: Karen Peterson appearing on behalf
2 of Eureka County. And also here today is Ted Beutel who's
3 also appeared on behalf of Eureka County. And then I did want
4 to introduce you to Commissioner Michael Sharkozy who's also
5 here today.
6 HEARING OFFICER JOSEPH-TAYLOR: So let's spell
7 Beutel for the court reporter.
8 MS. PETERSON: B-E-U-T-E-L.
9 HEARING OFFICER JOSEPH-TAYLOR: And then?
10 MS. PETERSON: Sharkozy, S-H-A-R-K-O-Z-Y.
11 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
12 Ms. Peterson.
13 MS. URE: Good morning, I'm Therese Ure
14 representing the Etcheverry Family Limited Partnership and
15 Diamond Cattle Company and Kenneth Benson. And Mr. Benson is
16 in the courtroom today.
17 HEARING OFFICER JOSEPH-TAYLOR: Good morning,
18 Mr. Benson.
19 MR. BENSON: Good morning.
20 HEARING OFFICER JOSEPH-TAYLOR: Diamond Natural
21 Resources Protection and Conservation Association, any
22 appearance?
23 MR. BURNHAM: Bob Burnham.
24 HEARING OFFICER JOSEPH-TAYLOR: Spell your last
25 name, please, sir.

1 CARSON CITY, NEVADA, MONDAY, NOVEMBER 18, 2013, 8:30 A.M.
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3
4 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
5 record. Good morning. As set forth in the hearing notice of
6 June 7th, 2013 this is the time and place noticed for a
7 hearing in the matter of protested applications 81719, 81720,
8 81825, 82268, 82570, 82571, 82572 and 82573.
9 For the record, my name is Susan Joseph-Taylor
10 and I'm a deputy administrator with the Division of Water
11 Resources. To my left is the State Engineer Jason King, chief
12 hydrologist Rick Felling. This is Malcolm Wilson who is
13 assistant hearing officer. For those of you haven't met
14 Kristen Geddes, she's the new chief in the hearing section.
15 This may be my last hearing. And Steve Walmsley with the
16 adjudication section. At this time I'll take appearances for
17 the record.
18 MR. TAGGART: Good morning, my name is
19 Paul Taggart, I'm here on behalf of Sadler Ranch.
20 MR. KOLVET: My name is Brent Kolvet, I'm here
21 for Venturacci.
22 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Spell
23 that for the court reporter, please.
24 MR. KOLVET: I would. V-E-N-T-U-R-A-C-C-I.
25 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

1 MR. BURNHAM: B-U-R-N-H-A-M.
2 HEARING OFFICER JOSEPH-TAYLOR: Thank you. James
3 E. Gallagher and James T. Gallagher?
4 MR. GALLAGHER: Jim Gallagher is here.
5 HEARING OFFICER JOSEPH-TAYLOR: Good morning,
6 Mr. Gallagher. Dusty Moyle? Let the record reflect no show.
7 James Moyle? Let the record reflect no show. Mark Moyle
8 Farms?
9 MR. MOYLE: Mark Moyle here.
10 HEARING OFFICER JOSEPH-TAYLOR: Good morning,
11 Mr. Moyle.
12 MR. MOYLE: Good morning.
13 HEARING OFFICER JOSEPH-TAYLOR: And Mark Moyle on
14 his own behalf.
15 As set forth in the Nevada Administrative Code,
16 Chapter 5339, the court reporter will file an original and one
17 copy of the transcript with the State Engineer. Anyone
18 wanting a copy of the transcript can make arrangements with
19 the court reporter. As provided in Nevada Administrative Code
20 533, subsection 300, I will take administrative notice of the
21 files and records in the office of the State Engineer.
22 I'm going to begin by introducing some exhibits
23 to get us all started and I hope I don't have to read them
24 all. I sent you all an exhibit list last Wednesday and
25 Exhibits 29 through 74, which have not been put in the record

1 yet are copies of the applications, the protests, the notice
2 for this hearing, the legal briefs you filed and the State
3 Engineer's interim order. So instead of reading those all
4 into the record I can give Michel, you, an exhibit list, but
5 is there any objection to the admission of Exhibits 29 through
6 74?

7 MS. PETERSON: No objection.
8 HEARING OFFICER JOSEPH-TAYLOR: Hearing none,
9 they will be admitted. Thank you. We're going to try and be
10 efficient here.

11 (Exhibits 28 through 74 admitted into
12 evidence.)

13 HEARING OFFICER JOSEPH-TAYLOR: 28 through 74.
14 Thank you, Malcolm. Are there any preliminary matters we need
15 to take care of before we get started?

16 MS. PETERSON: Yes.

17 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson?

18 MS. PETERSON: Thank you. I would like just to
19 put on the record I note that the interim order in this
20 proceeding dated August 9th, 2013 stated that the State
21 Engineer was not making any determination on the arguments
22 raised in the briefs until after the hearing. But I would
23 again assert that based on the applications made by the
24 Applicants for mitigation water rights pursuant to order 1226,
25 the Applicants are really requesting an adjudication of their

1 appropriate way to quantify and determine the priority of
2 claims to vested rights. And even looking at the definition
3 of water rights in the dictionary of water words on the State
4 Engineer's website, vested water is defined as the water right
5 to use either surface or groundwater acquired through more or
6 less continual beneficial use prior to the enactment of water
7 law pertaining to the source of the water. These --

8 HEARING OFFICER JOSEPH-TAYLOR: Slow down, the
9 court reporter can't take it that fast.

10 MS. PETERSON: These claims become final through
11 adjudication.

12 And so we would move at this time to vacate the
13 hearing and postpone action on these applications pursuant to
14 NRS 533.370, subsection 4, subsection F and NRS 533.370,
15 subsection 4, subsection G, which allow the State Engineer to
16 defer action on any applications if he determines that an
17 adjudication needs to be made.

18 And we'd ask this so that the State Engineer can
19 adjudicate the undetermined claims of vested rights at issue
20 in this proceeding prior to considering the pending
21 groundwater applications for mitigation.

22 MS. URE: And on behalf of Etcheverry, Diamond
23 Cattle Company and Mr. Benson we would adopt Ms. Peterson's
24 initial remarks and join in her motion.

25 HEARING OFFICER JOSEPH-TAYLOR: Response,

1 rights, their claims to vested rights to determine priority
2 and quantity. And adjudication is the appropriate procedure
3 and I'm just going to reiterate for the record I guess our
4 basis for that.

5 And one basis that adjudication is the
6 appropriate procedure is if you look on the Nevada Department
7 of Conservation and Natural Resources website under Nevada
8 water law 101, there's a section that deals with important
9 concepts and definitions. And under surface water the
10 explanation there states most surface water has been or will
11 be required to be adjudicated, which is a statutory process by
12 which pre-statutory vested water right claims are quantified
13 and finally judicially decreed.

14 Also noting in Applicant's Exhibit 294, which is
15 Hugh Shamberger's oral history. On page 25, former State
16 Engineer Hugh Shamberger recognized rights prior to 1905 are
17 thus classified as vested rights, the magnitude and extent of
18 which can only be determined by a process of adjudication by
19 the State Engineer as outlined in the water law.

20 And then goes on to state that an appropriator
21 can file with the State Engineer a proof of appropriation
22 together with a map which is his proof of claim to vested
23 water right.

24 And then in 1982 as you've been made aware, State
25 Engineer Peter Moros indicated that adjudication was the

1 Mr. Taggart?

2 MR. TAGGART: Thank you. First I want to thank
3 you, Mr. King, for giving us the opportunity to come here and
4 ask for replacement water for Sadler Ranch. The State
5 Engineer's Office certainly has the power to replace water
6 rights that have been impaired, particularly vested rights
7 that have been impaired by junior appropriators. And that's a
8 situation we're dealing with here.

9 Since the beginning of the water law was adopted
10 and the State Engineer's Office was created the most important
11 responsibility the State Engineer has is to protect rights
12 that have been initiated prior to that time. And when the
13 water code was adopted it was -- the whole process was
14 litigated. And the Nevada Supreme Court and the legislature
15 all indicated that the State Engineer could only exercise its
16 powers if he protected the rights that existed prior to the
17 adoption of the statutes.

18 That's been the -- that's been the law ever since
19 1905. And in this situation junior appropriators have caused
20 an impact to a senior water right holder.

21 The -- the -- the question is what powers does
22 the State Engineer have to do something about this problem.
23 And Eureka County's argument is that you -- you can't do
24 anything to protect an existing right -- or a vested right.
25 And here now -- now we're saying we have to go through an

1 adjudication. The State Engineer's Office, and we'll put on
2 evidence, the State Engineer's Office has historically
3 recognized and protected water rights that are vested even
4 though they're not adjudicated. Change applications have been
5 granted on proofs of appropriation that have not been
6 adjudicated. Applications have been denied in order to
7 protect unadjudicated vested claims.

8 So it's nothing new for the State Engineer's
9 Office to take steps to protect unadjudicated vested claims.
10 I -- I'm surprised that the -- that the argument is that we
11 have to continue to delay. The -- certainly the State
12 Engineer has the right to curtail junior -- junior
13 appropriators and -- and I don't think anyone can dispute
14 that.

15 So if the only option the State Engineer has --
16 we're injured, I mean, we don't have water, this is a spring
17 that flowed depending on a score if it counts, eight CFS, 15
18 CFS, it floats less than two CFS now. That's -- that's an
19 injury to a vested right. And every day that goes by is a
20 continued injury. And something needs to be done. And the
21 suggestion of an adjudication is just further delay. The
22 State Engineer would then have to curtail.

23 My position is that -- that the State Engineer
24 has a -- an implied and inherent obligation to protect senior
25 existing rights that have vested, that were initiated and

1 evidence of this, that the vested claims far exceed what we're
2 asking for in these applications for the purpose of trying to
3 make whole my client in particular whose springs have
4 completely dried up as a result of what's going on.

5 So, I agree with Mr. Taggart that the State
6 Engineer has a duty to protect vested claims. I think he has
7 recognized that duty in the orders that he's issued to this
8 point and he recognizes that the one remedy is to allow these
9 hearings to go forward and allow for some mitigation water to
10 be appropriated by Mr. Venturacci and Sadler Ranch. And so
11 for those reasons I don't think that Eureka County's request
12 to delay this is in the best interest of the -- my client in
13 particular but also in upholding the intent of the water law.

14 As I argued in my brief I don't think that there
15 is even a need for these hearings if the State Engineer
16 determines that there is in fact a harm to a vested claim and
17 the State Engineer could take whatever action he needs to to
18 protect that vested claim or to make it whole, in this case to
19 try and allow for additional water to be appropriated so he
20 can -- so the vested claims can be utilized. Without those
21 applications being approved there's no way to use water when
22 there is none.

23 So that's basically where we're at. I would
24 agree otherwise with everything that Mr. Taggart said.

25 HEARING OFFICER JOSEPH-TAYLOR: Response,

1 vested prior to the enactment of the statutes. And there's
2 other -- and there's powers that arise out of that to protect
3 those rights.

4 And if the only power the State Engineer has to
5 protect a senior right is to cut off a junior right, then --
6 then curtailment is the only opportunity that we're going to
7 have in Diamond Valley to do something for this existing
8 right. I think the State Engineer has properly looked for an
9 alternative to curtailment at this time to provide some
10 replacement water for a lost water right. And the State
11 Engineer's Office has never needed to adjudicate in order to
12 protect vested rights in the past. And -- and for that
13 reason, we'd ask you to not delay the hearing.

14 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet?

15 MR. KOLVET: Well, I will adopt everything
16 Mr. Taggart said and bring up just a couple of other points.
17 One is that the protest in this case do not contest the fact
18 that there are vested claims at issue in this case. Even
19 Eureka's first statement in their protest says that they
20 recognize that there are vested claims.

21 The State Engineer's interim order and other
22 orders issued in this basin have indicated that he's aware of
23 the fact that there are problems with the junior appropriators
24 affecting vested claims. And it would seem to me that a -- if
25 the evidence presented, and I think we presented sufficient

1 Ms. Peterson?

2 MS. PETERSON: Thank you. What we're here today
3 on is the process. The process to determine these claims to
4 vested rights, that's the issue that we're raising by our
5 motion. And the process under the statute is an adjudication,
6 that's the process that's recognized by previous State
7 Engineers, their interpretation of the statutes, and it's
8 consistent with our position that to determine the claims to
9 vested rights, to set the priority, to set the quantity you
10 need to have an adjudication. And that's essentially what
11 these Applicants are asking for in their -- in their
12 applications.

13 You need to determine the vested rights before
14 you can determine and what is senior before you can determine
15 if mitigation water right applications should be granted.

16 HEARING OFFICER JOSEPH-TAYLOR: And we're
17 rehashing the legal briefs that the State Engineer has already
18 ruled that he's going forward with this hearing. Is that
19 still your decision, Mr. King?

20 THE STATE ENGINEER: Yes.

21 MS. PETERSON: So I just wanted it noted for the
22 record of Eureka County's continuing objection to the process.

23 HEARING OFFICER JOSEPH-TAYLOR: So noted.

24 MS. PETERSON: Thank you.

25 HEARING OFFICER JOSEPH-TAYLOR: The agreed upon

1 procedure is that Monday through Wednesday is the time for the
 2 Applicants to put on their case and Thursday and Friday is the
 3 time for Protestants. It's my understanding, Mr. Taggart,
 4 Sadler Ranch is going first; is that correct?
 5 MR. TAGGART: That's correct.
 6 HEARING OFFICER JOSEPH-TAYLOR: And I see for the
 7 Protestants that Eureka County, Diamond Cattle Company,
 8 Etcheverry Family Limited Partnership and Benson are the only
 9 ones that had submitted any exhibits so I am assuming the
 10 other Protestants don't plan on putting on a case in chief; is
 11 that correct, Mr. Moyle?
 12 MR. MOYLE: I plan on making a comment.
 13 HEARING OFFICER JOSEPH-TAYLOR: I couldn't hear
 14 you, sir, could you --
 15 MR. MOYLE: I plan on making a comment.
 16 HEARING OFFICER JOSEPH-TAYLOR: Oh, a comment?
 17 MR. MOYLE: Yes.
 18 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 19 Mr. Gallagher, is that true for you also?
 20 MR. GALLAGHER: Yes.
 21 HEARING OFFICER JOSEPH-TAYLOR: And, Mr. Burnham,
 22 is that true for you also?
 23 MR. BURNHAM: Yes.
 24 HEARING OFFICER JOSEPH-TAYLOR: Thank you. I
 25 just wanted to make a record of that. Have the Protestants

1 decided which order they're presenting their cases, who's
 2 going first between you two?
 3 MS. PETERSON: Probably Eureka County.
 4 HEARING OFFICER JOSEPH-TAYLOR: Okay. I'm just
 5 trying to get a feel for how we're going to proceed. I would
 6 assume I was going to take public comment at the end of the
 7 hearing. Mr. Gallagher and Mr. Moyle, are you planning on
 8 staying all week?
 9 MR. GALLAGHER: I am.
 10 HEARING OFFICER JOSEPH-TAYLOR: All right. You
 11 too, Mr. Gallagher?
 12 MR. GALLAGHER: Yes.
 13 HEARING OFFICER JOSEPH-TAYLOR: Mr. Benson,
 14 you're represented by counsel, you don't get to talk, you talk
 15 through Therese, Ms. Ure, I'm sorry.
 16 Mr. Taggart, first witness, please? Or did
 17 anyone want an opening?
 18 MR. TAGGART: I would like to, yes.
 19 HEARING OFFICER JOSEPH-TAYLOR: Sure. Go ahead.
 20 MR. TAGGART: Again, thank you. And good
 21 morning, everyone. Good morning, staff, good morning, State
 22 Engineer. You know, we're here in an unusual situation where
 23 there's been an impact to senior rights from junior rights.
 24 And as I indicated before, the legislature and the courts were
 25 clear a hundred years ago on this kind of a situation.

1 The -- and it turns out that Sadler Ranch was --
 2 HEARING OFFICER JOSEPH-TAYLOR: Hold on a second.
 3 I'm sorry, that fan is kind of obnoxious while he's trying to
 4 do his opening.
 5 TECHNICAL ASSISTANT: Okay.
 6 HEARING OFFICER JOSEPH-TAYLOR: Were you using it
 7 in your --
 8 MR. TAGGART: I was going to put it up on the
 9 screen.
 10 HEARING OFFICER JOSEPH-TAYLOR: Okay. Go ahead
 11 then.
 12 MR. TAGGART: For you to have something to look
 13 at.
 14 HEARING OFFICER JOSEPH-TAYLOR: I find it
 15 distracting. Go ahead.
 16 MR. TAGGART: The -- and it turns out that Sadler
 17 Ranch was developed by Reinhold Sadler, and he was the
 18 governor of the state of Nevada in 1896. And his water rights
 19 are the type of water rights that the legislature in 1905 was
 20 thinking about protecting when the State Engineer's Office
 21 came into being.
 22 And so the -- you know, the question is what can
 23 you do when a senior right is impacted. And as I said
 24 earlier, curtailment is certainly something that's possible,
 25 but we think the State Engineer can grant a right that

1 replaces a vested right as long as that replacement right
 2 is -- is just that, replacement. It's a full replacement.
 3 And Eureka County has argued that -- that the
 4 applications that we filed cannot get the same priority as the
 5 vested claims that we filed. And if -- if we can't get the
 6 same priority then we aren't getting mitigation water rights.
 7 We aren't getting substitute water rights. In the event of a
 8 curtailment we would be the first cut. And that's not --
 9 that's not mitigation to a senior right.
 10 The -- you know, we believe that there's --
 11 there's -- this organic power the State Engineer has to
 12 provide substitute water that is -- that is sufficient to meet
 13 the needs of that vested claim.
 14 Eureka County is arguing that the statute says
 15 specifically pre-appropriation it gets the date of the
 16 priority the appropriation. I -- I agree with Mr. Kolvet that
 17 we're not talking about an application under the statutes,
 18 we're talking about the power of the State Engineer to do
 19 what's right about a harm to an existing right.
 20 And -- and to do what's right the original
 21 priority has to be established. Now, if -- if for -- if the
 22 context -- if the text rule issue of the statute and what it
 23 says is -- is that significant that the State Engineer could
 24 also designate in this basin mitigation water as being
 25 protected from a curtailment order.

1 And so if the State Engineer cannot grant the
 2 senior priority to these water rights and we think that he
 3 can, then an alternative is to issue a designation order in
 4 this basin that indicates that in the event of a curtailment
 5 rights that have been issued, new appropriations of
 6 groundwater that have been issued for mitigation purposes are
 7 preferred uses in the event of a curtailment. And that's
 8 critical and you put on evidence on why that's critical.
 9 We're going to have to spend hundreds of
 10 thousands of millions of dollars to -- to build the facility
 11 necessary to use water that used to freely flow out of this
 12 spring. It was free how this water came out of the spring and
 13 went through the ditches and out to the fields.
 14 Now we're going to have to put in wells, pump the
 15 wells and -- and that's a significant -- that's a significant
 16 cost. We won't make that investment with the threat of
 17 curtailment. There's -- as there's also going to be a
 18 tremendous amount of testimony about the over-appropriated
 19 nature, I don't think it can be disputed the over-appropriated
 20 nature of Diamond Valley. And curtailment is a threat to
 21 everyone in that valley.
 22 And -- and if -- if we're the first to be cut
 23 because we have the most junior priority in our mitigation
 24 groundwater right, then that's going to -- that's going to
 25 cloud the ability to make any kind of investment that we need

1 made whole.
 2 The evidence we're going to put on in support of
 3 the mitigation applications is, is overwhelming that the
 4 dominant water feature in Diamond Valley a hundred years ago
 5 was Shipley Spring. And you can see from the picture here on
 6 the screen which is Exhibit 616 that up on the left on the
 7 west side of the valley you could see a dominant feature in
 8 the, you know, coming out of the mountain block there which is
 9 where Shipley Spring is.
 10 Today you can see the dominant feature in Diamond
 11 Valley are southern pivots in the southern part of the valley,
 12 essentially wall to wall across the bottom of the valley.
 13 And -- and that -- and, you know, we're going to
 14 put on evidence that the spring flowed depending on different
 15 historic accounts between eight and 15 CFS a hundred years
 16 ago. And today it's less than two. And that the spring flows
 17 at 104 degrees, which means that water can be used year round.
 18 And that ranching at Sadler Ranch was very productive, it was
 19 very diverse and was more than 2,000 acres of irrigated fields
 20 and that -- where alfalfa and hay were grown.
 21 Today only 170 acres can be irrigated. So
 22 formerly it was over 2,000, now it's 170. And the focus of
 23 this hearing should be on how much water was used on Sadler
 24 Ranch under the vested claims that started before 1905. We
 25 ask for 7500-acre-feet essentially under the applications that

1 to make at the ranch.
 2 So the -- the -- the mitigation power, you know,
 3 I -- I -- I find it ironic that the argument is is that the
 4 State Engineer can't do what you're trying to do here.
 5 Because the only other power you have is curtailment. If you
 6 can't do what we're asking for here, I call it -- you have an
 7 axe, you have, you know, a very crude, very, very rough tool
 8 which is curtailment. You can cut off everyone who's junior
 9 to the perennial yield of the basin.
 10 And evidence we put on that the existing vested
 11 rights to springs have to be taken into account in that
 12 perennial yield analysis. So you'd be cutting back water
 13 rights in Diamond Valley to 20,000-acre-feet of groundwater
 14 pumping. That's -- that's the tool that you have clearly and
 15 are obligated to use when impacts are occurring like it is
 16 here unless there's an alternative. And -- and so we -- we
 17 embrace this notion that we can come up with some remedy, you
 18 know, short of curtailment.
 19 Will -- will Sadler Ranch be made whole by this
 20 what we're asking for here, no. The cost of all of the
 21 infrastructure that's going to need to be put in. The years
 22 and years of not having the ranch of full operation. The
 23 years of potential litigation that we're going to have to go
 24 through, the money spent in this hearing and elsewhere are all
 25 costs that are going to have to be incurred. So they won't be

1 have been filed. And -- and so as long as the uses that were
 2 in place at Sadler Ranch prior to 1905 exceeded 7500-acre-feet
 3 these applications should be granted.
 4 So -- so it's -- the key point is if -- if we
 5 establish sufficiently that at least 7500-acre-feet was used
 6 on the ranch prior -- and that use was initiated prior to
 7 1905, then these applications should be granted.
 8 Mike Buschelman's going to testify about the
 9 priority of these water rights being pre-1970 -- I mean,
 10 pre-1870. He's going to testify about the acreage being more
 11 than 2,000 acres. And he's going to testify about the duty
 12 being a year round duty of at least four-and-a-half-acre-feet
 13 per acre.
 14 He's also going to testify about how the State
 15 Engineer has protected vested claims without an adjudication
 16 in the past and I discussed that in my opening about prior
 17 practice of the State Engineer. And -- and -- and I should
 18 point out that Eureka County itself has argued for the
 19 protection of vested rights prior to adjudication in other
 20 cases.
 21 Dwight Smith will testify for us that the
 22 historic and -- about the historic and current flows of
 23 Shipley Spring, about the over-appropriation in Diamond
 24 Valley, about the cone of depression that exists in the
 25 southern part of Diamond Valley and the prediction impacts

1 that came years ago if that type of cone of depression
 2 existed.
 3 He'll testify about the impacts to springs south
 4 of Sadler Ranch. He'll review the other factors that could
 5 influence the decreased flow at Shipley Spring. And then he
 6 will testify about the cause and decline of Shipley Spring
 7 being the pumping in the southern part of Diamond Valley. And
 8 on that he'll be able to use hydrologic evidence to -- to move
 9 through time and watch the cone of depression move to the
 10 north, watch drawdowns occur in the cone of depression, watch
 11 the springs decline, watch the springs disappear as it moved
 12 north towards Shipley Spring. So we think it will be
 13 undisputed that the cause of the impact is pumping in
 14 southern, in southern Diamond Valley.
 15 These applications are the closest thing that
 16 Sadler Ranch can get to the vested right that they own.
 17 They're not asking for a new appropriation, they're not asking
 18 for new water and they're not asking to be upgraded by any
 19 means. They're simply seeking to enforce the right that they
 20 have beneficially used for almost 150 years. We're asking to
 21 ease the impacts on the ranch that have been caused by junior
 22 appropriators. And even if these applications are granted in
 23 whole they'll still be a loss to the ranch.
 24 So this is not a windfall. We're going to spend
 25 hundreds of thousands or millions of dollars on exploratory

1 We're not asking for any more than we're entitled to in this
 2 hearing. We're merely asking for the State Engineer to take
 3 the first steps in protecting the senior vested water rights
 4 that's required under the water law. The first step is to
 5 grant mitigation water to replace the water that's been lost
 6 in the over-appropriation and the over-pumping.
 7 And -- and while this won't make us whole it is
 8 the right step to take and it's a good first step to take in
 9 the right direction.
 10 So with that, I'm ready to call my first witness.
 11 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet, did
 12 you want an opening or did you want to wait until you call
 13 your first witness?
 14 MR. KOLVET: I prefer to wait.
 15 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson, did
 16 you want to --
 17 MS. PETERSON: I have an opening right now.
 18 HEARING OFFICER JOSEPH-TAYLOR: All right.
 19 MS. PETERSON: Thank you. The Applicants have
 20 assembled a lot of documents, at least three binders right
 21 here, maybe four. And most of the documents and the evidence
 22 that they're going to submit are irrelevant or insufficient to
 23 prove their claims of vested rights.
 24 Under the law to prove a vested right, and as
 25 Mr. Taggart just said, that's their pre-1905 historical use of

1 wells, testing, drilling production wells, getting water to
 2 the wells, paying to pump for the water, all of those expenses
 3 would not have been necessary if the senior rights had not
 4 been so dramatically and continuously impacted by junior -- by
 5 junior right holders.
 6 Each year that the water is denied causes
 7 financial harm. And -- and what's unfortunate here is that
 8 Sadler Ranch has to fight the county that it's in. The county
 9 is demanding protection of junior rights. Some of their
 10 protest grounds even demand that senior rights mitigate junior
 11 rights. And -- and we believe they're demanding an
 12 adjudication just for delay. And they -- they tried to delay
 13 curtailment arguing that they have some other alternative, but
 14 they've never offered a solution to the problem that we're
 15 dealing with today. And they acknowledge that over-pumping
 16 has caused massive drawdown and has dried up springs.
 17 They're even so bold as to argue that they are
 18 entitled to dry up springs in the perennial concept and then
 19 claim that that water is their own.
 20 And I mentioned before that they say if we get
 21 our water back that we should lose our priority and then be
 22 the first to be cut in a curtailment. Rather than having the
 23 county equally represent its citizens they have chosen to back
 24 one group of irrigators, the most junior in time to the
 25 detriment of citizens who are first in time, first in right.

1 water the Applicants must show, and I pulled off the form that
 2 you have to file with the State Engineer for your proof of
 3 appropriation. And this is, you know, the form that's on the
 4 website right now. But the form isn't much different from
 5 what it was in the early 1900s when the State Engineer's
 6 Office first started taking these proofs of appropriation.
 7 And the Applicants must show under their proof,
 8 which is their historical use of the pre-1905 -- pre-1905
 9 historical use of their claim of vested right, when the
 10 construction of the ditch or other work was begun and
 11 completed, the dimensions of the ditch or canal as originally
 12 constructed and enlarged, who owned or owns the conduit and
 13 the nature of the title of the land for which the water right
 14 is claimed, what crops were grown and when water was used for
 15 irrigation, when water was first used by whom, the number of
 16 acres irrigated and where, you know, the location of the land
 17 irrigated. And then the additional number of acres irrigated
 18 in subsequent years, all supporting the claim of a vested
 19 right.
 20 And there's also a requirement of an affirmation
 21 that the land was irrigated each and every year since the
 22 water right was first used and initiated, and then information
 23 as to when and why no water or the full amount of water was
 24 not used in certain years all on the form. Information on any
 25 other uses other than irrigation that the water was used for.

1 And then of course the proof of appropriation is signed under
 2 oath.
 3 The Applicants need to provide evidence of each
 4 of the items to show they had a senior surface water right
 5 that has been impacted by the groundwater pumping of junior
 6 water right holders for approval of their mitigation
 7 applications under order 1226. The Applicants' evidence does
 8 not support their current claims. There are huge gaps in the
 9 information and guesses and speculation associated with
 10 documentation purportedly to show beneficial use.
 11 There certainly is no documentation to show
 12 pre-statutory beneficial use of a known quantity of a certain
 13 amount -- on a certain amount of acreage let alone sufficient
 14 documentation to support 7,457-acre-feet annually of water
 15 used on 1,657 acres, and that's what Sadler's claiming, or
 16 five CFS for 1,636 acres on the Thompson Ranch, 2.5 CFS for
 17 344 acres on the Cox Ranch or 2.0 CFS for 190 acres on the
 18 Willow Field. And those are all the claims on the Venturacci
 19 claims. Historically someone would have noticed if this much
 20 water was being used on this amount of acreage.
 21 The surveyors in 1870 would have noticed it, the
 22 Eureka County assessors in that time frame would have noticed
 23 it, Payne, he's a man that went out from the State Engineer's
 24 Office in 1912 or 1913, he would have noticed that there is
 25 that much use. And even Eakin in 1962 or Harrill in 1968

1 mitigation right is a preferred use. However, they have done
 2 nothing in the past to protect their use along the way.
 3 Protestants question why we are here today.
 4 Applicants do not fall under exception 4 of order 1226 as the
 5 exception is for mitigation of senior surface water rights.
 6 Applicants do not hold senior surface water
 7 rights but merely claims to senior water which is
 8 unadjudicated. Protestants agree that vested claims should be
 9 protected, but when they are contested or when they are used
 10 as a basis for mitigation an adjudication must occur.
 11 So, notwithstanding that information, the
 12 Applicants question what are we doing here today -- or the
 13 Protestants question what are we doing here today. The
 14 Applicant Sadler Ranch and Venturaccis have filed new
 15 appropriations based on their surface claims. These
 16 applications have been called supplemental mitigation or
 17 replacement rights. These applications seek to break new
 18 ground in water law in that the applications served up the
 19 vested claims as the basis for their application and thus,
 20 claiming a priority date of the unadjudicated claim.
 21 These applications attempt to circumvent the
 22 water law by sidestepping the permitting process for uses
 23 after 1905. The applications like a house of cards lack their
 24 foundation and should fail.
 25 So, what are we doing here without the

1 would have noticed all this use purportedly of all this water.
 2 No one noticed because the use was not there.
 3 The other item the State Engineer wanted
 4 addressed was abandonment. And just briefly to refresh
 5 everybody's recollection, abandonment of a claim to a vested
 6 right is the relinquishment of the right by the owner with the
 7 intention to forsake and desert it. And that's in the Manns
 8 Springs case. Abandonment requires a union of acts and
 9 intent, that's Revert versus Ray.
 10 Pursuant to the case law circumstantial evidence
 11 of intentional abandonment can be shown by nonuse for a period
 12 of at least five years. A water right owner closing all
 13 business operations related to the water leaving the community
 14 and allowing part of its property to be sold for delinquent
 15 taxes.
 16 An aerial photo showing the land has not been
 17 used for agriculture. And you will see all of these types of
 18 circumstantial evidence or facts similar related to the
 19 enormous inflated claims of vested rights. Thank you.
 20 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 21 Ms. Peterson. Ms. Ure, did you want to do an opening?
 22 MS. URE: Yes. First of all, this is not about
 23 losing a priority. Here the applications currently have no
 24 priority as they haven't even been permitted. The Applicants
 25 tried to flip the burdens and argue that mitigation -- a new

1 established foundation? Here, the underlying vested claim
 2 must be adjudicated where claims have been filed a hundred
 3 years after the water use in the case of Sadler or have been
 4 amended several times including this year in the case of
 5 Venturacci. These claims must undergo a strict review by the
 6 State Engineer. They must be adjudicated to determine exactly
 7 what water use occurred prior to the Nevada water code and
 8 what years use occurred at the time of the claimed priority.
 9 Water use beginning after the water code is a new
 10 appropriation and the new application should now be filed.
 11 Not only is party determined in the adjudication but all
 12 elements of the water right including season of use, type of
 13 use, rate of flow, duty and of course was that use beneficial
 14 and not waste.
 15 Each Applicant bears the burden of proof to
 16 establish and confirm their vested claim. Assuming the
 17 foundation of the vested claims are evidence the Applicant
 18 then must prove the vested claim has continued since the date
 19 of first appropriation.
 20 In considering continued use the State Engineer
 21 must look to determine if the Applicant's water use as
 22 considered for adjudication have been abandoned. Here,
 23 without continued use of all the acres claimed the vested use
 24 can be limited or reduced in nature.
 25 Normally a vested claim through an adjudication

1 is issued a decree right and becomes a water right. So that
 2 vested right -- can that vested right now be transferred? In
 3 that transfer process the State Engineer must consider the
 4 criteria found in NRS 533 and 534 to determine if that is
 5 satisfied. This is also a condition of the designation order
 6 1226. Is it -- it is upon Applicants to show that the
 7 requirements of the water statutes are met.
 8 NRS 533 and 534 do not contemplate the notion of
 9 replacement rights or mitigation rights in this context. NRS
 10 533 and 534 do not contemplate a transfer of surface water
 11 diversions to a new groundwater diversion or an induced
 12 infiltration well. NRS 533 and 534 do not even define
 13 hydraulic connection between groundwater and surface water nor
 14 do they define what an induced infiltration well or capture
 15 well is or what the criteria for such a well might look like.
 16 NRS 533 and 534 require that water must be
 17 available for any appropriation and that such an appropriation
 18 cannot impact, conflict with or otherwise injure another user.
 19 And NRS 533 and 534 require that the State
 20 Engineer do not allow new appropriations that are detrimental
 21 to the public interests, which includes new appropriations
 22 within an over-appropriated groundwater basin.
 23 Assuming that all of the above is met the
 24 Applicant under order 1226 has the burden of proof to show
 25 that but for the groundwater pumping by junior applicators or

1 For Sadler the evidence will show that there was
 2 some water put to beneficial use in the late 1800s, but not as
 3 much as claimed by Sadler's 1980 claim filings.
 4 But perhaps something maybe around 450 acres.
 5 Exhibit 138 is telling. Some of the ditches on this map are
 6 confirmed by the GLO surveys in 1879, however, the extent of
 7 the cultivated land as opposed to the natural meadow can only
 8 be inferred from the length and location of the shown ditches.
 9 The place of use for the irrigation is not the entire Sadler
 10 Ranch but only a few portions of land along the ditches in the
 11 natural channel. And regardless of this place of use the hay
 12 harvested as noted in the survey shows natural meadows or
 13 natural hay meadow. Those in agriculture know that meadow hay
 14 generally receives less than four-acre-feet per acre
 15 allocation of water and is only cut maybe once or twice in a
 16 growing season.
 17 The other meadows are more akin to pastures and
 18 thus not to be allocated of four-acre-feet per acre allotment
 19 of water. Attempting to irrigate and grow hay on an alkaloid
 20 plat is not a beneficial use of water and can be considered
 21 waste.
 22 Evidence shows that there's a large meadow and a
 23 swamp created by the Shipley Hot Springs, however, a natural
 24 swamp cannot form the basis for irrigation appropriation of
 25 four-acre-feet of water or over 7,000-acre-feet per year.

1 junior appropriators the Applicant's senior water rights must
 2 have been impacted.
 3 Well, what is an impact? That is a matter of
 4 much debate. There must be varying levels of impacts so that
 5 at which point will the purported impact trigger an exception
 6 under order 1226 assuming that all other factors and
 7 requirements of the water statutes have been met.
 8 Finally, the roof on this house of cards, the
 9 mitigation or replacements right must fail. There's nothing
 10 in the Nevada water law that provides a mitigation right on a
 11 vested claim wherein the mitigation right circumvents prior
 12 appropriation doctrine with a priority date the same as the
 13 vested claim or vested right.
 14 So, at what point in water law is the water user
 15 who has done nothing to protect its own water use awarded a
 16 more senior use? Did the Applicant file supplemental
 17 groundwater rights like others? Did the Applicant go out and
 18 buy more senior rights and transfer it to their place of use?
 19 Did the Applicant protest other groundwater applications that
 20 might impact or conflict with its water use?
 21 A handout should not be given to those who have
 22 done nothing while others have proactively applied for,
 23 developed, purchased, supplemented and perfected their water
 24 use or otherwise protested other water users along the way
 25 that could impact or conflict with their rights.

1 The best pre-1913 evidence of flow rate at
 2 Shipley is around eight CFS in 1912 by the State Engineer's
 3 Office. This evidence is supported by Harrill in 1960. A
 4 rotation agreement by the parties evidencing an unmeasured
 5 flow of five CFS as one-third the flow rate in January is not
 6 the best evidence.
 7 The season of use should also be limited to the
 8 irrigation season for all crops. The evidence will show that
 9 only the area considered the Romano Ranch was irrigated during
 10 the winter months and generally at no other times during the
 11 year.
 12 Other uses at Sadler Ranch were domestic and/or
 13 stock watering. Some of their uses now claimed or evidence
 14 have been abandoned. I -- likely not creating ice or salt
 15 anymore.
 16 For Venturacci the original vested claims are
 17 telling. The water use was -- the water use was claimed out
 18 to the hundredth of a decimal point on the claim maps. Given
 19 the Venturaccis' predecessor's original vested claims were
 20 filed in 1912, this is likely the best evidence of a pre-code
 21 water use.
 22 New appropriations after the water code should
 23 have gone through the application and permitting process.
 24 Like the information presented above, each step in the process
 25 must be analyzed, considered and defined before the next step

1 in the building of a house can be considered.
2 There is no doubt that the groundwater basin in
3 Diamond Valley is over-appropriated. However, there are
4 several other factors that must be considered that may have
5 contributed or caused the decline in surface water that is
6 seen by Applicants' uses. These possible explanations include
7 climate change, groundwater discharge areas and recharge
8 areas, high water tables and spring dust charge areas and
9 their inner relationships.

10 In conclusion, Protestants object to this
11 proceeding as the underlying adjudication of the contested
12 vested claims must occur prior to the building block can be
13 placed on -- for -- be placed on the claim for mitigation
14 replacement or supplemental water rights.

15 HEARING OFFICER JOSEPH-TAYLOR: Thank you. First
16 witness, Mr. Taggart?

17 MR. TAGGART: Thank you. Sadler Ranch calls
18 Mr. Doug Frazer.

19 HEARING OFFICER JOSEPH-TAYLOR: Welcome,
20 Mr. Frazer. Be careful of the cord with that computer,
21 please. Stand and be sworn.

22 THE WITNESS: Working on it.

23 MR. TAGGART: And before he testifies can I
24 just -- just say one more thing for the record? We're going
25 to raise a continuing objection to any arguments by Eureka

1 A. I have my undergraduate degree from a little bit
2 of Davis where I took some soil science classes and just
3 general ed. I took some forestry classes and some soil
4 science classes at Humboldt. And then I finished my degree
5 with more soil sciences and kind of resource science courses
6 at UC Berkeley.

7 And then I enrolled in the master's degree
8 program in soil science in Berkeley and I completed that in
9 the mid-'80s.

10 Q. So you have a master's degree in soil science and
11 undergrad degree from Berkeley?

12 A. Yeah.

13 Q. Both those degrees are from Berkeley?

14 A. Yes, sir.

15 Q. And what was your master's thesis?

16 A. It was on nitrogen mineralization in the forest.
17 We were looking at how nitrogen degraded in the forest floor.

18 Q. And please describe your employment experience.

19 A. I worked as a -- for 15 years in the
20 Environmental Protection Agency, I worked on some water
21 standards, I worked down in Las Vegas.

22 I also -- I worked in various contracting jobs,
23 but I also -- my last few years were as a project manager for
24 a super fund cleanup site for groundwater cleanup in the Los
25 Angeles -- in the LA basin.

1 County as to the -- as to the existence of vested water
2 claims. Their protest in item number 1 said that these
3 protests do not challenge the existence of vested water rights
4 on Shipley -- on Big Shipley Springs and Indian Camp Springs.
5 So to the extent cross-examination or a case is put on to
6 challenge the existence of these vested claims will be
7 affected.

8 DOUG Frazer,
9 called as a witness in this matter,
10 having been first duly sworn,
11 testified as follows:

12
13 HEARING OFFICER JOSEPH-TAYLOR: Have a seat,
14 Mr. Frazer. Welcome. I'm sure you're thrilled to be here.

15 THE WITNESS: Well, kind of.

16 DIRECT EXAMINATION

17 BY MR. TAGGART:

18 Q. Good morning, Mr. Frazer. Are you the manager of
19 Sadler Ranch?

20 A. Yes, sir.

21 Q. And when did you become manager of Sadler Ranch?

22 A. When we bought it in September of '11.

23 Q. You have included as Exhibit 187 your resume.

24 Could you just describe quickly or describe for the State
25 Engineer your educational background?

1 Q. Did you have experience in your prior employment
2 interpreting aerial photographs?

3 A. Yes. When I was -- in my summers I worked for
4 the Forest Service, a couple summers I worked for the Forest
5 Service and we did -- we physically treat timber surveying,
6 we -- our supervisor would give us an aerial photo and we'd
7 have to -- he'd mark a point in the aerial photo and we'd have
8 to go find that point and then use that as a starting point to
9 do a timber survey around that point.

10 MR. TAGGART: I'd like to offer Exhibit 187 into
11 evidence.

12 HEARING OFFICER JOSEPH-TAYLOR: Any objection?

13 MS. PETERSON: No objection.

14 HEARING OFFICER JOSEPH-TAYLOR: Hearing none, it
15 will be admitted.

16 (Exhibit 187 admitted into evidence.)

17 BY MR. TAGGART:

18 Q. Have you prepared a presentation today?

19 A. Yes.

20 MR. TAGGART: And I have copies of what he's
21 going to talk about, if I could just approach and hand those
22 out?

23 HEARING OFFICER JOSEPH-TAYLOR: Has this been
24 presented as an exhibit?

25 MR. TAGGART: This is a summary of information

1 that has been presented as exhibits. So every page in this
2 presentation cites to the exhibit number that it -- that it's
3 referencing. And it's done for to be able to get through all
4 of the information that we have in a reasonable amount of
5 time. And so every -- like I say, every piece of information
6 in this presentation is the information that was submitted
7 during the exchange.

8 HEARING OFFICER JOSEPH-TAYLOR: So it's your
9 PowerPoint?

10 MR. TAGGART: Yes.

11 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
12 Brent, can you come around and pull your cord in or?

13 MR. KOLVET: I don't know if I can pull the cord.

14 HEARING OFFICER JOSEPH-TAYLOR: Oh, you have two?

15 MR. TAGGART: I gave --

16 HEARING OFFICER JOSEPH-TAYLOR: Oh, Jason's got
17 one?

18 MR. TAGGART: He has one. We have one here.

19 HEARING OFFICER JOSEPH-TAYLOR: Oh, okay. Thank
20 you. Let's be off the record while we're doing this.

21 (Recess taken.)

22 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
23 record. Please proceed, Mr. Taggart.

24 THE WITNESS: Ready?

25 HEARING OFFICER JOSEPH-TAYLOR: Take your -- take

1 that makes sense.

2 So first we're going to talk about where Sadler
3 Ranch is relative to Diamond Valley, then I'm going to do a
4 ranch tour which is basically -- which is on the ground photos
5 and aerial photos. I'm going to go into a long section on
6 aerial photography, historical aerial photography comparing
7 that to current -- current images. I'm going to do a few
8 time -- look at a time series where you look at a particular
9 area over time and see how that changes from within an aerial
10 photo.

11 I'm going to talk about the springs at the ranch
12 and the springs south of the ranch and how -- how they've been
13 affected by over-pumping.

14 I'm going to talk about the irrigation
15 infrastructure that used to exist at the ranch and how we
16 determine that. And then I'm going to talk about soil
17 investigation talking about the investigation that the
18 Protestants put into evidence and then a little bit of work I
19 did for myself.

20 So the first section is we're going to talk about
21 the location of Sadler Ranch. This is a picture of Diamond
22 Valley. The most prominent feature in the valley is the playa
23 you see of the north end, the white area. Sadler Ranch is two
24 red areas off to the west or left. Further west of Sadler
25 Ranch is Garden Valley. There's been some indication that

1 your lead from your counsel, Mr. Frazer.

2 BY MR. TAGGART:

3 Q. All right. Thank you. Mr. Frazer, please begin
4 that presentation that you prepared.

5 A. Okay. This presentation basically is a summary
6 of the work that I've been doing, Ted and I have been spending
7 the last six months doing quite a bit of work, just a lot of
8 research work trying to find as much as we can about the
9 history of Sadler Ranch.

10 HEARING OFFICER JOSEPH-TAYLOR: You and who,
11 Mr. Frazer? You got to make sure the court reporter can hear
12 you. You and who?

13 THE WITNESS: Mr. Ted Yednock.

14 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.

15 THE WITNESS: I will slow down and speak clearly.
16 So this is a -- this is a summary of the work that Ted and I
17 have been doing over the last six months to find -- to learn
18 more about the history of Sadler Ranch, especially the water
19 use.

20 My -- my presentation is -- is mostly aerial
21 photos and current photos to try to get an idea of what -- and
22 basically I'm trying to describe to you what the ranch looks
23 like, how water was used. And this presentation is really
24 somewhat of a foundational presentation so that you understand
25 the ranch so that subsequent presentations make more sense, if

1 some of the -- that some of the water that's coming into
2 Shipley Springs could be coming from that area.

3 I'm going to continue around counterclockwise.
4 Bottom picture is Eureka. You can see the Diamond Valley
5 pivots there at the end of the valley. To the south end of
6 the valley. The Thompson Ranch is on the east side and what
7 else? Diamond Springs and at the very top you can see Diamond
8 Springs Ranch at the north end of the valley north of Sadler
9 Ranch.

10 Sadler Ranch is comprised of two main parcels of
11 land. The top one being the original Brown Ranch, which I
12 think was merged with Sadler Ranch in the mid-'90s. And then
13 in the south you see the larger Sadler Ranch parcel. The --
14 the Sadler Ranch parcel is about 3900 acres. We're going to
15 be just spending time on that parcel, we're really not going
16 to be spending much time at all on the Brown parcel.

17 On the right-hand -- left-hand side you see
18 Sadler Brown Road and then Shipley Hot Springs is right here
19 and along the road. And then Indian Camp Springs is in the
20 southeast corner of our property.

21 This is a spray painted general conceptual model
22 of the areas that we're talking about in our presentation.
23 There's not -- there's not a lot of really good land --
24 landmarks to identify where we are. So, we're -- I'm -- this
25 is the areas that we're going to be talking about later in the

1 presentation and in all the presentations, it's just general
 2 ideas of -- of where areas are.
 3 So I'm going to start there at the top is the
 4 north field. Not much -- not going to talk much about that.
 5 But the -- the mint green color is the upper fields. These
 6 are areas where most of the intensive agriculture happened.
 7 To the south of that is -- to the south of that is the Indian
 8 Camp area. That area the springs went dry a couple decades
 9 ago. There was some cultivation there for a while.
 10 The south meadow here in the southern end of the
 11 ranch. The Romano Field is in the southeastern corner John's
 12 Field in the far southeastern corner. And it's about --
 13 John's Field is more than three miles from the outflow of the
 14 pond. There's the central high area and then the north
 15 meadow. Water -- water flows out of the pond and then in flow
 16 north into the north meadow or the south meadow. And it's the
 17 central high area that is -- that is the split between the
 18 two.
 19 So now we're going to do a piece-by-piece ranch
 20 tour. Just to help us, again, there's not a lot of landmarks
 21 out there, it's just to help us orient. We have the
 22 headquarters along the road in the northeast part of the
 23 ranch. You have Shipley Hot Springs along -- in the center of
 24 the ranch along the west side. This is northwest, not
 25 northeast, sorry.

1 the -- on the west side and into the -- out of the pond, the
 2 bottom of the pond on the west side goes through a shallow
 3 area and eventually comes out of -- well, originally it came
 4 out of this natural ditch, but then there's a dam along here
 5 that was put in to divert the water so the water can go to
 6 these irrigation ditches up to the north, these two irrigation
 7 ditches.
 8 There's a ditch that does a little 90-degree jog
 9 and goes -- heads off to the east. And then there's a
 10 southern ditch which can irrigate much of the southern area of
 11 the -- of the ranch. These are 26-foot irrigation pipes to
 12 give -- in the south end of the pond to give you an idea of
 13 scale of the pond.
 14 Q. When you said that there was a dam along this
 15 part of the pond, where you were pointing to the southeastern
 16 edge of the pond; is that right?
 17 A. The east and southeast, yeah. So now we're going
 18 to move north into the headquarters area. This is where the
 19 residents are, the area where the trees are on the northwest
 20 corner of the slide is where the trees are, is where most of
 21 the residents are, all of the residents. This white building
 22 is our shop. This is Sadler Brown Road on the west of that.
 23 And then if we're going to head east from the
 24 headquarters this is the upper fields, the north upper fields
 25 of the ranch. Most of the intensive -- intensive -- again,

1 BY MR. TAGGART:
 2 Q. Northwest for the headquarters?
 3 A. Yeah.
 4 Q. Thank you.
 5 A. In the northeast section of the ranch is this
 6 area that we call the lake. It's often flooded, at least it
 7 has been previously. It has a distinctive shape. In the --
 8 in the southeast corner of the ranch is this hexagon area
 9 which is really -- which is where John's Field is located.
 10 And I'm giving you all these names just so later on when we
 11 talk about -- when we zoom in the area and you don't know
 12 where we are, it will just help us orient later in the
 13 presentation.
 14 So we're going to start with Shipley Hot Springs
 15 and we're going to move in a clockwise direction around the
 16 whole ranch. This is -- this is the original Hot Springs.
 17 Shipley, the water comes out mostly -- it comes out of the
 18 bank over here and then it comes out underground -- I mean,
 19 underwater in this part of the pool, part of this pool can be
 20 20 feet deep.
 21 Q. When you say this part of the pool you mean the
 22 part of the pool on the left side?
 23 A. The part of the pool on the west side of the
 24 pond. This whole pond is approximately three acres in size.
 25 So the water comes out of the -- out of the bank and out of

1 most of the really intensive agriculture was done in these
 2 fields.
 3 To the east of that we have the north meadow.
 4 This area frequently got a lot of water because it's really
 5 close to the spring. And then we have irrigation ditches
 6 scattered throughout this -- the lower end of the photo.
 7 So this is a ground view of the north upper
 8 fields. You can see that there's nothing growing there. In
 9 order to get this area to irrigate you got -- it requires a
 10 lot of water down these ditches. It's not -- they put the
 11 water in this parallel to the slope so there isn't -- there
 12 isn't really any slope in the ditch. We tried watering in
 13 these ditches since we've owned the property and there's so
 14 much infiltration and not enough water coming out of the
 15 spring that we can't get it -- we can't get these areas to
 16 irrigate any longer. But these areas used to be the
 17 primary -- primary focus of the agriculture on the ranch.
 18 So now I'm going to move into the upper meadows.
 19 These are the upper meadows, these are the meadows closest to
 20 the springs. They currently -- part of these meadows are
 21 still green because sometimes we can get water to them.
 22 The -- part of them are quite dry and don't really produce
 23 anymore. And the -- these areas have very dense sod that is a
 24 very good sod base in these areas.
 25 All right. These are the northeast meadows, so

1 I'm moving east of where the last -- last pictures were taken.
2 These are a little drier because they're farther out and they
3 haven't received water it looks like in many years. There
4 tends to be kind of a rolling topography, you can have these
5 lower pool areas or lower areas and then you can have some
6 higher areas. And all those areas get different amounts of
7 water, different vegetations apparently because they've been
8 getting different amounts of water.

9 So you can see there's some grass there, but it's
10 not looking real good. Then we found some snail shells we
11 find once in a while out on the ranch to indicate to us that
12 there probably was water there at one point.

13 Okay. So now we're at the center -- we're going
14 to look at the central area. There's the north meadow that we
15 just looked at and then the outer north meadow slide -- well,
16 this is the first north meadow slide is here. The second
17 north meadow slide we looked at is in the northeast corner of
18 the ranch, a little drier. There's a central high area which
19 separates the north and south meadows. And then there's the
20 south meadow below and then these -- these curves are how far
21 these areas are from Shipley's Ranch.

22 Now we're down to the southeast area. So we're
23 east of where we just -- what I just talked about. We have
24 the Romano Fields which will come up several times later in my
25 presentation and Ted's presentation. And this is John's Field

1 which is the farthest from the spring. Parts of it are more
2 than four miles from the spring.

3 And these are pictures of Romano and John's
4 Fields. It's my -- it doesn't look like there was ever --
5 it's hard to imagine that there was ever actually anything out
6 there, but aerial photos suggest that there -- another thing
7 suggested there probably was significant grass out there.
8 These are large wide areas, arched kind of basin, typical
9 water and grass would apparently grow.

10 Okay. So now I'm moving -- we're moving
11 clockwise around the ranch. This is the -- this is really
12 the -- this is in the southern meadows west of -- of Romano
13 and John's Field. And this -- this picture shows like what a
14 lot of the topography was in the area -- is in the area where
15 you have lower darker areas where water would pool and then
16 higher areas that stayed relatively -- stayed drier.

17 When water pooled down there it would soak up
18 into the margins and you could have grass growing up along the
19 margins, but it looks like most of the grass probably grew at
20 the bottom of these pools. So water would flow through
21 these -- these depressions out from the spring towards the --
22 towards the playa. It would collect mostly in the wintertime
23 when evaporation was low and then dry up during the
24 summertime.

25 MS. PETERSON: I'm going to object. I'm going to

1 object about this testimony because it's my understanding that
2 this witness has owned the ranch for two years now. And I
3 don't know what he's talking about when he's talking about the
4 water historically pooled and this is a wet area, historically
5 a wet area and this is a dry area.

6 HEARING OFFICER JOSEPH-TAYLOR: What's the
7 grounds of the objection?

8 MS. PETERSON: No personal knowledge.

9 HEARING OFFICER JOSEPH-TAYLOR: Response?

10 MR. TAGGART: Well, first of all, Mr. Frazer owns
11 the ranch, he's been on the ranch, he's seen all of the
12 evidence that we're talking about here today. He's reviewed
13 the prior maps that show where irrigation was located from
14 Boyack, which is part of the proof. He owns the ranch so he's
15 gone out into the field and seen locations where irrigation's
16 indicated on prior maps.

17 He -- he understands what area is higher than
18 other areas because he's actually walked the ground and he's
19 been out there. He's looked on the ground at things that he's
20 seeing in aerial photographs. He's -- he's walked -- he's
21 taken thousands of pictures of what he's looked at to find
22 ditches, dams, fence lines, hay corrals. And so he has
23 personal knowledge of the ranch and personal knowledge of the
24 documentation of how water was used on the ranch in the past.

25 As a ranch owner understanding how water was used

1 on the ranch in the past is common information that they gain
2 through studying what prior owners of the ranch did with the
3 water. And certainly Mr. Frazer has done that.

4 So, he -- he has -- he has the knowledge
5 necessary to talk about how water was used on the ranch from
6 his knowledge of all those -- all those documents that he's
7 looked at from his field truthing, if you will, of those
8 documents by walking out in the field.

9 We do have a number of exhibits that I can offer
10 into evidence at this time. I can walk through steps with
11 Mr. Frazer to establish his -- his knowledge and how he
12 derived that. And we can -- we can put those photographs into
13 evidence. We can put those maps into evidence. And we can
14 walk through that whole process of establishing how he's
15 gained the knowledge that he has.

16 MS. PETERSON: I think that's important that we
17 go through all that process. So we know exactly what the
18 current owner knows. And when he testifies as to historical
19 use we know what documents he's relying on. Because obviously
20 none of us were there or here, there a hundred years ago.

21 HEARING OFFICER JOSEPH-TAYLOR: I agree,
22 Ms. Peterson. I'm going to sustain the objection. You can
23 introduce the -- because it's the word historically that I'm
24 stumbling over too.

25 MR. TAGGART: Um-hum.

1 HEARING OFFICER JOSEPH-TAYLOR: You know, it
 2 appears historically is different than historically. So I'm
 3 going to sustain the objection. You want to take a ten-minute
 4 recess to figure out how you're going to --
 5 MR. TAGGART: No.
 6 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 7 BY MR. TAGGART:
 8 Q. If I can just ask you to clarify one of your last
 9 questions, when you indicated that some areas were higher than
 10 other areas?
 11 A. Um-hum.
 12 Q. In this slide that's on the screen which is --
 13 make sure I'm on the right number.
 14 HEARING OFFICER JOSEPH-TAYLOR: 17.
 15 BY MR. TAGGART:
 16 Q. Slide 17, were you talking about the difference
 17 between lighter colored areas and darker colored areas?
 18 A. Um-hum.
 19 Q. And the lighter colored areas were the ones that
 20 were higher?
 21 A. That's right.
 22 Q. Did you -- did you do a field investigation or
 23 walk the ground at Sadler Ranch?
 24 A. Many times.
 25 Q. And have you taken pictures while you do that?

1 A. These are photos of what appear to be former
 2 springs.
 3 Q. Okay. So those are pictures of springs or former
 4 springs that you took?
 5 A. Right.
 6 Q. And at the beginning of that exhibit there's a --
 7 there's a page that is a table, what is that table?
 8 A. That's the locations of the -- the latitude and
 9 longitude of those locations of those spring photos.
 10 Q. Okay. What about Exhibit 182, that's been
 11 identified in the exhibit list as fences and corrals?
 12 A. So that is -- what is your question?
 13 Q. Did you prepare that exhibit?
 14 A. Yes.
 15 Q. And what is it?
 16 A. It's pictures of the corrals, the okay corrals
 17 that we found and the fences that we found we took pictures of
 18 and walked.
 19 Q. And when you were taking those pictures and doing
 20 that -- doing that walk in the field, did you determine the
 21 location of all the fences on the ranch?
 22 A. Right. We took pictures, we had our GPS of --
 23 which had the GPS on the camera. And then also I had my son
 24 walk with the GPS unit down the fences. We spent quite a bit
 25 of time doing that.

1 A. Right.
 2 Q. And --
 3 HEARING OFFICER JOSEPH-TAYLOR: Make sure we can
 4 hear your answer.
 5 THE WITNESS: I'm sorry. Yes.
 6 BY MR. TAGGART:
 7 Q. We have marked as Exhibit 180, 181 and 182, 183
 8 and 184 photographs that -- that were taken. Did you prepare
 9 those exhibits?
 10 A. This?
 11 Q. They're Exhibit 180 through 184. Let me give you
 12 a copy of that.
 13 A. What's the title of those?
 14 Q. Just a second. So do you recognize Exhibit 180?
 15 A. Right. Yes.
 16 Q. And is that photographs of survey caps out in
 17 Sadler Ranch?
 18 A. Yes.
 19 Q. And is that provided to indicate the -- the
 20 latitude and longitude of those particular photographs?
 21 A. Yeah, it was also provided to -- we were
 22 taking -- using our camera's GPS function and to locate where
 23 the photos were on the ranch and we were using this to make
 24 sure that the GPS function was working appropriately.
 25 Q. And now, what's Exhibit 181?

1 Q. Did you later mount those maps?
 2 A. Yeah.
 3 Q. Now, if you could turn to Exhibit 183. That's
 4 been identified as irrigation infrastructure. Could you
 5 describe that, please?
 6 A. These are -- the first table is the locations of
 7 all the pictures we took. There's a lot of pictures in here.
 8 And then we have a picture of the second pages of where the
 9 pictures were located. And then beyond that are the
 10 individual pictures of irrigation ditches.
 11 Q. Now, when -- when you -- when you walked the
 12 field to find those photographs did you see ditches?
 13 A. Yeah.
 14 Q. Did you --
 15 A. A lot.
 16 Q. Did you see dams?
 17 A. Yes.
 18 Q. Describe the ditches that you saw.
 19 A. We did -- we did actually -- we looked on the
 20 Google Earth and found these long lines, we thought they were
 21 ditches so we went out there and we put it -- our -- the
 22 locations in the GPS unit. So we used that to go out and make
 23 sure we knew where we were at. And we would walk the ditches,
 24 sometimes we'd find new ditches. We made sure they weren't
 25 cattle trails. And we just -- there's many miles of ditches

1 out there.
 2 Q. And did you also find -- or you indicated you
 3 found dams. Describe those, please.
 4 A. So dams would be you get a couple of high areas
 5 then a low area in between and there'd be a linear berm of
 6 dirt or soil in between the two areas, sometimes they have
 7 culverts in them, sometimes they wouldn't. But they were
 8 linear enough to look like that wasn't a natural feature.
 9 Q. Is it the existence of those dams and ditches
 10 that you rely on when you think of how water was historically
 11 used on the ranch?
 12 A. Yes. And in low areas like these in the
 13 pictures.
 14 Q. And did the fence lines and did those also -- is
 15 that what helped inform your opinion about what historically
 16 was occurring on the ranch?
 17 A. Well, it showed to me what areas were they
 18 thought were important.
 19 Q. There's also in Exhibit 184, and that is
 20 identified as landscape photos, could you describe that,
 21 please?
 22 A. Again, we start with the table with the location
 23 of the photos. The purpose of these photos was just to get an
 24 idea of what the terrain looked like in individual areas and
 25 to be able to document that.

1 example, what exhibit are you looking at?
 2 MR. TAGGART: So -- so a question was asked about
 3 the Exhibits 180 through 184. And the way that the exhibit's
 4 prepared is that there is a table in the front of the exhibit.
 5 There is a longitude and latitude identification for every
 6 photograph.
 7 And then as you turn the page you get to a
 8 summary -- a summary picture of where all the photographs are
 9 from, but then you get to the photographs themselves. And
 10 there are four per page and the numbering is 1 in the top
 11 left, 2 in the top right, 3 in the bottom left, 4 in the
 12 bottom right and -- and so on.
 13 HEARING OFFICER JOSEPH-TAYLOR: Hold on a sec. I
 14 want to take Exhibit 181. Malcolm, would you please number
 15 that first page as Mr. Taggart just spoke so we can reference
 16 back to it? 1 is the top left, Mr. Taggart?
 17 MR. TAGGART: That's my understanding. It's an
 18 artifact of how the printer organizes it when you say print
 19 four per page, it lines it up that way.
 20 HEARING OFFICER JOSEPH-TAYLOR: Yeah, I'm just
 21 trying to mark one exhibit. So 2 is the upper right hand, 3
 22 is the lower left hand and 4 is the lower right hand. Are you
 23 satisfied with that explanation, Ms. Ure?
 24 MS. URE: Yes.
 25 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

1 Q. So, did you physically walk into the fields in
 2 order to take those photos?
 3 A. Yes.
 4 Q. And is it that -- that experience of walking in
 5 those fields that informs your belief of how water was
 6 historically used on the ranch?
 7 A. Right. And also aerial photography, things like
 8 that. They're later in the presentation to make it clear.
 9 MR. TAGGART: I'd like to move admission of
 10 Exhibit 180 through 184, please.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 12 MS. PETERSON: No objection.
 13 MS. URE: I have a slight objection in that I
 14 don't know if it was the way my exhibits printed out, but I
 15 cannot tell where each individual picture correlates because
 16 they're not numbered according to the map. So I have no idea
 17 where each of these photographs was taken. I don't know if
 18 it's the way mine printed out. Each photograph has no number
 19 to correlate to the index on the first page.
 20 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 21 record.
 22 (Short off the record.)
 23 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 24 record, please, Michel. Mr. Taggart, would you state that
 25 again for the record, please? We're looking at -- for

1 Exhibits 180 through 184 will be admitted.
 2 (Exhibits 180 through 184 admitted into
 3 evidence.)
 4 HEARING OFFICER JOSEPH-TAYLOR: Please proceed,
 5 Mr. Taggart.
 6 BY MR. TAGGART:
 7 Q. Mr. Frazer, I'm going to show you what's been
 8 marked as Exhibit 112; do you see that?
 9 A. Um-hum.
 10 Q. Do you know what that document is?
 11 A. That's the Boyack proof map. And --
 12 HEARING OFFICER JOSEPH-TAYLOR: Hold on. For the
 13 record, Boyack, B-O-Y-A-C-K. I always have to spell for the
 14 court reporter so we get it right.
 15 BY MR. TAGGART:
 16 Q. Is that 112?
 17 A. Yes.
 18 Q. And was that the -- was that the map that was
 19 submitted as part of the proof that is underlying the claim by
 20 Sadler Ranch?
 21 A. Yes.
 22 Q. And did you review the ground at Sadler Ranch to
 23 look at what was represented on that map?
 24 A. I did.
 25 Q. And did Mr. Boyack attest to irrigation occurring

1 at those locations prior to the time of that map?
 2 A. He had areas of different -- of vegetation and he
 3 had arrows in the -- showing where the water flowed through
 4 the different lower areas.
 5 Q. And did you walk in the field to identify the
 6 locations that Mr. Boyack represented as irrigated on that
 7 map?
 8 A. Yeah. Yes.
 9 Q. And is that information that informed you when
 10 you made statements about what was historically irrigated on
 11 the ranch?
 12 A. That was some of the information.
 13 Q. Okay. What other information do you rely upon
 14 when you make that statement?
 15 A. We looked at the soil was -- was -- had been --
 16 was darker, had been -- you can tell because of the high
 17 content of the organic matter that had been wet. We found
 18 some old tules out there in some of the lower areas.
 19 We could find little channels where water had
 20 been flowing in the lower areas from one area to the next, it
 21 wasn't an irrigation ditch, it was a natural channel. You
 22 could see the water flowing.
 23 Q. You mentioned soils, did you have soil samples
 24 analyzed?
 25 A. Yes.

1 HEARING OFFICER JOSEPH-TAYLOR: Hearing none, it
 2 will be admitted.
 3 (Exhibit 112 admitted into evidence.)
 4 HEARING OFFICER JOSEPH-TAYLOR: Are you
 5 satisfied, Ms. Peterson?
 6 MS. PETERSON: That's not a good question to ask
 7 me.
 8 HEARING OFFICER JOSEPH-TAYLOR: Well, I'm going
 9 to let him proceed so you might as well say yes.
 10 MS. PETERSON: I -- I am satisfied as to what I
 11 know he looked at prior to now making his presentation.
 12 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 13 Please proceed.
 14 THE WITNESS: I think we've done this slide.
 15 BY MR. TAGGART:
 16 Q. No, let's go back to that slide real quick.
 17 A. Yeah.
 18 Q. Sometimes you refer to hummocky areas.
 19 A. Yes.
 20 Q. And could you describe that for the State
 21 Engineer using this slide, for example?
 22 A. The terrain in the -- in this area of the -- of
 23 that that seems to get water as the -- there's low areas and
 24 high areas and low areas and high areas, there's about
 25 five-foot difference, plus or minus, between the low area and

1 Q. And were there differences in the soil samples
 2 between areas that looked like they were irrigated to you and
 3 areas that didn't look like they were irrigated to you?
 4 A. Right. The areas that had been irrigated had
 5 much higher content of organic matter in the soil.
 6 Q. Let's go back to your presentation. I think that
 7 we laid a foundation for Mr. Frazer's ability to indicate what
 8 he believes was historically irrigated. I think that the
 9 State Engineer can make a judgment regarding that -- the
 10 credibility of that statement based upon the information that
 11 Mr. Frazer is relying upon. We've reviewed that information
 12 to indicate how he's getting that -- that conclusion.
 13 And given that that foundation has been laid and
 14 that the State Engineer can judge the credibility of those
 15 statements, understanding the information relied upon, we
 16 think it would be appropriate for the witness to be able to
 17 continue to answer the questions the way he has been answering
 18 them. So I'll continue my direct examination.
 19 HEARING OFFICER JOSEPH-TAYLOR: Let's put
 20 Exhibit 112 in the record.
 21 MR. TAGGART: Thank you. Yes.
 22 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 23 the admission of Exhibit 112?
 24 MS. PETERSON: No.
 25 MS. URE: No.

1 the high area.
 2 If you've ever been out to the Ruby Marshes, it
 3 looks like the Ruby Marshes, very similar to the Ruby Marshes
 4 when -- if this area had water the terrain's very similar,
 5 it's kind of interconnected random topography.
 6 Q. Now, when we see area photographs later will we
 7 see that -- that -- that random hummocky area of high and low?
 8 A. Yeah.
 9 Q. Now, when you point to an area called dam, is
 10 that something you were -- is that like something you were
 11 referencing earlier where a dam was constructed between two
 12 high areas?
 13 A. Yes.
 14 Q. So could you describe that and use the
 15 photograph?
 16 A. So this is -- this is the linear feature
 17 connecting to the hummocks or high areas. And then this is a
 18 picture we took in this year out in the field of this -- of
 19 this dam. It doesn't look like a natural feature to me at
 20 all, it looks like something that somebody put in. And I
 21 can't tell from this, I can't remember if that's the culvert
 22 there in the dam or not.
 23 Q. Did -- when you saw these dams did you ever see a
 24 cut in the -- in the middle of it or some other structure that
 25 would allow water to move past it in?

1 A. Sometimes the dams had been breached if that's
 2 what you mean, yes.
 3 Q. Okay. Go ahead and move on to your next slide,
 4 please?
 5 A. Okay. So now I'm going to move further east all
 6 the way over to Sadler Brown Road into the Indian Camp Springs
 7 area. The former springs from what we can tell from what's on
 8 the ground used to be in this central area here to the west of
 9 the -- the darker square.
 10 HEARING OFFICER JOSEPH-TAYLOR: Mr. Frazer, you
 11 have to pay attention, you keep getting east and west mixed
 12 up, it's about the fourth time. I don't want to interrupt
 13 you.
 14 THE WITNESS: No, that's fine.
 15 HEARING OFFICER JOSEPH-TAYLOR: I want the record
 16 clear.
 17 THE WITNESS: Should I -- okay.
 18 HEARING OFFICER JOSEPH-TAYLOR: So we moved west
 19 into the Indian Camp area.
 20 THE WITNESS: Yeah, huh. Okay. You've done
 21 pretty good. So we moved west into the Indian Camp Springs
 22 area and west of the large dark square is where are -- where
 23 the former -- is where the former springs used to be.
 24 We can tell that by a structure that's there and
 25 where -- there's fissures in the ground and there's peat, a

1 encourage you to come out to the ranch and see what's really
 2 there. The slides don't really do it justice, they don't do
 3 the distances justice. They don't do how dry it is justice.
 4 And I would request that you come and see the ranch if at all
 5 possible.
 6 MR. TAGGART: Before you move on. Let me do some
 7 housekeeping, so I'm going to ask to be admitted some exhibits
 8 that he's talked about so far. Is that --
 9 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 10 MR. TAGGART: So one of the first exhibits was
 11 what's been marked as Exhibit 174 and 175.
 12 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 13 the admission of 174 and 175?
 14 MR. TAGGART: Those are aerial photographs that
 15 he referenced in his discussion.
 16 MS. URE: No objection from me.
 17 MS. PETERSON: No objection.
 18 HEARING OFFICER JOSEPH-TAYLOR: It will be
 19 admitted.
 20 (Exhibits 174 and 175 admitted into
 21 evidence.)
 22 MR. TAGGART: Also 1 -- oh, we did 181, 182, 183,
 23 184.
 24 HEARING OFFICER JOSEPH-TAYLOR: Yes, we did. And
 25 180.

1 lot of peat area.
 2 There's some large ditches to the northwest of
 3 the dark square, these were put in in the '60s as far as we
 4 can tell from the record and from aerial photos where they're
 5 trying to find water, they're -- they can be almost 15 feet
 6 deep. The -- the dark area that's shown on previous satellite
 7 pictures to be cultivated.
 8 BY MR. TAGGART:
 9 Q. You said the word peat, what did you mean by
 10 that?
 11 A. Peat means -- means your soil is basically all
 12 organic matter, there's no clay or silt or sand, it's almost
 13 primarily broken down like hummus from -- from vegetable. The
 14 only way you can really get that in the desert is if it's
 15 underwater and it's not decaying.
 16 Q. All right. Can you move on to the next slide,
 17 please?
 18 A. Okay. So this is a -- I'm going to go back to do
 19 an overview of the ranch. One thing I wanted to say to the
 20 State is that when Mike Buschelman came out to the ranch and
 21 when Paul Taggart came out to the ranch they had a very strong
 22 reaction to oh, my gosh, this really makes -- this really
 23 changes how I see things, this is really important that I was
 24 out here, this is really different from what I thought.
 25 And -- and so as much as possible I would

1 MR. TAGGART: Excuse me?
 2 HEARING OFFICER JOSEPH-TAYLOR: 180 through 184
 3 are already in.
 4 MR. TAGGART: Thank you. The first slide he --
 5 he talked about was the aerial that was provided by
 6 Etcheverry, it's Exhibit 406. If there's no objection I'd
 7 like to offer that into evidence.
 8 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 9 MS. URE: None here.
 10 MS. PETERSON: No.
 11 HEARING OFFICER JOSEPH-TAYLOR: It will be
 12 admitted, Exhibit 406.
 13 (Exhibit 406 admitted into evidence.)
 14 MR. TAGGART: And then 118 is the last one we
 15 talked about, which is an aerial photograph with an overlay of
 16 the ownership at Sadler Ranch.
 17 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 18 Exhibit 118?
 19 MS. PETERSON: No.
 20 HEARING OFFICER JOSEPH-TAYLOR: Hearing none, it
 21 will be admitted.
 22 MR. TAGGART: Thank you.
 23 (Exhibit 118 admitted into evidence.)
 24 BY MR. TAGGART:
 25 Q. Mr. Frazer, if you could go on with your

1 presentation, please?
 2 A. So now I'm going to talk about the aerial
 3 photography that we found. I want to talk a little bit about
 4 where we got the images. Almost all the images that I got
 5 were from the USGS's EarthExplorer website. Some of the -- a
 6 couple of the photos were from -- the 1967 photos that were
 7 from DRI in Reno and then there was a photo from the '80s that
 8 I got from MapMart in Colorado.
 9 HEARING OFFICER JOSEPH-TAYLOR: For the record,
 10 DRI?
 11 THE WITNESS: Yes.
 12 BY MR. TAGGART:
 13 Q. And you said MapMart?
 14 A. MapMart, one word. So this is what the original
 15 photo would look like, the original image that I would
 16 download would look like. This is from 1946. You can see the
 17 date of the photo here. You can see Sadler Ranch of course
 18 and Brown Ranch. This is -- this is how it was downloaded.
 19 The website has some very nice high resolution photography so
 20 you can zoom in on an area and still see a lot of detail.
 21 So what I did is I zoomed in on this area here to
 22 create the next photo. So this is -- this is that -- that
 23 same photo only in greater detail. So what we see here is --
 24 are the upper fields in the west with further east of that we
 25 see the north meadow and then the south meadow, those are

1 THE WITNESS: Yes.
 2 HEARING OFFICER JOSEPH-TAYLOR: I hate to
 3 interrupt you, but the records that say this here and that
 4 there are tough.
 5 THE WITNESS: I have been coached not to say
 6 that. Have I made any directional errors since you --
 7 HEARING OFFICER JOSEPH-TAYLOR: I don't think
 8 you've said west.
 9 THE WITNESS: Okay. So we're going to move on.
 10 This is moving south, this is Shipley Springs again. I wanted
 11 to show -- these are the -- this is the southern upper field.
 12 I think this is sometimes known as the Taft Field. We can see
 13 the Shipley Springs here.
 14 There's a couple of springs to the south of
 15 here -- to the south of Shipley Springs, you know that they're
 16 springs not only because they're dark but there's also
 17 features. This one happens to be a little mud puddle, mud pit
 18 right now. And this one has some structures that are there
 19 that suggested it was there in 1946, old structures.
 20 BY MR. TAGGART:
 21 Q. Is the latter one that you talked about is the
 22 one that's up and left to the --
 23 A. Okay. So it should be -- should be Hot Springs.
 24 The last one I talked about was on the west side of the photo
 25 south of Shipley -- directly south of Shipley Hot Springs.

1 mostly dark. They're flatter than the other areas. And then
 2 as we move out towards the east from that we get more hummocky
 3 where there's drier areas intermixed with wetter areas.
 4 So, you can see that the -- the dark areas which
 5 are either wet or have -- have vegetation, active vegetation
 6 in them and this dark area extends all the way out into John's
 7 Field, the hexagon area. And -- let's see, what else? You
 8 can see the lake, there's water in the lake up to the north.
 9 And this is -- and that's it.
 10 This is a closer image of the headquarters area
 11 in 1946. Shipley Pond is in the southwest corner. This --
 12 these areas, this is the upper -- this is the upper fields
 13 water by the upper ditch, this upper ditch is this one on the
 14 west. You can see different crops off this ditch suggesting
 15 that there's -- these areas are intensively farmed. We'll see
 16 that these areas change over time. This area and then later
 17 will be dark with vegetation.
 18 Q. That's the area you're indicating, the area you
 19 were just circling is white right now?
 20 A. Yes, it's white and it's north of -- you know
 21 this -- the lane, this would be coming off of the -- to the --
 22 coming off to the east of the headquarters.
 23 HEARING OFFICER JOSEPH-TAYLOR: And also for the
 24 record, the ditch you were talking about is on the west side
 25 of that white field and the green darker field to the north?

1 And the one that was a mud puddle or mud spit right now is to
 2 the south, southeast of Shipley Hot Springs about a third of
 3 the way down the photo.
 4 On the -- on the west side of the photo there's
 5 this long dark strip ending in a -- basically looks like a
 6 hockey stick and ending with a wider area at the bottom. The
 7 bottom area is the Indian Camp Springs. And this area here is
 8 a long area that seems to be a seep. It's a strange looking
 9 feature, it kind of perplexed me, but Ted and I walked out
 10 there one day and there's a lot of this peat and basically a
 11 line going from the top of this strip down to the bottom. And
 12 it also -- it's also in a line with Shipley Hot Springs, the
 13 other spring and Indian Camp. So we're pretty sure it's a
 14 seep.
 15 HEARING OFFICER JOSEPH-TAYLOR: A what?
 16 THE WITNESS: A seep.
 17 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 18 THE WITNESS: Now we're going to move to the
 19 southeast to Romano and John's Field. This is John's Field in
 20 the hexagon in the lower right. And this is Romano Field to
 21 the northwest corner of the photo. And we're thinking that
 22 the dark areas are probably from vegetation or water.
 23 One of the things I just tripped on when I was
 24 looking at the pictures was -- was these two photos are
 25 different, this is photo 296 in the flight path and this is

1 photo 297, so the -- so the -- so the airplane was flying from
 2 east to west. I took this picture and I took this picture.
 3 This picture shows a reflection on a lake, an
 4 area of water here that isn't shown in the picture -- oh,
 5 sorry, this area -- the photo on the right shows a reflection
 6 that's not apparent in the photo on the left and the next
 7 slide is a close-up picture of that.
 8 The photo on the left doesn't have a reflection.
 9 The photo on the right has a reflection of water in it. And
 10 this is taken on the same flight the same day. To us it was
 11 surprising to see that because it's almost three miles from
 12 the Shipley Hot Springs suggesting that -- well, obviously
 13 there was water out there. If you go out there today it's
 14 hard to imagine that there was ever water out there.
 15 This is in the northwest corner of the ranch.
 16 This is the lake again. You can see the hummocky varied
 17 topography here with water in the lower areas extending as far
 18 out as the lake.
 19 HEARING OFFICER JOSEPH-TAYLOR: In the northwest
 20 portion of the ranch?
 21 THE WITNESS: Did I say it wrong? Northeast.
 22 Please correct me every time.
 23 Okay. And this is just a summary of 1946 where
 24 water is getting all the way out to the lake in the north and
 25 all the way out down to the hexagon to John's Field in the

1 software to create one photo that I could use.
 2 This is a July 6, 1953. Again, most of the areas
 3 all the way down to the south from -- from the west to the
 4 southeast are wet, are dark.
 5 In the north part the water does not reach all
 6 the way out to the lake. The lake is light colored. This is
 7 a close-up of the headquarters area 1953. And this is
 8 technically the headquarters, I don't know if you remember the
 9 field that I talked about just to the east of the western
 10 ditch in 1946, it was barren and this area is -- has something
 11 growing in it.
 12 So -- so it looks like again that they're
 13 intentionally the managing crops they're rotating. At the
 14 lower -- lower right of the picture there's a long linear
 15 feature with water backing up behind it, a dam. This is a
 16 picture from 2013 of that same dam.
 17 Q. And that was slide 33; right, in the PowerPoint?
 18 A. I have no idea.
 19 Q. It is.
 20 MR. TAGGART: That's slide 33 just for the
 21 record.
 22 HEARING OFFICER JOSEPH-TAYLOR: It's in the
 23 bottom right-hand corner, very light.
 24 THE WITNESS: It says 34. Okay. This is the
 25 same photo. Now we're looking in the central southern --

1 south.
 2 Now we're on 1953 --
 3 MR. TAGGART: At this time I'd like to offer
 4 Exhibit 156, 1946 aerial photographs.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 6 MS. URE: None.
 7 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 156 will
 8 be admitted.
 9 (Exhibit 156 admitted into evidence.)
 10 HEARING OFFICER JOSEPH-TAYLOR: When do you want
 11 to take a break? Never?
 12 MR. TAGGART: 5 o'clock. Whenever is
 13 comfortable.
 14 HEARING OFFICER JOSEPH-TAYLOR: Let's take a
 15 five-minute recess. We'll be off the record.
 16 (Recess taken.)
 17 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 18 record. Mr. Taggart, please continue. 1953.
 19 BY MR. TAGGART:
 20 Q. Yes. Mr. Frazer, please continue with your
 21 presentation.
 22 A. So, these are 1953 -- this is a -- they're photos
 23 from 1953, July 6th. Sometimes the way they downloaded off
 24 the internet was that the photos were too -- too close in to
 25 make one photo so I trimmed them and merged them together in

1 southern meadows. In this picture you can see a lot of small
 2 dams at various places directing moving water in -- no,
 3 directing water, controlling water in the lower area, so we
 4 have one, two, three, four, five, six, seven, eight, nine,
 5 ten, I think I missed a couple, but there's a lot of dams in
 6 this photo suggesting that they were actively managing the
 7 water.
 8 This is down in the Romano area, the same
 9 picture. In the lower left of the picture there's an
 10 irrigation ditch that comes in from the west and empties into
 11 the large dark pool in the southeast corner of the picture.
 12 And this -- where this empties into this pool is 2.8 miles
 13 from the Shipley Pond outlet.
 14 Basically what I did is went on Google Earth,
 15 that -- that ditch is still there and I traced -- measured the
 16 distance on Google Earth. And there's some fences along the
 17 western -- the eastern -- the eastern part of this area
 18 basically separating this -- this -- this active area from the
 19 playa.
 20 This is John's Field, the hexagon area, in the
 21 lower -- the far southeast corner of the ranch. This area
 22 here is dark in color, it's hard to tell exactly what's
 23 growing there, but in later years this -- this -- especially
 24 the center of this will turn out quite light. And in 1973 in
 25 the picture we have this area looks very much like it's been

1 hayed.
 2 This is the same season later on, we see a drying
 3 of the ranch as the summer went on, the water isn't getting
 4 nearly so far out into the fields. And then we have some
 5 water going out a central ditch out towards the -- towards the
 6 playa here. We see this cycle over and over again where in
 7 the spring everything seems -- most everything seems to be
 8 flooded. By the end of the season everything seems to be
 9 dried out. So the -- that's important because without that
 10 you couldn't get the grass to grow because you need that water
 11 coming in every winter in order to recharge the soils.
 12 You need two things, you need the water coming in
 13 in the winter to recharge the soils and you need it dry in the
 14 summer so that the grass can grow. So this is a cycle we see
 15 over and over again.
 16 This is a picture of the irrigation ditch, this
 17 central irrigation ditch here. It doesn't look like much now,
 18 but it's pretty obvious when you're out there.
 19 I guess I was getting ahead of myself. So again,
 20 this is the irrigation cycle. This is July 6th where water
 21 was far out into the meadows, but by September 29th most of it
 22 is dried up. As far as we know it was important to get the
 23 water off the fields so that they could hay the meadows.
 24 This is May 6th, 1954. So September 29th, the
 25 previous year everything was dry and we're back to May 6th,

1 (Exhibits 157 and 158 admitted into
 2 evidence.)
 3 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 4 Exhibit 160 or 161?
 5 MS. URE: No.
 6 MS. PETERSON: No.
 7 HEARING OFFICER JOSEPH-TAYLOR: They'll be
 8 admitted.
 9 (Exhibits 160 and 161 admitted into
 10 evidence.)
 11 HEARING OFFICER JOSEPH-TAYLOR: You skipped 159;
 12 correct?
 13 MR. TAGGART: Yes, we'll be talking about that
 14 right now. Go ahead.
 15 THE WITNESS: So this is -- I wanted to see what
 16 the valley and the ranch looked like prior -- as far as back
 17 as I could. They didn't have satellite so they couldn't
 18 get -- as far as I know they didn't have satellites and they
 19 couldn't take pictures of whole areas like this.
 20 So what I did is I took a picture -- a lot of
 21 smaller, actually 42 USGS smaller photos and merged them
 22 together as I had done in the 1953 picture to create a
 23 composite picture. Most of the pictures were -- fortunately
 24 in that time frame they were all taken during the summer, it
 25 looked very similar so I was able -- I was able to create a

1 everything is wet again. This is earlier, this is all the way
 2 back in beginning of May, so most everything seems to be
 3 flooded. The lake is flooded, there's the southeast -- the
 4 central south meadows and the southeast meadows and all the
 5 way down to John's Field are dark looking, looking like
 6 they're getting quite a bit of water.
 7 This is June 28th, you remember the previous
 8 photo was May 8th. This is June 28th where the water in the
 9 northwest -- sorry, northeast corner of the ranch is not
 10 getting as far. In the previous photo on May 6th it was
 11 getting out all the way out here to the lake. By June 28th
 12 the water is receding. We're also seeing more lighter areas
 13 showing up in the southern meadows.
 14 Again, I got ahead of myself. Same thing where
 15 you can compare the lake here and on July -- on May 6th and
 16 then it's drier in late June.
 17 MR. TAGGART: At this time we'd like to offer
 18 into evidence Exhibit 157, 158, 160 and 161. Those are the
 19 aerial photographs from 1946 and 1953.
 20 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 21 157 or 158?
 22 MS. PETERSON: No.
 23 MS. URE: No.
 24 HEARING OFFICER JOSEPH-TAYLOR: It will be
 25 admitted.

1 nice image, composite image.
 2 Now I'm going to go through the different areas
 3 of the -- of the -- of the composite. This is the north end
 4 of the composite. You can see Diamond Springs in the
 5 northwest, down to the south of that in the southwest you can
 6 see the Brown Ranch or the old Siry Ranch. To the east of
 7 that you can see springs from the Thompson Ranch. And that's
 8 pretty much all the springs you can see.
 9 This is the central part of the valley. This is
 10 where there seems to be a lot of water coming up through the
 11 different springs in the area, talking starting with Sadler
 12 Ranch in the northwest you can see a lot of dark -- dark --
 13 dark areas where there was water. There's Bailey Ranch after
 14 that with a bit of water coming out of the spring.
 15 To the south of that, you can't really see it, is
 16 the Romano Ranch. And then there's Tooley Dam Springs and
 17 Sulphur Springs and some wet areas to the east of those
 18 springs.
 19 To the -- and in the southeast corner of the --
 20 of the photo you can see Maggini Ranch. And then north of
 21 that you can see the Thompson Ranch and again lower springs
 22 that are part of the Thompson Ranch.
 23 Q. Mr. Frazer, there's a Romano Ranch in this
 24 picture, is that a different location than what you've been
 25 talking about as the Romano Field?

1 A. Yeah, there is -- there is -- the same Romano
 2 owned this ranch but also owned at one point the eastern part
 3 of Sadler Ranch. We call it the Romano Field because he used
 4 to own that part of the Sadler Ranch, but this is Romano Ranch
 5 which in 1946 was actually owned by Florio, so.
 6 Q. Thank you.
 7 THE STATE ENGINEER: May I ask a question real
 8 quick? Mr. Frazer, for this slide here, slide 45, I know
 9 we're just looking at dark spots that we're going to assume
 10 are some kind of irrigation, and I know this is for
 11 illustrative purposes only, but would it be your testimony
 12 that these are all from springs and that there aren't any
 13 groundwater wells? As far as you know is that not -- you're
 14 not testifying to any of that, you're just showing --
 15 THE WITNESS: There were -- at the time there
 16 were some wells over at the Florio Romano Ranch. And I was
 17 actually looking, it's pretty dry there, and he put some wells
 18 in in the '40s and it may be that he already lost the flow out
 19 of those artisan wells by then. But everything else is
 20 definitely spring as far as I know.
 21 THE STATE ENGINEER: This question could wait for
 22 later, but since I've already interrupted you. Obviously you
 23 know the lay of the land for Sadler Ranch, did you find any
 24 old casings in the old groundwater wells that perhaps could
 25 have been used?

1 picture and the south of the picture, you can see at the very
 2 south of the picture, you can't really tell, but there's a
 3 landing strip where the county airport is. But there's really
 4 no other -- as far as I can tell farms or use of water in the
 5 area.
 6 This is the picture comparing the 1954, what the
 7 valley looked like in 1954 compared to current. In the 1954
 8 picture you can see Sadler Ranch on the northwest side of the
 9 picture with two large arms protruding out into the playa of
 10 water.
 11 You can also see something similar only on a
 12 smaller scale for the Brown Ranch to the north of that.
 13 In the 2012 pictures you can see the remnants of
 14 those arms, the dry ground where those arms used to be for
 15 Sadler Ranch, but it's really hard to see water, there's maybe
 16 a little bit of green in the far west portion of the ranch
 17 right below the springs, but it's -- even that's not a very
 18 healthy looking green. Everything else seems to be dry.
 19 There's also a lot of pivots at the south end of the picture.
 20 Okay. So now I'm going to move ahead to 1973.
 21 Again, this is at the end of the season, water is not moving
 22 very far, but I'm going to zoom into some -- this photo had
 23 some really good resolution in it, now we see some things that
 24 we weren't able to see in other pictures.
 25 This is the Indian Camp area in the -- in the

1 THE WITNESS: There's a well right here that was
 2 put in around 1960.
 3 THE STATE ENGINEER: And "right here" is?
 4 THE WITNESS: Right -- right at the north end of
 5 John's Field, the north end of the northwest end of the
 6 hexagon.
 7 THE STATE ENGINEER: Which year?
 8 THE WITNESS: 1960. And there's also actually a
 9 little tiny casing, a four-inch casing up in the north end of
 10 the ranch that I have no idea how old it is.
 11 HEARING OFFICER JOSEPH-TAYLOR: For the record,
 12 he was pointing to the arrow pointing to the southwest off the
 13 Sadler Ranch.
 14 THE STATE ENGINEER: Thank you.
 15 THE WITNESS: That's it.
 16 BY MR. TAGGART:
 17 Q. What's your understanding of those wells and how
 18 they're used, the ones you just described on the Sadler Ranch?
 19 A. They're small four-inch wells for cattle --
 20 cattle watering.
 21 Q. Thank you.
 22 A. This is the southern end of the valley. These
 23 are the sulfur springs, these are up far -- far upper
 24 northwest corner of the picture. And then there's some farms
 25 at the base of the Diamond Mountains on the east side of the

1 blown-up photo on the upper right you can see irrigated area
 2 below Indian Camp Springs, which is a square area on the -- in
 3 the middle of the photo. North of Indian Camp Springs the
 4 irrigated area to the very top of the picture and then to the
 5 very far west of the picture you can see a couple of
 6 haystacks.
 7 This is the headquarters area. And again,
 8 towards the lower part of the picture in the far right part of
 9 the picture you can see additional haystacks.
 10 Now we're going to go out all the way out towards
 11 the Romano Field, the south end of the Romano Field. And
 12 again, you have a picture of a haystack in the middle of the
 13 photo, you can see around the haystack a square what looks
 14 like could be a square fence. That square fence is still
 15 there today and that's -- that's seen in the photo at the
 16 bottom.
 17 If you look where the yellow square is in the
 18 picture to the lower left that -- you can see that there's hay
 19 production pretty far out into the -- pretty far out from --
 20 pretty far from the springs towards the east towards the
 21 playa.
 22 This is a picture of John's Field, same year.
 23 The center of the photo you can see it looks like it's been
 24 mowed. You remember 1953 I talked about a dark area in the
 25 center of this. This area is now light suggesting it was

1 drier then. In the very far upper left of the picture you can
 2 see what looks like it might be haystacks, I can't guarantee
 3 that, but that's where currently a hay corral is.
 4 So this is hay -- this is hay -- harvesting hay
 5 as far as out three -- more than three miles from the spring.
 6 This is 1985, the first time we have color.
 7 MR. TAGGART: Just a second. Could we offer into
 8 evidence 159, 616 and 163, please?
 9 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 10 the admission of Exhibit 159? Hearing none, it will be
 11 admitted.
 12 (Exhibit 159 admitted into evidence.)
 13 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 14 the admission of Exhibit 163? Hearing none, it will be
 15 admitted.
 16 (Exhibit 163 admitted into evidence.)
 17 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 18 the admission of Exhibit 616? Hearing none, it will be
 19 admitted.
 20 (Exhibit 616 admitted into evidence.)
 21 BY MR. TAGGART:
 22 Q. Thank you. Go ahead.
 23 A. All right. So now we're in 1985, we have color.
 24 This is June 16th, there seems to be water in the lake area.
 25 You can see the upper fields seem to have -- seem to be green

1 used to get water there, no longer getting water. Up at
 2 the -- up at the springs they can decide where they're going
 3 to send water, they can send it to the south, they can send it
 4 to the north. It could be that they sent -- they had more of
 5 a desire to water the northern meadows and they sent -- the
 6 similar water -- similar amount of water to the north and
 7 basically shorted, they didn't have enough water so they
 8 shorted the south end of the -- of the ranch.
 9 This is 2006. All the areas on the east are
 10 completely dry. If you go out there now it's not like they
 11 have water some part of the year, they never have water. Levi
 12 Shoda --
 13 Q. Just a second. You referred to Levi, could you
 14 just state that name for the record who that is?
 15 A. Levi Shoda. He's the ranch foreman.
 16 Q. And how do you spell his last name?
 17 A. S-H-O-D-A.
 18 Q. Okay. Thank you. Please continue with your
 19 testimony.
 20 A. He got down there a few weeks ago to 12 feet in
 21 the southern meadows here and found no water and it was
 22 completely dry. So there's no water, it's not like it's
 23 seasonal, it's just dry all the time. This is May 24th which
 24 is supposed to be the wettest part of the season. The upper
 25 fields aren't being watered. The -- the northern and southern

1 and have them irrigated. The north meadow and the south
 2 meadow are irrigated. You can see the varying topography in
 3 the south meadow. But in 1985 the John's Field appears dry.
 4 There doesn't seem to be much water there.
 5 Also these areas in the south meadow looked
 6 like -- it's hard to tell, but it looks like they're drier
 7 than you had seen in previous photos.
 8 Q. When you said "this area" you were talking about
 9 the area where the arrow is pointed, it says, "only parts of
 10 the south meadow appear wet"?
 11 A. Yes, that's correct.
 12 Q. Thank you.
 13 A. This is the Indian Camp area for June 16th, 1985,
 14 the same photo we're looking at. But if you remember in 1946
 15 I was talking about a long -- a long seep heading north to
 16 Indian Camp Springs. This is that same -- the inlay is from
 17 1946, the picture of that long seep, but in 1985 that seep no
 18 longer seems to be visible.
 19 I'm going to move ahead to 1994. June 10th,
 20 there's a lake up in the northeast portion of the ranch.
 21 Again, this appears wet. I thought it was pretty surprising
 22 because this is fairly long and there's a drying up of the
 23 ranch.
 24 But if you look at the southern -- southern part
 25 of the ranch there's very little -- there's large areas that

1 meadows, the western part of those meadows aren't looking very
 2 green and everything, most everything east of that is dry.
 3 And then this is October 6th, 2012, this is just
 4 a Google Earth image, it's the end of the season, it's
 5 supposed to be dry, but again, the wet areas are restricted to
 6 the western portions of the north and south meadows.
 7 This is an overview of the ranch taken on -- in
 8 May 2013 by Ted Yednock.
 9 HEARING OFFICER JOSEPH-TAYLOR: Spell Yednock.
 10 THE WITNESS: Y-E-D-N-O-C-K. This is the wet
 11 part of the season, there's some wet areas. You can see the
 12 Hot Springs here, the headquarters -- Hot Springs on the lower
 13 right portion of the picture. We can see the headquarters in
 14 the bottom of the picture. And just above headquarters you
 15 can see the north meadow, the green and north meadow, this
 16 is -- this is May, this is the wettest time of the year.
 17 We're looking primarily beyond the north meadow,
 18 we're looking at the southern meadow and out to John's Field,
 19 this is the southern meadow towards the middle of the picture
 20 out to John's Field and the hexagon with the playa, the white
 21 playa behind it. All those areas are dry in May.
 22 MR. TAGGART: All right. Just a second. Can we
 23 admit also -- or offer into evidence Exhibit 170, 171, 173 and
 24 174?
 25 HEARING OFFICER JOSEPH-TAYLOR: 174 is already

1 in.

2 MR. TAGGART: Thank you.

3 HEARING OFFICER JOSEPH-TAYLOR: Any objection to

4 the admission of Exhibit 170? Hearing none, it will be

5 admitted.

6 (Exhibit 170 admitted into evidence.)

7 HEARING OFFICER JOSEPH-TAYLOR: Any objection to

8 the admission of Exhibit 171? Hearing none, it will be

9 admitted.

10 (Exhibit 171 admitted into evidence.)

11 HEARING OFFICER JOSEPH-TAYLOR: Any objection to

12 the admission of Exhibit 173? Hearing none, it will be

13 admitted.

14 (Exhibit 173 admitted into evidence.)

15 MR. TAGGART: Thank you.

16 BY MR. TAGGART:

17 Q. Continue on.

18 A. Okay. Finally moving on to a different section.

19 That was a long section, this next one should go faster. This

20 is a -- this is a time series section, this is a picture of --

21 this is a picture from 1920 -- from the '20s. In the north

22 you can see Shipley Hot Springs in the middle of the picture.

23 There were no trees at that time.

24 And then this is a picture taken from roughly the

25 same place, the lower picture is taken from roughly the same

1 Spring starting in '46 to '53 moving all the way to 2006.

2 Some of the photos in the time series I was very

3 sensitive about making sure it was the same time of year. I

4 didn't think -- I didn't think that -- I've never seen any

5 evidence that Shipley Springs changes that much according to

6 the time of year. So I just took as many photos as I could

7 get.

8 If you look at Shipley Springs there's a -- in

9 the 1946 picture in the middle of the springs there's kind

10 of -- like a little -- it almost looks like a dock out in the

11 middle of the spring. That's an old -- what we think might be

12 an old dam. It's an area of soil that's pretty close to the

13 water line of the -- of the pond. And then you can sort of

14 make out to the north a couple of irrigation ditches heading

15 towards the top of the photo.

16 This similar configuration with this narrow strip

17 of land here continues pretty much through all the photos. In

18 the -- in 2006 it tends to get a little blurred there. We

19 think it might be extra plant growth or whatever, but you

20 could still see in the 2006 picture a couple of irrigation

21 ditches heading out to the north almost like a couple of

22 antennae.

23 We wanted to put this in showing that Shipley

24 Springs had stayed pretty constant in appearance the whole --

25 from 1946 to 2006. This is a time series of the upper fields,

1 place of Shipley Hot Springs with the year, you can see the

2 prints.

3 MS. PETERSON: I have a question. There's been

4 no foundation for the 1920s photo, where it was taken, who

5 took it, how you got it.

6 MR. TAGGART: Right. We're going to do that with

7 a different witness, I guess I could try it with this witness.

8 But -- okay.

9 THE WITNESS: I can skip this whole --

10 HEARING OFFICER JOSEPH-TAYLOR: You can't talk

11 over him, Mr. Frazer.

12 THE WITNESS: Sorry.

13 MR. TAGGART: Yeah, there's another witness who's

14 going to lay the foundation for the 1920s photographs. I can

15 call him out of order and just have him do that right now.

16 HEARING OFFICER JOSEPH-TAYLOR: Can we just wait,

17 Ms. Peterson?

18 MS. PETERSON: That will be fine with the

19 understanding that this witness doesn't have the foundation --

20 MR. TAGGART: Yes.

21 MS. PETERSON: -- to talk about that.

22 MR. TAGGART: I don't know if he does or not, but

23 the other witness definitely does.

24 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

25 THE WITNESS: So this is a time series of Shipley

1 1953 is in the far left of the photo. Again, we can see

2 things don't -- most of the areas of the upper fields are

3 getting water from 1953 to '54 to '67. '67 was a year to year

4 because even the back -- everything seemed to get wet that

5 year, everything seemed to be dark, so it's hard to tell what

6 exactly was going on.

7 1982, again, it looks fairly wet in the upper

8 fields, but by 1994 the upper -- the far west or upper

9 irrigation ditch, the area below that ditch to the east is not

10 irrigated possibly because they didn't have enough water, but

11 in 2006 none of this area was watered possibly because there

12 wasn't enough water to irrigate the upper field.

13 This is -- these are the two -- this is a picture

14 of Shipley Springs and the springs just south of Shipley

15 Springs and then it seeps along the Sadler Brown Road. You

16 have Shipley Springs in the top of the photo of the 1946

17 portion of the photo of this slide and then below that you

18 have -- you have a dark area which is another spring and to

19 the south of that, southeast of that picture you -- that

20 spring you have another spring.

21 You follow the time sequence of these springs,

22 1973 they're starting -- they don't look as dark potentially

23 because they're drier. By 1985 they're quite clearly drier

24 and by 1994 there's really no indication that there's much

25 water there.

1 This is the northeastern meadow where -- in the
2 lake area. And what's interesting to me about this is that
3 this is -- these are all pictures taken in May and -- from
4 late May and early July to try to get the same time of year
5 for these different photos.

6 There's water -- there's water in the lake most
7 years all the way up to 1994 and then in 2006 there's no
8 water. What's interesting to me which we talked about before
9 was that there was water out all the way as far as this lake
10 in 1994, as late as 1994.

11 This is the Romano -- John's Field area near the
12 hexagon in the southeast portion of the ranch. In '46 you can
13 see there's the upper -- the northwest portion of the photo as
14 the lower areas are fairly uniformly dark. The same in 1953,
15 '54.

16 By '82 it's hard to tell really what's going on,
17 but by '83 the areas that were -- I'm going to leave that one
18 alone.

19 By '85 -- I'm getting tired. But by 1985 in the
20 northwest section of the 1985 picture is dry, the meadows
21 areas that were formerly wet are not -- are not wet, you can
22 see them wet in '46, '53, but they're not in '85, they're
23 certainly not in '94 and they're definitely not in 2006.
24 Again, this is the northwest portion of these -- of '85, '94
25 and '06.

1 MR. TAGGART: Thank you.

2 BY MR. TAGGART:

3 Q. Please continue.

4 A. First map I'm going to show is a topographical
5 map from 1986. This topographical map shows Shipley Springs
6 on the far west of the -- of the photo or the map. It may be
7 hard to see in the back of the room, but there's -- it shows
8 also blue lines following what we know are irrigation ditches
9 or it looked like irrigation ditches.

10 And then it also showed the areas, the lower
11 areas which in the satellite pictures have appeared dark. And
12 in the one picture with the reflection shows that it was water
13 there. The USGS also shows that these areas can be wet at
14 times, perhaps Pyramid Lakes.

15 To the north you can see the lake here with a --
16 there's a darker line around it similar to -- there's a darker
17 line around Shipley Hot Springs suggesting that the USGS
18 thinks that there are -- those areas are wet more than the
19 other areas.

20 Q. There's also a legend on the bottom left. What
21 is that?

22 A. So this is a legend which shows what the
23 definition of perennial lake and pond is, it's an intermittent
24 lake or pond.

25 Q. Thank you.

1 And then just to compare there's 1946 and 2000
2 photos where 1946 water was going all the way out to John's
3 Field, the hexagon and it's no longer doing that. Okay.

4 So now I'm going to go into a short section on
5 ranch mapping.

6 MR. TAGGART: Can I just offer the final areas
7 into evidence? We have a group of numbers here. Exhibit 156,
8 161, 162, 164. I'll offer those right now.

9 HEARING OFFICER JOSEPH-TAYLOR: 156 is already
10 in. 161's already in.

11 Any objection to the admission of 162? Hearing
12 none, it will be admitted.

13 (Exhibit 162 admitted into evidence.)

14 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
15 the admission of 164? Hearing none, it will be admitted.

16 (Exhibit 164 admitted into evidence.)

17 MR. TAGGART: Also 165, 166, 167, 168 and 172.

18 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
19 the admission of 165 through 168? Hearing none, they'll be
20 admitted.

21 (Exhibits 165 through 168 admitted into
22 evidence.)

23 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
24 the admission of 172? Hearing none, it will be admitted.

25 (Exhibit 172 admitted into evidence.)

1 MS. PETERSON: I'm sorry, what's the red outline?

2 THE WITNESS: That's the property boundary for
3 the Sadler Ranch.

4 This is a copy of -- what Allen Boyack drew for
5 the 1980 proof. It shows -- what he did is he took some areas
6 of the ranch and then delineated the different types of
7 vegetation that were in the ranch. And then in the very
8 bottom of the -- of the map he totalled them up by quarter
9 sections, 16 sections of different kinds of etches for each
10 type of vegetation.

11 I took that map and I -- it's really hard to read
12 and see what's going on the map. So I took each area and
13 color coded it by how he designated it just so you can get an
14 idea of what he was -- what he was mapping. The dark blue on
15 the far left is water, in this case in the far left it's
16 Shipley -- it's Shipley Pond.

17 The medium blue areas are the upper -- the upper
18 fields, he called that alfalfa. And then you could see the
19 area down in Shipley -- Indian Camp Springs, they irrigated
20 acres each called alfalfa.

21 The turquoise, the lighter blue are the hayed
22 meadows, what he called the hayed meadows and then the darker
23 green and the regular green or the medium green are the -- are
24 meadows. The yellower areas are areas that are either sage or
25 not irrigated.

1 This is a comparison of the 1954 photo to the
2 Boyack map. The -- the darker areas that he has mapped on
3 here track pretty well with the dark -- with the -- the areas
4 that Boyack has mapped track pretty well with the darker areas
5 on the -- on the photo suggesting that the lower areas -- the
6 darker areas are the same areas that he considers to be meadow
7 or hayed meadow.

8 Oh, one more thing. Boyack -- we found quite a
9 few areas where he didn't include acreages and we don't know
10 why right here north of the hexagon south of the Romano area.
11 There's an area -- you can see an area on his map where there
12 wasn't -- that vegeta -- wet areas weren't -- wet areas that
13 probably had vegetation weren't noted on his map. This is
14 again between the Romano area and the John's Field or hexagon.

15 BY MR. TAGGART:

16 Q. Do you know if he included any lands that were
17 designated as irrigated in his opinion that were not on
18 private property?

19 A. No, he did not. Yeah.

20 Q. Can you explain, that my question might have not
21 come through clearly, so?

22 A. Well, there's -- well, there's areas that --
23 where irrigation where the water would go past the boundary on
24 the BLM land and he stuck right to the property boundary,
25 anything that was beyond the property boundary he did not

1 There's ditches off to the north, and -- and then
2 there's a swamp -- a swamp is noted off to the -- off to the
3 east.

4 MR. TAGGART: Okay. At this time I'd like to
5 offer into evidence 110 and 111, those are the two BLM plat
6 maps, 177, which is the USGS topo, 198, which is the legend
7 for that topo and Exhibit 113.

8 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
9 the admission of 110? Hearing none, it will be admitted.
10 (Exhibit 110 admitted into evidence.)

11 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
12 the admission of Exhibit 111? Hearing none, it will be
13 admitted.

14 (Exhibit 111 admitted into evidence.)

15 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
16 the admission of Exhibit 113? Hearing none, it will be
17 admitted.

18 (Exhibit 113 admitted into evidence.)

19 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
20 the admission of Exhibit 177? Hearing none, it will be
21 admitted.

22 (Exhibit 177 admitted into evidence.)

23 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
24 the admission of Exhibit 198? Hearing none, it will be
25 admitted.

1 include in his map.

2 Q. Thank you.

3 A. I'm going to briefly touch on the 1879 BLM plat
4 maps. This is a picture of the two different maps that
5 were -- that we're going to talk about.

6 This 24 north, 52 east on the left and 24 north,
7 53 east on the east -- or right.

8 This is a 1979 24 north, 52 east map. Where
9 there's a lot of activity right along the -- the border
10 between the two -- between the two townships. You want to go
11 back?

12 So this yellow line is the township. And so
13 we're looking at everything just to the west and the east of
14 this township has a lot of activity pretty much is where the
15 ranch is.

16 Now I'm going to go to -- this is the 24, 53
17 east. I know you can't read anything on this map because it's
18 impossible to read. So what I did is I zoomed on the small
19 area of the 24, 52 east -- 24 north, 52 east map. This is a
20 small area of that map where I zoomed in and here we can see
21 that Big Shipley Springs is noted, a house is noted, a small
22 spring is noted. If you remember in our previous photos we
23 talked -- we talked about a small spring just south of Shipley
24 Hot Springs that dried up in the mid-'80s or whatever. This
25 is that same spring.

1 (Exhibit 198 admitted into evidence.)

2 MR. TAGGART: Thank you.

3 BY MR. TAGGART:

4 Q. Go ahead.

5 A. Okay. This is a section on springs. I'm going
6 to start by talking about the spring just south of Shipley Hot
7 Springs. This is the one we talked about several times, the
8 1946 photo. This is -- the picture on the -- the larger
9 picture on the slide shows what that springs looks like in
10 2013. It's a bit of a depression there. They tried to get
11 some sort of distribution system there at one point, but it
12 stopped flowing it looks like a number of years ago. And
13 that's the condition of that spring.

14 If you look at the upper left of the slide
15 there's a top -- U.S. topo map of that same area and they have
16 it named Shipley Hot Springs.

17 Q. Could you go back to that briefly? Just to be
18 clear about that, that's from Exhibit 177 and that's the USGS
19 topo; correct?

20 A. Uh-hum.

21 Q. And so the Shipley Hot Springs words are not next
22 to what you believe to be Shipley Hot Springs?

23 A. Right. Shipley Hot Springs should be north to
24 that.

25 Q. Thank you.

1 A. This is Indian Camp Springs. Again, it looks
 2 like an attempt to get the water to flow with tires and it
 3 didn't seem to work.
 4 Now I'm going to talk about springs that are off
 5 of the ranch to the south of the ranch. This is 2012 -- a
 6 photo from 2012, Google Earth. I then -- we started the north
 7 with Shipley Hot Springs in the far northwest corner of the
 8 photo.
 9 Moving south of that there's Bailey's Springs
 10 which now is -- it doesn't flow anymore and now it's pumped
 11 into a pivot.
 12 Below that is the Romano Florio Ranch Spring
 13 which is now pumped into wheel lines.
 14 There's an unnamed spring south of that, Tooley
 15 Dam Spring south of that and Sulfur Spring south of that until
 16 you get to Pony Express Road at the bottom of the slide. All
 17 of the springs are dry except for Shipley Springs in the
 18 north.
 19 This is a 1946 picture of those same springs.
 20 Starting from the very top of the photo you can see the -- you
 21 can see the bottom of John's Field, the bottom of the hexagon
 22 in the very top of the picture. This is Bailey. And then
 23 Bailey Springs is in the upper left of the picture. While as
 24 you move down you can see the Romano Florio Springs. Then
 25 further down there's the unnamed spring. Tooley Dam Spring is

1 Tooley Dam Springs in the middle and then there's Sulfur
 2 Springs below that from 1946.
 3 Currently, those same areas are dry. You can see
 4 the remnants in the pictures, but they're very dry.
 5 This is Tooley Dam Springs currently. Sulfur
 6 Springs and -- and again, this is the -- this is the same area
 7 in 2012 where everything just pretty much dried up.
 8 One of the things that Dwight will talk about is
 9 the springs at the south end of the playa that dried up.
 10 Q. Just for the record, Dwight Smith?
 11 A. Dwight Smith.
 12 Q. Thank you.
 13 A. This is -- you can see in the -- in the top left
 14 picture the area that I've zoomed in on here is in the yellow
 15 square. To the left of the yellow square you can see the
 16 Romano Florio Ranch. The area that I zoomed in and is blown
 17 up in the lower right part of the picture shows a number of
 18 dark areas, some of which -- some of which were water at that
 19 time, I'll get into more of that later, but there's a number
 20 of wet areas in 1946.
 21 We spent some time out there looking for these
 22 wet areas and we found every time we -- what we did is we took
 23 GPS coordinates of the -- off of Google Earth and went to find
 24 them on the ground last summer and we found dry -- dry
 25 remnants of springs where we had -- where before they were

1 below that. Sulfur Springs is below that.
 2 This is a 1949 topographical map for Garden
 3 Valley which shows the Romano Ranch, it shows a swamp off to
 4 the -- to the east of Romano Ranch and Tooley Dam Springs.
 5 Heading towards the north there also shows some
 6 wells on Romano Ranch way back in 1949. There's also a little
 7 bit of swampy area near Sulphur Springs.
 8 I'm going to zoom into the Romano Florio Ranch in
 9 1946. You could see about a square that was irrigated in the
 10 center of the dark area, a square area in the center of the
 11 photo that was irrigated. And then to the very far northwest
 12 portion of the photo there's a small area that was irrigated
 13 right below a spring. This of course is all drying out.
 14 This is what the -- what Romano Ranch looks like
 15 today. The former area at the very far northwest of the ranch
 16 is now dry and they're getting water for -- from an irrigated
 17 well, irrigation from a well.
 18 Just east of Romano Ranch there's a -- see where
 19 the old swamp is, this is a -- kind of a picture of the soil
 20 in the area. The darker areas in the middle of the picture
 21 are the remains of vegetation poking it -- it's poking out of
 22 the soil which suggests that it was wet at one point because
 23 it's just -- it's solid decayed vegetation.
 24 Moving south to Tooley Dam and Sulfur Springs at
 25 the top of the picture there's the unnamed spring, there's

1 previously springs; right. It was dry where it was formerly
 2 wet.
 3 And then we did the same -- I did the same around
 4 the same reflecting water as I did in the other photo from
 5 1946. This yellow square should actually be moved over closer
 6 to -- it should be moved over to the east a little bit. But
 7 this is the area that it's -- that we zoomed in on the far
 8 right of the 1946 picture, you can see a dark area and then in
 9 that 1946 picture that was taken in the same flight you can
 10 see the reflection of water. So there was water in that
 11 spring in 1946.
 12 In 2012 there it was dry. You can see that in
 13 the lower picture on the lower left. We didn't get a picture
 14 of that -- that spring this summer, we didn't make it up
 15 there. But this is another spring in the south end of the
 16 playa what it looks like when it's dry.
 17 Now I'm going to move into irrigation
 18 infrastructure. What we found on our ranch was --
 19 MR. TAGGART: Let me just offer a few more into
 20 evidence, excuse me. 155 we offer into evidence.
 21 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 22 the admission of Exhibit 155? Hearing none, it will be
 23 admitted.
 24 (Exhibit 155 admitted into evidence.)
 25 MR. TAGGART: And 176, please.

1 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 2 the admission of Exhibit 176?
 3 MR. TAGGART: Yes.
 4 HEARING OFFICER JOSEPH-TAYLOR: Hearing none, it
 5 will be admitted.
 6 (Exhibit 176 admitted into evidence.)
 7 MR. TAGGART: Thank you.
 8 BY MR. TAGGART:
 9 Q. Go ahead.
 10 A. Okay. Now we talk about irrigation
 11 infrastructure. This is a Google Earth photo. And what we
 12 did on this photo was we drew in blue where we found the
 13 irrigation ditches -- irrigation ditches. And the red is
 14 where we found all dams. We mapped 19 and a half miles of
 15 ditches and 9200 feet of dams.
 16 Q. Now, just for the record we're on slide 94 now;
 17 is that correct?
 18 A. Yes. This is -- the slide 94 is the water
 19 distribution at Shipley Springs. This is again Shipley
 20 Springs and you can see the irrigation ditches coming off of
 21 the screen. In the center of the photo you can see a red dam
 22 that's holding water in a holding pond. We use that holding
 23 pond to divert water -- to use it to divert water and to
 24 different irrigation ditches.
 25 This is an irrigation -- this picture is an

1 field, the very far north -- northernmost section of the
 2 ranch. You can see four different dams labeled here. The dam
 3 in the upper right is the one in the inset photo on the upper
 4 left. And then again, this is an overview of the irrigation
 5 infrastructure. We believe that water was stored in the
 6 reservoir, it was distributed in the ditches and they managed
 7 how it flowed behind the dams.
 8 Q. Mr. Frazer, let me just clarify, in the last
 9 couple of slides you were talking about an aerial photograph
 10 that you blew up in slide number 95, it indicates that that
 11 was Exhibit 174 that that aerial came from; is that right?
 12 A. The aerial here?
 13 Q. Okay.
 14 A. Okay. Yeah.
 15 Q. Is that the same aerial that you used in the
 16 following two slides?
 17 A. Yes.
 18 Q. All right. Thank you. You can continue.
 19 A. The next section is fences and hay corrals. When
 20 we talked about walking around the ranch this summer using the
 21 Google Earth to try to find things that looked like they might
 22 be hay corrals and going out there and verifying that they
 23 were, sometimes we found things that we thought were hay
 24 corrals on the satellite photo, we went out there and it turns
 25 out that there wasn't anything there. These are the ones we

1 irrigation ditch in the Romano area in the south part of the
 2 Romano area. And the picture on the upper left of the slide
 3 in the blue square you can see there -- well --
 4 Q. In the yellow square?
 5 A. What did I say?
 6 Q. You said blue.
 7 A. The yellow square is the area that we're talking
 8 about. And in this blowup of that yellow square we can see
 9 where the ditch -- the irrigation ditch splits into two
 10 different ditches. We can see a fence on the north side of
 11 the ditch, especially on the left side of the photo. And then
 12 up to the north we can see a road. We know that we are
 13 looking at an irrigation ditch and not a road, we can
 14 distinguish between the two.
 15 This is a ground level picture of that same ditch
 16 in 2013 with the split in the middle. In the upper right
 17 portion of the photo you can see the same fence through the
 18 top of the photo, Diamond Mountain is off to the east.
 19 Now we're going to go up to the northeast to the
 20 lake. And off to the southeast corner of the lake there's a
 21 ditch that looks like it empties the lake at -- at times.
 22 That ditch is about two miles from Shipley Hot Springs. And
 23 then in the upper right portion of the slide you can see --
 24 that's me walking down the ditch last spring.
 25 This is a slide of dams. This is in the north

1 found and we verified yellow -- the yellow areas on the --
 2 yellow marks on the photo are the hay corrals and the blue
 3 lines are the fences.
 4 This is down -- this area is down in the
 5 Romano -- Romano between the Romano and John's Field, our
 6 southeastern corner of the ranch. In the center of the photo
 7 you could see hay corrals marked yellow and then up to the
 8 north you can see -- up north of that you can see hay corrals
 9 and then to the very far bottom of the picture to the south
 10 there's another hay corral.
 11 If you're out there and you're looking at this
 12 hay corral it looks like it would be impossible for anything
 13 to ever grow out there currently, but obviously something --
 14 something was there. Actually, that area we saw in 1973 that
 15 there was -- they had harvested hay in the same area, but just
 16 now it looks like it would be impossible.
 17 I'm going to talk about a couple of soil
 18 investigations. The first was the one that was done by Eureka
 19 County. They -- apparently they got this report by going
 20 online at the Natural Resources Conservation Service website.
 21 What you do is you can outline an area and then
 22 it will develop a report for your area.
 23 Q. Mr. Frazer, could you just describe that in a
 24 little more detail? So how can you develop a report like this
 25 online?

1 A. So you go to the NRCS website, there's a place
 2 where you can -- you can a soil investigation. You enter it
 3 in -- I think you draw a line -- I think you draw a line
 4 around your property and you press the button and you get this
 5 report that spits out.
 6 Q. Thank you.
 7 A. It's five minutes. I took this -- I looked at
 8 this report and tried to see how closely what was going on
 9 with our ranch and it seemed to be pretty reasonable. I'm
 10 going to talk about pretty much -- I'm going to talk about the
 11 pink area in the photo which is -- which are the meadows.
 12 Before it says that there's 2400 acres or 20 --
 13 almost 2500 acres of -- of this kind -- this pink area which
 14 is the -- which they -- when they classified the soil for this
 15 area they classified it as a Bicondoa Dianeve soil, 60 percent
 16 of it was Bicondoa, 30 percent of it was Dianeve. And because
 17 it was all mixed together, they call it the Bicondoa
 18 Association. So there's 2473 acres of this Bicondoa Dianeve
 19 Association which is the pink area within the property of
 20 Sadler Ranch.
 21 So this soil type as I said before, there's 60
 22 percent Bicondoa, 30 percent Dianeve and I think ten percent is
 23 other, undefined. There's 2500 acres of it. In the report it
 24 says that these areas are poorly drained or somewhat poorly
 25 drained. It turns out that the Bicondoa soil is the lower

1 classification. And W says that there are soil -- it stands
 2 for water -- soils for which excess water is a dominant hazard
 3 or limitation affecting their use, poor soil drainage, high
 4 water table, et cetera. So these soils are wet all the time.
 5 They're difficult. That limits their capability of growing
 6 things.
 7 I looked in the Diamond Valley soil survey
 8 published in 1980 which was where they probably got their
 9 information and there is a little more detail about these --
 10 this disassociation. In that document again they said
 11 permeability is flow, runoff is slow, but for agricultural use
 12 they said these soils are mainly used in native pasture, small
 13 acreages for cut hay and they provide livestock grazing,
 14 wildlife habitat, which fits pretty well with how we were
 15 using the soil.
 16 Q. Mr. Frazer, this information on this slide, does
 17 this come from a table that you prepared previously?
 18 A. Yeah.
 19 Q. And I'm going to show you what's been marked as
 20 Exhibit 191. Is that the -- the table that you derived the
 21 information on this slide from?
 22 A. Right.
 23 Q. All right. And you prepared that table that's
 24 Exhibit 119?
 25 A. Yeah, I wanted to simplify it.

1 areas that we saw, remember we saw the pictures of the
 2 hummocks in the low areas and the high areas. The Bicondoa is
 3 the lower area of that -- of that and the Dianeve soil is the
 4 high areas. It makes sense that they would differentiate
 5 those two kind of soils because they are very different. The
 6 Bicondoa is poorly drained, the Dianeve is somewhat poorly
 7 drained, again, it makes sense because the water would pool
 8 down in the bottom of these lower areas.
 9 The depth to water table in the Bicondoa are the
 10 lower areas is zero to 24 feet and the land capability is
 11 called 5W, which is -- which is their classification of how
 12 well it can do agriculturally and we'll get into that in a
 13 minute again, the fact that they're saying this is an old
 14 soil. Classifying this soil as having a water table 24 feet,
 15 24 inches suggests that this soil has been routinely wet for a
 16 long time. This is the way soils develop, this is the way
 17 it's classified, it's not really management, it's just the way
 18 the soil evolved.
 19 Okay. So I'm going to look -- talk about the
 20 capabilities of these two kinds of soil. The Dianeve soil has
 21 a classification of three, which has severe limitations. The
 22 capability class of Bicondoa also says that there's severe
 23 limitations. The most important thing in this case is well,
 24 why do they have -- why are they limited? And so the 3W and
 25 the 5W, you have to look at the W which -- in that

1 Q. And if you could go back one slide, please? The
 2 information that's on this slide, did that all come out of the
 3 resources documents that you -- you talked about earlier?
 4 A. Yes. On the website, yeah.
 5 Q. Okay. Thank you.
 6 A. So, again, the pink area, the Bicondoa Dianeve
 7 soil, the way they characterize the soil matches pretty
 8 closely to what we found out in our area that it's -- that's
 9 frequently wet, the water table is shallow. They estimated
 10 about 2400 acres of that 60 percent is the Bicondoa portion.
 11 And we found that -- we thought that it matched pretty well
 12 with the Boyack map and how -- and the areas that the Boyacks
 13 considered to be productive.
 14 Now, remember the pink area is both the Bicondoa
 15 and the Dianeve, probably the Bicondoa is the only really
 16 productive part of that. The Dianeve doesn't get as wet as the
 17 Bicondoa so it's probably not as productive, that's why you
 18 see a lot of broken areas in the Boyack map on the right and
 19 there's not -- there's no broken -- the soil map on the left
 20 isn't broken like the Boyack map.
 21 When I was out in the -- when we were out running
 22 around in the summer, we were walking down an irrigation ditch
 23 and we noticed that way the heck out there where everything
 24 looked really good we found grass growing in the irrigation
 25 ditch. And I thought that was surprising. So I did some soil

1 sampling in that irrigation ditch and next to it and also just
 2 to see what the soil quality was I did some soil sampling in
 3 the bottom of the lower area and then up on the bench or
 4 hummock that was next to it.
 5 What I was looking at are basically the most
 6 limiting factors in our ranch. They would be pH, a high pHs
 7 limit. We have boron concentration problems and salt
 8 problems.
 9 One of the best ways to look at salt is not so
 10 much -- or sodium is not so much the absolute number but what
 11 percentage of the cad ions that are in the soil are sodium.
 12 So you have calcium, magnesium, potassium and sodium and which
 13 proportion of that is sodium. So that's the exchange of the
 14 sodium number that's on the far right of the table.
 15 So the blue -- so, let me start with the bottom.
 16 The green row at the bottom says -- is a number that's good
 17 for many crops. So this is just a number that I looked up in
 18 the research if you got a -- if you got -- some publications
 19 you've got a pH less than 8.2, a boron concentration of less
 20 than six and exchangeable sodium less than 15 percent -- less
 21 than 15 you probably got an okay soil. Now, these numbers are
 22 approximate, you're going to find different soils will have
 23 different numbers because of other chemical properties and
 24 different crops are more sensitive or less sensitive, but this
 25 is just a general -- general number for what would be good for

1 many crops and you're able to leach it and make it suitable
 2 for growing crops or growing grass.
 3 HEARING OFFICER JOSEPH-TAYLOR: Say that for me
 4 again. Sorry, I wasn't understanding.
 5 THE WITNESS: Okay. So you have two areas, you
 6 have -- you looked at an area that was in the ditch and then
 7 an area that was next to the ditch on the higher soil. The
 8 area in the ditch had water going through it over a period of
 9 time. The soil and -- the water -- the water that was in the
 10 irrigation ditch leached, soaked into the ground even when
 11 you're sending it down the irrigation ditch and leached out
 12 the excess sodium, leached out the excess boron and lowered
 13 the pH.
 14 And that was -- so areas that receive water as
 15 like the ditch, the soil chemistry improves a lot making it
 16 more capable of supporting plants.
 17 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 18 THE WITNESS: So you can actively -- by applying
 19 water you can actively manage your soil to improve it so that
 20 you can grow your crops. Does that make sense?
 21 BY MR. TAGGART:
 22 Q. Now -- oh, go ahead.
 23 A. We also did the same thing -- I also looked at
 24 the same thing, it wasn't in an irrigation ditch but it was in
 25 a low area versus a high area down between John's Field and

1 a number of crops.
 2 Just to give us a comparison. So if we look at
 3 the blue lines -- well, actually let's look at the -- sorry,
 4 let's look at the brown lines -- the greenish brown lines next
 5 to ditch number G and D in rows G and D which say next to
 6 ditch. They have pHs of -- line G has a pH of 9.4, line D has
 7 a pH of 10.
 8 If you look at -- if you look at the criteria for
 9 what a good crop is of 8.2, 9.4 and 10 are -- is too high.
 10 But if you look at the in ditch numbers, the in
 11 ditch quantity -- the in ditch number for pH of 8.2 or 8.1 in
 12 rows E and F, that -- that number is much closer to what you
 13 would want to irrigate your crops with.
 14 Similarly if you compare lines E and G for boron
 15 in the in the ditch the concentration of boron is .5 parts per
 16 million. Out of the ditch in the area it's 3.2. Same with
 17 sodium, an exchangeable sodium -- exchangeable sodium percent,
 18 both of those are quite higher in the ditch than out of the
 19 ditch.
 20 And so what that says is that in the ditch where
 21 water had flown routinely over a number of years or we think
 22 perhaps a number of years, the salt and the boron leached out
 23 of the soil, the pH dropped and you were able -- by leaching
 24 the soil in the irrigation canal you were able to take soil
 25 outside of the -- soil that was not compatible for growing

1 Romano.
 2 Again, the blue samples are in the low part of
 3 the meadow that would receive water and the green K and L
 4 which are in the green areas which are on the meadow bench
 5 which don't receive water, you can see that the blue areas
 6 have lower pH, lower boron, lower sodium and are lower
 7 exchangeable sodium percent.
 8 So the areas that get water are more suitable for
 9 growing grass. It also shows that there's water been there,
 10 there's evidence that water has been there. Something has
 11 changed the chemistry of the soil.
 12 So I'm basically saying you can use this water as
 13 a management tool to improve your soil chemistry.
 14 Q. Now, before you move on I just want to ask you
 15 about what's been marked as Exhibit 192, show you a copy of
 16 that. Did you prepare this?
 17 A. Yes.
 18 Q. And is the information that you talked about in
 19 the last two slides, does it come from that Exhibit 192?
 20 A. Right. So it's already pretty complicated so I
 21 tried to simplify it.
 22 Last two slides. This is -- we looked at hay
 23 production in 2013. We harvested about 103 tons over
 24 170 acres. And then this is the Boyack map which shows
 25 1700 acres of irrigated land. So while we were able to

1 irrigate 170 acres and not well, Boyack suggests -- the map
 2 suggests that historically we've irrigated at least
 3 1700 acres.
 4 Q. Thank you.
 5 MR. TAGGART: At this time I'd like to enter some
 6 more documents into the record. First, Exhibit 319, which was
 7 submitted by Eureka County, it's the soil survey from NRCS.
 8 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 9 the admission of Exhibit 319? Hearing none, it will be
 10 admitted.
 11 (Exhibit 319 admitted into evidence.)
 12 MR. TAGGART: 605, which is a report from the
 13 NRCS on Diamond Valley.
 14 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 15 the admission of Exhibit 605? Hearing none, it will be
 16 admitted.
 17 (Exhibit 605 admitted into evidence.)
 18 MR. TAGGART: And then Exhibits 191 and 192,
 19 which are the tables that Mr. Frazer indicated that he
 20 prepared.
 21 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 22 Exhibits 191 or 192? Hearing none, they'll be admitted.
 23 (Exhibits 191 and 192 admitted into
 24 evidence.)
 25 MR. TAGGART: Thank you.

1 beyond that and are purposely arguing against us and against
 2 protection to senior rights in Diamond Valley.
 3 Instead of trying to get the facts straight they
 4 have refused to speak with us. Their written arguments have
 5 been one-sided, sometimes ridiculously so. Their demand for
 6 an adjudication of our spring rights as a requirement before
 7 any action serves no purpose other than to keep us from
 8 getting the water we need.
 9 We've seen no sign of how their involvement
 10 benefits the general population of Eureka County. The fight
 11 the county is waging against our application does serve the
 12 purpose of distracting the farmers from the real problems of
 13 over-appropriation. We've become an easy scapegoat for the
 14 large and unresolved groundwater problem. We're the guys that
 15 in the words of a neighbor are suing everyone in Eureka County
 16 for their water.
 17 No, we're applying for the right to make up for
 18 flow lost to pumping in the valley. The county could be
 19 taking a leadership role and bringing the community together
 20 to address over-pumping but instead they've decided to ignore
 21 the problem and intentionally create an atmosphere of fear and
 22 animosity. We are the individuals put in the positioning of
 23 having to fight the county instead of farming.
 24 Every delay we have to face -- every delay we
 25 have to base gaining access to our vested water rights is

1 BY MR. TAGGART:
 2 Q. Does that conclude your presentation, Mr. Frazer?
 3 Do you have a -- did you prepare a statement that you wanted
 4 to provide at this stage?
 5 A. I did.
 6 Q. Okay. Go ahead.
 7 A. We are extremely frustrated about how Eureka
 8 County is participating in this application process. The
 9 purpose of hearings like this one is to ensure that decisions
 10 made by a government agency are fair and all sides are heard
 11 before a decision is made.
 12 Although we strongly disagree with the protest
 13 that some of the farmers have filed, it's important that
 14 they're included and that they have -- they have an
 15 opportunity to have their viewpoints heard. They need to be
 16 part of this process.
 17 On the other hand, Eureka County's insistence on
 18 including themselves in the proceedings as advocates for one
 19 side against the other is wrong. It seems that taxpayer
 20 dollars are being used for political favors rather than for
 21 benefit of the entire community.
 22 Eureka County started their involvement in our
 23 application process by filing a protest. They explained that
 24 they wanted to be included to make sure all the facts were
 25 available to the State Engineer. But they have clearly gone

1 causing actual harm.
 2 We have two requests, one to the county. Rather
 3 than working one side against the other please help make this
 4 hearing about finding facts with the goal of developing
 5 reasonable recommendation. And our request to the state that
 6 the county continues to apply their significant resources
 7 against us, please recognize the potential inequality of the
 8 process.
 9 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 10 Mr. Frazer. Let's be off the record.
 11 (Recess taken.)
 12 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 13 record. Cross-examination, Ms. Ure?
 14 MR. TAGGART: May I offer into evidence the last
 15 exhibit? I apologize.
 16 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 17 MR. TAGGART: The presentation has been marked as
 18 Exhibit 617. We'd like to offer that into evidence, it
 19 contains information from many, many different exhibits, but
 20 we did identify what those exhibits are as we walked through
 21 the presentation. So we offer them into evidence at this
 22 time.
 23 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 24 Exhibit 617?
 25 MS. PETERSON: Well, I was under the impression

1 it was demonstrative only. I think that's what it was offered
 2 for at the beginning.
 3 HEARING OFFICER JOSEPH-TAYLOR: We always put
 4 them into evidence.
 5 MS. PETERSON: Well, then we'd object because it
 6 wasn't part of the document exchange.
 7 HEARING OFFICER JOSEPH-TAYLOR: All the documents
 8 are all of the documents. I'm going to overrule that,
 9 Ms. Peterson. Exhibit 617 will be admitted.
 10 (Exhibit 617 admitted into evidence.)
 11 MS. URE: Ready.
 12 HEARING OFFICER JOSEPH-TAYLOR: Ms. Ure,
 13 cross-examination.
 14 CROSS-EXAMINATION
 15 BY MS. URE:
 16 Q. Hi, Mr. Frazer. I am Therese Ure and I represent
 17 the Etcheverry Family Limited Partnership, Diamond Cattle
 18 Company and Ken Benson.
 19 When did -- so you purchased the ranch in 2011;
 20 is that correct?
 21 A. Right.
 22 Q. When did you start investigating the ranch
 23 activities prior to purchase?
 24 A. The activity, what do you mean activity?
 25 Q. When did you first become aware of the ranch and

1 been irrigated recently and some haven't been irrigated since
 2 I've owned the ranch.
 3 Q. Which --
 4 A. Since I've been there.
 5 Q. Which of the area on this slide has been
 6 irrigated since you've purchased the ranch?
 7 A. As far as -- am I describing this for the record?
 8 Is the area -- so the meadows -- so it would be the meadows
 9 probably within a half mile of where the water comes into them
 10 from the -- from the Shipley Hot Springs.
 11 HEARING OFFICER JOSEPH-TAYLOR: Mr. Frazer, are
 12 you pointing to the photograph that is the bottom right of
 13 slide 12 of Exhibit 617 and it's an area north of Shipley Hot
 14 Springs?
 15 THE WITNESS: Northeast of Shipley Hot Springs.
 16 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 17 BY MS. URE:
 18 Q. And turning to slide 13 of Exhibit 617, do you
 19 know when the last time -- or these fields on this slide were
 20 irrigated?
 21 A. No.
 22 Q. Okay. Turning to slide 17 of Exhibit 617, can
 23 you describe the -- the dark areas between what you called
 24 call the low area and the high area?
 25 A. Describe them, what do you mean by describe them?

1 start looking at it with the intent to purchase?
 2 MR. TAGGART: Objection, that's beyond the scope
 3 of direct.
 4 MS. URE: I'm just wondering, you said that he
 5 purchased the ranch in 2011, did he start looking at the
 6 irrigation prior to 2011, that's all I'm wondering.
 7 HEARING OFFICER JOSEPH-TAYLOR: I'm going to
 8 overrule that, Mr. Taggart.
 9 THE WITNESS: So we started looking. We were
 10 looking at the ranch several years before 2011.
 11 BY MS. URE:
 12 Q. And several, two, five, ten years?
 13 A. I think it was like four, something.
 14 Q. Okay. Were you involved in preparing the
 15 applications for Sadler Ranch?
 16 A. Yeah, yes.
 17 Q. In that process did you file a permit to drain a
 18 wetland or a pond?
 19 A. Not to my knowledge.
 20 Q. Okay. Now, turning to your Exhibit 617 on slide
 21 12, are you there? Do you know when the last time these upper
 22 meadow fields were irrigated?
 23 A. Which one, I mean --
 24 Q. The ones referenced in slide 12 of your exhibit?
 25 A. Slide 12 covers a large area, so some areas have

1 Q. What are they? Are they plants, are they
 2 shadows?
 3 A. They're plants, I think.
 4 Q. Okay. Is it possible in these aerial photographs
 5 that those dark areas could have been made by shadows?
 6 A. I -- I don't see how. The sun would have to be
 7 at an extremely low angle and there's no indication from any
 8 Google Earth picture I've ever seen that they take pictures
 9 when the sun's at an extremely low angle.
 10 Q. Do you know what time of the day these are taken?
 11 A. No.
 12 Q. Okay. On slide 18 of Exhibit 617, the large
 13 ditches that are outlined on this slide that there's an
 14 indicator; do you see that?
 15 A. Yes.
 16 Q. Can you tell me again how deep these ditches are?
 17 A. I think roughly 15 feet.
 18 Q. Have you walked in these ditches?
 19 A. Yes.
 20 Q. Do you know when the last time these ditches had
 21 water in them?
 22 A. No.
 23 Q. Okay. Turning to slide 24 of Exhibit 617, from
 24 your testimony you spent a lot of time highlighting what was
 25 lighter and what was darker and indicating that the darker was

1 irrigation or water areas.
 2 Can you tell me why the field -- there's an upper
 3 field, it's the second arrow down --
 4 A. Um-hum.
 5 Q. -- in the upper field bracket, why -- what is
 6 your opinion as to why this field is white?
 7 A. I don't know.
 8 Q. Turning to slide 35 of Exhibit 617, you indicated
 9 that the area to the right of the irrigation district -- or
 10 the irrigation ditch on the lower portion of the photograph is
 11 a pool area; is that correct?
 12 A. Yeah.
 13 Q. Do you know if this was -- what type of pool
 14 area, was it always a swamp?
 15 A. I call it a pool area because it looks like a
 16 pool. I don't know that it is necessarily a pool in the
 17 common use of the word.
 18 HEARING OFFICER JOSEPH-TAYLOR: You need to speak
 19 up so the court reporter can hear you.
 20 THE WITNESS: I -- trying to describe how things
 21 are different on here I run out of adjectives, I run out of
 22 descriptions, it was a description of it looks like a pool
 23 like it could hold water, but beyond that I don't know.
 24 BY MS. URE:
 25 Q. Is there water in it today?

1 fast.
 2 Q. Turning to slide 49 of Exhibit 617, do you know
 3 what the precipitation was like in 1973?
 4 A. No.
 5 Q. So you don't know if that was unusually wet year
 6 or not?
 7 A. (Shakes head.)
 8 Q. Okay.
 9 HEARING OFFICER JOSEPH-TAYLOR: You have to
 10 answer audibly.
 11 THE WITNESS: No.
 12 BY MS. URE:
 13 Q. On slide 54 of Exhibit 617, this is a comparison
 14 of the 1946 dark area overlaid on what appears to be a 1985
 15 aerial; is that correct?
 16 A. Yeah. Yes.
 17 Q. Are you certain that in 1946 the dark area
 18 outlined in that photograph is a seep versus a bluff or a
 19 different geological structure?
 20 A. I wasn't there then so I can't be a hundred
 21 percent sure, but when you walk -- I kept thinking that it was
 22 a shadow or a ditch or something, it didn't make sense to me
 23 in the photo. So when I went and walked on it there wasn't
 24 any indication that it could be anything other than a wet
 25 area. There wasn't any change in topography that was really

1 A. No.
 2 Q. Do you know the last time water was in it?
 3 A. No. I mean, you look on the aerial photos and
 4 figure it out or I could look.
 5 Q. Turning to slides 36 of Exhibit 617. In your
 6 testimony the area that's pointed to that's called this area
 7 is not dark in later years, you said that it looks like it had
 8 been hayed; is that correct of your testimony?
 9 A. Not in this picture it does not, I don't see
 10 that. In 1973 picture it does.
 11 Q. Okay. And slide 37. Now, you show -- have it
 12 delineated on this slide that there are dark areas later in
 13 the season. Is it possible that these dark areas are
 14 vegetation phreatophytes?
 15 A. It is possible, I don't under -- but I don't know
 16 how. Because what happens is if you look at the beginning of
 17 the season and the end of the season things change pretty
 18 dramatically. I don't understand how you can get the
 19 vegetation to change that dramatically over that period of
 20 time.
 21 Q. Well, I think you testified that this was water.
 22 So I'm wondering if it's water or if it's vegetation?
 23 A. I think it's most likely water, I'm not -- I
 24 wasn't there on the ground. Again, it changes so drastically.
 25 It's got to be something that can change pretty quick, pretty

1 clear.
 2 Q. So in that 1946 photograph, is that water then
 3 that you see that's formulating that dark line?
 4 A. It's on a hillside so I doubt it's water. It's
 5 probably vegetation.
 6 Q. Okay. On slide 56 of Exhibit 617.
 7 A. Can I correct my last statement?
 8 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 9 THE WITNESS: It could be -- also could be mud,
 10 dark colored mud.
 11 BY MS. URE:
 12 Q. But you don't know; is that correct?
 13 A. Don't know.
 14 Q. Okay. Okay. So this slide is a 2006 aerial
 15 photograph. Do we know if the green area is from irrigation
 16 in this photograph?
 17 A. No. I mean -- well, the areas in the meadows it
 18 could be -- it could be some winter moisture. The dark area
 19 in the middle between the -- there's two long arrows that head
 20 towards the southwest, between those two arrows is a darker
 21 area that suggests that it couldn't be just a little winter
 22 moisture there, had to be some irrigation there.
 23 Also, if you look up at the irrigation ditches in
 24 the upper fields like the one right next to the headquarters
 25 you can see one of the irrigation -- the irrigation ditch just

1 below the long -- the long arrow that points to the northwest
 2 just below the tip of that arrow there's a green area. It
 3 looks like there's water that would be part of the irrigation
 4 ditch is green and then there's some fingers hanging from the
 5 southeast from there that's probably irrigation water in the
 6 trench and then coming across the field.
 7 Q. So, from your testimony, I believe that you said
 8 that the upper fields were dry all the time. The north field,
 9 the north and south meadow have no water. Do you know when
 10 the last time these fields were irrigated?
 11 A. No.
 12 Q. Have you ever applied irrigation on them?
 13 A. We tried last year in 2012 and we got water -- we
 14 got water from here down as far as this ditch to the road
 15 here.
 16 Q. Can you explain what "here" is for the record?
 17 A. Okay. We got water from Shipley -- Shipley
 18 Springs into the second ditch, the second ditch from the road
 19 up to this road here and then it's -- it stopped flowing, it
 20 wouldn't go any farther, it was soaking into the ditch so fast
 21 that we couldn't get it to go any further.
 22 HEARING OFFICER JOSEPH-TAYLOR: Mr. Frazer, did
 23 you describe going north from Shipley Springs up to a road
 24 that looks like it's right about headquarters?
 25 THE WITNESS: Yes.

1 1946 in black and white resolution sees color and high spots
 2 and low spots differently than a colored photograph today?
 3 A. Can you repeat that?
 4 Q. A black and white photograph taken with 1946
 5 equipment versus a colored photograph in 2006, what I'm asking
 6 is wouldn't -- or is it possible that in 1946 that black and
 7 white technology would translate colors and high spots and low
 8 spots with white and dark versus green? So, what we could be
 9 seeing at the dark spot -- I think it's what you called John's
 10 Field, it could be a green field versus a pond, we don't know;
 11 is that correct?
 12 A. I'm so lost.
 13 HEARING OFFICER JOSEPH-TAYLOR: Yeah, we're
 14 struggling, Ms. Ure. What I think I'm hearing you ask him is
 15 it possible that the contrast on the black and white is
 16 stronger than we see on the color.
 17 MS. URE: Yes, thank you.
 18 THE WITNESS: It's possible. One of the things I
 19 used is comparing the vegetation in the hills looking at, you
 20 know, kind of a benchmark, what does it look like in the
 21 playa, what does it look like in the hills and how do you
 22 compare that to what's happening in the irrigated land.
 23 So you can -- you can see that the hills are
 24 pretty much -- in the -- in the right-hand photo, the color
 25 photo, the hills are pretty much similar to the areas on most

1 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 2 BY MS. URE:
 3 Q. And when you say "we" who are you referring to?
 4 A. We the -- there was a manager -- manager at the
 5 time and he -- he -- he moved the gate, opened the gate.
 6 Q. And who is that manager?
 7 A. It was Rich -- Rick, what's his name,
 8 Dean Tucker.
 9 Q. Okay. Turning to slide 65 of Exhibit 617. On
 10 one side we have -- on the left side of this slide we have a
 11 black and white photograph and then on the right side we have
 12 a color photograph; is that correct?
 13 A. Um-hum.
 14 Q. Isn't it true that the slide on the right if
 15 taken in black and white would look similar to that on the
 16 left side of the screen?
 17 A. Actually I tried -- I wanted to put -- to make
 18 the slides black and white just to make them equal, but then I
 19 thought -- I was worried that you guys would complain that I
 20 was messing with the slide so I kept it colored. But there's
 21 no way you're going to get the contrast that's in the
 22 left-hand slide in the right-hand slide.
 23 If you made that black and white it's not going
 24 to look the same.
 25 Q. But would you agree that a photograph taken in

1 of the -- what used to be irrigated land on the east side of
 2 the right photo. They're similar in color and texture and
 3 contrast.
 4 In the 1946 picture it's really different. And
 5 the hills we know were never irrigated, they're dry, they stay
 6 dry. So to me that's a good way of getting a reference point
 7 about what you're really looking at.
 8 BY MS. URE:
 9 Q. Okay. Moving on to slide 70 of Exhibit 617.
 10 This slide evidences -- points to some areas that you say
 11 Boyack's map omits some areas; is that correct?
 12 A. Yes.
 13 Q. Was Boyack a water right surveyor?
 14 A. As far as I know. I don't -- I don't know how he
 15 could have submitted a proof and submit it to the date without
 16 being the water right surveyor but...
 17 Q. Do you know if he went out to that area in
 18 preparing this map?
 19 A. I don't.
 20 Q. Is it possible that he did not include the area
 21 because there was no evidence of irrigation?
 22 A. Yes.
 23 Q. On slide 89 of Exhibit 617, I can't remember, is
 24 this a question, did Dwight Smith prepare this slide or?
 25 A. (Shakes head.)

1 Q. That was you? Okay.
 2 HEARING OFFICER JOSEPH-TAYLOR: Witness shook his
 3 head no.
 4 THE WITNESS: No, sorry.
 5 MS. URE: Thank you, Ms. Taylor.
 6 BY MS. URE:
 7 Q. Did you go out to these areas that you testified
 8 were wet?
 9 A. Yeah, yes.
 10 Q. Do you know if the areas are wet because they are
 11 springs or seeps or groundwater discharge? Do you know which
 12 one?
 13 A. I don't know the difference.
 14 Q. Okay. Turning to slide 93 of Exhibit 617.
 15 UNIDENTIFIED SPEAKER: What's that number?
 16 MS. URE: 93.
 17 BY MS. URE:
 18 Q. This slide shows the ditches in blue; is that
 19 correct?
 20 A. Yes.
 21 Q. Do you know when the -- the date of the ditch
 22 construction for each of these ditches?
 23 A. No.
 24 Q. Turning to slide 100 of Exhibit 617, the blue
 25 lines on this map denote fences; is that correct?

1 inches below surface level?
 2 A. Right.
 3 Q. Is the soil being leached at two to three inches?
 4 A. Yes.
 5 Q. So is there any -- strike that.
 6 Who did your sampling?
 7 A. I did.
 8 Q. Did you have a lab analyze the samples?
 9 A. Yes.
 10 Q. And what lab was that?
 11 A. It was A&L labs in Modesto.
 12 HEARING OFFICER JOSEPH-TAYLOR: A&L?
 13 THE WITNESS: L.
 14 BY MS. URE:
 15 Q. How many samples did you take at each location?
 16 A. I took one each, each sample letter on the
 17 left-hand column is a single sample. So E was a sample. So I
 18 took one sample at each location.
 19 Q. Okay. Now, when you say next to the ditch, what
 20 does -- how far away from the ditch is next to ditch?
 21 A. About ten feet.
 22 Q. Did you take any samples beyond ten feet?
 23 A. No.
 24 Q. And is that ten feet from the center of the ditch
 25 or ten feet from the upper?

1 A. Yes.
 2 Q. Are the fences in the current location -- I guess
 3 are these the fences that are on the ground today?
 4 A. Yes.
 5 Q. What is the purpose of these fences?
 6 A. To control where cattle go.
 7 Q. Do you have a livestock grazing permit?
 8 A. Yes.
 9 Q. Does it cover the area south of your property?
 10 A. I don't know.
 11 HEARING OFFICER JOSEPH-TAYLOR: How is that
 12 relevant, Ms. Ure?
 13 MS. URE: Because the area outside the red is not
 14 on their property and there's evidence that shows that they're
 15 watering over there. So I just want to make it clear that
 16 that's BLM land.
 17 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 18 BY MS. URE:
 19 Q. Okay. Turning to slide 109 of Exhibit 617, I
 20 believe you testified that where the soil is being leached
 21 that soil is better for agriculture; is that correct?
 22 Something along those lines?
 23 A. Better than the soil that isn't being leached.
 24 Q. So, in your samples you took am I correct in
 25 saying that your samples were taken at a depth of two to three

1 A. The center of the ditch. I didn't measure it,
 2 it's approximate.
 3 MS. URE: I have no further questions.
 4 HEARING OFFICER JOSEPH-TAYLOR: Thank you. I
 5 think we're going to go ahead and take a lunch break or how
 6 much time do you need, Ms. Peterson?
 7 MS. PETERSON: You know what, I could organize, I
 8 could organize during lunch so it will probably be faster.
 9 HEARING OFFICER JOSEPH-TAYLOR: Great. We'll be
 10 in recess till 1:15. We're off the record.
 11 (Recess at 12:10 p.m.)
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1 CARSON CITY, NEVADA, MONDAY, NOVEMBER 18, 2013, 1:15 P.M.
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 3
 4 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 5 record. Cross-examination, Ms. Peterson?
 6 MS. PETERSON: Thank you.
 7 CROSS-EXAMINATION
 8 BY MS. PETERSON:
 9 Q. Mr. Frazer, my name is Karen Peterson, I'm the
 10 attorney for Eureka County. On your cross-examination with
 11 Ms. Ure you talked about that you had been I guess interested
 12 in buying the ranch four years prior to its purchase?
 13 A. Um-hum. Roughly.
 14 Q. That's correct?
 15 A. Um-hum.
 16 Q. You have to say yes or no.
 17 A. Yes. Sorry.
 18 Q. Thank you. And did you -- what did you learn
 19 about the water rights in that four years?
 20 MR. TAGGART: Objection, I don't see the
 21 relevance.
 22 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson, I'm
 23 having a little problem with these questions too, so.
 24 MR. TAGGART: I mean, we're not --
 25 HEARING OFFICER JOSEPH-TAYLOR: Hold on. Tell me

1 Q. And you don't actively manage the ranch; is that
 2 correct?
 3 A. Define actively manage.
 4 Q. Do you have somebody on the grounds day to day
 5 managing the ranch?
 6 A. We do. We also spend a lot of time on the ranch.
 7 I spent a --
 8 HEARING OFFICER JOSEPH-TAYLOR: Speak clearly.
 9 THE WITNESS: I work more than full time on the
 10 ranch. So to say that I actively don't -- don't actively
 11 manage the ranch would be incorrect. There's different
 12 aspects of managing the ranch. I do the accounting, a lot of
 13 this kind of -- this kind of technical work. I'm very active
 14 in the ranch. We also spent the summer there.
 15 BY MS. PETERSON:
 16 Q. Do you know who the chain of title is or was from
 17 I think you said Governor Sadler to the present ownership of
 18 your ranch property?
 19 A. I have a copy -- there's a copy in the exhibits,
 20 I think.
 21 Q. Do you -- did you contact any of those previous
 22 owners?
 23 A. Yes.
 24 Q. And I guess we can turn to Exhibit 617, slide --
 25 I believe it's slide 5. Do you know what land I guess

1 how it goes to his direct testimony.
 2 MS. PETERSON: Just his background and what he
 3 learned about the water rights prior to purchasing the ranch.
 4 I think it's very relevant.
 5 HEARING OFFICER JOSEPH-TAYLOR: How?
 6 MS. PETERSON: To know what he knew about it
 7 before he purchased the ranch.
 8 MR. TAGGART: May I be heard?
 9 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 10 MR. TAGGART: It's pretty clear they're trying to
 11 make a case for another proceeding. They want to get into
 12 some due diligence that was done by my client prior to buying
 13 the ranch. The testimony was clear that about how he
 14 collected the information that he did and -- and that should
 15 be the subject of the cross-examination.
 16 HEARING OFFICER JOSEPH-TAYLOR: See, I had a
 17 little problem when Ms. Ure was asking this too because he
 18 didn't testify anything about those, that wasn't the subject
 19 of his testimony. So I'm going to sustain the objection.
 20 BY MS. PETERSON:
 21 Q. Is it true, Mr. Frazer, that you do not live in
 22 Eureka County?
 23 A. Define live.
 24 Q. Where is your permanent residence?
 25 A. In the Bay Area.

1 Governor Sadler owned prior to 1905?
 2 A. I don't know. I mean, it's in the record, it's
 3 in the county tax records, but I don't know, I couldn't give
 4 you an exact description.
 5 Q. Based on this figure 5 of Exhibit 617?
 6 A. No, this is different from what Sadler owned.
 7 Q. And is it your understanding that the -- well, is
 8 the original Brown Ranch now part of what you own; is that
 9 correct?
 10 A. Yes.
 11 Q. And then the Romano Ranch.
 12 A. Um-hum.
 13 Q. The Romano Fields you called it.
 14 A. Um-hum.
 15 Q. Was that originally owned as part of the original
 16 Shipley Ranch -- or Sadler Ranch?
 17 A. That was added on at a later date.
 18 Q. The Romano Field?
 19 A. Yes.
 20 Q. Do you know what date?
 21 A. Ted will definitely get into it in his testimony.
 22 Q. Okay. And how about John's Field?
 23 A. It's Ted will have a really good description of
 24 that.
 25 Q. Okay. Is it fair to say his testimony, I should

1 ask him those questions about the north field and the south
 2 meadow, all that?
 3 A. (Nodded head.) I would.
 4 HEARING OFFICER JOSEPH-TAYLOR: Witness is
 5 nodding his head.
 6 THE WITNESS: Yes. Sorry, I would.
 7 BY MS. PETERSON:
 8 Q. And you had some testimony, I'm just going to ask
 9 you some general questions now about aerial photographs.
 10 A. Um-hum.
 11 Q. Did you try to correlate precipitation at all to
 12 the time frame of the aerial photographs?
 13 A. Be more specific.
 14 Q. Precipitation?
 15 A. Yes.
 16 Q. Did you try to correlate precipitation for that
 17 year, that month, that time frame to your -- any of your
 18 aerial photographs?
 19 A. Yes, I did actually.
 20 Q. What did you do?
 21 A. I -- I calculated the rainfall in Eureka City, I
 22 put that on -- I was actually on the slides at one point and I
 23 compared it to the photo, but I couldn't see any correlation
 24 so I kind of just gave up on that whole thing.
 25 Q. Okay. You didn't see any correlation between

1 Q. And are you equating ditches with channels?
 2 A. No.
 3 Q. In your testimony?
 4 A. No, by no means.
 5 Q. Okay. And then on slide 54 -- 34, sorry. I'm
 6 sorry.
 7 HEARING OFFICER JOSEPH-TAYLOR: Middle age eyes,
 8 glasses on and off.
 9 BY MS. PETERSON:
 10 Q. You were talking about the dams in that --
 11 A. Um-hum.
 12 Q. -- in that slide; do you recall that testimony?
 13 A. Yes.
 14 Q. And do you know when those dams were built?
 15 A. No. Prior to '53. Prior to June 6th, 1953.
 16 Q. So you don't know how long they were used?
 17 A. No.
 18 Q. And then in slide 56 on Exhibit 617. Okay. 55.
 19 You -- you testified at during this slide that they were short
 20 of water and they watered one area and not another area; do
 21 you recall that testimony?
 22 A. I don't remember saying they were short of water,
 23 but I do remember saying that they watered one area and not
 24 another.
 25 Q. And were you around in 1994 on this property?

1 precipitation and what you saw in the photos?
 2 A. Not -- not strong enough that I would testify to
 3 it.
 4 Q. Okay. And then you also talked about some dark
 5 soil and some peat soil in general when you were describing
 6 some of your land; do you recall that?
 7 A. Um-hum.
 8 Q. And based upon your observation would you be able
 9 to tell if water was applied pre-1905 to that land based on
 10 your observation of dark spots in 2013 or the peat in 2013?
 11 A. No. Wait. I would -- if it was applied, what do
 12 you mean by -- I mean, if it was there for that last thousands
 13 of years I could say that it was -- had been there, but if it
 14 was applied for a season, no.
 15 Q. Then going to slide 17 of Exhibit 617. When you
 16 testified about on this slide you said that there was some new
 17 ditches; do you recall that testimony?
 18 A. No.
 19 Q. Do you recall any testimony where you indicated
 20 that there were some new ditches on the property?
 21 A. No, I remember areas that had -- there was areas
 22 where there was water channels, there was water channels that
 23 had been, you know, shallow water channels that looked like
 24 they were hard by the soil -- I mean, by the water, I don't
 25 remember new ditches per se.

1 A. No.
 2 Q. So do you know what they were doing or how they
 3 managed the water in 1994 on this property?
 4 A. By being there, no.
 5 Q. Today do you know?
 6 A. Know what?
 7 Q. How they managed the property in 1994?
 8 A. Just from observations from aerial photography.
 9 Q. But you have no personal knowledge; is that
 10 correct?
 11 A. No personal knowledge.
 12 HEARING OFFICER JOSEPH-TAYLOR: Make sure you let
 13 her finish her question before you answer for the court
 14 reporter.
 15 THE WITNESS: Okay.
 16 HEARING OFFICER JOSEPH-TAYLOR: And don't look
 17 like you're having so much fun.
 18 BY MS. PETERSON:
 19 Q. And then on slide 78, you were testifying
 20 regarding the various springs in the southern playa; do you
 21 remember that?
 22 A. Generally, yes.
 23 Q. Do you -- you're not seeking mitigation for any
 24 of these -- or all these springs in this proceeding, are you?
 25 A. Not that we don't own.

1 Q. And you just own the Shipley Spring; is that
 2 correct?
 3 A. Well, we own the Shipley Springs and the
 4 springs -- there's -- there's Shipley Springs, there's a
 5 couple springs south, there's the Sea Barrier, there's the
 6 Indian Camp Springs, so there's more than just the springs per
 7 se.
 8 Q. But any of the springs other than Shipley Spring
 9 named on the slide you're not claiming any kind of mitigation
 10 right for; is that correct?
 11 A. Correct.
 12 Q. And then directing your attention to slide 94,
 13 which is described as the water distribution at Shipley
 14 Spring; do you see that?
 15 A. Yes.
 16 Q. Do you have -- do you have any knowledge when any
 17 of the -- I guess the holding pond or the gates onto the pond
 18 were constructed?
 19 A. When they were constructed?
 20 Q. Yes.
 21 A. Well, the ditches were there in 1946 so I would
 22 imagine -- I mean, that stuff looks really, really old so it's
 23 probably '46, but I wasn't there so I can't guarantee that.
 24 Q. Okay. And how about the gates out of the pond or
 25 the holding pond?

1 turn of the century. I don't have that, I don't know where
 2 that is. Well, I guess that's about all I can say.
 3 Q. And then turning to slide 100, this outlines the
 4 fences and the hay corrals; is that correct?
 5 A. Yes.
 6 Q. And do you know when the fences were built?
 7 A. No, again, they've been there -- no, they look
 8 extremely old when you're out to see them.
 9 Q. Or how about when the hay corrals were first
 10 used?
 11 A. No. Although there's BLM -- in the BLM notes it
 12 talks about running out to the hay corrals in 1879.
 13 Q. And then your last slide. Are you asking for --
 14 well, let me phrase it this way. Do you know what your proof
 15 asks for for irrigated land?
 16 A. The proof, what do you mean the proof asks?
 17 HEARING OFFICER JOSEPH-TAYLOR: There's multiple
 18 proofs, Ms. Peterson, so.
 19 BY MS. PETERSON:
 20 Q. Well, your Boyack map?
 21 A. The Boyack. Okay.
 22 Q. It's Exhibit 112, I think. My understanding was
 23 that that asked for 1,657.20 acres, not 1,731 acres?
 24 A. Actually, if you look at how much -- if you
 25 include Indian Camp Springs it asks for more, you're just

1 A. Again, those were there in '46, so I -- well,
 2 actually I can't remember for sure about the holding ponds,
 3 but the other gates were -- the ditches were the same in every
 4 picture I've looked 1946 and forward. So they have to be at
 5 least since then. But they're old and decrepit and they don't
 6 work well.
 7 Q. But you don't know when the gates out of the
 8 pond, specifically the gates out of the pond or the holding
 9 pond when they were constructed?
 10 A. No.
 11 Q. Or when they were first beneficially used or
 12 used -- used to beneficially use water?
 13 MR. TAGGART: Objection, just for clarity, when
 14 the water was used or the ditches?
 15 HEARING OFFICER JOSEPH-TAYLOR: She just
 16 clarified it. Just do it again, Ms. Peterson.
 17 BY MS. PETERSON:
 18 Q. You don't know when the dams -- I'll ask
 19 everything on the slide, when the dams, the irrigation
 20 ditches, the gates out of the pond or the holding pond were
 21 first used to beneficially use water?
 22 A. The 1920 picture which Ted's going to get to has
 23 the holding pond there, Shipley's Pond with the dam. So I
 24 know that was before 1920. I read some document someplace
 25 that said -- that puts the age of the dam pretty close to the

1 looking at part of it.
 2 Q. Okay. So your 1731 is both your Indian Camp and
 3 your other proof?
 4 A. As far as I remember.
 5 Q. Okay. Thank you for clarifying that. Was 1946 I
 6 think the first aerial photos you were able to obtain?
 7 A. Yes.
 8 Q. And then I'm going to show you or have your
 9 counsel show you Exhibit 196, it's one of your exhibits. Or I
 10 can show you. Do you have that exhibit right in front of you?
 11 A. Yes.
 12 Q. And it looks like you're -- somebody on your side
 13 highlighted certain portions of the minutes?
 14 A. Um-hum.
 15 Q. Those are of Eureka County Commission meeting
 16 minutes?
 17 A. Um-hum.
 18 Q. Are you familiar with those minutes?
 19 A. Vaguely.
 20 Q. They reference on page 10 of 14 that you had a
 21 meeting with Mr. Tibbitts and Dale Bugenig along with your
 22 hydrogeologist and your attorney?
 23 A. Right, I did it by phone call.
 24 Q. Right. And is that to discuss your water right
 25 filings?

1 A. Yes.
 2 Q. Is that correct?
 3 A. Yes.
 4 Q. And then at the bottom of the page 10 there on
 5 the yellow highlighting.
 6 A. Page -- I have page 4, I don't have page 10,
 7 sorry.
 8 Q. Yes.
 9 MR. TAGGART: I'm going to object. This is
 10 beyond the scope of his direct examination.
 11 HEARING OFFICER JOSEPH-TAYLOR: No, I don't think
 12 so, Mr. Taggart.
 13 MR. TAGGART: All right.
 14 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 15 THE WITNESS: I have page 4 and I have page 11.
 16 I don't have page 10.
 17 BY MS. PETERSON:
 18 Q. Maybe look on the back side there.
 19 A. Back side of?
 20 Q. Double sided.
 21 A. Of?
 22 Q. Are your pages double sided?
 23 A. Yes, I have 1, 4, 11 and 12.
 24 Q. Oh, okay. My copy has 1, 10 --
 25 HEARING OFFICER JOSEPH-TAYLOR: I'll give him

1 A. I don't understand why Eureka County is taking
 2 such a hard line or one approach without talking to us. And I
 3 don't understand, from my perspective what they are doing is
 4 really directed at a very small portion of the populous of the
 5 county. It doesn't make sense to me that Eureka County is
 6 spending such large sums of money on a very small portion of
 7 the county.
 8 They haven't really -- as far as I can tell, they
 9 haven't really talked about the fact that you're arguing
 10 against our permit in the commission meetings. And so my
 11 understanding is that my only way of -- I don't know political
 12 favors, but it seems to me that if a very small portion of the
 13 community can make the county government react and react so
 14 strongly there must be some sort of agreement or some
 15 motivation for the county commissioners to move so strongly.
 16 Q. And do you know Tom Gallagher?
 17 A. I have spoken to him. I think -- I'm not sure.
 18 I mean, is he the head of the Growers Association?
 19 Q. No. There's a Tom Gallagher that used to work
 20 for Division of Water Resources; do you know that Tom
 21 Gallagher?
 22 A. I don't think so.
 23 MS. PETERSON: Okay. That's all the questions I
 24 have.
 25 HEARING OFFICER JOSEPH-TAYLOR: Redirect?

1 ours, Ms. Peterson.
 2 MS. PETERSON: Okay.
 3 THE WITNESS: Okay.
 4 BY MS. PETERSON:
 5 Q. And would you agree at the meeting that you had
 6 with Mr. Bugenig and Mr. Tibbitts that you had agreed to
 7 withdraw your filings and agreed to meet with the county and
 8 other concerned parties?
 9 A. It was a while ago. I remember discussing
 10 withdrawing the -- the withdraw of our -- of our -- the county
 11 wanted to get involved and they wanted to work out a
 12 cooperative plan.
 13 And so in order to do that and to calm their
 14 fears I was thinking we could -- we could delay things,
 15 collect our information, work it out with the county and
 16 then -- and then maybe get back on -- get back on calendar,
 17 resubmit our -- or however you do it with the application.
 18 But, on the advice of Mike Buschelman, I decided not to do
 19 that.
 20 Q. Okay. Thank you. And then you discussed in your
 21 prepared statement political favors.
 22 A. Um-hum.
 23 Q. Do you recall that terminology that you used?
 24 A. Um-hum.
 25 Q. What did you mean by that?

1 MR. TAGGART: Could -- can I have the witness
 2 given that exhibit, please, so I can have my copy? I have a
 3 question about that same exhibit.
 4 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 5 MS. PETERSON: The minutes?
 6 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 196.
 7 MS. PETERSON: You know what, I had forgotten one
 8 question. Let me look at my last page. Exhibit 163, it won't
 9 take long.
 10 HEARING OFFICER JOSEPH-TAYLOR: I'm not inclined
 11 to be going back when you're saying that's all, I'll let you
 12 this time, Ms. Peterson, but when you're done, you're done.
 13 BY MS. PETERSON:
 14 Q. Do you have Exhibit 163? It was admitted during
 15 your direct examination.
 16 A. Okay.
 17 Q. And do you see the last page there of
 18 Exhibit 163?
 19 A. Yes.
 20 Q. Then it starts on the upper left-hand --
 21 MR. TAGGART: Can we just -- do you have a copy
 22 for the witness, because I don't have --
 23 HEARING OFFICER JOSEPH-TAYLOR: He's got it.
 24 MR. TAGGART: But I don't have a copy.
 25 MR. KOLVET: That's his copy.

1 HEARING OFFICER JOSEPH-TAYLOR: *You've got one on*
2 your screen, Mr. Kolvet.
3 MR. KOLVET: I do.
4 BY MS. PETERSON:
5 Q. Do you have the sheet, it's one page, it says hay
6 pile number, lines of haystacks; do you see that?
7 A. Yes.
8 Q. Okay. Could you just explain that?
9 MR. TAGGART: That's beyond the scope.
10 BY MS. PETERSON:
11 Q. What you did there? It's Exhibit 163 which was
12 admitted during your direct examination and there was no
13 testimony on it.
14 MR. TAGGART: I'll withdraw.
15 MR. KOLVET: The last page, Karen?
16 MS. PETERSON: Well, it's my last page.
17 HEARING OFFICER JOSEPH-TAYLOR: *Hold on. Let's*
18 *be off the record.*
19 *(Short off the record.)*
20 HEARING OFFICER JOSEPH-TAYLOR: *Let's go on the*
21 *record. Mr. Taggart, you're withdrawing the objection because*
22 *the exhibit was admitted during your direct?*
23 MR. TAGGART: That's correct.
24 HEARING OFFICER JOSEPH-TAYLOR: *Thank you. Do*
25 *the question again, please, Ms. Peterson.*

1 you.
2 HEARING OFFICER JOSEPH-TAYLOR: Redirect,
3 Mr. Taggart?
4 MR. TAGGART: Thank you.
5 REDIRECT EXAMINATION
6 BY MR. TAGGART:
7 Q. Hello again, Mr. Frazer. I want to ask you about
8 Exhibit 196. Do you have a copy of that?
9 A. This is -- this is this one?
10 Q. Yes. Thank you. Let's go to the second page of
11 that. Mrs. Peterson asked you about the minutes of those
12 meetings. During your -- during your direct examination you
13 made a comment that the county refused to meet with you.
14 Can you explain what you meant by that?
15 A. It was in the -- starting in I think it was
16 November of 2012 -- 2012, I started calling and leaving
17 messages with Jake Tibbitts saying we want to talk. And they
18 were -- they were -- they weren't returned. I tried several
19 times. They weren't returned.
20 So finally -- I guess that was right before
21 the -- the 12/26 hearing and wasn't -- finally at the
22 meeting -- finally about Jake he wrote me after that an e-mail
23 saying that they didn't -- they wouldn't meet with us unless
24 it was -- the county didn't feel the need to meet with us
25 unless it was with the Protestants. And that I -- to me that

1 BY MS. PETERSON:
2 Q. Yes. Do you have Exhibit 163 in front of you?
3 A. Yes.
4 Q. And the last page?
5 A. Yes.
6 Q. Could you just -- did you prepare this?
7 A. Yes.
8 Q. Could you just explain what you did?
9 A. I went on the 1973 Google Earth photo, like I
10 said in my testimony, it was at a really good resolution and
11 so I looked at all the haystacks that were on the photo and I
12 thought, you know, we're trying -- I thought, I wonder if I
13 can get an estimate for how much hay was harvested that year,
14 that September 29th, I wonder how much hay is on the ground.
15 So I took this -- the photo, overlaid it onto
16 Google Earth, we matched things up really closely and I used
17 Google Earth to estimate the length of each of the haystacks.
18 And then I was able to -- given we have the same kind of
19 machinery that they used back then I think for creating
20 haystacks, we estimated the length of the weight of the
21 haystack per foot. I took this information based on the
22 aerial photography and the weight of the haystacks that we
23 have today to estimate the total tons of hay that was on the
24 ground in '73 and that came out to be about 1400 tons in '73.
25 MS. PETERSON: That's all my questions. Thank

1 seemed like a setup because I didn't know what I'd be walking
2 into and so we didn't follow up. But --
3 HEARING OFFICER JOSEPH-TAYLOR: *And I'm going to*
4 *stop this. I don't see how this is even relevant to our*
5 *decision making.*
6 MR. TAGGART: Okay. Thank you.
7 BY MR. TAGGART:
8 Q. I just wanted to point out for the record. And I
9 had another question I wanted to ask, but I won't ask it now
10 given your concern. But I want to ask if you were aware of
11 this.
12 At the time that the county was considering the
13 protest, and that's within these minutes, it says Mr. Tibbitts
14 reiterated to the Board that the word protest was a strong
15 connotation, but if you took -- if you look at the intent of
16 the protest it is that all interested parties be informed and
17 to make sure proper information is in front of the State
18 Engineer.
19 And then later it says the commissioners restated
20 their intent that they were only taking action to clarify the
21 facts and were in no way challenging a valid or vested water
22 right.
23 Was that your understanding when they first filed
24 a protest?
25 A. Right. Yes.

1 Q. And then it also says that the Board decided to
 2 go ahead with a protest which could be withdrawn later if the
 3 county felt the unknowns were answered satisfactorily.
 4 Now, did you feel like you had an opportunity to
 5 meet with the county to explain those unknowns?
 6 A. No.
 7 HEARING OFFICER JOSEPH-TAYLOR: Can I have the
 8 exhibit back, please, Mr. Frazer?
 9 THE WITNESS: What's that?
 10 HEARING OFFICER JOSEPH-TAYLOR: I need to -- I'm
 11 missing a page.
 12 BY MR. TAGGART:
 13 Q. You were asked a number of times during Ms. Ure's
 14 questioning about whether you knew when the last time
 15 something was irrigated on the ranch; do you remember that?
 16 A. Yes.
 17 Q. Why have these areas not been irrigated?
 18 A. You mean specifically what areas when?
 19 Q. When she was asking you questions and there was
 20 an area that wasn't irrigated and she asked you do you know
 21 when the last time it was irrigated and you said no, I don't,
 22 my question was why haven't they been irrigated?
 23 MS. PETERSON: Just for clarification, my
 24 objection would be anything prior, if he's testifying about
 25 anything prior to their ownership of the ranch he wouldn't

1 A. Yes.
 2 Q. Have you had conversations with past ranch
 3 owners, past Sadler Ranch owners?
 4 A. Yes.
 5 Q. Did any of them tell you that they intended to
 6 abandon water rights on Sadler Ranch?
 7 A. They told me that they had a hard time irrigating
 8 the land because of a lack of water, but they did not intend
 9 to abandon the ranch.
 10 Q. Could you go to slide 24, please? This was the
 11 slide where there was an area of the aerial photograph that
 12 showed a field that was white.
 13 A. Yes.
 14 Q. And you were asked whether you knew why it was
 15 white and your answer was no.
 16 HEARING OFFICER JOSEPH-TAYLOR: I'm getting
 17 seasick. I'm getting seasick up here, Tammy.
 18 BY MR. TAGGART:
 19 Q. And I know you weren't there in 1946, but having
 20 looked at the aerial photograph do you have an understanding
 21 of why it -- why that might have been white?
 22 A. The reason I said no is because I wasn't there in
 23 '46 so I don't know. But we -- but there's records of growing
 24 winter wheat on the ranch, so it could have been winter wheat
 25 that was dry and getting ready for harvest or maybe it was

1 have personal knowledge of that. So if the question is just
 2 limited to in the last two years that they've owned the ranch
 3 then we have no problem answering that question.
 4 MR. TAGGART: May I be heard?
 5 HEARING OFFICER JOSEPH-TAYLOR: Hum-um.
 6 MR. TAGGART: He was asked on cross if he knew
 7 when the last time it was irrigated. So he was asked to give
 8 information about the ranch before he bought it. And now the
 9 objection is he can't answer questions on redirect about what
 10 happened on the ranch before he bought it.
 11 MS. PETERSON: I don't think that was your
 12 question.
 13 MR. TAGGART: I'll rephrase, maybe it will --
 14 maybe it will resolve the conflict.
 15 HEARING OFFICER JOSEPH-TAYLOR: I know where
 16 you're going and it's not relevant because he doesn't know.
 17 MS. PETERSON: I think the question was why it
 18 wasn't been irrigated as opposed to, you know, when.
 19 HEARING OFFICER JOSEPH-TAYLOR: Yeah, but if he
 20 wasn't there, he doesn't know why.
 21 MS. PETERSON: Correct.
 22 BY MR. TAGGART:
 23 Q. Well, does the lack of water from the spring
 24 affect the ability to irrigate the lands that used to be
 25 irrigated on the ranch?

1 harvested, maybe they just planted something, maybe they just
 2 let the field go fallow for a year, I -- you know, there's a
 3 variety of explanations. But in later photos that shows up as
 4 being --
 5 HEARING OFFICER JOSEPH-TAYLOR: Just answer the
 6 question you're asked.
 7 THE WITNESS: Okay.
 8 BY MR. TAGGART:
 9 Q. In later photos that turns out that that looks
 10 like what? Or how does it look in later photos?
 11 A. There's -- it looks vegetated.
 12 Q. Right. You were asked about whether you have a
 13 grazing permit in the area of John's Field where there's a
 14 fence located; do you recall that question?
 15 A. Yes.
 16 Q. Do you know whether you're authorized to have
 17 cattle in that area?
 18 A. I don't.
 19 Q. You were asked about -- go to slide 67, please.
 20 This is the slide where there were a lot of springs and you
 21 were asked whether you were seeking mitigation for any of the
 22 other springs?
 23 A. Right.
 24 Q. Do you know if mitigation water rights have
 25 already been granted for the Bailey's Spring?

1 A. As far as I know that they -- they applied for
 2 water because their well went dry. And so they were able to
 3 put in -- I mean, their spring went dry so they were able to
 4 put in a well. And that's what's providing them with the
 5 water.
 6 MR. TAGGART: Thank you. No further questions.
 7 HEARING OFFICER JOSEPH-TAYLOR: Recross, Ms. Ure?
 8 MS. URE: Yes.
 9 RECROSS-EXAMINATION
 10 BY MS. URE:
 11 Q. You mentioned that you talked to prior owners
 12 about their irrigation?
 13 A. Um-hum.
 14 Q. Can you tell us which owners you talked to?
 15 A. It was Loudy and his initials are BJ, I don't
 16 remember his name to tell you the truth, that was over the
 17 summer, he lives up in Idaho. I asked him what his experience
 18 was. He said that in 1970 -- in the '70s he noticed that he
 19 was having trouble irrigating, it wasn't -- water wasn't going
 20 as far as it used to go.
 21 And he -- he was getting worried about it. He
 22 went to the -- to the State Engineer, complained about it.
 23 The State Engineer was not interested in what he had to say.
 24 He was not interested in his concerns. He thought, you know
 25 what, there's no water laws out in the Diamond Valley, I'm

1 that you were able to look at?
 2 A. No, but I --
 3 Q. Were -- did all the -- did all the photos show
 4 the same thing, did they all show this time series of decrease
 5 in water through time?
 6 A. Yes. Except for '67 was a problem for me because
 7 it showed -- I thought it would be less than it was. It had
 8 more water than I expected, but then everything in that year
 9 looked like it rained like heck, I mean, everything was dark,
 10 everything -- the hills were dark, everything was dark. So I
 11 don't know what happened that year.
 12 Q. So, you're saying that there weren't any years in
 13 there that looked abnormally dry?
 14 A. No.
 15 Q. Okay. You showed us some of your image slides
 16 and photographs a number of springs that occurred on your
 17 lands that are no longer there.
 18 A. Right.
 19 Q. Were there irrigation ditches that led away from
 20 each of these springs?
 21 A. Not that I -- I mean, Indian Camp, but the other
 22 ones, no, not that I've seen. The big -- there's Shipley --
 23 there's Shipley in the north and then there's one a little bit
 24 to the southwest. I don't remember seeing any. It wouldn't
 25 be really big, there may be something there. But the other

1 going to sell and I'm going to get out of there.
 2 So he said he told sold the ranch and he got out
 3 of there. It was too risky.
 4 Q. Okay. Any other owners that you spoke with?
 5 A. Briefly about one of the -- with one of the
 6 Lundahl Brothers. But not about water rights or water or
 7 anything like that.
 8 MS. URE: Okay. No further questions.
 9 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson?
 10 MS. PETERSON: No questions.
 11 HEARING OFFICER JOSEPH-TAYLOR: Questions of
 12 staff? Mr. Felling?
 13 THE WITNESS: I thought I was done.
 14 MR. FELLING: You're almost done.
 15 CROSS-EXAMINATION
 16 BY MR. FELLING:
 17 Q. Good afternoon, Mr. Frazer. You've looked at a
 18 number of aerial photographs beginning in I guess 1946 until
 19 very recently. I'm curious, how many years did you look at?
 20 A. Tammy has the list, but it's like 15-something.
 21 There was years where sometimes it cut the ranch in half,
 22 sometimes the ranch wasn't in very -- resolution wasn't good
 23 so I only put in so many years, but there's probably 50, 20,
 24 something like that.
 25 Q. Did you show -- did you show us all the years

1 one that's a little farther south, no.
 2 Q. You commented that you were seeking mitigation
 3 for all the springs that dried up on your land, are you
 4 seeking mitigation for those springs as well?
 5 A. As far as I know this -- this proceeding isn't
 6 regarding those springs.
 7 Q. So is your answer no?
 8 A. Maybe at some later day, I mean, at this time,
 9 no, at some later date. I don't want to say no.
 10 MR. FELLING: All right. Thank you. No more
 11 questions.
 12 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 13 Mr. Walmsley?
 14 MR. WALMSLEY: Yeah.
 15 CROSS-EXAMINATION
 16 BY MR. WALMSLEY:
 17 Q. I'm pretty impressed with your background in
 18 soils and soils are pretty important out in this area.
 19 My question is based on soil types, did you
 20 correlate types of vegetation that were -- would grow in those
 21 soils, just in general?
 22 A. You mean according to the -- I mean, to the -- to
 23 the what was said in the book or to do I have my -- I mean,
 24 there's a consistency with the Bicondoa of -- of -- of -- I
 25 don't even know what they are, but they're this annual --

1 annual growth and maybe some later -- some recent rabbit brush
 2 in the -- on the -- in the higher soils there's definitely
 3 older brush, I don't remember what kind, just more -- the
 4 brush has been there a long time. And there's definitely a
 5 vegetational-type difference between the lower soils and the
 6 upper soils. I don't know the exact name of the plants
 7 that -- there's definitely more forbs on the lower areas than
 8 were shrubs on the upper areas, whatever the names of the
 9 plants were I -- I was supposed to study up on that before the
 10 hearing and I didn't.

11 Q. Okay. Well, thank you. But along those lines
 12 there's different -- different plants that grow within those
 13 soil types. Some have a higher value as livestock feed and
 14 others can be toxic, you mentioned rabbit brush and, you know,
 15 another one that appears to invade based on a lot of your
 16 pictures is greasewood.

17 And do you know what grew on the soil and how
 18 much they could have harvested of a grass that would have been
 19 palatable for cattle, for instance?

20 A. You know, what's there now is there is no grass.
 21 There is really nothing there. And so I -- I -- what used to
 22 grow there I don't know. I mean, there's some areas closer to
 23 the north -- the north lake, the lake at the northeast corner
 24 where you can still see some remnant grasses and a little bit
 25 of wiregrass.

1 Let me take just a minute and flip through my
 2 notes a little bit.

3 You talked about some -- some areas were
 4 saturated and -- and possibly swampy areas. You know, in --
 5 in the past in other adjudications such on the federal side,
 6 say the Truckee River or in the case of Humboldt River
 7 swampland was disallowed until drained so you couldn't -- you
 8 couldn't divert any water to that and therefore, there was no
 9 beneficial use on swampland.

10 Did you take any of that into consideration when
 11 analyzing your total acreage?

12 A. The only time we really -- I think you referred
 13 to it as swampland in terms of the 1879 survey. Beyond that
 14 most of the areas looked like you could ride them out. It
 15 seems like there's enough control on the water that you could
 16 dry them out. And now we have no water so I don't know what
 17 it looks like when there's a lot of water, but it looks like
 18 you could control the water enough to dry them out so it
 19 wouldn't be perennially a swamp.

20 Q. So -- so based on your -- your testimony -- now,
 21 your knowledge appears to go -- go back to when you purchased
 22 the ranch in that area or -- or even maybe based on aerial
 23 photography going back to 1946.

24 Is there any record that can be brought forth on
 25 the types of crops and the acreages of those crops?

1 Q. Right.

2 A. It looks like good grass, it looks palatable,
 3 just very thin because it hasn't had water. But on the
 4 southeast areas there is -- there's not much signs of grass,
 5 but they have hay corrals there so they must have had
 6 something growing there.

7 Q. I've run across instances where there were a lot
 8 of hay corrals and ground had been previously harvested. It
 9 was maybe not on a yearly basis, but when there was enough
 10 water this would be in Ruby Valley, so, you know, I can see
 11 that the evidence from those hay corrals showed that they did
 12 harvest something out there.

13 I guess the bottom line is the State Engineer is
 14 going to be charged with making a decision on, you know, what
 15 the bottom line area that had agriculture on it and the types
 16 of crops that were grown on that and their benefit to -- to
 17 livestock.

18 Do you have any historical record of number of
 19 cattle or cattle, sheep or -- or other animals that were
 20 raised on that ranch?

21 A. Ted has a really good -- in his presentation
 22 he'll go into that in pretty good detail.

23 Q. Okay. Thank you. That -- in my eyes that would
 24 be a good indicator on -- on amount of vegetation grown and
 25 possibly consumed in place.

1 A. Definitely.

2 Q. That were raised on the ranch?

3 A. Yes.

4 Q. Thank you. Part of the decision will I think --
 5 if -- of course it's up to Jason, I won't speak for Mr. King
 6 on if we're going to mitigate the amount of water that was
 7 taken out there is going to be based on type of use, you know,
 8 the standard is four-acre-feet per acre for alfalfa and
 9 generally in -- in Northern Nevada with a lower amount in
 10 higher elevation areas. And then we go as low as in a decree,
 11 in the Humboldt decree we go to .75-acre-feet for what we call
 12 diversified pasture.

13 So from based on my knowledge and having done
 14 this for a long time, I don't believe that all of the ground
 15 would -- should receive four-acre-feet per acre; would you
 16 agree with that?

17 A. I -- I disagree because you're talking about -- I
 18 think if I understand correctly you're talking about how much
 19 water would it take to --

20 HEARING OFFICER JOSEPH-TAYLOR: I'm going to stop
 21 both of you because this has nothing to do with your
 22 testimony. Let's see if we have a witness to bring this
 23 testimony forward. You're going way beyond what he testified
 24 to.

25 MR. WALMSLEY: Okay. Thank you.

1 HEARING OFFICER JOSEPH-TAYLOR: Any other
2 questions?
3 MS. GEDDES: No.
4 MR. WALMSLEY: No, I believe that's all. Thank
5 you.
6 HEARING OFFICER JOSEPH-TAYLOR: Mr. King?
7 CROSS-EXAMINATION
8 BY THE STATE ENGINEER:
9 Q. Mr. Frazer, when you spoke with one of the
10 previous owners, I can't remember the gentleman's name --
11 A. Louden.
12 Q. Louden?
13 A. Um-hum.
14 Q. Did you ask him what he used to irrigate, what
15 crops?
16 A. No.
17 Q. How many acres?
18 A. No.
19 Q. No?
20 A. (Shakes head.)
21 Q. It's your testimony that by the 1970s he had
22 enough of fighting a battle on not being able to get the water
23 and so he just --
24 A. Right. I think -- it didn't sound like he had --
25 the battle had gone on very long, but he -- I think he was

1 Q. Can you tell me what the temperature of the water
2 is today?
3 A. 104.
4 Q. Oh, it's 104 today, I'm sorry.
5 A. (Nodded head.)
6 Q. Do you know what the temperature was in past
7 records?
8 A. I've heard about 106. I think that sounds
9 closer.
10 THE STATE ENGINEER: No more questions. Thank
11 you.
12 HEARING OFFICER JOSEPH-TAYLOR: You may be
13 excused. Let's be off the record.
14 (Recess taken.)
15 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
16 record. Mr. Taggart, you indicated you had a few exhibits you
17 wanted to take care of before your next witness.
18 MR. TAGGART: Yes. Thank you. Exhibit 149 and
19 150, those are the soil samples that Mr. Frazer discussed,
20 that's the evidence about those soil samples.
21 HEARING OFFICER JOSEPH-TAYLOR: Any objections to
22 Exhibit 149 and 150?
23 MS. PETERSON: No.
24 HEARING OFFICER JOSEPH-TAYLOR: Hearing none,
25 they'll be admitted.

1 pretty freaked out by getting the cold shoulder from the State
2 Engineer.
3 Q. And I guess I want to be clear, I'm changing
4 gears on you, you spoke briefly about the four-inch diameter
5 casing that you found, was it only on four-inch diameter
6 casing that you're aware of that you found on the property?
7 A. Right. Well, there's -- there's a well that's in
8 your records where there's a well log in the southeast corner
9 of the property, but there's one on the north end of the
10 property that's actually just on BLM land that I remember that
11 is a four-inch casing.
12 Q. You believe that's just used for soft water?
13 A. Yes.
14 Q. Your counsel in his opening brief talked about
15 the fact that he believed that the season of use should be the
16 full calendar year because of geothermal water being four
17 degrees; do you have an opinion on that?
18 A. I think that -- I don't really understand what
19 the season of use technical terminology means. I do remember
20 I talked in the slides about having to take the water from all
21 winter long and saturate the meadows, in that takes the whole
22 winter of -- of -- as far as I could tell the whole winter to
23 do that of spring flow. And then that's used during the
24 summer as it all dries up. So it's unique water year round to
25 create what used to be there.

1 (Exhibits 149 and 150 admitted into
2 evidence.)
3 MR. TAGGART: And then 197 is a group of topos of
4 a -- USGS topographical maps and we offer those into evidence.
5 HEARING OFFICER JOSEPH-TAYLOR: Those are the
6 ones at the end of his PowerPoint?
7 MR. TAGGART: Yes.
8 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
9 MS. PETERSON: None.
10 MS. URE: None.
11 HEARING OFFICER JOSEPH-TAYLOR: Hearing none,
12 they'll be admitted.
13 (Exhibit 197 admitted into evidence.)
14 HEARING OFFICER JOSEPH-TAYLOR: And do we want to
15 take care of 196, do you have any objection, Ms. Peterson, if
16 we put those pages from the Eureka County minutes in now
17 because they were discussed?
18 MS. PETERSON: Sure.
19 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
20 MR. TAGGART: No objection. Thank you.
21 HEARING OFFICER JOSEPH-TAYLOR: 196 will be
22 admitted.
23 (Exhibit 196 admitted into evidence.)
24 HEARING OFFICER JOSEPH-TAYLOR: I think that's
25 the only other one I had. Your next witness, please,

1 Mr. Taggart?
 2 MR. TAGGART: Thank you. The next witness for
 3 Sadler Ranch is Dr. Ted Yednock.
 4 HEARING OFFICER JOSEPH-TAYLOR: Please raise your
 5 right hand and be sworn. I'm not going to try and pronounce
 6 your name.
 7 THE WITNESS: Yednock.
 8 HEARING OFFICER JOSEPH-TAYLOR: Yednock. Got it.
 9 Thank you.
 10 TED YEDNOCK,
 11 called as a witness in this matter,
 12 having been first duly sworn,
 13 testified as follows:
 14
 15 DIRECT EXAMINATION
 16 HEARING OFFICER JOSEPH-TAYLOR: Welcome,
 17 Dr. Yednock, your first Nevada water right hearing.
 18 BY MR. TAGGART:
 19 Q. Good afternoon, Dr. Yednock.
 20 A. Hello.
 21 Q. Are you the owner of Sadler Ranch?
 22 A. Yes, I am.
 23 Q. And when did you become the owner?
 24 A. 2011.
 25 Q. Do you have prior experience in farming or

1 Q. And were you -- what was your position at that
 2 company?
 3 A. I was an -- I started as a scientist and ended up
 4 being the head of research.
 5 Q. Have you invented any products to which you own a
 6 patent?
 7 A. I -- I invented a drug for multiple sclerosis
 8 which is actually one of the important drugs for MS on the
 9 market today. I don't know about the patent, that's something
 10 that's within the company.
 11 Q. And did you research historical documents as part
 12 of that employment?
 13 A. As head of research I was responsible for all of
 14 the projects that we did. And so it was my responsibility to
 15 understand where they came from, these projects came from,
 16 again, based on the historical literature and also based on
 17 the current literature. And so I used that to make both
 18 scientific and business decisions regarding the projects we
 19 were working on.
 20 Q. Have you conducted research of the historical
 21 documents regarding water use on Sadler Ranch?
 22 A. Yes, I have.
 23 Q. Could you please describe the locations that you
 24 went to find historic information?
 25 A. Yeah, I actually have a list. I went to the

1 ranching?
 2 A. I was raised by -- my parents were farmers in the
 3 Midwest. I was not raised on a farm, but I spent my summers
 4 earning money by working on farms in the area, so baling hay,
 5 walking the soybeans, growing vegetables.
 6 Q. And could you please describe your educational
 7 background for the State Engineer?
 8 A. I have a Ph.D. in biology and immunology.
 9 HEARING OFFICER JOSEPH-TAYLOR: Biology and what?
 10 THE WITNESS: Immunology.
 11 BY MR. TAGGART:
 12 Q. In your education did you conduct research of
 13 historical records?
 14 A. Being a scientist we -- you have to build upon
 15 what's happened in the past. And so I spent a lot of time
 16 writing my thesis. And even in my lab work day to day going
 17 back into historic records mostly within the past 20 years,
 18 but sometimes in my line of work some of the publications were
 19 from the 1800s. So yeah, all the time.
 20 Q. Please describe your employment experience.
 21 A. I went to work for -- after my Ph.D. I went to
 22 work for a biotechnology company working on CMS disease, brain
 23 disease. So we were studying Alzheimer's, Parkinson's and
 24 multiple sclerosis. And I stayed with that company for about
 25 23 years.

1 Eureka County courthouse in Eureka. The Lander County
 2 courthouse in Battle Mountain. A lot of work on the internet,
 3 on Google Earth. That the records of the State Engineer here
 4 in Carson City. The Northeastern Nevada Museum in Elko. The
 5 Eureka County Historical Society Museum in Eureka. The Nevada
 6 Historical Society in Reno.
 7 CCC camp records. Sadler Ranch was actually a
 8 CCC camp in the '30s. The National Archives and Records
 9 Administration in San Francisco. The University of Reno in
 10 Nevada. The archives for the Eureka Sentinel and other local
 11 papers.
 12 And also I had the privilege of interviewing a
 13 woman who was raised on the ranch, she was the great
 14 granddaughter of Reinhold Sadler. She lives in Idaho.
 15 Q. And that was -- what was her name?
 16 A. Jean Sadler Brown.
 17 Q. What did you learn about Reinhold Sadler?
 18 A. It seemed like he was quite a character. He
 19 was -- he owned the ranch. He bought the ranch in 1880 from
 20 George Hill who had purchased it from William Shipley in 1887.
 21 He was a merchant in Eureka, he had a mercantile
 22 store. He -- a lot people came to him and asked for
 23 investments in their mining operations because he was selling
 24 basically tools to the miners.
 25 And so he was very active in local mining, in

1 local land ownership and cattle ownership. He had the
 2 Huntington Valley Land and Stock Company. So he was quite
 3 active in the area in addition to owning several ranches in
 4 the area.
 5 Q. Do you have a picture of him?
 6 A. I do actually. This is the official governor
 7 picture of him.
 8 Q. Okay. Was he involved in litigation?
 9 A. Like I said, he was quite a character. So a lot
 10 of people came to him as I said asking for investment in their
 11 mines. So he came to own a lot of mines. He also lent money
 12 for the merchandise that he was selling in the store. And
 13 when people didn't pay he ended up taking them to court. So
 14 there was -- I kept tripping over these when you're trying to
 15 find records about Reinhold Sadler. And there's just
 16 litigation after litigation having to do with petty little
 17 things.
 18 Also, interestingly in -- when he was elected
 19 governor he won by 22 votes out of over 12,000 cast. And so
 20 he ended up going to the Supreme Court. His opponent was just
 21 throwing all sorts of ruckus to oust him. And he ended up
 22 going to the Supreme Court and prevailing.
 23 MS. PETERSON: Excuse me, I don't have this page
 24 in my exhibits.
 25 THE WITNESS: Oh, this is a transitional slide.

1 Sadler who lived on the farm. And then in 1946 was a large in
 2 fighting which I'll talk about within the Sadler family. And
 3 so there was a lot of testimony at that time. So those were
 4 the main seven sources.
 5 I also relied on the aerial and satellite
 6 photographs that Doug talked about as well as a lot of on
 7 ground fieldwork with pictures and GPS locations.
 8 Q. And a question just came from opposing counsel
 9 about the presentation --
 10 A. Yes.
 11 Q. -- you are showing on the screen. How is that
 12 different from what's been submitted as Exhibit 103?
 13 A. The exhibit in 103 is exactly as it was for the
 14 purposes of being able to tell the story succinctly, I did put
 15 in some transition slides. So I want to keep coming back to
 16 this outline slide, this is -- these are the main areas that I
 17 will talk about. All of the information in these areas come
 18 from the seven sources that I just discussed.
 19 And so when I begin a new section like this one
 20 I'll say okay, now I'm going to talk about how Reinhold Sadler
 21 had a work agreement in 1880 and I'll talk about something
 22 like that. So to the picture I downloaded from the internet.
 23 I don't need to submit these slides as evidence because they
 24 simply are for transitional purposes within the talk.
 25 Q. All right. Well, then let's -- let's go to slide

1 Sorry, I'll get to that and I'll talk about that. These are
 2 where we are right now. I will get to that.
 3 MS. PETERSON: Will I get a copy of it?
 4 THE WITNESS: Sure.
 5 MS. URE: Okay. I would like one as well.
 6 BY MR. TAGGART:
 7 Q. When -- who ran the ranch when he was governor?
 8 A. It appears that he had ranch managers, but also
 9 by the time he died, which was in 1906, his son was 19, 20,
 10 Edgar, and he took over operations of the ranch.
 11 Q. Now, you prepared a presentation that's
 12 identified as Exhibit 103; is that correct?
 13 A. Correct.
 14 Q. And why don't you describe to the State Engineer
 15 what Exhibit 103 is?
 16 A. So 103 is based on all of these sources of
 17 information. I listed all the places I went. I often did not
 18 find anything of value in those places.
 19 What I did find, seven sources in particular that
 20 I thought were relevant to water usage at the ranch. Work
 21 agreement starting 1880 when Reinhold first bought the ranch.
 22 Litigation in 1913. Water applications from 1913 and 1917.
 23 Memoirs written from people who worked there in the '20s and
 24 '30s. Then the diaries and pictures that I got from Jean
 25 Sadler Brown who was written by her grandmother Ethel Eccles

1 number 3 and begin discussion of the work agreement, please.
 2 A. This is just a one slide -- this was a work
 3 document that I found in Eureka County courthouse from 1880,
 4 again, Reinhold Sadler had just purchased the ranch. And all
 5 that was in -- it was a one-page cursive written work
 6 agreement between Sadler, Bothier and Baker. And basically it
 7 says, you know, he's hiring Baker to work faithfully to
 8 improve and attend to the Sadler Ranch raising and harvesting
 9 crops, baling and marketing the crops, fencing and irrigating
 10 the said lands. And this was going to go on until they
 11 reached the sum of \$4,000.
 12 So, to me what this -- what this said was that
 13 already in 1880 there was -- they were talking about raising
 14 and harvesting and marketing crops. So there was already a
 15 lot happening on this ranch by 1880.
 16 Q. And I want to ask you about what's been
 17 identified as Exhibit 136, I'll show you a copy of that note
 18 and please describe what that is for the State Engineer?
 19 First of all, did you prepare it?
 20 A. Yes, I did. This is just a very nice succinct --
 21 I don't know how nice it is, but it's a very succinct summary,
 22 it shows the original work agreement in cursive and then I
 23 wrote a transcript of it myself. So that's what's showing
 24 below. So both are submitted just for convenience.
 25 MR. TAGGART: We offer Exhibit 136 into evidence

1 at this time.
 2 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 3 Exhibit 136?
 4 MS. PETERSON: No objection.
 5 HEARING OFFICER JOSEPH-TAYLOR: Hearing none, it
 6 will be admitted.
 7 (Exhibit 136 admitted into evidence.)
 8 BY MR. TAGGART:
 9 Q. Could you please describe the next part of your
 10 presentation?
 11 A. Oh, sure. So the next section I -- I spent a
 12 fair amount of time on the south meadowland because here there
 13 was quite a bit of documented literature about how this land
 14 and water was developed and used and when it was done so.
 15 Mainly in the 1913 legal agreement between Romano
 16 and Sadler and then in a water application in 1917.
 17 So again, we're talking about the south meadow
 18 which is an arm reaching out from Shipley Hot Springs about
 19 three miles out into the playa.
 20 So the 1913 stipulation was between Sadler and
 21 his neighbor Romano, which Doug referred to earlier. And what
 22 you see in here is about eight pages of cursive along with
 23 this map. And I show a blowup of this map on the next page.
 24 This is right out of the stipulation from Eureka County
 25 courthouse. It shows an outline of the Sadler Ranch and it

1 in the dam over here marked .0 is to be open between
 2 January 1st and April 1st each year allowing water to flow
 3 into ditch E and into a natural waterway for the purposes of
 4 irrigating crops in the Romano Field. It's further specified
 5 that they would allow five CFS of water representing about a
 6 third of the Big Shipley flow.
 7 And then they also mentioned already these series
 8 of ditches and dams extending again over about three miles out
 9 into this land were built by Sadler and his predecessors prior
 10 to 1883 and had been a continuous maintenance and use for
 11 30 years prior to the stipulation, which was 1883, sorry.
 12 Okay. So, what I've done now is simply taken the
 13 structures that were outlined on that map and overlaid them
 14 onto the 1946 aerial photograph which was very easy to do
 15 because I just used Shipley Hot Springs in blue and the Romano
 16 outline which they had on their map in this overlay. And I
 17 was actually amazed at this diagram that was drawn in 1913,
 18 the blue lines showing the natural waterway really fits very
 19 nicely with the natural waterway that you see in these
 20 photographs.
 21 Again, just to know they were talking about why
 22 was there all this fighting about this water for the land way
 23 out here. We went out and looked. You can still see the --
 24 at this very location where they have pointing to a mark -- a
 25 point marked O you can see a dam and there's an opening in the

1 shows an outline, I actually highlight these. There's the
 2 Sadler Ranch, I show this in red and then outlined on the
 3 original map I put in blue showing the Romano Ranch. So it
 4 was about 326 acres.
 5 Now, the Shipley Hot Springs is shown over here
 6 on the left-hand side. And it -- they go to great length in
 7 describing how the water flows out of the Shipley Hot Springs
 8 into a ditch which I show in red, they called it ditch E. It
 9 flows into a natural waterway which I have shown here in blue
 10 and labeled as such. And it flows down onto the Romano
 11 property.
 12 They specify in the document that these -- these
 13 structures were there 30 years prior to this, that puts it in
 14 into 1883. Apparently they had been using this just fine,
 15 something happened between Sadler and his neighbor Romano and
 16 Sadler was no longer allowing water to flow through these
 17 structures. And so it came to a legal agreement and that's
 18 what the stipulation is that specifies how the water is to be
 19 used.
 20 I should also say that in here Romano was arguing
 21 that without flooding and irrigating of said lands during said
 22 months no crop may be produced thereupon and said lands become
 23 valueless. So it was very important for Romano to get the
 24 water back for the land.
 25 So what the stipulation came to was that a gate

1 dam. You can see ditch E, which is nice ditch waterway with
 2 concrete dams in them, I don't know if these were the dams
 3 that were there in 1913, but they're very old. And then you
 4 could see the natural waterway coursing down into the land.
 5 And then at the very, very end they had marked a
 6 line with the dam and that dam is still there. It's
 7 represented by a white linear mounded structure of dirt. And
 8 you can see the lake sort of behind it.
 9 And then I also just wanted to get an
 10 appreciation for the land. So we walked around the Romano
 11 Field down, I'm showing on the southern part of the Romano
 12 Field, the lower Romano Field is what appears to be a hay
 13 corral. In fact, we know it's a hay corral because this is
 14 the one that Doug had showed earlier still in use in 1973
 15 where you could see it full of haystacks.
 16 The picture above the -- the 1973 inset is a
 17 Google Earth in 2012 and you can see that now there's a lot of
 18 rabbit brush that has grown into that hay corral consistent
 19 with the picture.
 20 And then this standing at the hay corral and
 21 looking north. And again, there's rabbit brush that is now
 22 beginning to grow in this land, but you can see it's a very
 23 flat large open lake like land that you could picture things
 24 growing on it.
 25 Okay. Now, this is the same picture of the

1 hayfield or the haystacks down in the lower part of the
 2 picture now on slide 10. And you can see the field above it,
 3 there's linear structures that appear to be windrows. So
 4 consistent with that's where the hay came from for this hay
 5 corral.
 6 HEARING OFFICER JOSEPH-TAYLOR: *Can you go back,*
 7 please?
 8 THE WITNESS: Sure.
 9 HEARING OFFICER JOSEPH-TAYLOR: *Do you have a*
 10 pointer?
 11 THE WITNESS: Yes, I do.
 12 HEARING OFFICER JOSEPH-TAYLOR: *Can you show me*
 13 what you mean by linear structures?
 14 THE WITNESS: These linear structures here,
 15 they -- they appear.
 16 HEARING OFFICER JOSEPH-TAYLOR: *We don't need it,*
 17 Tammy.
 18 TECHNICAL ASSISTANT: Okay.
 19 HEARING OFFICER JOSEPH-TAYLOR: *Thank you.*
 20 THE WITNESS: Okay. All right. Then going to
 21 the southeastern part of the Romano Field. See, I actually
 22 wrote the word southeastern so I don't have to think about it.
 23 Again, we found another hay corral. And looking sort of along
 24 the line of the arrow I have drawn there looking southeast
 25 toward the hay corral, again, you can see nice open flat area

1 area, that same flooded field from 1973. Again, with what
 2 appear to be windrows here and they actually curve around this
 3 inner -- this middle part here is one of those hummocks, it's
 4 an elevated area. You can see that it has sagebrush on it so
 5 it's not used for growing crops, but the area around it appear
 6 to have windrows which appear to be consistent with harvesting
 7 hay.
 8 Moving then if you were to open that dam and that
 9 water flowed out of this lake it would flow into the next lake
 10 down below to it through this what appears to be an artificial
 11 water channel into another lake. And then it would back up
 12 against the dam that they had drawn in the diagram from 1813.
 13 And as Doug had mentioned all around here you can
 14 find snail shells suggesting that there had been a lot of
 15 water here at one point.
 16 That's all for that particular piece of 1913
 17 stipulation.
 18 Q. Thank you. I want to have you look at
 19 Exhibit 138 and please describe that?
 20 A. This is -- what is this? This is what I went
 21 through, this is the stipulation between Frank Romano and
 22 Edgar Sadler that I just walked through.
 23 Q. And what does that exhibit include?
 24 A. So in the exhibit is the original -- a photograph
 25 of the original eight pages of cursive text as well as my

1 that looked like it had been flooded.
 2 Going out to the middle of the Romano property,
 3 again, another hay corral and this is a view looking right
 4 next to the corral was another dam which had a culvert in it.
 5 And looking west from the hay corral and the dam you can see
 6 again a nice big flat open field that looks like it would have
 7 been full of water.
 8 Going to the north part of the Romano property,
 9 again, another hay corral and looking now southeast of this
 10 corral you can see again a nice big flat open field of level
 11 land.
 12 This is -- I'm using this picture that Doug
 13 showed earlier the 1946 aerial photograph pair where you can
 14 see the glistening lake. And what's neat about this it really
 15 is the same north field that I was just talking about. So
 16 it's this area.
 17 And you go up in higher magnification on this and
 18 I -- I marked there the location of the north Romano hay
 19 corral which you can see it's an elevated area, so it would be
 20 out of the water when the field is flooded. And then
 21 remarkably right where the water stops in the middle of the
 22 picture is a dam with a culvert. And so presumably that
 23 culvert was closed and the water would back up and flood the
 24 field.
 25 And then this is showing a picture of that same

1 transcript of that text as well as the map that I showed in
 2 the testimony, all of that's in there.
 3 Q. And that stipulation was resolving litigation?
 4 A. Correct. It was actually argued in the Third
 5 District Court or the state on behalf of Eureka County.
 6 MR. TAGGART: We offer Exhibit 138 into evidence.
 7 HEARING OFFICER JOSEPH-TAYLOR: *Any objection?*
 8 MS. PETERSON: No objection.
 9 HEARING OFFICER JOSEPH-TAYLOR: 138 will be
 10 admitted.
 11 (Exhibit 138 admitted into evidence.)
 12 BY MR. TAGGART:
 13 Q. Please continue with your presentation, Doctor.
 14 A. Okay. The next one on -- again, relates -- still
 15 talking about the southern part of the southern meadow. And
 16 Matilda Eccles, her husband died in 1915 and she went and
 17 purchased the Romano Ranch in 1916.
 18 So this is showing again that this is the blue
 19 area. And what she noted was that while the water flows all
 20 the way from Shipley Springs, floods her property, but then it
 21 actually goes beyond that dam, the dam shown in yellow and
 22 flows onto BLM land to the southeast.
 23 And so she wanted to buy the BLM land because it
 24 was being watered and she wanted to be able to manage it. But
 25 in order to do that she had to have a certificate from the

1 State Engineer saying that well, in fact, water went there.
2 And so that she could apply for the land back and that she'd
3 be able to buy the land.

4 So, this -- I've outlined here in white stippled
5 line, just looking at this 1946 aerial photograph I outlined
6 what appears to be water flowing, overflowing from the Romano
7 Ranch onto BLM land, which is the land that she's interested
8 in in this particular application.

9 And, in fact, it's likely this whole pentagon
10 structure was receiving water from overflowing from the Romano
11 Ranch.

12 MS. PETERSON: I'm sorry, what year was that you
13 said of the photo?

14 THE WITNESS: The photo is a 1946 aerial photo.

15 MS. PETERSON: Thank you.

16 THE WITNESS: So as shown here in pink is the
17 land that she wants to buy from the federal government. And
18 she's -- so she again has applied. What she's doing is the
19 five CFS of water that had been allowed and the stipulation
20 from 1913, she's saying well, I'm applying for use for that
21 same water, it's overflowing onto the land, I'm not asking for
22 more, I'm just asking for part of the water that overflows the
23 Romano Ranch. And this again is winter water, this is winter
24 water from January, February and March.

25 So, after she applied in 1917, I think in 1923 or

1 '24 was granted a permit. So they were very specific in the
2 permit that they were talking about the land here that I am
3 showing in the white stipple. So it wasn't the entire ranch,
4 it was just this particular piece of land, 336 acres. And
5 within that 336 acres they specified 234.2 acres of water that
6 apparent -- of land that was apparently irrigated.

7 What's remarkable about that to me is this is
8 very consistent, if you go out now and survey this land as
9 Boyack did and as we have done since then using Google Earth
10 you get very much the same numbers of land that's irrigated,
11 about 234 acres of land that's irrigated within this region.
12 And for that they granted her 2.342 CFSs.

13 MS. URE: I'm sorry, who is "they"?

14 THE WITNESS: The water agency, the water
15 district. And this turns out to be exactly one one hundredth
16 of the acreage, that's just the way it apparently was at that
17 time, that that is what they would allow. So for her
18 234.2 acres they granted her 2.342 CFS or 702.6-acre-feet per
19 season.

20 And remember, the season is just the three-month
21 season and that's again January, February and March. So this
22 is all consistent with the original stipulation between Sadler
23 and Romano.

24 HEARING OFFICER JOSEPH-TAYLOR: Can you go back a
25 slide or two for me?

1 THE WITNESS: Sure.

2 HEARING OFFICER JOSEPH-TAYLOR: So the 120 acres
3 in pink, is that the federal land that she was applying for to
4 purchase?

5 THE WITNESS: Yes.

6 HEARING OFFICER JOSEPH-TAYLOR: And this is 1917?

7 THE WITNESS: Yes.

8 HEARING OFFICER JOSEPH-TAYLOR: And she gets a
9 water right through Division of Water Resources in 1917.

10 THE WITNESS: She gets -- she wanted -- she
11 needed the certificate to take to the federal -- the feds and
12 say here, I have -- yes, I can prove that there is water for
13 this land.

14 HEARING OFFICER JOSEPH-TAYLOR: But it doesn't
15 say anything about whether it was irrigated in quotes. It was
16 just water on this land. Irrigation being a term of art.

17 THE WITNESS: Yes. And she specifies that -- so
18 she says the water has been conveyed across my own land which
19 is the Romano blue land by means of ditches. It flows over
20 the one meadow which would be the last meadow and from there
21 it hits to I want to point government land.

22 So she points out that she has done no
23 improvements on the federal land at this point. But then as
24 part of the water application process she needed to show that
25 she did improvements upon the land so she had put in ditches

1 and culverts and --

2 HEARING OFFICER JOSEPH-TAYLOR: Okay.

3 THE WITNESS: So, I think the main thing this all
4 says to me is that again, as part of this they have ago
5 testifying and she's testifying and they talk about all of
6 these structures going out three miles into the playa of dams
7 and ditches that have been in use for 30 years prior to that.
8 So all of the structures reaching way out there have been in
9 use and maintained for that entire time.

10 Oh, and then -- I'm showing pictures of how this
11 land looks. Again, out there is a hay corral and then this is
12 a picture of the land looking southeast. Again, nice flat
13 lake like land, lake like land. And this is the picture that
14 Doug has already shown from 1973, again, what appears to be
15 windrows consistent with pink.

16 And they made a big deal, they actually talked
17 about the kind of land that it was and said that way out there
18 that land was basically pasture and hayed some years, so it
19 was -- it was not -- it's the farthest from the spring. So it
20 wasn't always hayed, but they made a point of saying that it
21 was hayed some years. And again, this is still 1973, it has
22 been hayed.

23 This is a photograph that was given to us by Jean
24 Sadler Brown on -- again, the great granddaughter of Reinhold
25 Sadler who was raised on the ranch. Her grandmother put

1 together this album. This picture itself did not have a date
2 on it, but all of the -- all of the pictures within this
3 album, those that were dated were from the '20s and '30s. And
4 so I'm assuming that this was part of that context.

5 But what struck me about this picture is that
6 it's showing water flowing from Shipley Spring all the way
7 down to the Eccles and Romano land. Again, so this is three
8 miles of water, this is obviously in the winter because the
9 trees around the Hot Spring are small, but they are -- they
10 don't have leaves.

11 So this is also consistent with what we observed
12 today that when the ground freezes the water will flow farther
13 and then actually build up as ice. So that's why I labeled
14 this as water and ice, I don't know which it is. Coming from
15 the spring going all the way out there.

16 And then I do an overlay of -- I actually found
17 exactly where they took this picture and did an overlay of how
18 it looks today. So that's -- the spring is still there
19 obviously and -- but the land beyond this very proximal area
20 that's somewhat green is quite dry. In fact, this is -- okay.
21 So that is the land that is -- Levi was able to harvest hay
22 from this year.

23 Note that all the lands above that there is --
24 I'm now showing in green were the highly cultivated areas.
25 They -- they -- they are not otherwise wet. They actually

1 have to have water ditched to them, that's where they grew
2 their alfalfa and their winter wheat and their barley and
3 everything else. And then the land below that I show here in
4 pink all the way down to the Eccles property, John's Field is
5 no longer -- receives water.

6 BY MR. TAGGART:

7 Q. Just one question to clarify, on this slide the
8 colors, the yellow area is the one that was irrigated in the
9 past year?

10 A. That was irrigated in the past year, yes. In
11 fact, you can -- you can see the windrows on it. But it
12 doesn't really matter.

13 Okay --

14 Q. There's another pointer there.

15 A. That's okay. So this -- this is just a picture
16 of the same area that Doug has already shown from earlier this
17 year in May and you can see all the areas extending out to the
18 Eccles being just gray and very, very dry.

19 Q. Just a second, I want to show you an exhibit,
20 it's Exhibit 142.

21 A. Yes.

22 Q. Are you familiar with that exhibit?

23 A. Yes, this is the -- these are documents that I
24 obtained from here in Carson City from the Water Division
25 relating to her application for water in 1917. And so it

1 contains sort of looseleaf applications and correspondence
2 back and forth from the State Engineer, but then it also has a
3 very nice typed, believe it or not, testimony from her and
4 from Eccle -- Edgar Sadler talking about how this line was
5 used. And so it was very instructive and there it is.

6 Q. So -- so Ms. -- or who filed the application?

7 A. Matilda Eccles.

8 Q. And who protested it?

9 A. Well, there was a protest as part of it. This
10 was a Louisa Sadler. Louisa Sadler was Reinhold Sadler's
11 wife. It appears as though she was about as litigious as he
12 was because she was always fighting different things. So even
13 though he was dead at that point she was carrying on that
14 battle.

15 Q. And so there's actually -- there was actually a
16 protest hearing?

17 A. There was actually a protest hearing; right.

18 Which they held on Saturday by the way because it happened to
19 be that they were in the area and so rather than having to
20 travel back and forth all the distance they held it on
21 Saturday and took this testimony, which is very, very
22 descriptive of how the land was used.

23 Q. And when was that?

24 HEARING OFFICER JOSEPH-TAYLOR: Hold on a second.

25 Didn't you say this was a 1917 application?

1 THE WITNESS: Yes.

2 HEARING OFFICER JOSEPH-TAYLOR: How do we have
3 1946 testimony in this?

4 MR. TAGGART: I'm sorry, we're going ahead.

5 THE WITNESS: That was a different slide.

6 MR. TAGGART: Go back a slide.

7 THE WITNESS: I was moving on, but then Paul drew
8 me back to this application.

9 HEARING OFFICER JOSEPH-TAYLOR: Okay. Go ahead.

10 THE WITNESS: Because we were submitting it into
11 evidence.

12 BY MR. TAGGART:

13 Q. Is there anything else in that exhibit that is of
14 note?

15 A. Well, at the end of the exhibit it -- it was a
16 lengthy process to obtain -- to obtain -- to put in the
17 application and obtain the permit. And so again, she had to
18 show that she could build structures in order that she's been
19 improving the land. And at one point she -- she kept saying I
20 have to delay, I have to delay.

21 Because in this one case she's saying, you know,
22 this time of the year the land is all flooded and I can't ask
23 Mr. Sadler to turn off the water because that would flood his
24 other fields, so please give me an extension so that I can put
25 in structures that you were asking me to put in. And so that

1 was granted.
 2 MR. TAGGART: Thank you. And we offer
 3 Exhibit 140 --
 4 HEARING OFFICER JOSEPH-TAYLOR: Two.
 5 MR. TAGGART: -- 2 into evidence.
 6 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 7 MS. PETERSON: No objection.
 8 HEARING OFFICER JOSEPH-TAYLOR: It'll be
 9 admitted.
 10 (Exhibit 142 admitted into evidence.)
 11 BY MR. TAGGART:
 12 Q. Now, could you talk about the 1946 information
 13 that you found?
 14 A. Yes. This relates to the same area. This was
 15 the 1946 Sadler versus Sadler litigation. When Reinhold
 16 Sadler died he left his ranch in a will to his children. One
 17 of the children stayed on the ranch, Edgar, and continued to
 18 ranch it.
 19 The others were sort of peripherally involved.
 20 But when one of the others died four years later they said
 21 wait a minute, you know, I don't care that you've been living
 22 on that ranch for four years, we own part of it according to
 23 the original will, you have to sell it and give us the money.
 24 So that was a long, long court case that ended up
 25 in the 9th Circuit. At any rate, everyone was on the stand

1 including Edgar Sadler and he was referring to the
 2 Romano/Eccles land. And he referred to it as that is quite a
 3 hay country down there, maybe about 300-ton, somewhere along
 4 there.
 5 Okay. Then just to show that the Eccles were
 6 real people, Jean Sadler Brown gave me a picture of the Eccles
 7 Ranch, and this is the -- showing that it's south, here's the
 8 ranch houses, it's south of Shipley Hot Spring. Again, I
 9 found a place where this was taken from and overlaid it with
 10 current photograph, you can see on the -- the house is still
 11 there, it's kind of ghostly, and then no longer there today.
 12 Q. Can I show you Exhibit 178? And are these the
 13 photographs, copies of the photographs that you got from
 14 Ms. Sadler Brown?
 15 A. Yes, they are.
 16 MS. PETERSON: I'm sorry, what number?
 17 MR. TAGGART: 178.
 18 HEARING OFFICER JOSEPH-TAYLOR: 178.
 19 MS. PETERSON: Okay.
 20 MR. TAGGART: We offer Exhibit 178 into evidence
 21 at this time.
 22 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 23 MS. PETERSON: I can't find 178. No objection.
 24 HEARING OFFICER JOSEPH-TAYLOR: It will be
 25 admitted.

1 (Exhibit 178 admitted into evidence.)
 2 BY MR. TAGGART:
 3 Q. Thank you. Please proceed.
 4 A. So this is now moving on to the next part of my
 5 talk and I've talked about the south meadow, now I'm going to
 6 basically compare what I learned about the south meadow with
 7 structures that we found in the north meadow. Unfortunately
 8 for us, fortunately for them there was not a lot of litigation
 9 about the north meadows so we don't have quite the record of
 10 that, but I'm assuming that they would be using it in the same
 11 manner.
 12 So again, this is the north meadow shown here in
 13 the yellow outline. This is a picture that Doug took
 14 previously, it's a 1985 aerial photograph of the north meadow.
 15 And again, you can see that it's shown here in a red box
 16 that's reflecting sunlight so it appears to be flooded.
 17 We also in walking around this property as Doug
 18 has already shown you we found hay corrals quite a ways out in
 19 the meadow. Here are pictures of those hay corrals. And then
 20 Jean Sadler Brown also gave us a photograph that shows the
 21 north meadow, again, I'm assuming from the '20s or '30s. And
 22 what appear to be in this picture, and I have highlighted with
 23 yellow arrows, haystacks out in the meadow.
 24 And you can see that they're surrounded by water,
 25 ice, it's probably from the same time when they took a picture

1 of the south meadow with water and ice.
 2 And I assumed that these -- again, I found where
 3 this was, took a modern picture of it, could then go to Google
 4 Earth and see where these haystacks had been and through a
 5 series of photographs I won't take you through, it was pretty
 6 clear that they aligned with the haystacks out in the field --
 7 I mean, the hay corrals that are currently still there out in
 8 the meadows.
 9 So, this overview, this is showing these hay
 10 corrals 1.75 miles from the Shipley Hot Spring that were in --
 11 in that picture.
 12 Q. Now, on that last one?
 13 A. Yes.
 14 Q. That's slide 62?
 15 A. Oh, yeah, this is out of order, this was at the
 16 end of the presentation but we moved it up because we felt it
 17 was relevant here.
 18 All right. Again, just relating the south meadow
 19 to the north meadow, I've talked extensively about the ditches
 20 and structures and dams that existed out to the Eccles Farm
 21 3.5 miles from the Hot Spring. We've found similar things on
 22 the north. So looking here it is the north channel which is
 23 two and a half miles out from the Hot Springs, it's a channel
 24 that drains the big lake that Doug discussed.
 25 Pictures of this channel are striking in that

1 it's a very big channel. It -- again, it's lined with snail
 2 shells so obviously there was a lot of water out there for
 3 some period of time.
 4 If you look at the lake it's very impressive,
 5 it's clear that the lake was probably six, seven, eight feet
 6 deep. And you can even see on this picture I'm showing on the
 7 lower left that there were different what appeared to be water
 8 heights within the lake. So there's a linear structure like
 9 banks.
 10 Now I'm showing a picture far in the north, these
 11 are the dams that Doug showed before that are 1.9 miles away
 12 from the Hot Spring. What -- and then this a picture of these
 13 dams. And these are not subtle dams, these are substantial
 14 structures.
 15 And what impresses me about them is that you
 16 could see how they would capture water from the uppermost
 17 ditches when the water flowed through the ditches in the upper
 18 fields they would come out and then maybe capturing that. So
 19 they're trying to squeeze production out of every drop of
 20 water they can on this ranch.
 21 So again, I'm just impressed with the structures
 22 we saw on the south and how they relate to how it was most
 23 likely used in the north.
 24 This is a -- another source, this is memoirs from
 25 Floyd Slagowski that were captured in a book called Eureka

1 Q. All right. Let me ask to have a few more -- a
 2 little bit more housekeeping. Could I ask you to look at
 3 Exhibit 139? This is Sadler v. Sadler, 1947.
 4 Is that the exhibit that you took the information
 5 from about that 9th Circuit litigation?
 6 A. Yeah, I found this on the web, the whole thing.
 7 So this is -- this is -- and it was all nice and typed and
 8 it's surgical (ph.).
 9 Q. All right. And also Exhibit 132, is that the
 10 Eureka Memories or excerpts from it that you got in -- in
 11 Eureka?
 12 A. Yes, it is. And so these are -- I referred to
 13 about six or seven -- what I did is searched -- I read the
 14 entire book, anything having to do with the Sadler Ranch I put
 15 into here so those pages are reflected in this document.
 16 MR. TAGGART: We would move to admit Exhibit 132
 17 and 139, please.
 18 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 19 MS. PETERSON: No objection.
 20 HEARING OFFICER JOSEPH-TAYLOR: It will be
 21 admitted.
 22 (Exhibits 132 and 139 admitted into
 23 evidence.)
 24 THE WITNESS: Okay. Oh --
 25 ///

1 Memories. He was a hired hand in the fall of 1937, he
 2 actually worked there for four years. And he relates all
 3 these together by this one outtake that I've made.
 4 He talks about feeding 800 head of cattle and
 5 that they were held out in John's Field. And so he would --
 6 whoops, he would take his rig up to the spring and go out to
 7 John's Field which was about four miles which is consistent
 8 with that big south meadow. There he would feed three big
 9 loads of hay, a load with a ton of hay, he could feed a
 10 hundred cows. So obviously they had to have 800 -- eight tons
 11 of hay a day.
 12 They would go -- have to go back home, which I
 13 assume would be the headquarters and down two miles out in the
 14 field. So again, that's consistent with the haystacks that I
 15 showed you in the north meadow, get another load of hay and
 16 bring it back and finish feeding the cows.
 17 So from this you can just do the math and in
 18 order to feed 800 cows for three and a half months of winter
 19 they'd have to have 840 tons of hay, which is consistent with
 20 testimony I'll give you in a few minutes with the average
 21 production of hay on the ranch.
 22 Q. Dr. Yednock, do you know what year he was
 23 referring to when he was talking about that?
 24 A. He was very specific, 1937. He was actually
 25 building the house at that point that we live in now.

1 BY MR. TAGGART:
 2 Q. Go ahead.
 3 A. Okay. So I'm moving now on to this is discussion
 4 about appropriated water and when it was put into beneficial
 5 use. This comes from a 1913, again, a water application from
 6 the State Engineer.
 7 From another interesting character in the Sadler
 8 family is Hermann Sadler. He was a relative of Reinhold
 9 Sadler and after Reinhold had died he -- he applied for 45 CFS
 10 of water from Big Shipley Spring. And basically what he was
 11 trying to do was take control of the ranch from Reinhold
 12 Sadler's wife. So you basically use the same water and the
 13 same land.
 14 So Louisa Sadler, Reinhold's wife protested. She
 15 said all the water in Shipley Springs was appropriated for the
 16 beneficial use, and these were vested rights, they've been in
 17 there for many, many years.
 18 So this prompted a -- apparently a visit from the
 19 State Engineer. And he writes a very nice letter denying this
 20 application. He said that I have made an examination on the
 21 premises and there is no unappropriated water at that source.
 22 The watch is ditched to several parts of the ranch known as
 23 the Sadler Ranch and is used for raising crops.
 24 The fact that the water is used beneficially
 25 under a title dating back beyond the year 1905 is sufficient

1 for this office to consider the water rights as valid. Which
 2 I thought was just a pretty amazing point actually.
 3 I should also point out that they had applied for
 4 45 CFS of water, the State Engineer or someone from his office
 5 went out there and said well, in fact, it's not 45 CFS, it's
 6 seven or eight. Okay.
 7 Q. Let me -- please go on.
 8 A. Okay. And now I'm going to get into the ranch
 9 use and productivity. And this comes from the memoirs of
 10 Andrew Crofut and Floyd Slagowski that I found published as
 11 well as the diaries of Ethel Eccles Sadler that were given to
 12 me by Jean Sadler Brown. Ethel Eccles Sadler was her great
 13 grandmother. And Ethel -- she would have been the
 14 daughter-in-law of Reinhold Sadler.
 15 First starting with the book Diamond Valley Dust
 16 describing life in Diamond Valley in the '20s and '30s written
 17 by Andrew Crofut. Again, I read the book and every reference
 18 I found to Sadler Ranch that was clearly Sadler Ranch I put
 19 into the exhibit. And there are -- I -- I had to say I made
 20 all of the slides myself and there's a lot of information in
 21 here so I did make mistakes.
 22 This should -- instead of page 42 this should be
 23 46 I believe; is that correct, Paul? I have it in here. But
 24 we made corrections and we will submit those.
 25 So, there at the Sadler place there was a Big Hot

1 THE WITNESS: I'm confused. I don't see it here.
 2 HEARING OFFICER JOSEPH-TAYLOR: Hold on, you're
 3 talking over each other. Let's be off the record.
 4 (Short off the record.)
 5 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 6 record. We just had an off-the-record discussion how the
 7 demonstrative slides that Dr. Yednock is using have a few
 8 edits on it that are not in the exhibit that was submitted and
 9 the demonstrative slides are not being admitted into the
 10 record. Please proceed.
 11 MR. TAGGART: That's correct. And that's
 12 Exhibit 103.
 13 HEARING OFFICER JOSEPH-TAYLOR: Right.
 14 MR. TAGGART: Which is the presubmitted
 15 presentation that will be offered into evidence. Let me do
 16 some housekeeping.
 17 THE WITNESS: Sure.
 18 BY MR. TAGGART:
 19 Q. You talked about a 1917 water application. I
 20 wanted to look at Exhibit 137. Is that information regarding
 21 that application, is that where you got the information that
 22 you just testified about?
 23 A. Yes, these are the files from the State Water
 24 Division.
 25 Q. Okay. And then Exhibit 130 is the Andrew D.

1 Springs and people would come from long distances around and
 2 bathe and swim, it was a wonderful place even in the
 3 wintertime. On page 45 it talks about how they cut just one
 4 crop of hay in northern Diamond Valley, of course that was
 5 nearly all wild hay where at the Sadler place in particular
 6 they had two crops of alfalfa.
 7 On page 47 it talks about Edgar Sadler had a
 8 stack of hay that he wanted to have baled and they agreed to
 9 take the contract to bale it and haul it to Eureka for I
 10 assume so it could be sold.
 11 On page 106 it talks about Edgar running quite a
 12 bunch of cattle up near a thousand head at the time. So there
 13 was always a lot of work to be done and there was several
 14 employees at all times, in fact, he employed a cook.
 15 And than finally, this is more cultural than
 16 anything, there were Indian camps scattered around the
 17 country, one just south of Sadler's place there in Diamond
 18 Valley where the Indians lived during the winter and that
 19 would be referred to as Indian Camp Spring.
 20 MS. PETERSON: Excuse me. My exhibit, page 41,
 21 doesn't have parentheses describing 1920s, '30s on it in the
 22 in the -- in the handout or in the exhibits that were
 23 exchanged.
 24 Would that -- maybe is that something you added
 25 to that slide?

1 Crofut, Diamond Valley Dust. Can you take a look at that and
 2 describe that?
 3 A. Yeah, in -- again, this is -- this is from
 4 Diamond Valley Dust and I just went through the whole book and
 5 took out every reference I could find for Sadler Ranch
 6 including all these pages here.
 7 MR. TAGGART: All right. So we offer 137 and 130
 8 into evidence.
 9 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 10 MS. PETERSON: No objection.
 11 HEARING OFFICER JOSEPH-TAYLOR: It will be
 12 admitted.
 13 (Exhibits 130 and 137 admitted into
 14 evidence.)
 15 BY MR. TAGGART:
 16 Q. The -- the next thing I want to ask you about is
 17 Exhibit 131. Before you go on to your next slide would you
 18 describe what Exhibit 131 is?
 19 A. 131 are diary pages. These again are the diary
 20 from Ethel Eccles Saddler, they were given to me by Jean
 21 Sadler Brown. I have to say that Jean Sadler Brown was very
 22 mixed about giving me the diaries because she feels a great
 23 connection to the ranch, but she also feels a great connection
 24 to the community and she did not want to be involved in any
 25 litigation. So I -- she didn't ask me to do this, but I -- I

1 took only pages that I was going to use to show how this ranch
 2 was used for work. And I as a courtesy to her redacted
 3 anything having to do with personal matters in their family
 4 such as father was sick last night and had a nosebleed or had
 5 to go to the hospital. Again, just out of deference to her.
 6 MR. TAGGART: All right. We offer Exhibit
 7 Number --
 8 HEARING OFFICER JOSEPH-TAYLOR: 131.
 9 MR. TAGGART: -- 131 into evidence.
 10 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 11 MS. PETERSON: No objection.
 12 HEARING OFFICER JOSEPH-TAYLOR: It will be
 13 admitted.
 14 (Exhibit 131 admitted into evidence.)
 15 BY MR. TAGGART:
 16 Q. Please proceed.
 17 A. Again, these are our recollections from Floyd
 18 Slagowski, again, the hired hand who worked on the ranch from
 19 1937 to 1940. He says they had a good ranch, a good ranch
 20 operation there and he needed help. There was lots of work
 21 for me. And then he says on the ranch there was a big
 22 springs, lots of water, you have to irrigate to raise hay
 23 crop. They have big ditches up on -- out of spring, it's a
 24 big spring, about 12 second-feet of water, that's a lot of
 25 water.

1 was at that point.
 2 Q. Okay. Thank you. And you were about to start on
 3 slide 42?
 4 A. Okay. So this is a transitional slide, again,
 5 it's not in your booklet, it's just showing a picture of
 6 Ethel Eccles Sadler and a picture of her son Edgar in the Hot
 7 Springs.
 8 So from her diary, her diaries were rich, there
 9 were over 2,500 entries that I read through in these. The
 10 diaries were something that she got from the local bank and
 11 they had each day marked out. And so she had enough room to
 12 write three or four sentences.
 13 And the way she used that time she -- every
 14 single day she wrote something in there and it always related
 15 to the boys were out in the field today planting, harvesting,
 16 she talked about what field they were in, she talked about
 17 what they were planting, what they were harvesting. So again,
 18 it's a remarkably rich source of how the land was used.
 19 So from there I have extracted that they grew
 20 grasses, clover, wheat, oats, barley and alfalfa were planted
 21 in the upper fields. These would be the fields that would be
 22 above the meadows and they were able to regulate the water
 23 that went there so they were under control.
 24 They -- they harvested these -- oh, so they --
 25 this is when they -- I have dates from when they were planted.

1 Then on page 21 he talks about Reinhold Sadler,
 2 which is Edgar Sadler's son, did all the irrigating, he worked
 3 hard at it, he was a hard worker, he knew how to get the best
 4 use out of the water. He had to keep the ditches clean
 5 because the water was warm and grew lots of moss.
 6 Page 21, we -- when we put up hay we had two
 7 mowing machines, two buck rakes. Basically, they had a crew
 8 of seven men. And he talks about a time when they worked
 9 seven days a week for 70 days in a row. So again, I was just
 10 impressed with how much haying was happening on the property.
 11 And then on page 31 he says they had top quality
 12 hay. And there he was referring to Diamond Valley because he
 13 was referring it to his own farm one valley over.
 14 Q. Could you turn back to slide 41, please?
 15 A. Yes.
 16 Q. And now I was going to ask you about the
 17 Andrew Crofut recollections?
 18 A. Uh-huh.
 19 Q. What did you learn from that about uses of the
 20 water in the winter at Sadler Ranch?
 21 A. Crofut -- well, only the fact that it had a Big
 22 Hot Springs, he talked about taking baths there, so it was a
 23 desirable place in the winter.
 24 Q. Okay.
 25 A. I don't remember anything about what the usage

1 She talks about seed being drilled in the meadows to enhance
 2 those and she talked about winter wheat being planted in
 3 October. This again would be in the upper fields that are
 4 cultivated and harvested in July. So that would be consistent
 5 with the picture that Doug showed of fields changing colors.
 6 And they also grew -- kept some of the alfalfa back for seed.
 7 There were two cuttings of alfalfa from the upper
 8 fields and I included examples of dates of when this happened
 9 in 1941. Tame hay was cut from the Taft Field in two mowings.
 10 Again, I provide dates. Hay was mowed in the lower fields
 11 with just one mowing for the lower -- the lower hay meadows
 12 and in the Romano Field. And in the -- again, I provide
 13 dates. They were haying these continuously due to there was
 14 so much of them.
 15 The hay was stacked in the fields. She actually
 16 took great pride in saying today they have 18 stacks, today
 17 they 23 stacks. And so by the time September would come
 18 around I would get a summation of how many stacks of hay they
 19 harvested that year. So in -- whoops, in 1940 she noted 43
 20 stacks. In 1939, 41 stacks. In 1941, 48 stacks. That was
 21 the big year that they had.
 22 And then she also talks about maintenance of hay
 23 corrals. So again, consistent with the hay corrals we were
 24 seeing in the picture and that we were talking about at Taft.
 25 Finally in the 1940s she talks about John's

1 Field, this would be the John Eccles Ranch way out in the
2 farthest end of the south meadow was being both used as
3 pasture in some years and also for haying, and I gave a date
4 of when they were haying it. And again, the aerial photograph
5 from 1972 shows that being hayed.

6 Then she talks about the ranch selling oats,
7 barley and wheat, I have dates for those sales. And I note
8 there on the bottom again that today we're producing 170 acres
9 of wild hay, we can no longer do the cultivated crops because
10 the ditches that are higher in the meadows don't flow water.

11 Then she also talks about other crops that were
12 grown on the ranch, they had a very large vegetable garden.
13 In fact, there were numbers put to good use out of the Sadler
14 versus Sadler testimony from 1946, they talk about 80 acres
15 were planted garden. And then she lists all these different
16 crops, carrots, turnips, lettuce, radishes, corn --

17 HEARING OFFICER JOSEPH-TAYLOR: Too fast for the
18 court reporter.

19 THE WITNESS: Carrots, turnips, sorry, lettuce,
20 radishes, corn, onions, string beans, peas, beets, turnips,
21 squash, cauliflower, waxed beans and then cabbage. And they
22 were doing this on a pretty industrial scale because she was
23 talking about 750 plants of cabbage.

24 The other thing they did on an industrial scale
25 was potatoes. They had a large plot. So she talks about 23

1 rows they planted in one day and selling two tons in October.
2 Sold 50 more sacks in October and 90 sacks in October. So
3 this was a lot of work.

4 They also grew currents and then in hot beds they
5 grew strawberries and asparagus.

6 And then they also -- she -- throughout her diary
7 she says well, the local restaurant called up again today.
8 And they -- they want another slaughtered cow or they want
9 another slaughtered pig, so they were always slaughtering and
10 preparing meat for the local businesses. I think they were
11 called -- I don't know, they actually mentioned the names of
12 the restaurants.

13 And so they did this 20 times in 1942, for
14 example. They also took in chickens and geese. There was
15 honey in the meadows. She prided herself on her eggs and it
16 was noted in 1941 that they had over 200 chickens and that the
17 eggs were taken to market.

18 They made dairy, this was mentioned several times
19 producing butter and milk. And then also very interesting to
20 me was they trapped -- her son actually trapped muskrats for
21 fur that he would sell to raise money. And in 1941 by
22 March 5th they had caught 85 muskrats. So again, this is
23 coming from all the ditches which to me say they had to have
24 been perennial ditches flowing water in order to raise
25 muskrats.

1 And then they also in addition to the ice that
2 built up in the meadows naturally they had some trenches that
3 they would deliberately flood, allow them to freeze and then
4 they'd cut them into big blocks of ice that they stored in a
5 block house. And they used this all the way into August. And
6 this was even sold in the store that Reinhold Sadler had used
7 back in 1906. So those are the diaries.

8 MR. TAGGART: Okay. I have one exhibit to offer
9 into evidence which is Exhibit 133. This is the -- this is
10 Grandma Sadler's diary.

11 BY MR. TAGGART:

12 Q. Could you describe this for the record?

13 A. I -- okay. So, some of these diaries were
14 actually written into a story, not with the detail of the
15 individual fields, more her life story on the ranch. And this
16 was published by the Northeastern Nevada Museum in one of
17 their orderlies, it's called Grandma Eccles Sadler's Diary.

18 I actually found a typewritten precursor to that
19 publication deposited in the Eureka County Historical Museum.
20 And that's actually the version that I refer to. But again,
21 it tells of the larger picture but corroborates a lot of the
22 individual diary entries.

23 MR. TAGGART: We offer that exhibit into evidence
24 at this time.

25 HEARING OFFICER JOSEPH-TAYLOR: Any objection to

1 the admission of Exhibit 133?

2 MS. PETERSON: No objection.

3 HEARING OFFICER JOSEPH-TAYLOR: It will be
4 admitted.

5 (Exhibit 133 admitted into evidence.)

6 THE WITNESS: So, can I go ahead, an extra slide
7 here? I'll come back to this slide. So I'm going to go to
8 slide 48. And this lists a summary of hay production on the
9 ranch that I found in all these various sources. So I'm now
10 in the summary section, this is my last section, so I'm just
11 summarizing a lot of the information that I found.

12 So, this is hay production going all the way from
13 1925 to 1946. And generally there was 900, 800, 900 would be
14 the high end of -- of the hay production. I was just
15 surprised at the consistency in hay production from year to
16 year.

17 And then breaking out separately from this is the
18 hay production, there were two references to that in the
19 Sadler versus Sadler testimony from 1946 talking about 2 or
20 300 tons of hay being produced down in the Eccles/Romano land.

21 BY MR. TAGGART:

22 Q. Dr. Yednock, is there any corrections that need
23 to be made to this slide?

24 A. Yeah, there -- I -- I -- this was one of the
25 slides I didn't get back to and double-check and so I did make

1 some minor errors referring to page numbers, instead of being
 2 page 509 it would be page 591. In most cases that was the
 3 extent of it, but unfortunately in some cases -- and 591
 4 wasn't actually one of the pages that we had submitted into
 5 evidence. So we have those here at this point.
 6 MR. TAGGART: Okay. Let me take it from there.
 7 If I could hand out a copy of each one of these.
 8 THE WITNESS: Actually, in the case of hay
 9 production --
 10 HEARING OFFICER JOSEPH-TAYLOR: Hold on, hold on.
 11 MR. TAGGART: Yeah, let me -- let me talk.
 12 THE WITNESS: Can I see that though?
 13 MR. TAGGART: Absolutely. I left myself with
 14 none. So --
 15 HEARING OFFICER JOSEPH-TAYLOR: I'm going to hold
 16 you up for a second, Mr. Taggart. Are we -- are you asking to
 17 substitute pages in Exhibit 103 with these pages?
 18 MR. TAGGART: I think probably the best way to
 19 handle this would be that what I just handed you we'll
 20 probably mark as a new exhibit and have these pages
 21 substituted for the pages in 103. We could take out and
 22 replace pages in 103 as well, so it's the preference of the
 23 hearing officer. I do want to explain what the change is.
 24 HEARING OFFICER JOSEPH-TAYLOR: Okay. Explain
 25 the change, I'd much rather substitute pages. If it's not

1 the part that was correct original; does that make sense?
 2 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 3 record.
 4 (Short off the record.)
 5 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 6 record. So, we are substituting a new page 48 and page 49 in
 7 Exhibit 103; correct, Mr. Taggart?
 8 MR. TAGGART: That's correct.
 9 HEARING OFFICER JOSEPH-TAYLOR: And paper clip
 10 that. And then we have two pictures, one is -- has a 1940 and
 11 a 1944 looks like diary on it. And the second picture
 12 identifies some pages that Dr. Yednock, you said are out of a
 13 9th Circuit case?
 14 THE WITNESS: Yes.
 15 HEARING OFFICER JOSEPH-TAYLOR: Yednock, I
 16 apologize, my handwriting is that bad. And we are attaching
 17 this to the back of Exhibit 131; correct?
 18 MR. TAGGART: Just the first page.
 19 HEARING OFFICER JOSEPH-TAYLOR: Oh. Okay. What
 20 are we doing with the second page?
 21 MR. TAGGART: The second page is just the printed
 22 transcript, is an additional page to Exhibit 139.
 23 HEARING OFFICER JOSEPH-TAYLOR: Any objection,
 24 Ms. Peterson and Ms. Ure?
 25 MS. PETERSON: No objection.

1 objectionable then make another exhibit.
 2 MR. TAGGART: Okay. It's my understanding that
 3 in preparing testimony Dr. Yednock noticed some -- some errors
 4 in the actual page cites that are in this and dates. And so
 5 what I've handed you has those in blue, the proper numbers are
 6 in blue and -- and then also attached -- so it actually
 7 encompasses some change on two slides, 48 and 49.
 8 And then as Dr. Yednock indicated in a couple
 9 instances that means we didn't include it in an exhibit
 10 because we only included excerpts that were actually cited so
 11 we didn't include everything in some of these. So we have
 12 those excerpts attached here with this -- with this handout
 13 that I've given you.
 14 BY MR. TAGGART:
 15 Q. And there's -- there's two pages for page 49.
 16 Can you explain why that is?
 17 A. Oh, it's just if that wasn't --
 18 HEARING OFFICER JOSEPH-TAYLOR: 641, Mr. Taggart?
 19 MR. TAGGART: Oh, 49. Two pages.
 20 THE WITNESS: It was in case it wouldn't be
 21 allowed that I submit data that we haven't submitted before, I
 22 just removed them.
 23 MR. TAGGART: So one page 49 is if we make the
 24 change, the other page 49 is if you don't allow us to make the
 25 change we'll take out the part that was erroneous and leave in

1 MS. URE: No objection.
 2 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 3 MR. TAGGART: Thank you.
 4 (Exhibit 139 admitted into evidence.)
 5 BY MR. TAGGART:
 6 Q. Dr. Yednock, in that case if you could proceed --
 7 HEARING OFFICER JOSEPH-TAYLOR: Hold on, hold on,
 8 hold on.
 9 (Short off the record.)
 10 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 11 record.
 12 BY MR. TAGGART:
 13 Q. Thank you. Dr. Yednock, could you now proceed
 14 with Exhibit -- with slide number 48 of Exhibit 103?
 15 A. This is a summary of dates regarding the number
 16 of cattle I found on the ranch going from 1918 to 1946. And
 17 again, I was struck with the consistency all the way back to
 18 1918 of somewhere between 700 and 900 head of cattle on the
 19 ranch. So again, implying to me this is the hay production as
 20 well.
 21 So now I'm going to go back to slide 46, this is
 22 basically a map which summarizes the data that I just told
 23 you. The upper fields shown in pink and blue up here are the
 24 fields in which the barley, wheat, alfalfa and tame grasses
 25 were grown. And that's where the two cuttings occurred.

1 The green shows the meadows with wild hay and
2 actually drilled seed into these meadows. And they're -- all
3 the records support 5 and 700 tons of hay being produced from
4 those meadows. And then the Romano Fields down in blue
5 showing 2 or 300 tons of hay being produced down there.

6 The red area is the area that Doug has already
7 talked about, this is where we were able to grow hay this
8 year. Again, not able to grow the upper cultivated fields
9 because we can't get water up there and I wouldn't grow
10 anything below the two red globs, because we couldn't get
11 water any further than that.

12 Slide 50 talks just about hired help. There
13 isn't any main point to make about this slide other than this
14 is -- they talk -- all the difference sources talk about
15 hiring hayers, hiring cooks. And so that's just a list of
16 what I found from the '20s up to the '40s.

17 And then finally slide 51 is showing water from
18 the Big Shipley Spring. I have -- this also is a change on
19 this slide of -- I don't know if this is demonstrative or what
20 would you call this, but I was trying to be inclusive of all
21 the things that I came across in these individual sources. So
22 in 1913 the State Engineer had said 17 to 18 CFS and then in
23 1913 we had about 15 CFS, which was the Big Shipley flow in
24 the 1913 stipulation.

25 In 1931 we have testimony from Alfred Sadler --

1 actually a letter written by Alfred Sadler that was part of
2 the Sadler versus Sadler testimony. He said the spring
3 supplies 13 CFS. And then in 1937 is the memoir of
4 Floyd Slagowski talking about lots of water on the ranch and
5 he says about 12 CFS.

6 Q. Dr. Yednock, I may have been thinking about
7 something else, but could you go back to slide 49? I want to
8 make sure that we cover this cattle. There's questions from
9 Mr. Walmsley earlier about uses there.

10 And did you cover everything on this slide that
11 you wanted to?

12 A. Other than -- the main thing for me again was the
13 consistency in terms of how many cattle were raised on the
14 ranch spanning basically 40 years.

15 Q. Okay. I apologize. Questions on this slide, 52?

16 A. And then this was a -- also a document taken out
17 of -- it was actually a land appraisal taken out of these --
18 presented as part of the Sadler versus Sadler testimony in
19 1946, '7. Where again, an appraiser came out and looked at
20 the land and said that there was 190 acres of 600 acres at
21 these different values, all of which are much higher than the
22 lower two values, so I'm assuming that this is irrigated land,
23 which would mean a total irrigation of 1838 acres.

24 And this does not include the Eccles Romano land
25 because this wasn't purchased by the Sadlers until 1947. The

1 Eccles Ranch we learned from several -- from the water
2 application itself was 234 acres. It didn't count 82 acres
3 which was off of -- they hadn't included that in that
4 application. So the Eccles land is a total of 314 acres of
5 irrigated land.

6 So in total I have 2,144 acres from these --
7 again coming from the sources that I found. I made a mistake
8 in my math, it actually should be 200 -- 2,146 acres, so I was
9 off by two acres.

10 And this is the last slide. This is a -- again,
11 from the Water Division documents, this is -- it's just
12 changing the deed of the ranch. Reinhold Sadler was quite
13 elderly at that point and was putting the ranch into a -- a
14 corporation in the Sadler brothers. And just interesting as
15 part of this in the -- in the engineer's records they have a
16 township map. And written in the bottom, I don't know whether
17 this was written by Reinhold Sadler or by the State Engineer's
18 Office about 2,000 acres irrigated. So again, the consistency
19 in the numbers of water irrigated from a variety of sources.

20 That's my presentation.

21 Q. I'd like to ask you to look at what's been marked
22 as Exhibit 140. And this is identified as the -- from the
23 water files, water application 2679. And it has this page in
24 it that we just talked about. Did you prepare that exhibit?

25 A. Yes, I did. It's a picture from the State

1 Engineer's Office.

2 MR. TAGGART: We'd like to offer that in evidence
3 right now, it's Exhibit 140.

4 HEARING OFFICER JOSEPH-TAYLOR: Any objection?

5 MS. PETERSON: No objection.

6 HEARING OFFICER JOSEPH-TAYLOR: It will be
7 admitted.

8 (Exhibit 140 admitted into evidence.)

9 BY MR. TAGGART:

10 Q. So based upon your research, Dr. Yednock, what --
11 what are the main points that you learned about water use on
12 the ranch from those historical documents?

13 A. I was just really impressed with the amount of
14 data that I was able to find talking about ditches and dams
15 extending three miles out into the playa in two different
16 arms. And that there was direct evidence that these were
17 built before 1900.

18 I was impressed with the ingenuity that these
19 guys were using back then to again squeeze every drop of
20 production they could out of the water. I was impressed with
21 finding evidence of how much water flowed. How the flow was
22 controlled through ditches and dams. How it was used for
23 haying the hay corrals. I was blown away by the diaries
24 talking about the specific fields, dates when they were
25 planted, dates when they were harvested, how many harvestings

1 there were.
 2 By the diversity of use on the ranch all the way
 3 from muskrats and perennial waterways to making ice to sell in
 4 the store to slaughtering, cattle, pigs and chickens to
 5 growing eggs, the type of crops that were grown on the ranch,
 6 you know, hay, alfalfa, wheat, oats, barley, and I just feel
 7 as though what's happened to the ranch since then is utterly
 8 tragic. And this is something that's happened to the
 9 Thompson's Ranch, the Romano Ranch, the Bailey's Ranch and now
 10 it's happening to the Sadler Ranch. It's absolutely tragic to
 11 see the Sadler Spring -- the Shipley Spring go dry.
 12 And I just want to add that we -- we bought this
 13 ranch to restore farming and ranching on this historic
 14 governor's ranch. I wanted it there to hire employees, I
 15 wanted to see families, that's why I bought it.
 16 Q. In the opening this morning there was a statement
 17 by opposing counsel that there had been no evidence presented
 18 of the time of construction of ditches, who owns the land or
 19 the water, what crops were grown, when the water was used, how
 20 many irrigated acres. I mean, do you feel like that's an
 21 incorrect statement?
 22 A. I was going -- I was biting my lip back there, it
 23 was very hard for me to understand that statement, yes.
 24 Q. There was also a statement that prior owners took
 25 no measures to protect their water, is that consistent with

1 A. Oh, yes.
 2 Q. Now, why -- why is it that the priority date for
 3 the water right applications that have been filed is so
 4 important to you that that priority date be the same date as
 5 the vested claim?
 6 A. Because the ranch has changed so much, the water
 7 used to flow through the series of ditches and dams. In order
 8 for us to use it we're going to have to put in very expensive
 9 pumps, we've already learned how expensive that is and very
 10 expensive irrigation equipment. So it's going to take a lot
 11 of investment to make this ranch run again. And so I can't do
 12 that if there isn't some certainty about the water rights on
 13 the ranch.
 14 Q. And why would -- would why would a priority of
 15 2012 or 2013 create some uncertainty in your mind?
 16 A. Because it would be subject to being the first
 17 curtailed.
 18 Q. If the State Engineer grants the water rights
 19 that you're seeking at this hearing do you think the Sadler
 20 Ranch will be made whole?
 21 A. Well, it can never be made whole again because
 22 not only was it flowing water out there, but the wildlife,
 23 everything associated with that, the fact that people could go
 24 out there and use the spring that was flowing so much water to
 25 bathe in. I mean, right now it's flowing so slow that it's

1 your understanding of the historic documents?
 2 A. Again, they were buildings and amazing structures
 3 to use every drop and drip.
 4 Q. And -- and there was a statement that -- that the
 5 harvest meadows and the natural meadows were not actively
 6 used, but they have to be actively used in order to have a
 7 vested claim.
 8 Do you think the meadows were actively used based
 9 on historic documents reviewed?
 10 A. Absolutely, I mean, again, I have tonnage even
 11 for the farthest fields on how it was used on that basis.
 12 Q. And there was a comment that you actually have to
 13 farm in order to establish a water right, and do you think
 14 that that actually occurred at the Sadler Ranch?
 15 A. Well, given the litigation that was around this
 16 ranch I would say I find it very hard -- they were fighting
 17 very hard to establish the water rights on this ranch.
 18 HEARING OFFICER JOSEPH-TAYLOR: That wasn't his
 19 question.
 20 THE WITNESS: I'm sorry, what was your question?
 21 I'm getting tired.
 22 HEARING OFFICER JOSEPH-TAYLOR: His question was
 23 were they farming.
 24 BY MR. TAGGART:
 25 Q. Yeah, were they actually farming?

1 kind of really muddy down on the bottom. And then just the
 2 cost it's going to take to operate the trench, it will never
 3 be made whole.
 4 Q. But is this a good start?
 5 A. This is a critical first step.
 6 MR. TAGGART: Let me make sure I've got all my
 7 exhibits in.
 8 HEARING OFFICER JOSEPH-TAYLOR: No. Exhibit 103.
 9 MR. TAGGART: Thank you. We offer Exhibit 103 at
 10 this time.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 12 MS. PETERSON: No objection.
 13 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 103
 14 will be admitted.
 15 (Exhibit 103 admitted into evidence.)
 16 MR. TAGGART: I have no further questions.
 17 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 18 record till 3:45. Start with cross.
 19 (Recess taken.)
 20 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 21 record. Cross-examination, who's going first, Ms. Peterson?
 22 MS. PETERSON: Ms. Ure.
 23 MS. URE: I will.
 24 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry, you
 25 have a soft voice. Is it Ure or Ure?

1 MS. URE: It's Ure.
 2 HEARING OFFICER JOSEPH-TAYLOR: Thank you. I
 3 pronounced your name wrong for years and I will continue to do
 4 so.
 5 MS. URE: That's okay. I won't correct you
 6 unless you ask me to.
 7 HEARING OFFICER JOSEPH-TAYLOR: I apologize.
 8 Cross-examination?
 9 CROSS-EXAMINATION
 10 BY MS. URE:
 11 Q. Good afternoon, Mr. Yednock, my name is
 12 Therese Ure and I'm representing the Etcheverry Family Trust,
 13 Diamond Cattle Company and Mr. Benson. So I have a few
 14 questions for you and I will try to keep them all organized
 15 and not have you jump around too much. But starting I guess
 16 with Exhibit 136.
 17 A. On the slides. Okay.
 18 Q. Well, I'm going to go off the exhibits though,
 19 you did cite to portions of Exhibit 136 and your Exhibit 103
 20 at slide 3.
 21 HEARING OFFICER JOSEPH-TAYLOR: Do you have
 22 those?
 23 THE WITNESS: I have 136.
 24 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 25 ///

1 A. Okay.
 2 Q. Do you know when this map was created?
 3 A. It was part of the 1913 stipulation. So I don't
 4 know beyond that.
 5 Q. Okay. Do you have the full map in front of you,
 6 the slide appears to cut off a portion off the bottom?
 7 A. Yeah, okay. It says March 5th, 1913.
 8 Q. As part of the rotation agreement stipulation; is
 9 that correct? If you look above that it says surveyed March
 10 1st, 2nd and 3rd, 1912; is that correct?
 11 A. Yeah, I can't read it with the resolution of my
 12 copy. I can take your word for it.
 13 Q. Okay. So is it your understanding that this
 14 earlier 1912 map was adopted to effectuate the settlement of
 15 1913?
 16 A. All I can say is what I found in the library.
 17 Q. Okay. Do you know if all the ditches evidenced
 18 on that map are still on the ranch today?
 19 A. As far as I know, yes. Again, I was surprised at
 20 the overlap, the overlay.
 21 Q. Now, did you transcribe the settlement agreement,
 22 is that your --
 23 A. I did. And then only much later did I find there
 24 already was a transcribed copy in the documents here.
 25 Q. Now, on page 2 of your transcription, and this is

1 BY MS. URE:
 2 Q. I was -- do you have 136 in front of you?
 3 A. I do.
 4 Q. Okay. Does 136 evidence that any irrigation was
 5 already started?
 6 A. Not directly. It just states that he's hiring
 7 him to raise and mark crops. He doesn't talk about building
 8 ditches and dams, but it implied to me that he's already -- he
 9 does not say that.
 10 Q. Okay. Do you happen to know when this land that
 11 they're talking about in Exhibit 136 was patented -- or I
 12 guess the desert land entry patent was received?
 13 A. I don't, Mike Buschelman may, but I don't myself.
 14 Q. Okay. Okay. I'm going to 138 and can you turn
 15 to the map that was part of this exhibit? And I believe you
 16 have it on your Exhibit 103 at slide 4 and 5 and 6.
 17 Do you have that map in front of you?
 18 A. Yes, I do.
 19 HEARING OFFICER JOSEPH-TAYLOR: Let's get it up
 20 on the screen, please. Tammy is faster than you are.
 21 THE WITNESS: Unfortunately, I have a light --
 22 TECHNICAL ASSISTANT: Oh, put it on the
 23 projector. You said screen. Okay. Slide.
 24 BY MS. URE:
 25 Q. That will work.

1 again in Exhibit 138, can you read the first two lines of the
 2 bolded portion?
 3 A. For the purpose of irrigating, that one?
 4 Q. Yeah.
 5 A. "For the purpose of irrigating the irrigable
 6 portions of said lands heretofore described as said Defendant
 7 corporation, main system of said dams and ditches on said
 8 land" --
 9 HEARING OFFICER JOSEPH-TAYLOR: I'm going to slow
 10 you down because I know she's not getting it.
 11 THE WITNESS: I'm sorry.
 12 HEARING OFFICER JOSEPH-TAYLOR: You need to speak
 13 up and slow down. Start again, please.
 14 THE WITNESS: "For the purpose of irrigating the
 15 irrigable portions of said lands" --
 16 BY MS. URE:
 17 Q. That's good. That's what I wanted to clarify, it
 18 says the irrigable portions of said lands; is that correct?
 19 A. Yes.
 20 Q. Okay.
 21 A. And, in fact, later on the State Engineer defines
 22 exactly what those irrigable portions are, that's 234 acres.
 23 Q. Okay. Now, on the transcription after the bolded
 24 area, there's -- where it talks about page 530, there's that
 25 bolded sentence there. Can you also read the next two lines

1 after the bolding ends?
 2 A. "There was also constructed a ditch leading from
 3 said dam directly eastward with a water gate which said ditch
 4 has of late years been abandoned and which said ditch is still
 5 capable of use and which said ditch together with the natural
 6 swales and impressions" --
 7 Q. That's --
 8 A. -- "of land."
 9 Q. Do you know which said ditch they're referring to
 10 as being abandoned as of late?
 11 A. They -- it was not clear to me which that was.
 12 Q. Okay. Is it your understanding that this
 13 document is an agreement amongst two parties?
 14 A. Yes.
 15 Q. Okay. And so it -- these two parties, it was
 16 their statement that the five second-feet was about one-third
 17 of the total irrigation -- or total flow, I'm sorry?
 18 A. Correct. And this was in front of a judge as
 19 well.
 20 Q. Did the judge take evidence as to that fact?
 21 A. I don't know. It was part -- it was part of the
 22 district hearing.
 23 Q. Okay. The last -- on the last page of your
 24 transcription it's talking about the Defendant corporation
 25 herein; do you see where I'm talking about, it's successors or

1 understanding that the State Engineer denied application 2679?
 2 A. Yes.
 3 Q. Do you know why the State Engineer denied that?
 4 A. Yes, because the water was already fully
 5 appropriated and put to beneficial use prior to 1905.
 6 Q. Did the State Engineer also deny it because the
 7 method of use was not the best?
 8 A. I don't see any evidence of that.
 9 MS. URE: I have the actual application with the
 10 permitting terms, can I provide a copy to everybody?
 11 HEARING OFFICER JOSEPH-TAYLOR: Um-hum.
 12 BY MS. URE:
 13 Q. If you turn to the second page, I guess the last
 14 page of this under the -- where it talks about approval of the
 15 State Engineer?
 16 A. Um-hum.
 17 Q. Can you read the paragraph that starts out "The
 18 State Engineer finds"?
 19 A. "The State Engineer finds that the method of use
 20 is not the best and that can be carefully -- and that can by
 21 careful handling under modern methods of higher duty of water
 22 can be obtained. The appropriation of any surplus water and
 23 the source at this time due to the method of use would be
 24 detrimental to the public welfare."
 25 Q. Okay.

1 assignees are entitled to all the water rights appurtenant to
 2 Big Shipley?
 3 A. How far down the page is it?
 4 Q. It's about four lines up from the bottom.
 5 A. Yep.
 6 Q. Do you know based on this agreement when the --
 7 the water rights appurtenant to the Big Shipley were being
 8 used by the Defendant versus the Plaintiff, by each of the
 9 parties?
 10 A. Well, they make a point of saying that the water
 11 rights that she was getting applied to January, February and
 12 March and were explicitly meant not to detract from any other
 13 water rights that the Sadlers had to this water. So they
 14 couldn't claim additional water at additional times of the
 15 year, it was owned by the Sadlers.
 16 Q. But then the Romanos were to get the winter
 17 water; is that correct?
 18 A. It's the same water, the same water the same time
 19 frame.
 20 Q. But the Romanos were to receive -- under this
 21 agreement the Romanos were to receive the water in January,
 22 February and March?
 23 A. They were to receive five CFS of water for
 24 January, February and March.
 25 Q. Okay. Turning to Exhibit 137, is it your

1 A. Remember, this application is referring to water
 2 that doesn't exist, you're talking about 45 CFS of water and
 3 there's no way that there's enough land out there to be
 4 applied 45 CFS of water.
 5 Q. Okay. Well, you testified as to the 45 CFS so I
 6 just wanted to make sure we were all on the same page.
 7 MS. URE: Can we mark this as an exhibit or we
 8 take notice of it? I don't know how you want to handle it
 9 because the application, the permit wasn't -- or submitted.
 10 I'm okay if you want --
 11 HEARING OFFICER JOSEPH-TAYLOR: Hold on. Any
 12 objection to marking this as Exhibit 437, Mr. Taggart?
 13 MR. TAGGART: No.
 14 HEARING OFFICER JOSEPH-TAYLOR: Taking
 15 administrative notice.
 16 MR. TAGGART: No objection. I think it's
 17 probably more aptly described in an application because it was
 18 not actually permitted.
 19 HEARING OFFICER JOSEPH-TAYLOR: Correct. You
 20 actually misspoke, Ms. Ure, you called it permit terms.
 21 MS. URE: Sorry.
 22 HEARING OFFICER JOSEPH-TAYLOR: And these are
 23 denials.
 24 MS. URE: I stand corrected.
 25 HEARING OFFICER JOSEPH-TAYLOR: So Exhibit 437 is

1 a copy of application 2679 with the State Engineer's denial.
 2 And I'll go ahead and admit that.
 3 MR. TAGGART: 437?
 4 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 5 MR. TAGGART: Thank you.
 6 (Exhibit 437 admitted into evidence.)
 7 BY MS. URE:
 8 Q. Turning to Exhibit 141.
 9 A. I don't have a copy of 141. Oh, maybe I do. I
 10 don't.
 11 HEARING OFFICER JOSEPH-TAYLOR: That hasn't been
 12 discussed, Ms. Ure, that's a Sadler Ranch exhibit. I don't
 13 think he discussed it.
 14 MS. URE: 141?
 15 HEARING OFFICER JOSEPH-TAYLOR: Um-hum.
 16 MS. URE: Okay. I thought we had. I'm sorry.
 17 HEARING OFFICER JOSEPH-TAYLOR: Hold on, hold on.
 18 Do you remember discuss that exhibit, Doctor?
 19 THE WITNESS: If I do I don't have it in front of
 20 me so I don't know what it is.
 21 HEARING OFFICER JOSEPH-TAYLOR: Let me get it for
 22 you. Let me have Exhibit 141, please? We may have referenced
 23 it, Mr. Taggart didn't move to introduce it but --
 24 MR. KOLVET: I'm sorry, what -- what number?
 25 HEARING OFFICER JOSEPH-TAYLOR: 141, permit 4273.

1 Q. Okay. Well, I won't ask questions then.
 2 Okay. Turning to Exhibit 130, and this is the --
 3 A. Crofut?
 4 Q. Yes. And then page 45 of the -- I guess the
 5 Diamond Valley Dust excerpts, do you see where -- am I correct
 6 in saying that -- that Crofut recalls "They cut just one crop
 7 up there, of course that was nearly all wild hay, the Sadler
 8 place in particular they had two crops of alfalfa. They did
 9 have one field of alfalfa and they had two crops in that"; is
 10 that a correct --
 11 A. What the words say, yes.
 12 Q. -- excerpt?
 13 A. (Nodded head.)
 14 Q. Okay.
 15 HEARING OFFICER JOSEPH-TAYLOR: Is there a
 16 question?
 17 MS. URE: He did not put that in his testimony,
 18 that excerpt and so I wanted --
 19 THE WITNESS: I did actually.
 20 HEARING OFFICER JOSEPH-TAYLOR: I think he did.
 21 MS. URE: Oh, sorry.
 22 BY MS. URE:
 23 Q. Does that same excerpt, did that go on to say the
 24 type of hay or the quality of hay?
 25 A. Yeah, they had a lot of foxtail. Remember,

1 Mr. Felling remembers it being discussed, but I want to give
 2 it to the doctor here.
 3 MR. TAGGART: We did talk about 142.
 4 MS. URE: I don't have notes on it, so.
 5 THE WITNESS: 142?
 6 HEARING OFFICER JOSEPH-TAYLOR: I've got it for
 7 you, Doctor, 141.
 8 MR. TAGGART: Just for the record, I don't think
 9 we talked about 141. We did talk about 142, it involved the
 10 same water right, each exhibit.
 11 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 12 MR. TAGGART: One is the official certificate,
 13 the other is the background that Mr. -- that Dr. Yednock put
 14 together.
 15 HEARING OFFICER JOSEPH-TAYLOR: I'm going to let
 16 him -- let her ask the question. If you can remember what it
 17 is.
 18 MS. URE: Well, I do, but I'm wondering if I
 19 should talk about the permit. I do believe we talked about
 20 this because it was the --
 21 THE WITNESS: 4273 is the application that I
 22 referred to, I do not --
 23 BY MS. URE:
 24 Q. Talk about --
 25 A. -- talk about this particular certificate.

1 though, this is a competing farm across the valley and this
 2 guy was working there for the summer. So he talks about there
 3 being a lot of foxtail in the field. In fact, he goes on at
 4 quite length talking about having to tuck their -- their pants
 5 into their socks. But I assume that people still have foxtail
 6 today. In fact, I think the foxtail implies there's a lot of
 7 the water.
 8 Q. Okay. Do you know what year this was, I'm sorry?
 9 A. Crofut is not very great on years, that's why I'd
 10 say it was '20s, '30s, I don't -- I don't have specific dates
 11 on them.
 12 Q. Okay. Turning to Exhibit 133.
 13 A. Yes.
 14 Q. I'm looking for the excerpt here. On page 25, in
 15 the middle of that page where it says, "They told me too
 16 before my time on the ranch"?
 17 A. Yep.
 18 Q. Can you finish that paragraph for us?
 19 A. "They told me too before my time on the ranch
 20 that the grass was so luxuriant in the north end of the valley
 21 that it wasn't necessary to feed cattle. They could run out
 22 all winter, but that was then."
 23 Q. Would this statement be consistent with the need
 24 for cultivating additional acreages of hay?
 25 A. I have no idea what she was referring to in this

1 statement. In fact, this would have been before her time on
 2 the ranch, which would have been quite a long time ago, but if
 3 they certainly were growing a lot of hay while she was there
 4 in the years after as well.
 5 Q. Okay. Turning to Exhibit 103 at slide 15, are
 6 you there?
 7 A. Yeah.
 8 Q. Do you want to put it up on the slide number --
 9 or sorry, 15? Yeah, that's correct.
 10 A. Okay.
 11 Q. Do you know what type of culvert that is that you
 12 took a picture of?
 13 A. It's a metal culvert.
 14 Q. And do you know when it was installed?
 15 A. I don't.
 16 Q. Okay. Going back -- I guess turn to slide 16,
 17 can you point to me again just for clarification where you
 18 believe the windrows are, because I was having a hard time
 19 following you?
 20 A. The wind lines curve around here, so they're
 21 parallel lines that follow -- sort of they go around this
 22 center -- central hummock area.
 23 Q. Okay. And then turning to slide 34.
 24 A. (Complies.)
 25 Q. There you go.

1 HEARING OFFICER JOSEPH-TAYLOR: "This" doesn't
 2 come across on the record.
 3 THE WITNESS: Oh, okay. Gosh. Going back to
 4 that map they point to water coming out of the Shipley Spring
 5 in a ditch flowing easterly coming through a dam that they
 6 mark .0 on that map that falls into a natural waterway which
 7 is highlighted by a blue line on my map on that page. And
 8 then they come to an end dam which is down here which is on
 9 that page. And then I believe this lower dam, they don't talk
 10 about it in the stipulation, is marked on that map.
 11 HEARING OFFICER JOSEPH-TAYLOR: Lower ditch?
 12 THE WITNESS: It's lower ditch is marked on that
 13 map, plus I believe that there are a few branches that they
 14 don't elaborate because they are focusing down here, but
 15 nonetheless, they show a few of these branches branching off
 16 of those dams.
 17 BY MS. URE:
 18 Q. I have an enlargement of Exhibit 138 of this map.
 19 Can I --
 20 A. We can go back to the original.
 21 Q. Hold on, can I --
 22 HEARING OFFICER JOSEPH-TAYLOR: Doctor, you can't
 23 talk over her.
 24 THE WITNESS: Sorry.
 25 HEARING OFFICER JOSEPH-TAYLOR: And none of you

1 A. That one?
 2 Q. No, 34, sorry, you skipped.
 3 A. There it is.
 4 Q. There. Do you know when the dates of the -- all
 5 of the ditches and dams were put in there evidenced in blue
 6 and red on this slide?
 7 A. No, I just know that they were watering the
 8 Eccles prior to 1905 with the ditches that I outlined before
 9 that were on that map, and that was point O, the ditch E, the
 10 natural waterway and the dams were all listed prior to 1905.
 11 I don't know about all those ditches, no, I don't know about
 12 that.
 13 Q. And can you tell me the cross reference for the
 14 exhibit that lists these ditches prior to 1905?
 15 A. It would have been the 1913 Romano versus Sadler
 16 stipulation where they talk about all these structures
 17 being -- it's 30 years prior to the stipulation, which would
 18 have been 1883.
 19 Q. But going back to Exhibit 138, which is that map
 20 that was part of that stipulation, do you see all of the
 21 ditches and dams on this map that are evidenced in your
 22 Exhibit 103, slide 34?
 23 A. No, but there are quite a few and they are
 24 focusing on this area, so they show -- they show -- they show
 25 this ditch, they show this dam, they show --

1 can talk over me. Go back to that slide, please. Doctor, go
 2 back to 34.
 3 THE WITNESS: Is there any -- oh, that slide.
 4 Okay. This slide does not relate to what she's talking about.
 5 HEARING OFFICER JOSEPH-TAYLOR: No, go back to
 6 the slide that had the ditches, please.
 7 THE WITNESS: Okay.
 8 HEARING OFFICER JOSEPH-TAYLOR: I need to clarify
 9 the record. Great. When you were saying the map that went
 10 with the stipulation showed some shorter ditches you were
 11 pointing to blue lines going north on slide 34 of Exhibit 103?
 12 THE WITNESS: Of blue lines going north coming
 13 out of the main ditch from Shipley Spring, yes.
 14 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Thank
 15 you. Ms. Ure?
 16 MS. URE: Can I provide an enlargement of
 17 Exhibit 138 map so he can reference that with the slide that's
 18 up?
 19 HEARING OFFICER JOSEPH-TAYLOR: Yes, you may.
 20 BY MS. URE:
 21 Q. Now, looking at Exhibit 138 and Exhibit 103,
 22 slide 35.
 23 HEARING OFFICER JOSEPH-TAYLOR: 34 or 35?
 24 BY MS. URE:
 25 Q. 34, thank you. Can you -- would you like to

1 change your answer as to why or when the dams and ditches were
 2 placed on the property?
 3 A. No, because of the text of the stipulation they
 4 say here is a map and they refer to these structures being in
 5 use and continual maintenance 30 years prior to the
 6 stipulation.
 7 Q. Are all of the ditches that are on Exhibit 103 --
 8 or slide 34 referenced on Exhibit 138?
 9 A. No, this is the map that is meant to show the
 10 ditches pertaining to the entire ranch, whereas the map that
 11 was submitted is part of the 1913 stipulation was referring to
 12 the water that flowed down to the Romano Ranch.
 13 Q. Can you look on the bottom of Exhibit 138 and
 14 tell me when this map was prepared?
 15 A. It says it was filed March 5th, 1913.
 16 Q. 19 -- can you go above that to the left where it
 17 says surveyed?
 18 A. Surveyed March --
 19 MR. TAGGART: Asked and answered.
 20 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 21 BY MS. URE:
 22 Q. So isn't it true that this map was prepared in
 23 1912 and not necessarily for the stipulation and that the
 24 stipulation adopted this map to evidence and illustrate the
 25 stipulation?

1 today, in terms of the uses today.
 2 HEARING OFFICER JOSEPH-TAYLOR: I understand her
 3 question. Overruled.
 4 THE WITNESS: I'm sorry, do I answer?
 5 HEARING OFFICER JOSEPH-TAYLOR: Yes, you may.
 6 THE WITNESS: Oh, okay. Well, in fact, there
 7 can't be muskrats because all the ditches are dried. There is
 8 actually one muskrat in the Hot Spring today, maybe two. And
 9 we did grow vegetables there this year, we put in a drip
 10 irrigation system and grew vegetables and they do just fine.
 11 And we have chickens and we have eggs. What else did you want
 12 to know?
 13 BY MS. URE:
 14 Q. I was just wondering if you were in mass
 15 production of chickens and butter and milk for the valley?
 16 A. We do not have the water to go into mass
 17 production.
 18 Q. Okay. Turning to your Exhibit 103, that slide
 19 52.
 20 A. Oh, Exhibit --
 21 HEARING OFFICER JOSEPH-TAYLOR: Your
 22 presentation.
 23 THE WITNESS: Oh, I'm sorry. Okay. Slide what?
 24 HEARING OFFICER JOSEPH-TAYLOR: 52.
 25 MS. URE: 52.

1 A. Yeah, they -- yeah, it was a great map to use
 2 because they could refer to very specific features like
 3 ditching and .0 and dam.
 4 HEARING OFFICER JOSEPH-TAYLOR: I'm going to stop
 5 you, Ms. Ure, because this map says showing the source of
 6 water supply for Frank Romano's lower field. And I believe
 7 the doctor has already answered the ditches going north of
 8 that were not relevant.
 9 MS. URE: But the ditches going north of that are
 10 listed on the map. That's I guess my point and I'll move on.
 11 BY MS. URE:
 12 Q. Do you know if garden vegetables were -- I'm
 13 referring to your Exhibit 103, slide 44. Do you know if the
 14 garden vegetables, if -- well, if they garden was on the
 15 property prior to 1940?
 16 A. I would have to go back to the Sadler versus
 17 Sadler testimony where either in appraisal or a letter that
 18 referred to 80 acres of garden. I don't -- it's there, the
 19 year that they talked about that is there. And obviously I
 20 don't know what was there before then.
 21 Q. Okay. Is the current activities at the ranch --
 22 at Sadler Ranch, do they include chickens, dairy, muskrats,
 23 producing ice?
 24 MR. TAGGART: Objection, the focus of the hearing
 25 is on the time period relevant to a vested claim and not

1 BY MS. URE:
 2 Q. Do you know if the -- in first bracket that you
 3 had, the first rectangle area that you have there, if the
 4 1,000 acres and 600 acres listed were appraised at irrigation
 5 value?
 6 A. All I know is the value they put here, I do not
 7 know.
 8 Q. You don't know the type of land?
 9 A. I do not. As I said in my testimony I assumed
 10 that since they were so much more highly priced than the
 11 others it has something to do with water.
 12 Q. Okay.
 13 HEARING OFFICER JOSEPH-TAYLOR: Be careful not to
 14 talk over each other, please.
 15 MS. URE: I have no more questions.
 16 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 17 Ms. Peterson?
 18 CROSS-EXAMINATION
 19 BY MS. PETERSON:
 20 Q. Dr. Yednock, my name is Karen Peterson, I'm the
 21 attorney for the county. And I'm asking you to go to
 22 Exhibit 103?
 23 A. That's the slides?
 24 Q. Yes.
 25 A. Yes.

1 Q. It's the slides. Actually, I'm sorry,
 2 Exhibit 136?
 3 A. Which is the Sadler versus Sadler 1947 testimony?
 4 Q. No, this is the agreement that's referenced on
 5 page 3 of the slides, the work agreement?
 6 A. Oh, okay.
 7 Q. And I think you said you made the transcription;
 8 is that correct?
 9 A. That's correct.
 10 Q. So, when I read this after the legal description
 11 that's in the top one-third of this document there's a figure
 12 of 623 and 32/100 acres.
 13 A. Yes.
 14 Q. And it's my understanding on reading this
 15 agreement that this is the land that was owned by Sadler?
 16 A. In 1980; correct.
 17 Q. 1880?
 18 A. 1880.
 19 Q. Yes. And that they were also I guess Baker and
 20 Bothier?
 21 A. Um-hum.
 22 HEARING OFFICER JOSEPH-TAYLOR: And who?
 23 MS. PETERSON: Bothier, B-O-T-H-I-E-R.
 24 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 25 ///

1 Q. The blue part. And then in 1917 Ms. Eccles I
 2 guess owned the Romano Ranch at that time?
 3 A. She purchased the ranch.
 4 Q. And then wanted to use part of that -- I guess
 5 part of that water, the three-month water on her purple
 6 portion -- well, the purple portion of land she wanted to get
 7 from the government --
 8 A. Yes.
 9 Q. -- is that correct? And then as I heard your
 10 testimony the white line is what was actually certificated to
 11 her --
 12 A. Correct.
 13 Q. -- for use; is that correct?
 14 A. That's correct.
 15 Q. So that -- is that white line the area part of
 16 your description in your proof of appropriation for this
 17 proceeding? Is it part of -- is it the Boyles map?
 18 A. Yep.
 19 Q. Boyer map?
 20 A. Yep.
 21 Q. So you already have water rights on that
 22 360 acres; is that correct?
 23 A. I'm not a legal expert. I don't know how to
 24 interpret water law in that regard.
 25 Q. Okay. But there's a permit, you got the Eccles

1 BY MS. PETERSON:
 2 Q. It's on the page. They were also going to work
 3 the land, the desert land entry of George A. Hill that was
 4 adjoining said premises; is that correct?
 5 A. Yes, I found this part very confusing.
 6 Q. So, the acreage that's referenced to -- I guess
 7 it was Governor Sadler at that time --
 8 A. It wasn't at that time.
 9 Q. Prior to him being governor?
 10 A. (Nodded head.)
 11 Q. But he was the governor?
 12 A. Yes.
 13 Q. Is 623 and 32/100 acres; is that correct?
 14 A. That's what it appears, yeah. There are many
 15 land stakes on this property that all emerge at some point.
 16 Q. Right. And then I wanted to go to slide 20 on
 17 Exhibit 103.
 18 A. (Complies.)
 19 Q. As I understand your testimony with regard to
 20 this slide and what happened is that Romano -- prior to 1917
 21 Romano and Sadler had an agreement that during three months of
 22 the year Romano would be able to use water on a portion of his
 23 property. I guess it was 360 acres, is that your
 24 recollection?
 25 A. Yeah, the blue part.

1 permit when you purchased the property?
 2 A. Correct.
 3 HEARING OFFICER JOSEPH-TAYLOR: That's the Boyack
 4 map.
 5 BY MS. PETERSON:
 6 Q. And then just to clarify the record, I think I
 7 heard you say that in your historical research in 1949 the
 8 Romano Field went to what is now the Sadler Ranch; is that
 9 correct?
 10 A. '48 or '49, somewhere around there.
 11 Q. Okay. And then how about just for the record,
 12 when did -- the owner of the Sadler Ranch buy the Brown Ranch
 13 properties?
 14 A. I don't know.
 15 Q. Oh, okay.
 16 A. I think Doug said it was in the '80s.
 17 Q. Okay.
 18 A. '90s, I don't know.
 19 Q. And then on I think it was slide 22, I just
 20 wanted to clarify that you believe that was the time frame,
 21 the 1920s and the 1930s?
 22 A. Correct.
 23 Q. And then there was some discussion about how ice
 24 was used in the ditches?
 25 A. Well, the -- this happens even today in a little

1 bit of area outside of the pond because the water will flow
 2 out there. The ground's frozen, it can flow farther. And
 3 then it freezes. Remember the water is 104 degrees coming out
 4 of the Hot Springs so it takes a while for it to freeze. And
 5 it builds up in nice ice sheets.
 6 I think the importance of that was highlighted in
 7 how much fighting they were doing in 1913 for the value of
 8 that winter water was because it then melts and will feed the
 9 spring hay season.
 10 Q. Well, there was also some records I think in the
 11 diaries to use of ice, selling ice in the winter months; is
 12 that correct?
 13 A. Yeah, and that's different in the sense that they
 14 actually dug specific trenches for that, they would let the
 15 water flow in there and the trenches were easy for them to cut
 16 ice into blocks.
 17 Q. So any water use for ice making purposes at that
 18 time would have been limited to whatever the width of the
 19 trench was I think you just said; right?
 20 A. Well, no, I think the value of all that ice is
 21 extremely important for growing hay in the spring season.
 22 Again, because that's how the water is stored in the winter so
 23 that it can be put to valuable use in the spring.
 24 So there was two uses of ice, one was the natural
 25 storage in these ditches and dams and these ditches and

1 areas were highly cultured areas --
 2 A. Yes.
 3 Q. -- do you recall? And that's August of 2013; is
 4 that correct?
 5 A. No, there's no water to those green areas right
 6 now. It is completely dry.
 7 Q. So what are you basing -- okay. I totally
 8 misunderstood your testimony then. I thought you were saying
 9 because I guess that slide is August 2013?
 10 A. It says current view of south meadows.
 11 Q. So what -- what are you basing that highly
 12 cultivated areas on, what are you basing that on that that was
 13 a highly cultivated area?
 14 A. Because she in her diaries was very specific
 15 about what the men were doing. And they were in the upper
 16 fields and planting alfalfa and hay and oats and barley as
 17 opposed to the meadows as opposed to John's Field.
 18 So I -- that's where I came to that conclusion.
 19 Q. Okay. And she -- her diaries were from the 1940s
 20 and the 1950s?
 21 A. Correct. 1940, yes.
 22 Q. And she didn't give any kind of acreage
 23 associated with her observations --
 24 A. She didn't --
 25 Q. -- in the '40s --

1 waterways and it also helped these individuals for making ice
 2 for storage.
 3 Q. And then turning to slide 24, I believe you
 4 testified that the green area outlined in blue was highly
 5 cultivated areas?
 6 A. The upper area -- or the upper fields and they
 7 are the ones that receive the channels that are basically at
 8 the water height of the Shipley Spring. So they no longer get
 9 water because the water can't be pushed up far. So those are
 10 the areas that historic -- that -- they could cultivate those
 11 because those weren't low lands, they could completely control
 12 the water flow to those areas. So they could move it on and
 13 off at will, let it dry as much as they wanted to and grow
 14 alfalfa and hay -- alfalfa and barley and oats and tame hay.
 15 Q. Who are "they" that you're talking about?
 16 A. I'm referring to everything I learned from Ethel
 17 Eccles Sadler's diaries. So it would have been the Sadler
 18 brothers.
 19 Q. Okay. And you don't have any, you know, personal
 20 knowledge of what they were doing on the ranch; is that
 21 correct?
 22 A. Other than the very specific dates that she gave
 23 for planting and harvesting.
 24 Q. Right. Actually, my question about this line was
 25 a lot simpler than that. You -- you testified that the green

1 A. -- talk about acreage, but that's where the
 2 Sadler versus Sadler testimony in the 1947 court case was very
 3 valuable. Because they talked about 80 acres of garden and
 4 then talked about how many acres they had in high cultivation.
 5 And they talked about how much hay production came out in the
 6 meadows.
 7 HEARING OFFICER JOSEPH-TAYLOR: Be careful.
 8 Again, I didn't hear any of her question and I think the court
 9 reporter must have struggled.
 10 THE WITNESS: I'm sorry.
 11 BY MS. PETERSON:
 12 Q. In the 1947 litigation is that you were just
 13 describing is the slide that has -- you made a slide
 14 associated with appraisals of land from 1928 based on the 1947
 15 litigation; is that correct?
 16 A. Yeah, the appraisal was submitted as part of the
 17 testimony.
 18 Q. And I think you just testified that the acreage
 19 for irrigation on that slide was assumed by you?
 20 A. No, the acreage was -- was exactly --
 21 Q. Well, we'll go to the slide.
 22 A. Okay. Which slide is that?
 23 MR. TAGGART: 42.
 24 MS. PETERSON: I think it was either like 48 or
 25 49.

1 MR. TAGGART: 52.
 2 MS. PETERSON: Yeah, 52.
 3 THE WITNESS: So that's -- those are the numbers
 4 that appeared in the appraisal that was -- I took right out of
 5 the document. The only thing --
 6 BY MS. PETERSON:
 7 Q. What document? Just so the record is clear, the
 8 document is the 1947 litigation; is that correct?
 9 A. Correct.
 10 Q. Okay. Go ahead. Sorry.
 11 A. That's all right. But the appraisal was
 12 submitted as part of that document and that was 1928. And the
 13 only thing I assumed on here was where I've highlighted in the
 14 blue box up on the top which is the -- the price associated
 15 with those acres is so much higher than the rest of it so I
 16 assumed that that meant something to do with water.
 17 Q. And represents irrigated land?
 18 A. Correct.
 19 Q. That's what your note says; is that correct?
 20 A. Correct.
 21 Q. And that was your assumption that you made --
 22 A. Yes.
 23 Q. -- about those 1830 acres?
 24 A. That is my assumption.
 25 Q. Thank you. And then going to slide 26.

1 Q. And -- and I'm going to go back to Exhibit, slide
 2 34.
 3 A. Oh, that's good.
 4 Q. This -- you had some questions about the
 5 underlying exhibit, Exhibit 138, which was the settlement?
 6 A. Uh-huh.
 7 Q. You did testify that the ditches depicted on this
 8 slide 34 were in existence prior to 1905?
 9 A. If I said that I did not mean to imply all the
 10 ditches on this map. What I think I was saying was that
 11 ditches that supplied water to the Eccles Ranch three and a
 12 half miles away from the spring for existence in use prior to
 13 1905.
 14 Q. Okay. Thank you. Based on your review of the
 15 documents?
 16 A. Based on what the documents said, yes.
 17 Q. Going to slide 41.
 18 A. This is good. Forward.
 19 Q. Just so we do have it on the record because it's
 20 not on the slide that's been submitted to the State Engineer.
 21 Your -- your -- your discussion of the recollections on this
 22 page are from Andrew Crofut describing the 1920s and the
 23 1930s; is that correct?
 24 A. Correct.
 25 Q. And then going to slide 42 on the page 21.

1 A. Any way you can put your questions in order?
 2 Q. Your testimony has been out of order according to
 3 my cross-examination questions.
 4 Again, on Exhibit -- or Exhibit 103, slide 26
 5 you're taking an excerpt in 1946; correct, from Sadler v.
 6 Sadler?
 7 A. Correct.
 8 Q. And are -- do we know when the 300th ton of hay
 9 was there?
 10 A. That was testimony, so they actually were asking
 11 him how much -- how much -- how many tons of hay were produced
 12 on the Romano/Eccles Ranch. And they kept asking different
 13 ways, well, just the average and he said okay, maybe 300 tons,
 14 somewhere around there per --
 15 Q. Did he give a time frame -- sorry. Did he give a
 16 time frame in his testimony as to when that was?
 17 A. Well, Edgar had farmed that land. They began to
 18 actually lease the land from Eccles in 1929. So his testimony
 19 was 1946 or '47, so I assume it would have been an average
 20 from 1929 till then. That would be -- he would have intimate
 21 knowledge of that time frame.
 22 Q. In the north meadows, just so I understand, is
 23 that part of the Brown Ranch?
 24 A. No, north meadows is part of the Sadler Ranch
 25 property.

1 A. There's three of them.
 2 Q. Oh, sorry, the middle one.
 3 A. Okay.
 4 Q. You were describing that entry, but you forgot to
 5 read the full last part of the sentence there.
 6 A. The last sentence?
 7 Q. Yeah, if you could read that, "We had to clean
 8 those ditches"?
 9 A. "We had to clean those ditches in the spring to
 10 clean the moss out so the water would run free to the patches
 11 he irrigated." And that was because he was talking about the
 12 water being warm and the moss grew like crazy and actually it
 13 still does.
 14 Q. Yeah, I was more interested in the word patches.
 15 A. Fields?
 16 Q. Patches. And then you had some testimony about
 17 the -- the diaries, the Sadler/Eccles diaries, I guess both
 18 were published and the unpublished; is that correct?
 19 A. Yes.
 20 Q. Did any of those entries show pre-1905 use of
 21 water?
 22 A. She reported the day-to-day operations at the
 23 ranch, she was simply talking about what the men were doing at
 24 that time.
 25 Q. Which was the 1940s; is that correct?

1 A. That's correct.
 2 Q. And then page 51 you had -- it's probably not in
 3 the State Engineer's exhibit, but you had added an entry up
 4 there from 1913?
 5 A. Correct.
 6 Q. About the letter from the State Engineer in
 7 reference to application 2679 there being files I guess in the
 8 State Engineer's Office that reference that there was
 9 approximately seven to eight CFS?
 10 A. Correct.
 11 Q. At Big Shipley Hot Springs, and this is in 1913;
 12 is that correct?
 13 A. Correct.
 14 Q. And then I want to show you Exhibit 145, which is
 15 one of your exhibits because mine is marked up.
 16 MS. PETERSON: Do you happen to have one for the
 17 witness?
 18 MR. TAGGART: No.
 19 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry, you've
 20 lost me, you're mumbling.
 21 MS. PETERSON: Exhibit 145. I don't know if he
 22 has it in front of him.
 23 THE WITNESS: I don't.
 24 MS. PETERSON: It's one of the Sadler exhibits.
 25 HEARING OFFICER JOSEPH-TAYLOR: And actually I

1 HEARING OFFICER JOSEPH-TAYLOR: It's kind of
 2 tough on the spot to read, Ms. Peterson. I think I'm going to
 3 sustain that objection.
 4 THE WITNESS: It's a fine statement.
 5 HEARING OFFICER JOSEPH-TAYLOR: Stop. Can we be
 6 off the record?
 7 (Recess taken.)
 8 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 9 record. Ms. Peterson, the State Engineer wants -- as I am
 10 overruling your objection please ask your question.
 11 MR. TAGGART: And just for the record, we do have
 12 two other witnesses that are going to testify about this
 13 document.
 14 HEARING OFFICER JOSEPH-TAYLOR: That's okay.
 15 BY MS. PETERSON:
 16 Q. Did you get a chance to read Exhibit 145?
 17 A. Yes, I did.
 18 Q. And do you see in the last part of the first page
 19 of that exhibit and through the middle of the second page
 20 there's a description by Mr. Paine dated November 18th, 1912?
 21 A. Yes.
 22 Q. And is it -- it's my understanding, they're your
 23 exhibit, that these are notes taken from the State Engineer's
 24 Office?
 25 A. Um-hum. Mr. Paine was an assistant to the State

1 believe this is one that we think there's a few more pages
 2 that should be part of this exhibit for our books.
 3 MS. PETERSON: Yes, there are.
 4 HEARING OFFICER JOSEPH-TAYLOR: Okay. Go on.
 5 MS. PETERSON: I'm just interested in the Sadler
 6 pages though, and those are in Exhibit 145. Do you want me to
 7 give him my copy, it's highlighted?
 8 MR. TAGGART: Yeah, I just won't have a copy to
 9 look at while you're asking him. You can give him that one.
 10 MS. PETERSON: Okay. You can look at your copy.
 11 HEARING OFFICER JOSEPH-TAYLOR: And just so all
 12 of you know, we want pages 1, 2, 3 and 4, only pages 1 -- boy,
 13 I can't even see the page numbers in here. This may be a
 14 different one. Different one.
 15 THE WITNESS: This is not a source that I
 16 reviewed.
 17 BY MS. PETERSON:
 18 Q. Right. Did you get a chance to read it?
 19 A. You'd like me to read the whole thing?
 20 Q. If you could read to yourself the last paragraph
 21 on page 1 and then the -- I guess the top half of page 2?
 22 MR. TAGGART: I would lodge an objection. This
 23 is beyond the scope of direct. He was not asked about this
 24 document on direct examination, but he just indicated he
 25 hasn't reviewed the document before.

1 Engineer.
 2 Q. Oh, you've heard of him before?
 3 A. Um-hum.
 4 Q. And he describes what's happening on the ranch at
 5 the time that he visited; isn't that correct?
 6 A. Um-hum. Yes.
 7 Q. And that he estimated the flow at the spring to
 8 be about eight CFS?
 9 A. Yes, he says actually that it's hard to measure,
 10 which is one of the problems with the spring because there are
 11 several outflows. He's measuring, but since there are several
 12 outflows it's hard for him to measure and he estimates it is
 13 about eight CFS or a little more.
 14 Q. Right. And then he describes the acreage of the
 15 land under cultivation; do you see that?
 16 A. Yes.
 17 Q. And when actually he says that it's hard to
 18 determine?
 19 A. Yes.
 20 Q. And then goes on to describe that Mr. Edgar
 21 Sadler owns 3,000 acres of land, 250 acres of which is alfalfa
 22 grade and garden; do you see that?
 23 A. Yes. And he goes on to say part of -- then he
 24 talks about the meadow, part of which is cut for hay. So it
 25 was beyond the 250 acres.

1 Q. Right. But, the one sentence states that
 2 Mr. Sadler puts up several hundred tons of hay but is unable
 3 to tell how many acres is cut; is that correct?
 4 A. Yes, this is in 1913 so this is also before they
 5 either leased or purchased the Eccles Ranch.
 6 Q. The what change?
 7 A. The Romano/Eccles Ranch.
 8 Q. Romano Ranch. Okay. And then you have on slide
 9 51 you have some other 1913 entry, a 1931 entry, a 1937 entry
 10 about the flow of Big Shipley Springs; is that correct?
 11 A. That's correct.
 12 Q. Did you know if any of those were actual
 13 measurements?
 14 A. No, the only thing about the 15 CFS is again,
 15 that was a legal proceeding from the Third District Court.
 16 Q. And likewise, with regard to the testimony when
 17 you were talking about the State Engineer having a hard time
 18 trying to measure it -- well, there were no measurements in
 19 '13, '31 or '37; is that correct?
 20 A. These numbers do not reflect -- these numbers
 21 reflect numbers coming out of individuals' mouths, I don't
 22 know where they got the numbers.
 23 Q. Okay. Thank you.
 24 A. But they were individuals who were quite
 25 associated with the ranch.

1 Exhibit 145 that you just asked about it said about 125 acres
 2 of which is alfalfa. Is that close to the amount that you
 3 showed on slide 52?
 4 A. Slide 52 was 190 acres at the highest price which
 5 would probably be the alfalfa. So yeah, it's consistent with
 6 that.
 7 Q. What about the 40 acres of that, where was that?
 8 A. In the testimony by Floyd Sadler in the Sadler
 9 versus Sadler litigation they talked about have you put any
 10 more land into production since 1918 in that case. And he
 11 said yeah, we put into production about 40 acres, which
 12 they -- they turned sagebrush into -- again, high cultivation
 13 land.
 14 Q. Unfortunately, I'm going to have to ask you to go
 15 back to the beginning of this slide presentation. I only have
 16 a few more questions -- wait, I might be able to avoid it.
 17 A. If there is a way -- maybe you know how to get
 18 out of slide mode and go back, I don't know how to operate
 19 this computer. There we go.
 20 Q. Do you have the copy of Exhibit 437 that Ms. Ure
 21 gave to you?
 22 A. I don't have that copy anymore.
 23 Q. Now, this was that water application that was
 24 denied; do you recall that, 2679?
 25 A. Yeah.

1 Q. And then this is just for clarification purposes,
 2 Crofut, you were talking about his entries and they were in
 3 the 1920s to the 1930s?
 4 A. Yes.
 5 Q. Is that correct?
 6 A. (Nodded head.)
 7 Q. And then are you involved -- well, you are
 8 involved. A thousand ton of hay today, how much water would
 9 that take to get a good crop?
 10 A. I'm not the best person to ask the question to.
 11 Q. Did you have any discussions with Tom Gallagher?
 12 A. No, I did not.
 13 MS. PETERSON: I don't have any further
 14 questions.
 15 HEARING OFFICER JOSEPH-TAYLOR: Redirect?
 16 MS. PETERSON: Oh, I would move for the admission
 17 of Exhibit 145.
 18 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 19 MR. TAGGART: No.
 20 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 145 will
 21 be admitted.
 22 (Exhibit 145 admitted into evidence.)
 23 REDIRECT EXAMINATION
 24 BY MR. TAGGART:
 25 Q. I have a question about Exhibit 145. In

1 Q. And I want you to turn to that second page where
 2 she asked you to read and it is the -- it's under the approval
 3 of the State Engineer, it's the sentence above the sentence
 4 she asked you to read, it says, "Deny the same on the ground
 5 that the water is a Big Shipley Spring are entirely
 6 appropriate at this time"; correct?
 7 A. Correct.
 8 Q. Is that consistent with the other language that
 9 you saw in this water right file?
 10 A. Absolutely.
 11 Q. Then you were asked about Exhibit 138, which is
 12 again the Romano v. Sadler litigation. You provided a
 13 transcript, you were asked to read from that transcript on
 14 page 2 of the transcript, and I want to refer to that.
 15 A. Yes.
 16 Q. It says that after -- let's see, one, two, three,
 17 four, five, six, seven lines down there's a colon and it says,
 18 "That the main dam at the eastern end of said Big Shipley
 19 Spring was constructed by the said predecessors in interest of
 20 said corporation more than 30 years before the commencement of
 21 this action and has been continuously maintained at the
 22 eastern end of said Big Shipley Spring."
 23 Is that the reference that you refer to when you
 24 say that the dam was constructed at least as soon as 1883?
 25 A. That's correct.

1 Q. And if you could look at the -- the map that was
 2 attached to that stipulation, and this is where unfortunately
 3 I think you can do it now, if you could go to slide number 5.
 4 And then build it to your overlays. Right there.
 5 So you have a blue arrow pointing to opening of
 6 the dam?
 7 A. Yes.
 8 Q. And is that the actual location of the dam today?
 9 A. Yes.
 10 Q. And -- and is that at the base of the spring or
 11 is it down the natural channel from the spring?
 12 A. It's down the natural channel from the spring.
 13 Q. And -- and explain that. Is there a holding
 14 pond?
 15 A. Yeah, that's where -- in fact, you can even see
 16 it in the picture from the '20s there is a -- the spring flows
 17 out of a natural channel and then it hits the dam. And when
 18 this dam is closed, it still happens today, it builds a nice
 19 big holding pond. From that holding pond you can direct the
 20 water into a variety of different channels.
 21 Q. And in your opinion based on the historic
 22 documents that facility has been there since 1883?
 23 A. Yes.
 24 Q. You were asked about an application that was
 25 granted to Ms. Eccles, we talked about this, 1917 Eccles

1 Q. -- where this claim is? Okay.
 2 Okay. You were asked about the 15 CFS number
 3 that comes from the Sadler v. Sadler -- I'm sorry, the Romano
 4 v. Sadler litigation from 1913. You indicated that the
 5 Sadlers were involved in a lot of litigation.
 6 So, is it your understanding that the number of
 7 CFS that was agreed to in that stipulation was the result of a
 8 contested matter; is that your understanding?
 9 A. Yes. In fact, it even refers to in the document
 10 that you just gave me when Paine visited, you're talking about
 11 their contested issue about water between Sadler and Romano.
 12 Q. And given everything you've said about Sadler,
 13 does it appear that he would just select a number out of the
 14 air on how much water he would award to somebody who he was
 15 having this kind of litigation with?
 16 A. I would think that if he agreed to allow five CFS
 17 water flow to someone else he would be very careful about how
 18 that number was chosen.
 19 MR. TAGGART: I don't have any other questions.
 20 HEARING OFFICER JOSEPH-TAYLOR: Recross, Ms. Ure?
 21 MS. URE: Yes.
 22 RECROSS-EXAMINATION
 23 BY MS. URE:
 24 Q. Did you compare the ditches on Exhibit 138 to any
 25 GLO survey maps or field notes?

1 application and you asked the question about the fact that you
 2 already have this water.
 3 Can you use this water right now?
 4 A. No. There's no water there.
 5 Q. Are you aware of whether you own this water right
 6 permit?
 7 A. Yes.
 8 Q. If you get the mitigation water that you're
 9 asking for will it also mitigate for the inability to use the
 10 water under this water right?
 11 MS. PETERSON: I'm going to object, it's outside
 12 the scope of this proceeding. Are we talking about -- this is
 13 a groundwater permit that they have for that land that is not
 14 allowed to be mitigated under order 1226.
 15 MR. TAGGART: This is actually a surface water
 16 right.
 17 HEARING OFFICER JOSEPH-TAYLOR: Well, it's not
 18 the subject of this proceeding. I'm going to sustain it.
 19 MR. TAGGART: Okay. Well, the question -- I
 20 mean, he was asked questions about it.
 21 BY MR. TAGGART:
 22 Q. Is it your understanding -- I'll just ask the
 23 question this way that there is underlying vested claim to
 24 the same land --
 25 A. Yes.

1 A. The map on 138. You mean this map?
 2 Q. Yeah, the underlying map?
 3 A. So did I -- repeat your question, ma'am.
 4 Q. Did you compare any of the ditches or water
 5 courses on the underlying map which is Exhibit 138 to any GLO
 6 maps or field notes?
 7 A. No, all I did was go out and take pictures of GPS
 8 locations of what the structures were pertaining to in this
 9 stipulation.
 10 MS. URE: I have no further questions.
 11 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson?
 12 MS. PETERSON: No questions.
 13 HEARING OFFICER JOSEPH-TAYLOR: Questions of
 14 staff?
 15 THE STATE ENGINEER: I don't have any.
 16 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 17 Doctor, you may be excused.
 18 THE WITNESS: Thank you.
 19 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 20 record.
 21 (Short off the record.)
 22 HEARING OFFICER JOSEPH-TAYLOR: Call your next
 23 witness, please, Mr. Taggart. You have to call him first so
 24 then I can tell her to swear him in.
 25 MR. TAGGART: What's that?

1 HEARING OFFICER JOSEPH-TAYLOR: You have to call
 2 him on the record first so that I can swear him in.
 3 MR. TAGGART: I'm trying to chew with my mouth.
 4 HEARING OFFICER JOSEPH-TAYLOR: Didn't your
 5 mother tell you not to do that.
 6 MR. TAGGART: Sadler Ranch calls
 7 Mr. Mike Buschelman.
 8 HEARING OFFICER JOSEPH-TAYLOR: Mr. Buschelman,
 9 please stand and be sworn.
 10 MIKE BUSCHELMAN,
 11 called as a witness in this matter,
 12 having been first duly sworn,
 13 testified as follows:
 14
 15 DIRECT EXAMINATION
 16 BY MR. TAGGART:
 17 Q. Just for the record and for everyone in the room
 18 we won't be as -- we don't have all the documents to go up on
 19 the screen as well as we did in the prior presentations, we're
 20 going to be jumping around with exhibits here.
 21 Good afternoon, Mr. Buschelman.
 22 A. Good evening.
 23 Q. Good evening. I understand that the State
 24 Engineer is -- or that there's a stipulation that you'll be
 25 admitted as an expert in the area of Nevada water rights?

1 permit number 81719?
 2 A. I am.
 3 Q. Would you please describe what that exhibit is?
 4 A. This is a copy of an application that I prepared
 5 on behalf of Sadler Ranch, LLC for an application to
 6 appropriate groundwater for irrigation purposes to mitigate
 7 the impacts of water from what is known as Shipley Springs and
 8 Indian Camp Springs.
 9 Q. What is the purpose of that application?
 10 A. The purpose of this application is to provide a
 11 supplemental source to those two spring sources and provide
 12 them the ability to increase or to acquire groundwater to
 13 supplement the sources that -- the spring source that's no
 14 longer capable of flowing from those two springs.
 15 Q. What's the diversion rate that's requested there?
 16 A. The diversion rate is six cubic feet per second.
 17 Q. And what about the duty?
 18 A. The duty is 4,462.38-acre-feet.
 19 Q. And what acreage, what amount of acreage is
 20 referenced in the application?
 21 A. The amount of acreage listed in the application
 22 is for 1,731.19 acres. And this is to be irrigated from not
 23 only 81719 but also application 81720.
 24 Q. What is the Boyack map and how did you use it in
 25 connection with this application?

1 HEARING OFFICER JOSEPH-TAYLOR: Correct,
 2 Ms. Peterson?
 3 MS. PETERSON: Correct.
 4 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 5 Mr. Buschelman, have you been qualified as an expert here
 6 before?
 7 THE WITNESS: I have.
 8 HEARING OFFICER JOSEPH-TAYLOR: In what? In what
 9 hearings, can you remember?
 10 THE WITNESS: I'm trying to remember, but it's
 11 been a while ago.
 12 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 13 Thank you, Ms. Peterson. Ms. Ure, are you acceptable with
 14 that also?
 15 MS. URE: Yes, I accept him.
 16 HEARING OFFICER JOSEPH-TAYLOR: Thank you, I
 17 appreciate your consideration in moving this along.
 18 MR. TAGGART: Do all the Protestants also
 19 stipulate --
 20 HEARING OFFICER JOSEPH-TAYLOR: They're the only
 21 ones putting on cases in chief.
 22 MR. TAGGART: Okay.
 23 BY MR. TAGGART:
 24 Q. Mr. Buschelman, are you familiar with what's been
 25 marked as Exhibit Number 3, which is the application for

1 A. The Boyack map is -- let's see, this is 81720.
 2 Q. Yeah, I'm sorry, it's quite a bit forward.
 3 A. Is it?
 4 Q. Yeah, if you could just ask generally about it
 5 we'll get into more detail.
 6 A. Sure. The Boyack map was actually a culture map
 7 filed on behalf of Allen Boyack to support the proof of
 8 appropriation for both Big Shipley Springs and Indian Camp
 9 Springs.
 10 Q. And was Allen Boyack a water surveyor?
 11 A. He was.
 12 Q. And did he conduct a field investigation?
 13 A. He did.
 14 Q. Is the -- or did the Boyack map involve irrigated
 15 acreage that was irrigated with water from both Indian Camp
 16 Springs and Shipley Springs?
 17 A. Yes.
 18 Q. What is the point of diversion for application
 19 81719?
 20 A. The point of diversion is listed as well A, which
 21 is identified on the supporting map and near or adjacent to
 22 Big Shipley Springs. And that would be well A is right here,
 23 I believe.
 24 Q. And you're pointing now to the area on
 25 Exhibit 143 that shows well A?

1 A. Yes, that's correct.
 2 Q. What duty per acre is requested in this
 3 application?
 4 A. The duty requested under this application is
 5 four-acre-feet per acre.
 6 Q. Now, now this application is a little different
 7 than normal applications; wouldn't you agree?
 8 A. I do.
 9 Q. And, in fact, this application is based on a
 10 vested claim?
 11 A. It is.
 12 Q. Now, what about 81720, I think you referenced
 13 that earlier, that's Exhibit Number 9, is that a companion
 14 application to 81719?
 15 A. It is.
 16 Q. And is that filed for the same purpose?
 17 A. Yes.
 18 Q. And does it have the same duty diversion rate
 19 acreage?
 20 A. It has the same rate of flow and acre-feet, but
 21 it's additive, not the same number, it's actually a total of
 22 12 CFS and a total of 6,000 -- or a total of 7,000 -- sorry,
 23 6,924.76 acres.
 24 Q. All right. And what is the point of diversion
 25 for that?

1 Q. Now, in the remark section of that application,
 2 particularly number 16, miscellaneous remarks, it refers to an
 3 induction well.
 4 Could you describe what an induction well is?
 5 A. Yes. In this case the -- I -- the design of this
 6 particular well would be such that it would intercept the same
 7 flow that is being seen in what we call Big Shipley Springs by
 8 placing a well into the same source and you would pump the
 9 well which would intercept the same source of water as the
 10 spring.
 11 Q. Are you familiar with other examples of induction
 12 wells in the state of Nevada?
 13 A. I am.
 14 Q. If you could turn to what's been marked as
 15 Exhibit 602?
 16 A. (Complies.)
 17 Q. Please describe what that exhibit is?
 18 A. 602 is permit number 70656, which was issued for
 19 a source of water as Carson River. And it's for municipal
 20 purposes. And it is an infiltration well also known as an
 21 induction well near Carson River with the design purpose of
 22 pumping water from the Carson River into the infiltration well
 23 or induction well in supplying customers.
 24 Q. So this is surface water that is pumped out of
 25 the well?

1 A. Under this application it is noted as well D on
 2 the map, which is located in this area right there.
 3 Q. Okay. And that's again Exhibit 143, identified
 4 as well D?
 5 A. Correct.
 6 Q. Now let's turn to what's been marked as
 7 Exhibit 28, but it's application 82268; are you familiar with
 8 that?
 9 A. I am.
 10 Q. What is this application?
 11 A. This application is an application to change the
 12 point of diversion of proof number 03289, which is more
 13 commonly known as Big Shipley Springs and tributaries.
 14 Q. And is this a change application or a new
 15 appropriation?
 16 A. It is a change application.
 17 Q. Does it include the Indian Camp lands in the --
 18 in the application?
 19 A. It does not.
 20 Q. And please describe the diversion rate in D?
 21 A. The diversion rate is noted as the maximum flow
 22 of Big Shipley Springs complex and the duty is for
 23 7,457.76-acre-feet ground.
 24 Q. And the acreage?
 25 A. Acreage 1,657.28 acres.

1 A. That's correct.
 2 Q. Okay. When -- let's look further into this
 3 exhibit. You talked about 70656, which is a Carson River
 4 source; is that correct?
 5 A. It is.
 6 Q. And if you turn to the approval page, this was
 7 actually changing a claim in the Carson River; correct?
 8 A. That's right.
 9 Q. Let's look at the next permit that's in this
 10 group, 70657, is that similar to the one you just looked at?
 11 A. It is.
 12 Q. I want to ask you about what the duty -- I'm
 13 sorry, what the priority is for these change application for
 14 induction loss? You describe your understanding what the
 15 priority is for these change applications?
 16 A. Yes. On page 2 of 3 under permit 70656, in the
 17 third paragraph down, it states the priority date of the
 18 portion of this permit changing claim numbers 6 -- 767 and 768
 19 remain as decreed. And all rights under this permit shall be
 20 regulated as decreed.
 21 Q. So the induction well has what priority?
 22 A. In this case claim 6 -- 767 has a priority of
 23 1881 and claim 768 has a priority of 1905.
 24 Q. There are also some change applications in this
 25 exhibit from Lyon County, and are those also surface water

1 change applications to an induction well?
 2 A. Yes.
 3 Q. Are you familiar with the setting on the Carson
 4 River?
 5 A. I am.
 6 Q. And if a change application changes segments does
 7 that affect the priority of a right?
 8 A. It does.
 9 Q. So if one of these inductual applications
 10 actually change segments what would happen to the priority?
 11 A. That priority would be changed to the date of the
 12 filing of the application. As -- if you referred to permit
 13 70657 and again, page 2 of 3 of the permit, third paragraph it
 14 says this permit changes the point of diversion of water
 15 previously diverted under claim number 754 as changed by
 16 permit 68646 from segment 7A of the Carson River to segment
 17 7B. Thus, the priority date of this permit will be the filing
 18 date of permit 68646 being March 22nd, 2002.
 19 Q. How is application 82268 similar to the permits
 20 that we are reviewing in Exhibit 602?
 21 A. Well, the similarities are that there are both
 22 proposing as they're proposed as induction wells and
 23 infiltration wells. And in the first case under the permit
 24 70656 is the intention to retain the priority prior to 1870.
 25 Q. And how -- do you have an opinion on whether an

1 A. I do.
 2 Q. And please describe that for the State Engineer?
 3 A. Yes, this is a copy of proof of appropriation of
 4 water for irrigation and the proof number is 03289. It
 5 identifies Big Shipley Springs and tributaries as the source
 6 of water and it also identifies three points of diversion.
 7 The use is for irrigation and then towards the
 8 end of the proof it also says stock water is also a use of
 9 this water.
 10 Q. What is the stated priority for this proof?
 11 A. Stated priority on this is prior to 1879.
 12 Q. And what is the acreage?
 13 A. The acreage is 1,657.28 acres.
 14 Q. And did you already state what the duty is for
 15 this?
 16 A. I have not. On item number 19 states that a duty
 17 of four-and-a-half-acre-feet per acre per annum had been used
 18 to irrigate the crops.
 19 Q. Now I'd like you to turn to Exhibit 112, and is
 20 this the map on which that proof is based?
 21 A. It is.
 22 Q. So is this the Boyack map?
 23 A. Yes, it is.
 24 Q. And have you reviewed the jurat on that -- on
 25 that map?

1 induction well drilled at the point of diversion for 82268
 2 will capture the same source waters that are the source of
 3 Shipley Spring?
 4 MS. PETERSON: Objection. I don't think he's
 5 qualified to give opinions as to hydrology.
 6 MR. TAGGART: That's fine. We can ask another
 7 witness.
 8 HEARING OFFICER JOSEPH-TAYLOR: Okay. Sustained.
 9 BY MR. TAGGART:
 10 Q. In -- in one of the exhibits of the Protestants,
 11 Eureka County Exhibit 302, they describe application 82268 as
 12 a -- on page 5 they describe it as an application seeking a
 13 new groundwater appropriation.
 14 Do you agree with that characterization?
 15 A. I do not agree.
 16 Q. And why is that?
 17 A. Primarily because the application is to change,
 18 it's clearly stated on the top of the application, it clearly
 19 states on the application it's a change of point of diversion
 20 of proof of appropriation 03289.
 21 Q. All right. Let's -- let's now shift gears a
 22 little bit and talk about the vested claims.
 23 So Exhibit 26 is what's been marked -- or what's
 24 been filed as vested claim 3289; do you recognize that
 25 document?

1 A. I have.
 2 Q. Does it indicate that Allen Boyack did a field
 3 investigation?
 4 A. Yes, it does.
 5 Q. Now, Exhibit Number 27, this is also a proof,
 6 proof number 3290. Are you familiar with this proof?
 7 A. I am.
 8 Q. Please describe it?
 9 A. This is a proof of appropriation of water for
 10 irrigation, the source of water is Indian Camp Springs and
 11 tributaries. It identifies one point of diversion and its use
 12 as I mentioned is for irrigation and also stock water.
 13 Q. And what is the priority?
 14 A. The priority is prior to 1879.
 15 Q. And the acreage?
 16 A. Acreage is 73.91 acres.
 17 Q. And the duty?
 18 A. And the duty listed is four-acre-feet per annum.
 19 Q. And this -- was this vested claim also based on
 20 the Boyack map?
 21 A. Yes.
 22 MR. TAGGART: Before we move on could I just
 23 offer some documents in evidence, please? And I may be
 24 repetitive on the ones we've already admitted, but Exhibit
 25 Number 3.

1 HEARING OFFICER JOSEPH-TAYLOR: Is?
 2 MR. TAGGART: 143.
 3 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 4 the admission of Exhibit 143? Hearing none, it will be
 5 admitted.
 6 (Exhibit 143 admitted into evidence.)
 7 MR. TAGGART: 602?
 8 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 9 the admission of Exhibit 602? Hearings none, it will be
 10 admitted.
 11 (Exhibit 602 admitted into evidence.)
 12 MR. TAGGART: And 26, 27 and 28 are already in
 13 evidence; correct?
 14 HEARING OFFICER JOSEPH-TAYLOR: Correct.
 15 MR. TAGGART: Thank you.
 16 BY MR. TAGGART:
 17 Q. Now, let's turn to Exhibit 105. What is this
 18 document?
 19 A. This is a copy of my report letter dated
 20 September 13th, 2013.
 21 Q. I want to just ask you quickly what your
 22 conclusions were and then we'll talk more about how you
 23 reached those conclusions.
 24 In this report did you make a conclusion on what
 25 the priority date should be for the vested claims 3289 and

1 Department of Agriculture. And I came up with a document that
 2 provided efficiencies for flood irrigation, which is what I
 3 was interested in and how those efficiencies related to
 4 projects like this one.
 5 I also contacted representatives from
 6 Truckee-Carson Irrigation District, Pershing County Water
 7 Conservation District, the U.S. water master on the Truckee
 8 River and Carson River, the U.S. water master on the Walker
 9 River. And asked them questions about how they diverted
 10 water, if they had efficiencies that they used to come up with
 11 duties or flows in ditch systems that would account for
 12 transportation losses, et cetera.
 13 So with that information along with the
 14 information from the Department of Agriculture I did do some
 15 calculations based on those and came up with a duty -- an
 16 average duty of 4.7-acre-feet.
 17 Q. And is that conclusion involving irrigation
 18 season only or does that include non-irrigation season as
 19 well?
 20 A. That is irrigation season only.
 21 Q. Now to summarize the three applications. The --
 22 you've testified about them earlier, but what's your
 23 understanding of how the three applications are to work
 24 together or what was the purpose for the way they get filed?
 25 A. The applications are basically to work together

1 3290?
 2 A. Yes, I did.
 3 Q. And what is that date?
 4 A. The priority date should be prior to 1870.
 5 Q. And what did you conclude the acreage should be
 6 for those vested claims?
 7 A. The acreage when we looked -- well, I said we,
 8 all of us looked at the map that Allen Boyack had prepared and
 9 compared that to historical aerial photographs that Mr. Frazer
 10 had put together. We identified that there was more land
 11 being irrigated outside of the boundaries that were stipulated
 12 on the Boyack map.
 13 Q. Have you concluded that at least 1731 acres were
 14 irrigated under the vested claim?
 15 A. We concluded that under claim 03289 that it was
 16 1,657.28. But we also found that outside of the boundaries
 17 that Boyack had identified under his that we felt that that
 18 number was conservative and it should be higher.
 19 Q. What conclusions did you reach regarding the
 20 duty -- I'm sorry, when I say duty I mean the per acre duty?
 21 A. I looked into the resources to try to find out
 22 about irrigation efficiencies. I went online and researched
 23 document -- or information provided by the National Resource
 24 Conservation Service and also the Food and Agricultural
 25 Administration which is part -- both are a part of the

1 as you mentioned. The induction well or the infiltration well
 2 is an effort to try to capture water from the Big Shipley
 3 Springs. However, based on what I've seen in the field plus
 4 information that I've seen as part of this hearing, is that
 5 the flow from the spring is actually the summer dropped below
 6 one CFS, which is not enough to support the amount of acreage
 7 that was shown on the Allen Boyack map. So therefore, the two
 8 applications, the 81819 and 818 -- I'm sorry.
 9 Q. 81719?
 10 A. There you go. Thank you. Those two
 11 applications, that they would be a supplemental source or a
 12 mitigation source to the spring. They would help make up the
 13 difference that the spring could not provide.
 14 Q. So is it -- is it fair to say that induction well
 15 would act as the primary and the other two applications
 16 would -- would be a combined duty with that right?
 17 A. That's correct.
 18 Q. All right. Now, I'd like to talk to you now
 19 about the priority date for -- for the vested claims. And the
 20 first thing I want to do is ask you generally what generally
 21 is the -- or how is the priority date generally determined in
 22 your opinion for a vested claim?
 23 A. Priority dates for vested claims is really an
 24 exercise in research. Go back through historical documents,
 25 accounts by historical owners, others to try to identify when

1 water was first diverted from the source. That's what
 2 establishes a priority, not when it's placed to beneficial
 3 usual but when it's first diverted. And there's a number of
 4 sources.
 5 You can use -- in this case we've used U.S.
 6 General Land Office survey notes, the plats that accompany
 7 those notes. We've utilized historical accounts, court
 8 testimony that we found at the clerk's office in the county.
 9 Any types of mapping that we can find that's available, but
 10 essentially what you're doing is assembling as much historical
 11 information as you can to identify a point in time that you
 12 can say yes, water was diverted.
 13 Q. Are you familiar with the doctrine of relation
 14 back?
 15 A. I am.
 16 Q. Would you please describe that?
 17 A. My understanding of doctrine of relation is that
 18 if a -- if a water source is diverted on -- say, we'll pick a
 19 date of 1870. And then water is then put to use during that
 20 year. Of course, with technology as it was at the time it's
 21 going to be a continual development, 1870 they may have been
 22 able to put in a few acres of ground, they may have irrigated
 23 either native pastures or they may have been able to
 24 cultivate, which means cultivation in my definition is when
 25 you break ground up with a plow and you somehow bust it up in

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1 a way, you treat the ground, plant it and that becomes
 2 irrigated from that source.
 3 Well, over time it takes -- as you go through
 4 more time you're going to put more and more ground under
 5 irrigation. So what happens is is your priority relates back
 6 to the 1870 date which is when you first diverted the water.
 7 And even though you may have put land in in 1871 and 1872 and
 8 continued to put more land past that point your priority still
 9 relates back to the first diversion.
 10 HEARING OFFICER JOSEPH-TAYLOR: *Mr. Buschelmann,*
 11 what happens when you get past 1905?
 12 THE WITNESS: The doctrine of relation still
 13 works. Where you run into issues where you might have to
 14 adjust -- well, what the doctrine of relation does is if you
 15 have a competing party that comes in and starts using the same
 16 source of water.
 17 HEARING OFFICER JOSEPH-TAYLOR: *No, I'm thinking*
 18 in terms of the water law, because after 1905 you didn't have
 19 a right to use water, you had to apply to the State Engineer
 20 for surface water. Does that cut off the doctrine of relation
 21 back?
 22 THE WITNESS: I don't think it does.
 23 HEARING OFFICER JOSEPH-TAYLOR: Go ahead,
 24 Mr. Taggart.
 25 ///

1 BY MR. TAGGART:
 2 Q. So in the -- are you -- are you familiar with the
 3 term initiated in the water law of when the water law is
 4 initiated?
 5 A. I would understand that to be when it was first
 6 diverted.
 7 Q. And -- and some testimony's already occurred
 8 regarding the Boyack map and that was a 1978 survey.
 9 A. Yes.
 10 Q. Describe to me what your opinion is about the
 11 relevance of a 1978 survey to show a pre-1905 vested claim?
 12 A. Well, again, there had been no mappings that we
 13 were able to find of the total amount of land that was
 14 irrigated by Big Shipley Springs until 1978 when Allen did his
 15 fieldwork to go out and identify in the field the extent of
 16 where that water was placed on the land.
 17 Prior to that there were maps as we've seen as
 18 part of our exhibits here, but they do not necessarily show
 19 the extent of the irrigation throughout the what we would call
 20 the Big Ship -- or the Sadler Ranch.
 21 So in an effort to identify the full scope of
 22 irrigation from that spring they hired a water surveyor, had
 23 him go out, identify the land that was receiving water from
 24 Big Shipley Spring and create the map.
 25 Q. Do you have experience in dealing with this type

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1 of issue of -- of establishing a pre-1905 priority based upon
 2 the water right that was initiated prior to 1905 but was added
 3 to after 1905, do you have experience with that in Nevada?
 4 A. I do.
 5 Q. And could you please describe that?
 6 A. Yes. During the late '80s and early '90s there
 7 was an attempt on the part of the state of Nevada, state of
 8 Idaho, state of Oregon to satisfy the adjudication of a Snake
 9 River drainage. And as part of that there were a number of
 10 ranches in the northern part of the state, Elko County
 11 primarily that have water sources, namely the Owyhee River and
 12 the Bruno River and Salmon Falls Creek that all flow north and
 13 are tributary to the Snake River drainage.
 14 As part of that I was hired by 15 families, 15
 15 ranch owners that had me and survey crews come out into their
 16 ranch and identify land that was irrigated, the same process
 17 that Allen Boyack did in his review of the Big Shipley Spring,
 18 I did that same process for roughly 15 ranch owners in those
 19 drainages.
 20 As part of that I was also involved with
 21 assisting in the priority. The date of priority that was
 22 established by the first diversion from those sources.
 23 So I wasn't the one who did all the research, but
 24 I was the one involved in that.
 25 Q. And what was the result of that effort in terms

1 of priorities for those water rights?
 2 A. As a result of that we prepared proofs of
 3 appropriation similar to the ones we see here under Big
 4 Shipley Springs, 03289. And we identified a culture
 5 tabulation along with acreage. We also identified those areas
 6 that were put into production -- I'm sorry, those areas that
 7 were irrigated and the date associated with each one of those
 8 acreage.
 9 We had found in some cases that as these ranches
 10 continue to expand they were on a stream that was totally
 11 utilized by one ranch. And as they went out and they did
 12 improvement to their irrigation systems, lining ditches, put
 13 in different types of headgates, that they continued to expand
 14 their acreage. And in some cases they extended past 1905.
 15 Q. And in those cases were those expanded acreages
 16 after 1905, was that included in the pre-1905 water right?
 17 A. It was.
 18 Q. What types of factors need to be considered in
 19 determining whether some of that post 1905 addition gets the
 20 pre-1905 priority?
 21 A. I think at least from my understanding is that it
 22 was essentially a continuous and diligent effort to put more
 23 land into production, utilize the flow of the stream to their
 24 advantage. Many of these streams were considered flash flow
 25 streams, which is a term utilized when spring runoff occurs,

1 notes describe that the survey was conducted, I don't have it
 2 right here on my fingertips, I'll have to dig it out of my
 3 other file.
 4 Q. Can you look at the legend on the map itself?
 5 A. Yeah, the legend says that the date of the
 6 contract was September 24th, 1870, I'm not sure if that was
 7 the date of the survey. The date of the survey would have
 8 been a little later than that because the contract had to come
 9 first before the surveyor could go out and do --
 10 Q. And we'll be talking about those survey notes in
 11 a few minutes; correct?
 12 A. Yes.
 13 Q. Okay. Let's look at Exhibit 111, and what is
 14 that?
 15 A. This is also a copy of the survey plat. Again,
 16 this is township 24 north, 52 east. Under Exhibit 110 it was
 17 township 24 north, range 53 east. So these two townships
 18 adjoin each other. And again, it's a depiction of what was
 19 seen in the field by the field surveyors and put into a map
 20 form.
 21 Q. So this is -- this is the area where Shipley
 22 Spring is today?
 23 A. Yes, it is.
 24 Q. And I know it's hard to read this map, but I want
 25 to ask about some of the things that are shown in the Shipley

1 that you get a lot of water really fast. And a lot of these
 2 ranchers had put in dikes and dams similar to what he we see
 3 on the Shipley Spring.
 4 Proof to take that water and actually distribute
 5 it in a manner that would be beneficial when those flash flows
 6 occur. And in some cases that's when they extended past the
 7 1905 date when they were building those berms and these dams
 8 to help push that water out into areas of the ditch that they
 9 were irrigating.
 10 Q. I'm going to now ask you about some of the
 11 information you relied upon in reaching your conclusions about
 12 priority with respect to these vested claims.
 13 The first is Exhibit 110, are you familiar with
 14 that exhibit?
 15 A. I am.
 16 Q. What are the dates -- what is this document?
 17 A. This is a plat or map of -- depicting the
 18 information that was found in the field by the general land
 19 office at the time, and back in -- at this time it's in 1970,
 20 1979.
 21 Q. So do you know the dates of this survey that took
 22 place that led to this map?
 23 A. Yes.
 24 Q. And what was that?
 25 A. Let's see, in the 1870 time frame the survey

1 Spring area and what they mean to you in your review of
 2 priority for this vested claim.
 3 Can you see where it says yield?
 4 A. Yes.
 5 Q. And do you also see -- I wonder if we can blow
 6 that up, I mean, enlarge it?
 7 A. Yes, that would be this area right here.
 8 Q. Okay. So you see where there's a field depicted
 9 on it. Now, again, how did this map get created?
 10 A. Again, it's a compilation of a -- of the notes.
 11 It was taking the information from the field notes and then
 12 applying it to a map so that they could have a pictorial
 13 representative of what they found in the field.
 14 Q. And that surveyor actually walked the field;
 15 right?
 16 A. Well, the contract stipulates that the surveyor
 17 is to survey specific lines. And those lines are township
 18 lines or subdivision lines within the township.
 19 So the direction to the surveyors is anything
 20 that crosses that line that is a topographical feature, a
 21 feature such as a meadow, swamp, a field, a fence, a road,
 22 they're to identify where they find those features on that
 23 line. And catalog it by either chains and directions or --
 24 associated with that.
 25 So the idea is is that anyone that follows that

1 surveyor can find those same calls and those same distances
 2 and retrace the footsteps of those surveyors.
 3 Q. So their review is more detailed along those
 4 lines than in the middle of a section, for instance?
 5 A. That's correct. They are to make some general
 6 comments and some general impressions of what they see in the
 7 field. And we see those in their notes. However, there is no
 8 directives to them to go basically outside of that line other
 9 than to note something that would be of interest.
 10 And again, part of the instructions to the
 11 general land office surveyors was to give an assessment of
 12 soils and features that would help possibly bring settlement
 13 to those areas or to catalog settlement that was already
 14 there.
 15 Q. So what information on this, this plat map is
 16 important to you in determining when irrigation or whether
 17 irrigation was initiated at the time of this survey?
 18 A. Several things. This map is very busy so please
 19 bear with me a bit. One is the field. And in this case a
 20 field would be something that would be cultivated. You can
 21 cultivate it, meaning again, that the ground would be tilled
 22 or plowed and there would be a purposeful intent to do
 23 something with that soil, plant a seed, plant something,
 24 grass, hay, crops of some kind.
 25 Q. Now, Mr. Buschelman, you mentioned cultivated.

1 pencil?
 2 A. Yes. Also on here we see the boundaries of the
 3 claims by what is called possessory claimants. These people
 4 would come out, put in physical features in the field or
 5 establish some form of the boundary that was recognized by
 6 these surveyors so that they could show the lands that they
 7 were trying to acquire patent title to.
 8 Q. So, at the time of this survey there were already
 9 patent claims being initiated?
 10 A. I don't believe these were patented at the time,
 11 they were claims or possessory claims. But not patents, no.
 12 Q. All right. Does the designation of swamp, does
 13 that indicate something that cannot be irrigated in your view?
 14 A. No. In many cases those areas are the areas that
 15 are irrigated.
 16 Q. Why is that?
 17 A. Primarily because they're receiving water and
 18 depending on the time that the survey is conducted when the
 19 general office land surveyors were going through this country
 20 if that had standing water in it or it appeared that it did
 21 have standing water in it, they would identify it during that
 22 time as possibly a swamp or an area that would receive water
 23 more frequently.
 24 So again, it depends on the time of year, early
 25 spring a lot of times these areas are much wetter than they

1 Does something have to be cultivated in your opinion to
 2 qualify as irrigation for a vested claim?
 3 A. No.
 4 Q. Describe that, please?
 5 A. Well, it's very common and what I've seen is that
 6 there's many, many acres that are irrigated, water supplied to
 7 encourage native hay or native grasses to grow, but there's no
 8 cultivation involved.
 9 The water is spread through a series of ditches,
 10 dikes or dammed up in such a way that it would saturate the
 11 soils in order to encourage those native grasses to grow.
 12 Q. Please continue describing what you see on this?
 13 A. One thing that really points out is a ditch
 14 that's noticed here coming to the southeast. There's also
 15 ditch systems up here to the north of what would be Shipley
 16 Springs, here's another one here. There's fence lines noted
 17 as well. And then there's also boundaries. You can see this
 18 line here which would show a boundary where on one side it's a
 19 brownish color and on the easterly side it is more green, they
 20 highlighted it green.
 21 And then there's another boundary here where they
 22 show what would appear to be a designation for swamp areas.
 23 And they use these little symbols to indicate a wetter area or
 24 a swampy area.
 25 Q. So those symbols are like four hash marks with a

1 are once you go through more dryer times in the year of July,
 2 August. And in the case of Big Shipley Springs we know that
 3 there was the practice of flooding those areas in the
 4 wintertime and then using that water to charge the soils in
 5 the winter.
 6 And as I recall, I think the original 1870 survey
 7 was in October. So that would be consistent with the practice
 8 of flood irrigation in those areas.
 9 Q. Because in October what would the -- what would
 10 that irrigation cycle involve?
 11 A. Well, primarily the growing season had come to
 12 a -- to its time frame. It had been -- crops were starting to
 13 slow down, water was then going to be diverted out into areas
 14 that were pretty much dry because they harvested those crops.
 15 So now they wanted to rewet those soils.
 16 So in the case what we've seen from the
 17 historical accounts that Dr. Yednock had come up with and
 18 we've seen they divert that water from the spring out into
 19 those areas to charge the soils in the winter.
 20 Q. Could you turn to what's been marked as
 21 Exhibit 614?
 22 HEARING OFFICER JOSEPH-TAYLOR: We're going to
 23 make a breaking point here.
 24 MR. TAGGART: This will be my last exhibit. I
 25 have a little new section --

1 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 2 MR. TAGGART: -- coming in.
 3 BY MR. TAGGART:
 4 Q. What is this exhibit?
 5 A. This exhibit is an overlay of the features that
 6 we've seen on the general land office survey plats onto a
 7 Google Earth image of the Big Shipley Springs and Sadler
 8 Ranch. The features that we saw such as swamp, the squiggly
 9 lines that you spoke about have been basically overlaid onto
 10 areas of the aerial photo that correspond to the locations on
 11 the ground.
 12 We also have the field location. We also have
 13 the ditch references that were on the survey plat fence line
 14 reference, so it basically shows that in many cases these
 15 correspond very closely if not in the same location as present
 16 day features that we see today, ditches especially.
 17 MR. TAGGART: Thank you. I'd like to offer
 18 Exhibit 614 into evidence.
 19 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 20 MS. PETERSON: No objection.
 21 HEARING OFFICER JOSEPH-TAYLOR: 614 will be
 22 admitted.
 23 (Exhibit 614 admitted into evidence.)
 24 MR. TAGGART: And with that we have no further
 25 questions for today.

1 HEARING OFFICER JOSEPH-TAYLOR: How about -- are
 2 you not going to go for his report yet?
 3 MR. TAGGART: No, I'll do that at the end.
 4 HEARING OFFICER JOSEPH-TAYLOR: I'm checking
 5 everything. 110 and 111 are in. All right. Let's be off the
 6 record.
 7 (Proceedings concluded at 5:56 p.m.)
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1 STATE OF NEVADA)
 2 CARSON CITY) ss.
 3
 4
 5 I, MICHEL DOTY LOOMIS, a Certified Court
 6 Reporter, do hereby certify;
 7 That on the 18th of November, 2013, in Carson
 8 City, Nevada, I was present and took stenotype notes of the
 9 hearing held before the Nevada Department of Conservation and
 10 Natural Resources, Division of Water in the within entitled
 11 matter, and thereafter transcribed the same into typewriting
 12 as herein appears;
 13 That the foregoing transcript, consisting of
 14 pages 1 through 301 hereof, is a full, true and correct
 15 transcription of my stenotype notes of said hearing.
 16
 17 Dated at Carson City, Nevada, this 13th day of
 18 December, 2013.
 19
 20
 21
 22
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 24
 25

MICHEL LOOMIS, NV CCR #228

	139:12	8	6:16;9:25;10:2,5,18, 25;11:11,17;13:1,21; 16:5,10;24:15,19; 26:12;31:10;32:11,22, 25;37:11;119:6;292:8	30:16;40:2,6,7; 42:20;43:5,6,6,9;50:6; 51:20;58:7;66:4;67:14; 68:5,15;69:2;74:4; 78:19;107:9,11,12,15; 124:4;126:3;127:15; 128:14;141:9,12,18; 144:8;148:6;154:22; 159:11,20;162:18; 167:22;179:5;183:14; 186:13;189:5,14; 199:14;213:4;286:9; 301:10
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In The Matter Of:

*Applications 81719, 81720, 81825, 82268, 82570, 82571,
82572 and 82573*

Public Hearing - Tuesday

Vol. 2

November 19, 2013

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7	IN THE MATTER OF APPLICATIONS
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2	Jason King, State Engineer
3	Susan Joseph-Taylor, Deputy Administrator
4	Malcolm Wilson, Assistant Hearing Officer
5	Rick Felling, Chief Hydrologist
6	Kristen Geddes, Hearing Officer
7	Section of the Division of Water Resources
8	Steve Walmsley, Water Resource Specialist
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11	For Daniel Venturacci: By: Paul G. Taggart, Esq.
12	Thorndal, Armstrong, Delk Balkenbush & Eisinger By: Brent Kolvet, Esq.
13	For Kenneth Benson, Diamond Cattle Company And Etcheverry Family Limited Partnership: Schroeder Law Offices P.C.
14	By: Therese A. Ure, Esq.
15	
16	For Diamond Natural Resources Protection and Conservation Association: Bob Burnham
17	
18	For James Gallagher: James Gallagher
19	For Mark Moyle Farms: Mark Moyle
20	For Eureka County: Allison MacKenzie, et al.
21	By: Karen A. Peterson, Esq.
22	Also present: Theodore Beutel, Esq.
23	Chairman Ithurrealde
24	Vice Chairman Goicoechea
25	Dale Bugenig Jake Tibbitts

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1 were done in the 1870s. And now I'm going to ask you about
2 field notes that are associated with those plat maps. And
3 could you describe just generally what are field notes that
4 are taken as part of that survey?
5 A. Yes. As part of the general land office
6 contracts, the surveyors are required to keep accurate field
7 notes of their surveys when they're in the course of their
8 field survey. And part of the requirement of the field
9 surveys is to note topographical features, roadways, ditches,
10 fences, any type of feature along those lines that they are
11 surveying, section lines, township lines.
12 The effort is that if in the future someone had
13 to come back and recreate that line, which happens to be the
14 case, that they can follow in the footsteps of the surveyor
15 using those calls in the notes to help recreate the section
16 line and then find the monument that they placed in the
17 field. So they're critical and very important as part of the
18 field notes that are prepared by the surveyors.
19 Q. All right. Let's turn to Exhibit 124. And are
20 these field notes?
21 A. Yes, they are.
22 Q. Can you tell from these field notes what the date
23 of the survey was?
24 A. Yes. In the notes themselves the surveyors will
25 indicate what time frame they were actually in the field.

1 TUESDAY, NOVEMBER 19, 2013, 8:00 A.M.
2 ---oOo---
3 HEARING OFFICER JOSEPH-TAYLOR: We are going to
4 continue with direct examination of Mr. Buschelman. Welcome
5 back, Mr. Buschelman.
6 THE WITNESS: Thank you.
7 HEARING OFFICER JOSEPH-TAYLOR: Mr. Taggart.
8 (The court reporter interrupts)
9 THE WITNESS: It's Mike. And it's
10 B-u-s-c-h-e-l-m-a-n.
11 HEARING OFFICER JOSEPH-TAYLOR: And we're on his
12 direct, Christy.
13 MR. TAGGART: Good morning, everyone.
14
15 MIKE BUSCHELMAN
16 Called as a witness on behalf of the
17 Applicant, having been first duly sworn,
18 Was examined and testified as follows:
19
20 DIRECT EXAMINATION
21 By Mr. Taggart:
22 Q. Good morning, Mr. Buschelman.
23 A. Good morning.
24 Q. We're going to start where we ended yesterday.
25 And we were talking about the plat maps from the surveys that

1 Q. And on Exhibit 124 we have page 20. And what --
2 Can you walk us through what on that page you found
3 significant?
4 A. Yes. What the surveyor is describing is that
5 they are surveying the section line, or the township line
6 actually in this case between Township 2452 -- Sorry. 24
7 north, Range 52 east and Township 24 north, Range 53 east.
8 The common line between those two townships is referred to as
9 the section line between Sections 13 and 18. And it
10 describes how they're progressing north along that line.
11 They're starting off in the southeast corner of Section 13,
12 which is the same corner as the southwest corner of Section
13 18. And then on a due north line they're progressing in what
14 they call chains.
15 The number on the left side of the page is
16 reference to chains, the number of chains they are traveling
17 along that line. In this case you'll see ten chains to the
18 line of the meadow bearing east and west and then 13 chains
19 to the southwest corner of a hay corral. And then at 40
20 chains, which is half a mile in length, they set a cedar pine
21 monument on earth with pits and charred stake as per
22 instructions. And then they continue north to the 80 chains,
23 which is one mile.
24 Q. What did you find significant about this
25 particular field note?

1 A. What caught my attention is that when they noted
 2 13 chains to the southwest corner of hay corral.
 3 Q. And what's the significance of a hay corral?
 4 A. Hay corral is very significant to show that there
 5 was the harvest of a crop and the effort to keep that
 6 harvestable crop in an area that would be secured from cattle
 7 feeding on it during the growing season so that they could
 8 use that hay to feed cattle during the winter season.
 9 Q. All right. Let's turn to page 43 of that same
 10 exhibit. And just because the record might be confusing,
 11 there's two separate pages listed up in the top left-hand
 12 corner of these field notes. There's 42 and then that's more
 13 in handwriting and then a 43. I'm referring to what's 43 in
 14 bold on that field note. Do you see that?
 15 A. I do.
 16 Q. Okay. And there's also 42 on this page as well.
 17 What is the significance of these field notes on this page?
 18 A. In this section of the notes, they describe a
 19 very hot spring about 60 feet in diameter from which flows a
 20 stream ten links wide and three foot deep with a strong
 21 current and sinks in about two miles.
 22 Q. And what's the significance of that?
 23 A. What it shows is that there is a significant flow
 24 coming out of this spring. Ten links is roughly 6.6 feet
 25 wide.

1 Q. All right. Now I want to show you the full --
 2 We've been asking about certain pages out of Exhibit 124.
 3 But in Exhibit 124 what's marked page 40 by the field notes
 4 and then there's a bold number 41 next to it. That is the --
 5 Does that indicate what date the field survey was actually
 6 taken?
 7 A. Yes, it does. It says November 4th 1870.
 8 Q. Okay. Now, can we turn to a table that was
 9 prepared for -- to help summarize the field notes.
 10 And just for the hearing officer, what we tried
 11 to do is summarize about 15 or 20 of these separate sets of
 12 field notes on this table to help him kind of walk through
 13 them without having to go directly to each one of those.
 14 It's just to save time. So this is not something that was
 15 submitted in to the exhibits ahead of time, but it's
 16 something we've done to help speed up the presentation.
 17 Now, could you describe the table that's up on
 18 the screen?
 19 A. Yes. It's basically a summary of information
 20 that was described in the field notes under the 1870 field
 21 survey by Adrian and Bates. They were the two surveyors that
 22 were contracted in 1870 to conduct the survey along the
 23 township line between Townships 24 north, Range 52 and 53
 24 east. And then it's also a summary of the notes from 1879
 25 conducted by a survey conducted by Bridges and Eaton. And

1 HEARING OFFICER JOSEPH-TAYLOR: I'm going to stop
 2 you, Mr. Buschelmann.
 3 Is this on this page, Mr. Taggart?
 4 MS. PETERSON: I think you need the next page.
 5 He's on page 44.
 6 MR. TAGGART: Oh, I'm sorry.
 7 Q. (By Mr. Taggart) Yeah, on this page, 43, do you
 8 see in the last paragraph there's a statement there are
 9 several settlements?
 10 A. Oh, I'm sorry.
 11 Q. Do you see that?
 12 A. I do.
 13 Q. And what's the significance of what you see on
 14 that set of field notes?
 15 A. Well, again, this is coming from the survey notes
 16 of the 1870 survey. And what it's describing is that there
 17 is definitely activity, human activity in the area that they
 18 actually -- when it says settlements, that means that there's
 19 houses, structures, features such as corrals. That's part of
 20 the definition of a settlement in this case. And it speaks
 21 of the first tier of the sections, which is on each side of
 22 the range line, which is, again, in the vicinity of where we
 23 saw a call to the hay corral. It also describes meadow land
 24 formed by the sink of water from Hot Springs, which again
 25 correlates to the Big Shipley Hot Springs.

1 again, these were more of the internal section lines within
 2 the townships that we just mentioned, Township 24 north and
 3 Township 25 east and west.
 4 Q. And the exhibit number that they've been
 5 identified by for this hearing, that's also shown?
 6 A. It is.
 7 Q. And then the page number for each one of these
 8 entries is also shown on the table?
 9 A. That's correct.
 10 Q. All right. Have we already referred to the first
 11 one?
 12 A. We have.
 13 Q. And the second one as well?
 14 A. We have.
 15 Q. Why don't we start with what's shown there as
 16 under Exhibit 126 from page 26?
 17 A. 126 describes -- Exhibit 126 describes the
 18 information contained on page 26 of the survey notes
 19 describing that the surveyors are traveling north between
 20 Sections 29 and 30. And again, the number is reference to
 21 chains and it says that it's entering a meadow that is east
 22 and west.
 23 And then at chain 23.6 chains they intersect M.
 24 Semore's desert land claim. And then it continues on between
 25 Section 19 and 30 going north.

1 At ten chains they come across a small pond 50
 2 links to the south.
 3 At 20 chains they enter an overflow land north
 4 and south. Overflowed land. Sorry. That is north and
 5 south. And then they also note that the southwest corner of
 6 Semore's desert land claim.
 7 Q. What's the significance when you see a reference
 8 to the desert claim?
 9 A. In the process of trying to take public land and
 10 bring it in to private ownership, the government had several
 11 programs, one of which was the desert land entry program.
 12 And as part of that program, you were required as a claimant
 13 or as a person who wanted to gain title to the land to go out
 14 and actually physically identify the land that you were
 15 trying to settle and being patented. And in many cases they
 16 would construct rock monuments, fence lines, any type of
 17 monument in the field that they could say these are the
 18 boundaries of my claim. And these were actually found by the
 19 surveyor as they were going up these sections.
 20 Q. And what significance does the existence of a
 21 claim like that have to the determination of whether water
 22 was being put to beneficial use?
 23 A. Part of the requirements for these programs, like
 24 I said, the desert land entry program, the homestead entry
 25 program, the carry act program, was that you had to show that

1 north and south.
 2 Q. Now, you've identified that as a fence. What's
 3 the significance of the fact that there was a fence there?
 4 A. Again, as part of their responsibility to show
 5 that they were actually improving the land or using the land,
 6 fences were one of the main, basically documents that they
 7 were investing in the land. Fencing at that time was quite
 8 expensive and it was hard to get. Usually it had to be
 9 brought in by rail and brought to you as a person. So
 10 fencing was an expensive item and something that was showing
 11 due diligence on trying to perfect the land and bring it in
 12 to -- you know, bring it in to patent.
 13 Q. Thank you. And I think the next is what's been
 14 marked as page 37 of the exhibit that was submitted in
 15 Exhibit 126?
 16 A. Correct. In most cases, not all cases but in
 17 most cases in the survey notes, the general land office, the
 18 surveyor general asked if the surveyors that were in the
 19 field would provide a general description of the land, which
 20 would help them or assist with them in identifying areas that
 21 were more compatible to development and resources. And so
 22 you'll see these general descriptions in survey notes. And
 23 in this case on page 37 of the survey notes it states, the
 24 subdivided portion of this township is level and with the
 25 exception of the extreme south part is all meadow and mostly

1 you were using -- utilizing that land for agricultural
 2 purposes, you were constructing facilities, houses. You had
 3 to occupy the land, which was one requirement. So that meant
 4 that a house had to be built. You had to show that you were
 5 putting improvements on the land, such as a mechanism to
 6 divert water or bring water to that property. And then you
 7 had to show that you were actually cultivating land or a
 8 portion of that land before you could gain title or patent to
 9 that land.
 10 Q. Let's move on. I think you stopped with what's
 11 marked there as page 28 on the table.
 12 A. That's correct. And on page 30 of the survey
 13 notes, they were continuing north again between Section 18
 14 and 19. And at 45.1 chains they intersect P. Doherty's
 15 desert land claims.
 16 And then on page 31 then they notice that a house
 17 was within reasonable distance of their survey line so they
 18 would identify features such as houses or other types of
 19 things like that that they could see when they were going
 20 along these section lines.
 21 Page 35 they were continuing north between
 22 Sections six and seven. And then they identified White's
 23 house, White being the name of the person that owned the
 24 house, and it gives a bearing towards that house.
 25 It also identifies at 65 chains a fence that runs

1 natural meadow with rich soil and suitable for cultivation.
 2 Hay is now cut from a considerable portion of it and a small
 3 part is now under cultivation. The unusable part is all
 4 alkali desert.
 5 Q. So that may be self-explanatory on the answer to
 6 my next question. But how did you find this significant?
 7 A. Again, this reenforced to me that human activity
 8 was now well beyond what it was in 1870, that there had been
 9 many more people that had come out there. They had
 10 physically identified their parcels on the ground. They had
 11 actually constructed fences. There were homes built. And
 12 this takes time.
 13 So in 1879, considerable improvements had already
 14 been established. And the 1870 note of a hay corral tells me
 15 that they were there during that time as well. So there's
 16 considerable amount of activity during that time frame.
 17 Q. All right. Now let's move on to Exhibit 127 and
 18 on the table you listed some entries from that exhibit.
 19 A. Again, this is in 1879, Bridges and Eaton again.
 20 And now they're doing some other work in that same area.
 21 Another series of notes.
 22 And it's on page five of their notes, there's a
 23 general description that states, the eastern part of this
 24 township is level land, most of which is meadow and the
 25 remainder covered with sage brush and grass with rich soil

1 all easily irrigated. A considerable portion is now occupied
 2 by settlers engaged in cutting hay.
 3 Q. Thank you. And just for the record, the bold
 4 number there is actually the page in the exhibit as it was
 5 submitted. So it's not -- Again, I guess we've inserted
 6 another number in to this field note situation. So page
 7 five, the fifth page of the exhibit that was submitted. And
 8 what's significant about that entry?
 9 A. Again, it speaks of irrigation, which to me is
 10 important because it reinforces the fact that as these people
 11 were settling in these areas they were doing anything they
 12 could to encourage that natural hay, the natural grasses to
 13 grow. So what may have been there prior to their occupancy
 14 they were now trying to enhance that growth by adding water
 15 to those areas that would of course increase the growth of
 16 the crop they were cutting and putting in hay corrals. So to
 17 me that was very significant.
 18 And of course, as we know in the desert
 19 environment in which we're in, anytime you have a source of
 20 water, especially one like Big Shipley Springs, to utilize
 21 that water is the first thing you're going to do to enhance
 22 your ability to survive and create an economical farm unit or
 23 ranch unit.
 24 Q. Based on your experience, do you have an
 25 understanding if any of these original settlements did --

1 At 30.7 chains they intersect and -- I'm not sure
 2 if 30 is the right number there, but it was seen at another
 3 distance they intersect the south boundary of GA Hills desert
 4 land claim.
 5 Q. And that's on page 13 of the exhibit; correct?
 6 A. That's correct.
 7 Q. Let me just show you the field notes there on
 8 page 13. I'm a little surprised at the number of chains
 9 that's listed there.
 10 A. Oh, I see the problem. It's not 59. It's 29.
 11 It's 26 chains, 29 chains and then 30 chains.
 12 Q. How long is a chain?
 13 A. A chain is 66 feet in length. The reason for
 14 that number is that it works very conveniently in to a mile.
 15 20 chains is a quarter mile. 40 chains is a half a mile. 60
 16 chains is three quarters of a mile. And 80 chains is a mile.
 17 Q. All right. Let's move on to page 14 of that
 18 exhibit.
 19 A. On page 14 of the exhibit it states Wence Hills
 20 House bears north 42 and a quarter east. Again, as the
 21 surveyors are going through along the lines of their survey,
 22 they will try to note specific features that are not
 23 necessarily on the line but are notable to indicate occupancy
 24 or settlement within an area.
 25 Then it says at 45 chains there's an irrigation

1 were there efforts made to maximize the use of water from
 2 sources like this spring?
 3 A. Yes. In the number of surveys that I've done,
 4 historical surveys associated with vested rights, it was one
 5 of the things that was, one, critical for them to prove
 6 occupancy of the land to satisfy the requirement so the entry
 7 programs can gain patent. And significant because when they
 8 had livestock and their own lives at stake, getting that
 9 water to grow crops, grow gardens, anything to sustain
 10 themselves was important. You couldn't go to the grocery
 11 store, so you had to provide for yourselves and your animals
 12 immediately before you considered doing anything else.
 13 Q. Let's go to the next entry.
 14 A. In this case, speaking -- he's progressing north,
 15 the surveyors are progressing north between Sections 23 and
 16 24. And at 9.5 chains there's a fence that runs east and
 17 west and they leave a field.
 18 At ten chains they enter a meadow. And it's --
 19 the meadow is northwest -- it bears northwest to southeast.
 20 At 25 chains they enter in to a swamp that is the
 21 same orientation of northwest southeast.
 22 At 26 chains they cross a creek that is two
 23 chains wide that is running easily.
 24 At 59 chains they leave the swamp that again is
 25 oriented east and west.

1 ditch 15 chains wide that bears northeast.
 2 At 59.8 chains, another irrigation ditch 15
 3 chains wide that bears north 15 degrees east.
 4 At 67 chains, a fence and a road that bears
 5 northwest. And then they start north between Sections 13 and
 6 14.
 7 At 14.5 chains they intersect an irrigation ditch
 8 again that's 15 links wide that bears north -- bears east and
 9 north.
 10 And then at 27.1 chains they intersect an east --
 11 they enter east boundaries of Hill's desert land claim. And
 12 then they specifically cite that there's a corner, and this
 13 is part of the monuments that these desert land entry people
 14 would put in the fields, stacks of rocks, cedar post,
 15 anything that they could show a more permanent boundary or
 16 monument. And they identify that as corner number ten of
 17 this claim.
 18 And then at 30.5 chains they intersect the west
 19 boundary of Dohertys, which is another desert claim.
 20 Q. Basically is this the same type of information
 21 you've seen before? Anything now about this entry?
 22 A. No. What is encouraging though is now we're
 23 starting to see as the surveyors are getting more internal
 24 within the township where they're surveying within the
 25 township instead of just along the exterior boundaries that

1 they're finding specific features that speak of water and
 2 utilizing that water to irrigate land.
 3 Q. What about from page 23 and 24?
 4 A. Now, again this is a general description that was
 5 provided by the surveyors when they were surveying Township
 6 24 north, Range 52 east subdivision. And it says, the
 7 subdivided portion of this township is mostly level. A large
 8 portion is rich meadowland and the remainder covered in sage
 9 brush and grass with good soil and all available land which
 10 can easily be irrigated from numerous creeks and springs and
 11 a portion of it is natural meadow. A considerable part of
 12 the township is taken up by settlers and several hundred tons
 13 of hay is cut yearly from the meadows.
 14 Q. All right. And that's the last entry that we
 15 have on this table. What's the significance of this entry?
 16 A. Again, it describes that this is very productive
 17 land, very desirable land. That also is evidenced by the
 18 number of settlers that were out there trying to put that
 19 land in to production and of course gain title to it as well.
 20 That was a very valuable piece of property and it was
 21 recognized by the surveyors that this is good stuff. This is
 22 the type of thing that they wanted to see and encourage for
 23 privatization of much of the public land that they had.
 24 Q. Now, I wanted to clarify that the first set of
 25 field notes that you reviewed that are marked as Exhibit 124,

1 safely say without much debate that there was use there prior
 2 to 1870. Diversion of water was occurring prior to 1870 for
 3 irrigation purposes.
 4 Q. Thank you. I'm going to ask you now to turn to
 5 Exhibit 135.
 6 HEARING OFFICER JOSEPH-TAYLOR: Did you want to
 7 move to admit those field notes, Mr. Taggart?
 8 MR. TAGGART: Yes. We would like to offer in to
 9 evidence Exhibit 124, 126 and 127.
 10 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 11 MS. PETERSON: No objection.
 12 HEARING OFFICER JOSEPH-TAYLOR: They'll be
 13 admitted.
 14 MR. TAGGART: If it would be more useful for the
 15 State Engineer to have the table as well, we can make copies
 16 of that. I don't have those now.
 17 HEARING OFFICER JOSEPH-TAYLOR: We're fine.
 18 Q. (By Mr. Taggart) All right. So now let's talk
 19 about Exhibit 135. What is this exhibit?
 20 A. This is a copy of the Lander County assessor's
 21 records in 1870. And as part of this, it's other information
 22 that showed that there was activity and use of water in that
 23 area. We also looked at tax records.
 24 These are important because, as we know, the
 25 state statute did not begin until 1905. So part of the

1 those were from 1870; is that correct?
 2 A. That's correct.
 3 Q. And the other two that have been marked as
 4 Exhibit 126 and 127, those are from 1879?
 5 A. That's correct.
 6 Q. I need to add as we move past the field notes of
 7 what those field notes indicated to you in your analysis as
 8 to when water was first put to beneficial use in this area or
 9 have you summarized that already?
 10 A. Say the question again.
 11 Q. Do you have anything to add -- We are going to
 12 move past the field notes now. Is there anything else about
 13 the field notes that's important that we haven't already
 14 discussed?
 15 A. Yes. In my review of Allen Boyack's culture map
 16 that he submitted to support Big Shipley Springs Claim 03289,
 17 he indicated in his notes that he utilized the 1879 field
 18 notes from the general land office as his basis for prior to
 19 1879 priority statement on his proof.
 20 But by going through earlier notes by earlier
 21 surveyors, we were also able to find indications and
 22 statements that would convince me along with other data that
 23 was also found by Dr. Yednock that there was activity there
 24 prior to 1879.
 25 And so in my conclusion I think that we can

1 process of showing your possessory claim to land was to show
 2 that you were being taxed. And having a tax record was
 3 evidence of your intent to establish possessory ownership of
 4 property. And one of the things that we looked for is these
 5 tax records. And in 1870 we were able to, you know, conclude
 6 that there was actual activity by William Shapley -- Shipley,
 7 I'm sorry. And he was being taxed for horses, mules, cattle
 8 and a wagon. Now, that doesn't indicate that he was actually
 9 irrigating.
 10 But we went on to look at the next year in 1871
 11 of the Lander County assessment records. And again, William
 12 Shipley is noted in this year. And it goes on to say under
 13 the 1871 assessments that there was improvements, stockade,
 14 house and a ranch in Diamond Valley. So that tells me that
 15 having a house, stockade and a ranch confirms what we found
 16 in the surveyor's notes that he was a player at that time and
 17 being very active in that area.
 18 Q. And the last entry that you reference that's on
 19 the last page of the exhibit, is that true?
 20 A. Yes.
 21 Q. All right then. And why Lander County at this
 22 point? Is Sadler Ranch currently in Eureka County?
 23 A. It currently is. However, at the time, Lander
 24 County encompassed this area. And there were changes to the
 25 county boundaries and Eureka County was a subset of Lander

1 County. So that's why Lander County records would show up in
 2 1870, 1871.
 3 Q. Now let's look at Exhibit 134. Could you
 4 describe what that is?
 5 A. As we were still looking at more of the
 6 assessment records, we continued past 1870 to see what more
 7 may have been going on with Mr. Shipley. And as we continued
 8 in time, 1872, three, four and on, it continues to show more
 9 improvements that were being taxed, more cattle, more land,
 10 more of the required improvements to establish private
 11 ownership of property.
 12 So again, as he was making these improvements of
 13 course he was using more water from the spring. So this
 14 reenforced the fact that not only was he out there, he
 15 continues to stay there and continues to make more
 16 improvements.
 17 MR. TAGGART: I'd like to offer Exhibit 134 and
 18 135 in to evidence.
 19 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 20 MS. PETERSON: I don't have an objection. But
 21 Exhibit 134 is pretty important and it's really hard to read.
 22 So I would offer to transcribe the entries in that exhibit
 23 subject to opposing counsel's, you know, concurrence with
 24 that if it is a late-filed exhibit.
 25 HEARING OFFICER JOSEPH-TAYLOR: Any objection to

1 A. The deed from Lewiston to Hill is July 14th 1879.
 2 Q. Let's go back, I'm sorry, to Exhibit 115. What
 3 was the date on that one?
 4 A. The date on the deed from William Shipley to
 5 George Hill is May 13th, 1877.
 6 Q. And then Exhibit 116, what is that?
 7 A. This is a patent issued to Reinhold Sadler,
 8 R-e-i-n-h-o-l-d. And it's a patent describing portions of
 9 Section 19, Township 24 north, Range 53 east. It totals
 10 160.17 acres and it's dated June 2nd 1891.
 11 Q. Now, what's the significance to you in your
 12 analysis of the date and priority of the two deeds that we
 13 looked at?
 14 A. What is pointed out to me is when the surveyors
 15 as they were going north they noted many of the desert claim
 16 possessory parcels. This area, again because of its
 17 desirability, was settled by many people. There were a
 18 number of people that wanted to be there. And there were a
 19 number of people that had established possessory claims. Not
 20 patent necessarily, but claims to land that further down the
 21 road could be put in place of patent.
 22 It was very common that if someone with enough
 23 financial means or influence could come in and purchase those
 24 possessory claims and consolidate them in to one large ranch
 25 and get patent to a larger body of water based on each of

1 that, Mr. Taggart?
 2 MR. TAGGART: No. I assume that will happen
 3 later. Or is that going to happen now?
 4 MS. PETERSON: No. With my eyes I can't
 5 translate that. So it would be a late-filed exhibit probably
 6 after the hearing.
 7 HEARING OFFICER JOSEPH-TAYLOR: We couldn't have
 8 it by the end of the week?
 9 MS. PETERSON: I can definitely try that.
 10 HEARING OFFICER JOSEPH-TAYLOR: That would be
 11 fine. So I'll admit Exhibit 134 and 135. And by Friday --
 12 Mac, could you write a note by Friday to follow that up. And
 13 we would just attach it to Exhibit 134.
 14 Q. (By Mr. Taggart) Now let's move on to Exhibit
 15 115. What is this document?
 16 A. This document is a deed from William Shipley to
 17 George Hill, indicating the conveyance of title of land that
 18 is commonly known as Shipley Spring and the associated
 19 properties.
 20 Q. And what about Exhibit 117?
 21 A. This is also a deed where William Lewiston sold
 22 to George Hill. And it also references certain properties
 23 that were also commonly known as Shipley Ranch or Warm Spring
 24 Ranch.
 25 Q. Do you know the date of this deed?

1 those components of possessory claims that they consolidated.
 2 Q. A larger body of land or -- You said water?
 3 A. I'm sorry. Land and water. It would be both
 4 actually. So as someone like Mr. Sadler came in to the play,
 5 he would approach each of these individuals and purchase
 6 their possessory claims and then eventually follow through
 7 with patents to gain private ownership of those public lands.
 8 That's very common. We see that in many places throughout
 9 the state.
 10 Q. So could Shipley have been one of those?
 11 A. Yes.
 12 Q. And when we look at the tax rolls, we looked at
 13 Shipley specifically. Was there also information about
 14 other -- others of these possessory claimants in those tax
 15 rolls?
 16 A. There were. In fact, if I can go back to Exhibit
 17 134. If you look, let's see, I'm trying to find a date. You
 18 can also see Reinhold Sadler being assessed in that same time
 19 frame. So he was also out there engaging in possessory
 20 claims and interest in property in that area, either by
 21 purchasing existing possessory claims or by establishing one
 22 on his own.
 23 Q. There's also a Mr. Hill is included in that
 24 Exhibit 134 as well?
 25 A. That's correct.

1 Q. And he was one -- a party to one of the deeds
 2 that we looked at?
 3 A. He was. And he was also mentioned in the notes
 4 of 1879, the general land office surveyors.
 5 Q. So is it your understanding that Reinhold Sadler
 6 then consolidated many of these possessory claims in to the
 7 ranch?
 8 A. Yes.
 9 MR. TAGGART: We offer Exhibits 115, 116 and 117
 10 in to evidence at this time.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 12 MS. PETERSON: No objection.
 13 HEARING OFFICER JOSEPH-TAYLOR: They'll be
 14 admitted. What about -- No. We already got those.
 15 MR. TAGGART: Okay. Now I want to ask about
 16 Exhibit 138, which is already in evidence and it was prepared
 17 by Dr. Yednock and it is the Romano v. Sadler stipulation.
 18 Are you familiar with this document?
 19 HEARING OFFICER JOSEPH-TAYLOR: Spell Yednock for
 20 this -- We have a new court reporter.
 21 MR. TAGGART: Oh, hi. Yednock, Y-e-d-n-o-c-k.
 22 THE WITNESS: Yes, I'm familiar with this
 23 exhibit.
 24 Q. (By Mr. Taggart) All right. Now, in prior
 25 testimony we talked about this, but I want you to turn to

1 about one-third of the total flow of the spring. So that
 2 gives us a reference of approximate flow of being 15 CFS as
 3 the total flow from that spring.
 4 And again, being involved in adjudication
 5 processes similar to this one where they're trying to settle
 6 disputes to come up with a solution, they're going to want to
 7 have some reliable numbers to be included in their
 8 assessment. So this tells me that there had to be some form
 9 of qualified person to come out and judge the flow or measure
 10 the flow from that spring, otherwise they would have just
 11 said one-third and not quantify a flow.
 12 So to me those numbers are significant because
 13 there had to be some thought behind them or some validity
 14 behind them before they were incorporated in to the
 15 settlement.
 16 It also speaks that this water is for the purpose
 17 of flooding and irrigating land and that has been
 18 continuously used on this land for quite a bit of time.
 19 Let's see, we turn to -- on page 531 of this report or this
 20 settlement, there is a statement in here that says wherein
 21 to -- this is where the plaintiff will receive wherein a
 22 sufficient, to a sufficient extent to prepare the soil each
 23 year and produce the crops of which the lands of the
 24 plaintiffs are capable. And that it has been the custom of
 25 the defendant corporation herein and its predecessors in

1 what's been transcribed in that exhibit. It's towards the
 2 end of the pages that were submitted. And there is some
 3 bolded text that we've, again, referenced in earlier
 4 testimony. Are you familiar with that, with the reference to
 5 30 years prior to the entry of this document there being a
 6 dam? Are you familiar with all of that information?
 7 A. I am.
 8 Q. How significant is this information in your
 9 analysis of the priority date for this water right?
 10 A. This action was taken in 1913. And as they state
 11 here that the water from this source had been used for more
 12 than 30 years before the commencement of this action and has
 13 been continually maintained at the east end of the Big
 14 Shipley Spring. So to me that says that there has been a
 15 continual effort on the part of who ever is involved in this
 16 action that that water is not lapsed or has not had a break
 17 in use, that it has been continually maintained and utilized.
 18 The significance of the 30 years, doing the math,
 19 takes us back to 1883, which shows that there's history of
 20 use that extends prior to 1905. It also, you know, sets up
 21 some agreements between the parties in this lawsuit that I
 22 think are significant to how we look at the water today. One
 23 in respect to flow speaks of -- that the spring or at least
 24 in this case one of the users is going to receive the ability
 25 to use five cubic feet per second, which is noted as being

1 interest to so open said ditches each year during more than
 2 20 years for the benefit of the descendants of this land.
 3 And I have a copy here that's highlighted in my book.
 4 But what that tells me is that what is happening
 5 here is an agreement. There has been -- This practice has
 6 been going on for more than 20 years. They're -- Based on a
 7 handshake, this stipulation is part of the adjudication of
 8 that process. And they're saying, yes, even though it was a
 9 handshake deal, today it's now written down and we have a
 10 recorded record of it.
 11 So it wasn't in 1913 that this practice began.
 12 It actually had been occurring for 20 years prior to 1913,
 13 which again gets us before the 1905 statutory time frame.
 14 So there's a number of significant statements in
 15 this adjudication.
 16 Q. Thank you. And I wanted to ask you about the
 17 reference to the dam and the construction of the dam, which
 18 is on page 529 of that stipulation. Do you see that?
 19 A. Here, is that correct?
 20 Q. Yes. If you continue on to the colon in that
 21 sentence, it says that the main dam at the eastern end of
 22 Shipley Spring was constructed by said predecessors and
 23 interest --
 24 HEARING OFFICER JOSEPH-TAYLOR: The court
 25 reporter is having a hard time hearing you, Mr. Taggart.

1 THE WITNESS: Oh, right here? This is it right
 2 here. I'm sorry. I found it. The statement that's bolded
 3 is that the main dam at the eastern end of said Big Shipley
 4 Spring was constructed by said predecessors in interest of
 5 said defendant corporation more than 30 years before the
 6 commencement of this action and has been continuously
 7 maintained at the eastern end of Big Shipley Spring by
 8 defendant corporation herein and its predecessors and
 9 grantors.
 10 Q. (By Mr. Taggart) And that indicates when the
 11 works were initiated for this use of water?
 12 A. I don't know if it documents the initiation of
 13 it, but it definitely documents that it was used for 30 years
 14 and maybe even more.
 15 Q. So the initiation in your view could have been
 16 before the 30 years that are referenced here?
 17 A. It could be, yes.
 18 Q. Okay. Let's move on to Exhibit 137. And this
 19 exhibit is already in evidence and it was discussed by
 20 Dr. Yednock. On the third page of that exhibit there's a
 21 letter to -- from the -- well, it's dated September 23rd
 22 1913. Do you see that?
 23 A. I do.
 24 Q. And why don't you describe what you found
 25 significant in this letter.

1 the adjudication process earlier, the state denied that
 2 application.
 3 Q. And what else is significant about this letter?
 4 A. It does state that the fact that the water is
 5 used beneficially under title dating back and beyond the year
 6 of 1905 is sufficient for this. And go to the second page.
 7 It says to consider the water right as valid.
 8 Q. Okay. And yesterday there was an Exhibit 437 put
 9 in to evidence, which is the denial of Application 2679. And
 10 I want to ask a couple questions about that. Do you see on
 11 the second page there is an area where the State Engineer
 12 typed in the reasons for denial of the application?
 13 A. I do.
 14 Q. And what was the first statement by the State
 15 Engineer on why the application was denied?
 16 A. It says, "This is to certify that I have examined
 17 the foregoing application and do by -- and do hereby deny the
 18 same on the ground that the waters of Big Shipley Springs are
 19 entirely appropriated at this time."
 20 Q. So what to you is the significance of the
 21 information you found in the file for Application 2679?
 22 A. The denial by the State Engineer's office of this
 23 application reinforces that the water flowing from Big
 24 Shipley Springs had been fully appropriated prior to 1905.
 25 Q. And the State Engineer made that determination in

1 A. This letter is referenced Application Number 2679
 2 that was filed by I believe that's H.J. Sadler. Or is that
 3 M? Sorry.
 4 Q. I think it's an H.
 5 A. H, okay. H. Mr. Sadler, who is different than
 6 Reinhold Sadler, had filed an application to appropriate 45
 7 cubic feet per second from the Big Shipley Spring. And in
 8 that application he had proposed to irrigate the same lands
 9 as Reinhold Sadler and utilize the spring, the same source
 10 that we know during other documentation that Reinhold Sadler
 11 was using to irrigate his ranch, which was an accumulation of
 12 many small possessory claims.
 13 So in 1913, the State Engineer receives this
 14 application. They have documentation based on the
 15 stipulation we just read through that it was essentially
 16 adjudicated, that the water had been used 30 years prior and
 17 that there was a substantial vesting of water rights with
 18 that source. So in this case they denied this application,
 19 2679, based on the fact that the water, there was no
 20 unappropriated water at the source. And that follows with
 21 the adjudication that says that, yes, all of the water is
 22 owned by the corporation.
 23 And then that case would have been Edgar Sadler
 24 and Huntington and Diamond Valley Stock and Land Company.
 25 That was who they showed the owners to be. So its process of

1 1913?
 2 A. Yes, they did.
 3 Q. And I want to clear something up potentially here
 4 for the record. This may be a little confusing. Look at
 5 who -- Look from the Exhibit 437, who filed that application?
 6 Who was it filed by?
 7 A. The application was filed by H.J. Sadler.
 8 Q. And who is the applicant on it?
 9 A. Diamond Valley Stock and Land Company.
 10 Q. And then did it say who protested the
 11 application?
 12 A. It was protested by Louisa Sadler.
 13 Q. And I just thought it might be a little confusing
 14 because the Sadlers appear to be fighting amongst themselves.
 15 And the State Engineer was recognizing a right that existed
 16 prior to, in his view, a right that existed. And that
 17 stipulation that we represented before, I think that's
 18 relevant to determining what water the State Engineer
 19 believed was already appropriated.
 20 A. It does, yes.
 21 Q. All right. Let's move on to Exhibit 141. Are
 22 you familiar with this exhibit?
 23 A. I am.
 24 Q. And what does it indicate about water use on
 25 Sadler Ranch before 1905?

1 A. This certificate describes a parcel of land that
2 is located in what we've earlier been defined as the hexagon
3 area, the lower southeast portion of the Sadler Ranch where
4 Matilda Eccles was trying to establish a possessory claim and
5 gain patent to a parcel of land in that area. And as an
6 effort to gain private ownership, she had to show that she
7 had water resources to irrigate that parcel.

8 In 1917, a claim or proof of appropriation of a
9 vested right had not yet been filed with the State Engineer's
10 office, so therefore there was no written or recorded record
11 that she could utilize in order to verify to the general land
12 office that she had the resources to irrigate.

13 As a function of that and a function of the
14 stipulation in 1913 about the use of water, this particular
15 water right was filed to provide the written documentation
16 that water -- there was an agreement of using water.

17 Essentially this was a top filing on an existing
18 right, a vested right. Again, because of the documentation
19 filed with the state, the vested right had only been
20 recognized by the Court through an adjudication process but
21 had not been -- the documents had not been filed with the
22 state's office. So that's what was needed in order to go
23 forward with the application for possessory right or an entry
24 to patent.

25 Q. You referenced a cover filing?

1 process or filing of a proof of vested right or proof of
2 appropriation, but a method to let others know that, hey,
3 there is actually a water right on this source. So that is
4 common.

5 Q. What does this document indicate about use prior
6 to 1905? And if I could, I'll ask you to turn to the last
7 page of the exhibit and there's a map included. And if you
8 could describe what that map is and how it relates to
9 pre-1905 use.

10 MS. PETERSON: I have two pages of a map for that
11 exhibit. Which page would it be?

12 MR. TAGGART: The last page.

13 THE WITNESS: On this page, which is a cultured
14 map that was filed in support of, in support of the
15 Application 4273, and what it illustrates is a portion of the
16 area that is adjacent to the property that is being sought by
17 Matilda Eccles. It has vested water right -- or vested right
18 in that area. It shows that on the map.

19 Q. (By Mr. Taggart) That's written on the map?

20 A. It is. Right there.

21 Q. So the words "vested right" are written on an
22 area that's not shaded black?

23 A. That's correct.

24 Q. And what else is written on this map?

25 A. The other significant note is that this one right

1 A. Yes. Top filing.

2 Q. Top filing, what is that?

3 A. Top filing is something that we have seen
4 historically where there is a base water right that is
5 already approved for a property and there's another water
6 right that is filed on top of that same property, same place
7 of use.

8 In some cases, a top filing is a supplemental
9 right. In other cases, it's an additional right. We've seen
10 that happen -- occur in many instances. But again, basically
11 it's one water right on top of another water right.

12 Q. In your experience have you seen examples of
13 where statutory water rights were requested while a vested
14 claim or proof was also filed at the same time?

15 A. Yes.

16 Q. And please describe your understanding of why
17 that was done.

18 A. Well, this is a good example of why, where she
19 needed a document from a state agency recognizing a -- the
20 ability for that person to utilize water to irrigate a parcel
21 of land. I've seen this case in this particular action.
22 I've seen cases where they were filing, again, to reinforce
23 the fact that there's occupancy and use of a specific water
24 source to get something of record at the State Engineer's
25 office, not necessarily going through the formal adjudication

1 here that is in the red box and it says it's enlarged on the
2 screen here, it says the area within the dotted line and the
3 fence is flooded with water from big springs during the
4 months of January, February and March. The soil is such the
5 moisture is then held until time for haying.

6 Q. Why is that significant?

7 A. This is very important to show that water was
8 actually diverted and applied to the land during the
9 non-irrigation season in an effort to augment soil moisture
10 content in that soil so that when the growing season did come
11 about, whether it had warmed up, that is soils would already
12 have moisture in them and the plants could begin growing
13 immediately. It also reinforces the fact that in this case,
14 particularly on Big Shipley Springs, that the water flow from
15 this spring continues every day 24/7. And that water flow
16 was actually utilized by the owners of these ranches and this
17 ranch in particular, to -- during the wintertime to push
18 water and utilize water on areas that were far removed from
19 the source, that could during the non-irrigation season,
20 during the cold and freezing portions of the year they could
21 transport that water to further extents of the ranch and
22 provide water for growing their crops.

23 And this is also important because the State
24 Engineer's office recognized that practice and even allowed a
25 permit condoning that practice.

1 Q. Let's go back to the first map that's in that
 2 exhibit. Do you see that?
 3 A. I do.
 4 Q. And what's the difference between these two maps,
 5 do you know?
 6 A. Well, in this case, this map was filed to support
 7 the proof of beneficial use.
 8 Q. Okay. The last page of the exhibit?
 9 A. This last page, the one that has the dark shaded
 10 area and the note that we spoke of just previously.
 11 Q. So is this a cultivation map, is that what it's
 12 sometimes called?
 13 A. Yes.
 14 Q. So this was filed to actually get a certificate?
 15 A. That's correct.
 16 Q. What about the first map?
 17 A. The first map was actually filed with the
 18 application to show the general lands that were proposed to
 19 be irrigated under this scenario of irrigation during
 20 January, February and March.
 21 Q. And we don't -- unfortunately we didn't have that
 22 one set up to put on the screen. But can you read from the
 23 copy that you have what's written in handwriting on that map.
 24 If not, we can just blow it up on the -- we can enlarge it on
 25 the screen?

1 number of acres irrigated. So that takes the one CFS to 100
 2 acres and converts it in to a flow rate. It's not a
 3 measurement of flow.
 4 Q. And Ms. Eccles filed for 480 acres. Do you know
 5 why she only got a certificate for 234 acres?
 6 A. That was the amount of land that she actually
 7 irrigated.
 8 Q. And that was shown on the cultivation map?
 9 A. And it was shown on that cultivation map, yes.
 10 One other point that I wanted to make on the
 11 calculation of that flow rate is that in the law it
 12 stipulated that that flow was at the head of the field, not
 13 at the source that developed the water. So in the case of
 14 this 2.342 cubic feet per second, that would have been
 15 measured at the head of the field. So whatever amount of
 16 water -- And the three cubic feet per second was measured at
 17 the head of the field. Whatever the amount of water flow
 18 that it took to get it there is in addition to these numbers.
 19 Q. All right. We've been through the exhibits
 20 involving the field notes, the surveys, the tax rolls, the
 21 deeds, the State Engineer records that we just talked about,
 22 the litigation information from Romano v. Sadler. Based on
 23 all of this information could you just restate your
 24 conclusion about what the priority of the vested claim for
 25 Sadler's ranch should be?

1 A. I can read it, I believe. It says, these lands
 2 are irrigated chiefly by flooding during winter and early
 3 spring. Two main dams shown, a vested right is claim for
 4 most of the land so irrigated.
 5 Q. And again, this -- I'm sorry. Strike that. Go
 6 back to the first page of the exhibit and that's the
 7 certificate itself. So what season of use was the
 8 certificate granted for?
 9 A. The season of use was for the period of January
 10 1st to April 1st of each year.
 11 Q. And how much water rights were awarded in
 12 acre-feet?
 13 A. 702.6 acre-feet.
 14 Q. And do you know how many acre-feet that is per
 15 acre in the certificated land?
 16 A. Yes. It is three acre-feet per acre.
 17 Q. Do you know why the five CFS that she requested
 18 in the stipulation is not shown on the certificate?
 19 A. I do.
 20 Q. Why?
 21 A. At the time that this certificate was issued, the
 22 State Engineer was operating under a law that stipulated that
 23 they could allow one cubic foot per second for the irrigation
 24 of 100 acres. So you can see there's a direct correlation
 25 between the cubic feet per second in the certificate and the

1 A. Based on the information that I've been able to
 2 review and the documentation that I've been able to identify,
 3 it supports the priority should be prior to 1870.
 4 Q. All right. Now we're going to move on to another
 5 topic.
 6 HEARING OFFICER JOSEPH-TAYLOR: Let's get your
 7 exhibit admitted, 141.
 8 MR. TAGGART: Thank you. We offer 141 in to
 9 evidence at this time.
 10 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 11 MS. PETERSON: No objection.
 12 HEARING OFFICER JOSEPH-TAYLOR: It will be
 13 admitted.
 14 Q. (By Mr. Taggart) So now I want to start asking
 15 you about the amount of acreage that you believe qualifies
 16 under the vested claim. So first let's turn to Exhibit 112.
 17 And what is Exhibit 112?
 18 A. Exhibit 112 is a culture map identifying lands
 19 irrigated by Big Shipley Spring and Indian Camp Spring.
 20 Q. And we covered this already. But what was the
 21 date of the survey under this map?
 22 A. The field survey was conducted in February and
 23 March of 1978.
 24 Q. Do you agree with the acreage that is included in
 25 this map?

1 A. The acreage included in this map is less than
 2 what is shown to be irrigated in other documents, other
 3 information.
 4 MS. PETERSON: Excuse me. I -- Are you amending
 5 your -- this vested claim? Because I'm not sure what the --
 6 MR. TAGGART: We'll cover that.
 7 MS. PETERSON: I'm not sure what the relevance of
 8 this is.
 9 MR. TAGGART: It's certainly relevant. The
 10 questions we ask the witness will explain the relevance of
 11 this and other information. Can I get more in to it right
 12 now?
 13 HEARING OFFICER JOSEPH-TAYLOR: Well, if that's
 14 an objection on relevance, I'm going to overrule it.
 15 MS. PETERSON: Well, can I make my record on that
 16 then?
 17 HEARING OFFICER JOSEPH-TAYLOR: Yeah.
 18 MS. PETERSON: Because the application relates to
 19 vested claim 03289 and 03290. So those are the vested claims
 20 that are in front of you?
 21 MR. TAGGART: Yes. And I think I can --
 22 Mr. Buschelman will be clear that, and we understand that
 23 there are applications before the State Engineer and that's
 24 what we're asking to be granted for the amount of water that
 25 is included in those applications.

1 evidence. Mr. Frazer discussed this exhibit. Why was this
 2 prepared?
 3 A. This was prepared in an attempt to overlay the
 4 Boyack culture map that was filed in support of proof of
 5 appropriation 033289 and 033290, which is Big Shipley Springs
 6 and Indian Camp Spring. Take that culture map and overlay it
 7 on a series of aerial photographs to see if, in
 8 fact, Mr. Boyack did include the acreage that was irrigated
 9 and to kind of give us a chance to ground proof his map.
 10 Even though he actually conducted field
 11 investigations and surveys in 1978, we felt it important also
 12 to go out and check to see what we could find out in more
 13 current time frames and in historical time frames. Because
 14 it's obvious from the map that Mr. Boyack prepared that he
 15 stop his cultural boundaries based on ownership lines.
 16 And it's obvious when you look at aerial
 17 photographs that the culture did not stop at those property
 18 boundaries lines, those private property boundary lines.
 19 They extended out in to the Bureau of Land Management lands
 20 and were not cut off by some property line defined on paper.
 21 Q. Well, can land that's not on private land be
 22 included in a vested claim if it's irrigated?
 23 A. Yes.
 24 Q. And why is that?
 25 A. The right goes to the water right owner, not the

1 It is relevant that there is information that
 2 indicates that more acreage was actually irrigated
 3 historically. But at this time we understand that the
 4 applications before the State Engineer are the only thing
 5 that can be considered to be granted. But in determining
 6 what the amount of acreage is and the application acreage is
 7 at least the amount that was historically irrigated, we think
 8 it's relevant to indicate what the evidence shows about the
 9 historical irrigation. So we will not be asking for more
 10 water in this hearing than what was filed for in those
 11 applications.
 12 MS. PETERSON: And that sounds like an
 13 adjudication to me if they're asking for more than what's in
 14 their application or trying to put in to evidence on this
 15 record more than what's in their application.
 16 HEARING OFFICER JOSEPH-TAYLOR: They didn't ask
 17 for more than in their application and they can't because you
 18 have to go back to publication. I hear it as justifying the
 19 quantity asked for in the application. So the objection is
 20 overruled.
 21 Q. (By Mr. Taggart) I'm trying to remember where I
 22 was. Let's move on to Exhibit 113. And are you familiar
 23 with this exhibit?
 24 A. I am.
 25 Q. And this has already been admitted in to

1 property owner.
 2 Q. Now, you say you conducted a field investigation
 3 to test essentially the Boyack map. What did you see during
 4 that investigation?
 5 A. Well, as part of this map here, it gave us the
 6 ability prior to going in to the field to do a lot of
 7 Reconnaissance in a way to make our field investigation more
 8 productive.
 9 So again, what we did is we took the features
 10 that were identified on the 1870 GLO plats, the 1879 deed
 11 calls. I'm sorry. Survey calls that were done by the
 12 general land office surveyors. We looked at aerial
 13 photography beginning in the forties and continuing through
 14 until current periods of time. We also looked at areas that
 15 Mr. Boyack had omitted from his culture tabulation. For
 16 whatever reason, we don't know, it was noted on the map, it
 17 was noted in the culture tabulation but not included on the
 18 proof of appropriation form. So we were trying to solve a
 19 lot of these questions before we went in to the field to see
 20 if there may have been something that changed possibly. We
 21 were trying to get a list of questions that we could answer
 22 by field investigations.
 23 Also in comparing aerial photography and the
 24 Boyack map, we were trying to draw a visual comparison of
 25 land that had been irrigated so that we could tell the shades

1 of color that we talked about earlier in Dr. Yednock's
2 presentation and in Mr. Frazer's presentation as to why is
3 that shade darker, why is it lighter. We were trying to get
4 all of those basically in to our head before we went in to
5 the field.

6 Once we looked at those features on the photos,
7 then we were going to correlate those features on those
8 photos with what we could see on the land, on the property.
9 So this preparation was significant in our efforts to do our
10 homework before we went in the field.

11 Q. Were you able to confirm Mr. Frazer's
12 understanding of the light versus dark colors on the aerial
13 photographs corresponding with lower and higher areas in the
14 field?

15 A. Yes.

16 Q. And were you able to develop an opinion of
17 whether water had been applied in those lower areas?

18 A. Yes.

19 Q. And what was your opinion? What is your opinion?

20 A. It was very obvious in the field that, one, the
21 existence of the ditches that were illustrated on the Boyack
22 map were still there when we visited the property earlier
23 this summer. It was obvious that the dams that were
24 identified on the aerial photos through time were still there
25 in the field where you could see where they were -- where

1 collect in one main channel.

2 We observed that in the field and also we were
3 able to see through vegetation in the soil, dry vegetation in
4 the soil that plants had grown there. And it was
5 considerably different than when you would go to the higher
6 areas where there was no vegetative -- no vegetative presence
7 in those soils.

8 We also -- Tammy, do you have a picture of the
9 ranch as a whole?

10 Q. We're going to go over to -- Why don't you go to
11 the irrigation infrastructure slides. Before we do that,
12 describe what your overall impression was of the ranch based
13 upon the field investigation.

14 A. The overall impression was that the spring, the
15 Big Shipley Spring supported a huge amount of growth. And
16 it's evidenced when you look at the aerial photos as to the
17 extent of the arms you might say that extended out in to the
18 alkali flat. If you look at the northern part of Diamond
19 Valley and the alkali flat that is there, it is a dominant
20 feature that stands out and it is a physical evidence of how
21 much water was actually flowing through that system bleaching
22 the soils of salt and enabling plant life to grow.

23 And it was very impressive to me to see it on the
24 ground after I had visualized it in the photos. It really
25 helped a lot to be on the ground to see the difference in the

1 they were actually creating a dike or a berm system. It's
2 called dams on this photo here. This is Exhibit 183, image
3 44 that illustrates the dams. They're also called berms or
4 dikes and where water would flow across the -- it's called a
5 sheet flow. Flow across the property or the land and then
6 accumulate behind these elevated structures and then be
7 redistributed again so they wouldn't just focus themselves in
8 to one single channel. They could be kicked back out again
9 on the pastures and then flow again out. In many cases you
10 can see that illustration here where you can see several flow
11 lines coming from this particular structure.

12 Q. Now, right now you're referencing page 98 of
13 Exhibit 617; is that accurate? Exhibit 617 is the power
14 point slide that Mr. Frazer spoke from. Exhibit 183 is the
15 actual photograph itself. Okay. And so when you're speaking
16 from slide number 98, you're talking about the dam areas and
17 then you were speaking of features running from those dam
18 areas?

19 A. That's correct. That's correct. You can see,
20 again, these flow lines coming from this dike or dam
21 structure which would then rebroadcast out water that had
22 been collected behind it. And then you can see another
23 structure here that's doing the same thing. Another dam or
24 berm structure also doing that same thing to, again, spread,
25 respread that water over and over again so that it wouldn't

1 soils, the difference in how the water was actually moved
2 around using the dikes and the dam systems and ditches to
3 create that area of growth.

4 Q. Describe the distances that you traveled from the
5 spring to the areas that you investigated.

6 A. The distances were great. At the further
7 extreme, I believe it's in the southeast arm of the ranch,
8 it's three and a half miles, somewhere in that magnitude,
9 three and a half miles from the spring to what is called the
10 Johns Field or the Hexagon Field that Mr. Frazer has
11 referenced. So it's a considerable distance between the
12 source and the outlying areas of cultivation -- irrigation.

13 Q. Did you see the pond or lake that is shown in the
14 USGS maps when you did your field investigation?

15 A. Yes. We made a specific point to go to that
16 site.

17 Q. And what did you -- What did you see there? And
18 again, now we're looking at slide 97 of Exhibit 617.

19 A. We actually hiked up this channel, which is a
20 ditch structure that is essentially a release channel and
21 this area called the lake, which was shown on the USGS map as
22 a more permanent storage structure or water containment
23 structure. You can see where this channel was definitely
24 constructed and utilized to bring water in to this lower area
25 that was in the lower right-hand corner of this photo. It

1 would be to the southeast. We also saw several what I would
2 call kind of beach lines along the sides of this elevated
3 area as well as this area here which would have impounded the
4 water at different levels at different times.

5 HEARING OFFICER JOSEPH-TAYLOR: Saying "right
6 here" is not going to come across on the record.

7 THE WITNESS: Sorry. When you look at the lake
8 structure, there is an impoundment that sits on the east side
9 and south side that is very prominent of this feature. The
10 elevation of this impoundment is -- I'm six-foot-two and it
11 was definitely double or triple my height when I was standing
12 in the middle of the lake structure. So there was a
13 significant amount of material either naturally or added that
14 would have kept the water in that feature.

15 And again, this is the area where we saw snails,
16 remnants of snails in the lake bottom. There were several
17 features here that confirmed that water was stored there for
18 many times.

19 Q. (By Mr. Taggart) I'm going to show you a few
20 pictures that come from Exhibit 183 and ask you to describe
21 the picture. Is this what you saw in the field? This is
22 picture number 94 from Exhibit 183.

23 A. Yes, it is.

24 Q. Can you describe what we're seeing here?

25 A. Yeah. This picture illustrates a ditch system

1 that's leading southeast from Big Shipley Springs. The trees
2 in the center right of the photo is Big Shipley Springs and
3 this ditch system basically is flowing southeast out of that
4 particular source.

5 Q. How about the next picture? This one is picture
6 99. Can you describe what you see there?

7 A. This is another ditch system that we observed in
8 the field. And it was also identifiable on the photos.
9 Again, as part of our Reconnaissance prior to doing the field
10 investigation, we identified specific features we wanted to
11 see in the field.

12 Q. And what about picture 101, what do we see here?

13 A. This is an example or a photo of one of the dikes
14 or dams that we speak of -- that we spoke of earlier. And
15 again, it shows where channels either coming in to this were
16 then redistributed so that they could be spread out.

17 Q. And the dike that you referenced, that just runs
18 from the left to the right of the picture just to the
19 foreground of the fence line?

20 A. Thank you. Yes.

21 Q. All right. Now I'm showing you slide 99 from
22 Exhibit 617. And this was discussed by Mr. Frazer. Were you
23 able to confirm the location of these ditches and dams in
24 your field investigation?

25 A. Yes.

1 Q. And based upon this figure, can you describe your
2 understanding of how water would have been applied to
3 irrigate these fields from these ditches and dams?

4 A. Big Shipley Springs, which is this dark area on
5 the west side of the photo near the ranch headquarters, which
6 is just to the north of the springs, there is a dam structure
7 around the east and southeast side of the spring that helps
8 to regulate the flow out of -- out of Big Shipley Springs.
9 The springs are located under water, under the pond. So when
10 we were there on the field investigation, essentially there
11 was no flow coming in to the Big Shipley Pond but there was
12 flow coming out of it through a head gate system that could
13 be used to divert water to the north as seen on these two
14 blue lines heading north out of the Big Shipley Pond area.
15 And then it was also a stream -- a ditch system that was
16 heading south out of the pond.

17 Now, due east of the Big Shipley Pond you can see
18 this green area -- I'm sorry, this darker shaded area which
19 was basically a distribution facility and another series of
20 head gates and a dam structure due east of the Big Shipley
21 Springs, which then allowed more ditches and more head gates
22 to further control the flow of water.

23 And again, looking at the photo, you'll see
24 ditches heading north, northeast, east, southeast and south
25 from Big Shipley Springs and the diversion structure.

1 Q. Do you see the four dams that are identified
2 towards the north? I think that's in the north meadow area.

3 A. Yes.

4 Q. Is that what you were describing earlier of how
5 water moved from one of those structures to the next?

6 A. Yes. That's the location that was illustrated
7 on those photos.

8 Q. When you were in the field did you also in the
9 Eccles' field area notice dams between these higher hummock
10 areas?

11 A. Yes. The Eccles' field area down here in the
12 southeast corner of this photo, and you'll note as you come
13 kind of to the northwest from that area you'll see these red
14 areas, these little red lines. When we were in the field, we
15 observed that they were actually for a better word a small
16 dam that was maybe three -- three to four feet in height.
17 And essentially what they would do is take dirt from each
18 side of the hummock area where it would restrict down to a
19 narrow passage, take that dirt and build up a berm and allow
20 it to back water up in to these areas and then you could see
21 where those dams or berms were breached and allow the water
22 to then flow southeasterly in to other fields. And there
23 were several, several that we identified on the photo and
24 then also identified in the field where this was done
25 throughout this hummocky and low area that was to the

1 southeast of the ranch.
 2 Q. And those structures are shown on this diagram in
 3 red?
 4 A. They are.
 5 Q. I want to ask you about fence lines and hay
 6 corrals. Did you see fence lines and hay corrals when you
 7 reviewed -- when you did your field investigation?
 8 A. Yes.
 9 Q. And I'm showing you slide 100 from Exhibit 617.
 10 Can you describe what you saw in the field, specifically
 11 fences and hay corrals, from this exhibit?
 12 A. Yes. One of the things that I was very
 13 interested in seeing was the hay corral. And if we could, I
 14 wanted to go along the section line between Sections 13 and
 15 18, that area identified by the 1870 surveyors, to see if
 16 there were actually hay corrals in that area to reenforce the
 17 fact that what we saw in the notes was still something that
 18 we could see hopefully today. And there were. There were
 19 hay corrals in that area. I can't say that I walked up to
 20 the specific one that was identified in the GLO notes.
 21 However, we did identify and locate several hay corrals in
 22 that vicinity.
 23 Q. What about hay corrals as far out as Johns Field,
 24 did you confirm the location of those?
 25 A. Yes.

1 restack it in to a hay corral.
 2 Q. So the hay corrals were located close to where
 3 the hay actually grew?
 4 A. Yes.
 5 Q. The hay that was stacked in the corral?
 6 A. That's correct.
 7 Q. Let's turn to Exhibit 314.
 8 HEARING OFFICER JOSEPH-TAYLOR: *About how much*
 9 longer? You've been going about an hour and a half.
 10 MR. TAGGART: This is actually a good time. And
 11 we probably have another 15 minutes before we get to another
 12 one.
 13 HEARING OFFICER JOSEPH-TAYLOR: *Okay. Let's be*
 14 in recess until 9:45. Off the record.
 15 (Recess was taken)
 16 HEARING OFFICER JOSEPH-TAYLOR: *Please continue,*
 17 Mr. Taggart.
 18 MR. TAGGART: Thank you.
 19 Q. (By Mr. Taggart) Mr. Buschelman, welcome back.
 20 A. Thank you.
 21 Q. Let's go to Exhibit 114. What is this?
 22 A. This is a compilation of -- or I should say this
 23 is an overlay of, again, the Boyack map that was filed in
 24 support of proof numbers 03289 and 033290, Big Shipley and
 25 Indian Camp Springs respectively. It's an overlay of that

1 Q. And what did you see when you saw a hay corral?
 2 A. They varied. Some of them were basically cedar
 3 posts that you could tell had been there for a long time and
 4 they were in a row. There was some remnants of barbed wire
 5 in some cases and other cases there was a very good stand of
 6 barbed wire that was there. But we saw quite a few old cedar
 7 posts in a specific square that had all the characteristics
 8 of being a hay corral.
 9 Q. Why would they put a hay corral out there?
 10 A. Well, the reason that hay was gathered and stored
 11 was to feed animals in the wintertime. So to prevent those
 12 animals from eating it during the summertime you had to fence
 13 them out. That was important. And the location of the hay
 14 corral was important because you couldn't haul it all that
 15 far in order to stack it. And so if you harvested a
 16 particular field, you wanted to keep your hay corral fairly
 17 close to that field so you weren't moving it at great
 18 distances.
 19 And again, keeping in mind that this is 1870,
 20 1879, there's no tractors and trailers. This is all horse
 21 and man-operated equipment. In many cases before hay
 22 machinery became available, this was all with sickles and a
 23 horse and you were pulling this stuff around that you could
 24 gather up that you could cut with a sickle, lay it on some
 25 form of a sled and drag it to a location that you could then

1 map over some aerial photographs. This one in particular is
 2 a photograph that we utilized as a form of comparison to
 3 illustrate that the cultures that were identified
 4 by Mr. Boyack on his map extended beyond the property
 5 boundaries on to the Bureau of Land Management lands. And it
 6 shows also areas that we felt were needed to be included in
 7 the culture map showing the full extent of the land irrigated
 8 by Big Shipley Springs and Indian Camp Springs.
 9 And the coloring in general is this, that the
 10 area outside of the private land is additive. This is an
 11 area that was irrigated and it correlates to the Matilda
 12 Eccles permit that we discussed just a little while ago. It
 13 shows more land in this part of the ranch being irrigated.
 14 It extends out.
 15 Q. That's yellow?
 16 A. Yes, that's yellow. The green area is areas that
 17 were cultures like meadow. There was an area here that is
 18 red that was for some reason omitted on the Boyack map.
 19 HEARING OFFICER JOSEPH-TAYLOR: *Mr. Buschelman,*
 20 that's not going to come across because there's lots of
 21 greens. There's lots of reds. You need to work yourself
 22 directionally. So starting from the southeast, is that blue
 23 area the Eccles certificate?
 24 THE WITNESS: That's correct. Again, to orient,
 25 we're in the southeast corner of the photo which is also the

1 southeast corner of the ranch. The yellow area is area that
2 is irrigated outside of the private land ownership of the
3 Sadler Ranch. The blue area represents the area that was
4 irrigated by Matilda Eccles. The green and a portion of the
5 red as we're continuing up northeasterly are areas that were
6 part of the Romano Ranch.

7 HEARING OFFICER JOSEPH-TAYLOR: Northwesterly?

8 THE WITNESS: Westerly, northwesterly. This red
9 area here, which is the furthest to the southeast in the
10 photo, illustrates an area that was not included on the Allen
11 Boyack map. However, again, in our preparation to go in to
12 the field, this was one area that we wanted to see in
13 particular and we saw no distinction of culture between
14 further northwest where there was meadow and further
15 southeast where there was meadow. We saw the same features.
16 We saw flow lines. We saw dams. So that area in my opinion
17 needed to be added to the culture.

18 There's further red areas as you continue
19 northwest. Those we found to be areas not included on the
20 Boyack map, but again upon our field review we saw no
21 distinction that would separate them out as non-irrigated
22 versus irrigated.

23 So again, I felt that it was important that we
24 add those areas as additionally irrigated lands above the
25 number that Allen Boyack had totalled.

1 There was some areas that we were able to
2 identify as being harvest on the aerial photos where the
3 Boyack map only quantified them as meadow. So we went
4 through a process of changing the culture in some regards,
5 not the acreage but the culture from meadow to hay meadow.

6 Q. What would you see in the field that would
7 indicate that to you?

8 A. Well, again, we saw stack yards -- or hay corrals
9 and we also saw evidence of wind grows on aerial photos. So
10 that gave us the confidence to say that it was actually
11 harvested as opposed to just being grazed.

12 As we continue to the northwest, we'll see these
13 blue areas. Those areas correspond to what the Boyack map
14 showed and what we verified in the field as being meadow.

15 Q. Those are light blue in the picture?

16 A. Light blue, correct.

17 Q. And this is the second page of Exhibit 114.
18 There were two pages that built up to this. So I want to
19 know that we're talking about the second page of 114 and the
20 colors on that map. Please continue.

21 A. As we continue northwest, you'll see areas that
22 of course are green. There's some pink areas. There's some
23 dark blue areas. Again, each of these colors are trying to
24 identify culture types or omissions from the Boyack map that
25 we felt actually should have been included.

1 Q. The pink area you mentioned is down at the
2 southern end?

3 A. Yes. There's a pink area on the very southern
4 end of the ranch. It's a rectangular-shaped parcel.

5 Q. What are the dark blue areas?

6 A. The dark blues are along the westerly boundary of
7 the ranch and those are the more intensely irrigated,
8 cultivated areas that are identified as alfalfa.

9 HEARING OFFICER JOSEPH-TAYLOR: Mr. Buschelman,
10 I'm going to stop you a second.

11 Mr. Taggart, that's page one in our Exhibit 114.
12 Are we missing a page? That's our page two. This is page
13 one. You said it was page two. I just want to make sure
14 we're not missing a page in our exhibit.

15 MR. TAGGART: If that's the way yours is, that's
16 the way mine is. So we are talking about page one of Exhibit
17 114. I apologize.

18 HEARING OFFICER JOSEPH-TAYLOR: No. That's okay.
19 I just want to make sure we got it.

20 Q. (By Mr. Taggart) All right. Did you mention
21 open water areas and how those were addressed in this map?

22 A. Can we go to page two? I think that might help
23 us a little bit more.

24 Q. Okay. So now we are going to talk about page
25 two.

1 A. Thank you. Page one just kind of gave us an
2 overview of the Boyack map over the top of the aerial. Page
3 two helps me to explain more of what we felt was additional
4 land that was irrigated not only from our observation of the
5 aerials but our ability to go in to the field and correspond
6 shade differences with land that had -- that was irrigated at
7 the time we were there and compare those shadings and color
8 variations with lands that were previous aerial photos.

9 The sum total of that is that in this photo,
10 again, in the southeast portion of the ranch, which is also
11 the southeast portion of the photo, we can see the yellow
12 area, which is added culture. It's on BLM land. You can
13 also go, again, northwesterly along the area that's shaded
14 dark, we can see red areas that we added to the cultures to
15 the tabulation because we felt there was actually culture in
16 those areas that were inside of the Boyack map but not
17 included by him.

18 We have some blue area in here which was actually
19 a change from meadow to hay meadow because of the evidence of
20 the hay corrals in those areas and other evidence that we saw
21 in the aerial photos of wind grows and the collection of hay
22 of putting in the stack yards.

23 If you go to, again, continuing northwest, we
24 have these green areas. On the Allen Boyack map, they were
25 identified as water features. Upon review of other aerial

1 photos, there were times that these areas did have water, but
2 there were other times that they did not have water and they
3 actually had what was seen to be the same type of shading as
4 other culture around it.

5 So it helped to verify that they would use these
6 dams that we had identified on the other photo to back water
7 up on to fields and then breach those dams and allow that
8 water to flow on later in the season or in the growing
9 season.

10 Q. Mr. Buschelman, did you identify what date and
11 the year Mr. Boyack visited the farm and did that influence
12 your decision about these green areas?

13 A. It did. Because the survey, the field survey
14 that Allen Boyack conducted was in February and March of the
15 year, which was the time that water would have been
16 transported down the ditch system because of the freezing of
17 the ditch system, allowing it to transport itself further
18 down to the furthest extents of the ranch and then allowing
19 it to be stored in these small impoundments for later release
20 in the growing season.

21 As we look at the very --

22 Q. And so that's what he would have seen, given the
23 date that he was out there. He was out there in February or
24 March, is that what you said?

25 A. That's correct. That's correct. And it also

1 correlates to some of the photos that were shown to us
2 earlier during Dr. Yednock's presentation where during the
3 winter you can see all of those water areas that were
4 inundated, which again, reinforces during the wintertime that
5 they were storing water during the winter for icing the
6 fields as a form of storage or in these impoundments as a
7 form of storage.

8 At the center of the picture on the bottom of the
9 private property there is some black areas noted here. Those
10 were areas that were not included in the Boyack table that
11 was submitted with the proof of appropriation. They were
12 included on the map and had culture identified on it. But we
13 felt that it was an omission that he forgot to add it up in
14 to the overall total.

15 So we identified those areas and visited those in
16 the field. And the culture was -- the evidence of culture
17 was evident as well as it corresponded to other areas that we
18 had seen culture in the past, photos. So the only thing that
19 we could think of is that when he was adding up, which is a
20 fairly extensive list of acreage that he forgot to include
21 these in his tabulation.

22 So we identified those. You'll also notice
23 there's one due north of this large square black area.
24 There's a few up in here in the more central part of the
25 property that was also omitted. So again, we included those.

1 One thing that is of note is in this area which
2 is due north of Shipley Springs and due north of the ranch
3 headquarters on Allen's map he identified an area of alfalfa
4 on the northern portion of the ranch. There was one corner
5 up here where the ditch actually rounded the corner in a
6 sense. And we looked through a series of photos and we could
7 not see that that had been irrigated. Mr. Boyack's map
8 showed that it was in alfalfa. However, we felt that that
9 was not in alfalfa historically so we removed that from our
10 total land that was irrigated from the source. So we found
11 some that we had to eliminate as well.

12 Q. And that's shown in red?

13 A. Yes, yes. So overall, what we had found as
14 basically trying to ground proof Mr. Boyack's map was that he
15 accounted for what we felt was irrigated land accurately. We
16 did feel that he was limited either by the client that
17 says -- that told him only to identify culture on private
18 land. But there was definitely culture and irrigation beyond
19 the private land boundaries that we feel are significant and
20 represent what the full extent of the irrigation from the
21 spring actually is.

22 Q. And I'd like you to turn to the last page, the
23 last page of Exhibit 114. What do these tables show?

24 A. These tables are a draft. We're still fine
25 tuning the numbers. However, we're within the order of

1 magnitude of these numbers very closely. But this was our
2 attempt to trace or track the changes that we felt were
3 needed, the additions and the subtractions from the Allen
4 Boyack map to what we felt was the full extent of the
5 irrigation on that spring.

6 Q. And please summarize what the changes in total
7 acres of irrigated land are that are shown in these tables?

8 A. Originally under the Boyack map totals, I'm sorry
9 there's not a total for this first column. It's titled
10 original Boyack totals. It's the first box on the exhibit.
11 But these three numbers, 262.11, 499.28 969.8 add up to
12 1,731.19 acres, which is the total of proof number 03289,
13 which is the Big Shipley Springs, plus the irrigated acreage
14 identified under Indian Camp Springs which is 03290. It's
15 the total of those two numbers that were submitted on the
16 proofs of appropriation.

17 After our review, we feel that the total for both
18 of these claims should be in the neighborhood of 2,244 acres
19 with some minor adjustments that we're still finishing up.

20 Q. How is this map going to be used? Do you intend
21 to amend the vested claim?

22 A. Yes, that's the intent.

23 Q. Are you using this map in this hearing to ask for
24 more water than is in the applications?

25 A. No.

1 Q. Does the -- Does the total irrigated acreage that
 2 you indicate on this table, the 2,244.71 acres, does that
 3 correspond with other historical information?
 4 A. It does. During Dr. Yednock's presentation there
 5 were historical accounts that referenced the irrigated lands
 6 within the ranch to be in the neighborhood of 2,000 acres.
 7 And so this fits very closely with that number that had been
 8 referenced by a number of others.
 9 MS. PETERSON: I'm sorry. Who did you say stated
 10 that?
 11 THE WITNESS: Let's see, that would have been --
 12 MS. PETERSON: Who did you just say stated that
 13 right now in your testimony?
 14 THE WITNESS: Previous historical accounts.
 15 MS. PETERSON: Oh, I thought you listed somebody.
 16 MR. TAGGART: I think he indicated in
 17 Dr. Yednock's testimony Dr. Yednock had referred to certain
 18 documents.
 19 MS. PETERSON: Okay. Thank you.
 20 THE WITNESS: Yes.
 21 Q. (By Mr. Taggart) Okay. Based upon all of this
 22 information that you reviewed, the field investigation that
 23 you did, the analysis of the Boyack map, what is your opinion
 24 about whether there is sufficient historic documentation to
 25 support the amount of acreage that is part of the vested

1 a number of dates. July 13th, 1974. These are image dates.
 2 July 16th 1984, August 23rd 1986, August 5th 1991 and July
 3 18th 1999. It provides the first column titled Sadler low
 4 range acreage. Going to the right, another column Sadler
 5 high range acreage. And it has two different numbers for the
 6 low and a different number for the high.
 7 What it shows me here is that during these time
 8 frames there's an attempt based on imagery, satellite imagery
 9 to come up with what is assumed to be acreage. And those
 10 acreages would be irrigated acreage.
 11 Q. And in some years does it indicate that in the
 12 high range of the acreage is similar to what you've been
 13 testifying about?
 14 A. They are similar but low compared to what I found
 15 when I actually went out in to the field.
 16 Q. Do you know whether -- And I'm going to have to
 17 ask you about this report although we haven't had a chance
 18 for this witness to testify, this is the only time I can ask
 19 about it. The -- Does that number include private land,
 20 public land? Is it restricted to just private land?
 21 HEARING OFFICER JOSEPH-TAYLOR: I didn't get
 22 that.
 23 Q. (By Mr. Taggart) Is it restricted to just
 24 private land?
 25 A. I believe it is restricted to private land.

1 claims and which are the support of the applications that are
 2 filed here today?
 3 A. I've been involved in a number of proofs of
 4 appropriation, to assemble documentation to show historical
 5 use of water, historical diversion dates, to establish
 6 priority. And this particular property by far has enormous
 7 amounts of historical documentation, much more than I'm used
 8 to seeing in other clients that I've worked for.
 9 So I'm very encouraged by the volume of
 10 background, the volume of history that's associated with this
 11 ranch, that it definitely proves with very little debate as
 12 to how much was used, that it was used continuously without
 13 interruption and that the priority is prior to 1870.
 14 Q. Okay. Let's -- I have some questions about an
 15 exhibit that was submitted by the protestants and it's
 16 Exhibit 328. Are you aware that this report was prepared?
 17 A. I'm going to have to ask for a copy. I don't
 18 have it in my file. Oh, yes, I do have it in my file. Thank
 19 you. Yes, I'm aware of this and I've read through it.
 20 Q. All right. And let's go to the last page of that
 21 report, page 21 of 22. Page 21 of 22. What did that report
 22 conclude regarding irrigated acreage on the Sadler Ranch?
 23 A. I'm looking at table six, a summary of the range
 24 of acres calculated using NDVI derivative -- derived from
 25 land sat imagery, short for land satellite imagery. It shows

1 Q. And would you agree that that's how the analysis
 2 should occur in determining what acreage was irrigated under
 3 the vested claims?
 4 A. No. The assessment of irrigated acreage extends
 5 beyond private land. A vested right is not limited to land
 6 ownership. It's the owner of the water right whether it
 7 extends on to public lands or even other private lands that
 8 is the owner of the water right. So it would have to include
 9 the full extents of the land irrigated from the spring, not
 10 just the private land.
 11 Q. What about the fact that there's one date in a
 12 season. How does that influence in your view the conclusions
 13 made here?
 14 A. Any imagery, aerial photography is a snapshot in
 15 time. It only gives you a sense of what is happening at that
 16 very moment in time. It does not provide you an assessment
 17 of what happened before or after that event. So to me it's
 18 imperative to use these images as a tool to further do more
 19 land, on the ground type of investigations to basically
 20 ground proof the images that you're seeing.
 21 Q. Is it also relevant what date in the year it is,
 22 what time of year the image represents?
 23 A. Yes, it's very significant.
 24 Q. And in looking at some of the images in this
 25 report, like specifically looking down at the center pivots

1 in the southern part of the valley, can you describe whether
 2 one image might not pick up land that was irrigated in a
 3 particular year?
 4 A. Yes. I'm looking at July 18th 1999. That is the
 5 image that is on page 20 of 22. And you can see by looking
 6 at the center pivots that the dark red color is exhibiting
 7 reflective qualities of a leafy crop. However, if you look
 8 adjacent to some of these red circles, you'll see some that
 9 are kind of a bright yellow. In that case from a picture
 10 like this it wouldn't be evident whether that had been
 11 irrigated or not. It could have also been irrigated and then
 12 harvested. And then because this was done on -- this photo
 13 was taken on July 18th, 1999, this is during the harvest
 14 period of time. So some of those that are appearing yellow,
 15 they could be non-irrigated or they could have been just
 16 harvested and now they're dried out so they're going to have
 17 to reapply water and get the crop to grow again. So that's
 18 why having a snapshot in time doesn't give you the full
 19 picture on whether that land was irrigated, harvested or not.
 20 Q. What about the fact that the first photographs in
 21 1974 and there was no photographs before 1974, do you think
 22 that has any influence on the reliability of these
 23 conclusions?
 24 A. I do. I think it's important that you look at as
 25 many images as you can find historically. That's why in the

1 definitely there was culture on the ground. Again, the date
 2 of the photo, the time of the year of the photo versus being
 3 out on the ground made a big difference in being able to
 4 quantify those areas that had been irrigated versus an image
 5 that may not have the right shading or color differentiation
 6 to give you that. Field work is imperative. It's a tool.
 7 Infrared photography, black and white photography is a tool.
 8 But without going in the field, it's hard to give it the
 9 ultimate.
 10 Q. Now, obviously you're a licensed water rights
 11 surveyor in the State of Nevada?
 12 A. Yes.
 13 Q. And do you have to be a licensed water rights
 14 surveyor to submit a map to support a water right in Nevada?
 15 A. Yes.
 16 Q. Including a vested claim?
 17 A. Yes.
 18 Q. As a water rights surveyor would you ever
 19 recommend acreage for a vested claim based solely on a land
 20 sat image or series of land sat images?
 21 A. No.
 22 MR. TAGGART: We'd like to -- Thank you. We'd
 23 like to offer Exhibit 114 in to evidence.
 24 MS. PETERSON: Objection. And all the testimony
 25 associated with it based on the same grounds, that it's

1 process of reviewing the lands irrigated before I went in to
 2 the field there were photos that went, aerial photos and
 3 images that went back to 1946, fifties, sixties, seventies,
 4 eighties, nineties, as well as in to the 2000s to get a
 5 better idea of what was actually being irrigated.
 6 Q. And if the spring had decreased by 1974 then this
 7 method wouldn't pick up that, for instance; right?
 8 A. That's correct. It would only show what was
 9 irrigated in 1974.
 10 Q. Now, have you used land sat imagery yourself in
 11 assessing the amount of irrigated acreage in a vested claim?
 12 A. I have. It was infrared photography, not imagery
 13 from a satellite. But during the course of my field reviews
 14 and mapping of cultures in the adjudication of the Snake
 15 River drainage which included the Owyhee River, the Bruno
 16 River and roughly 15 ranch properties up there, I used
 17 infrared photography a lot to try to identify areas of
 18 irrigation.
 19 Again, prior to going in the field I did a lot of
 20 pre-work, office work before meeting with the individual
 21 clients, the individual ranch owners and then targeted
 22 specific areas that I wanted to see as to whether or not they
 23 had been irrigated. And there are some areas that on the
 24 photo, on the aerial photo, will show very little color
 25 differentiation. When we were in the field we could see

1 irrelevant to this proceeding.
 2 HEARING OFFICER JOSEPH-TAYLOR: Do you want to
 3 respond, Mr. Taggart?
 4 MR. TAGGART: Excuse me.
 5 HEARING OFFICER JOSEPH-TAYLOR: You want to make
 6 a record or response to her?
 7 MR. TAGGART: Oh, yeah. I thought we already
 8 did. I thought that might be a continuing objection. But
 9 yes, the information from the Exhibit 114, the map contained
 10 there, is not intended to request more water under the
 11 applications that have been filed by Sadler Ranch and which
 12 are under consideration during this hearing. They're -- That
 13 information is provided because it's the best information
 14 about historic irrigation on the ranch. It provides relevant
 15 information as to the upper range of irrigated acreage and so
 16 it supports the amount of acreage as being reflected in the
 17 application before the State Engineer.
 18 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 19 MS. PETERSON: May I respond?
 20 HEARING OFFICER JOSEPH-TAYLOR: Hold on. Go
 21 ahead, Ms. Peterson.
 22 MS. PETERSON: Just for the record, it's not the
 23 best information that's historic because it's not historic
 24 information. It's new information compiled in 2013.
 25 HEARING OFFICER JOSEPH-TAYLOR: So noted. Your

1 objection is overruled. Exhibit 114 will be admitted.
 2 MR. TAGGART: All right. Now I'm going to change
 3 to a topic about water duty.
 4 HEARING OFFICER JOSEPH-TAYLOR: *Can we go off the*
 5 *record for a second?*
 6 (Discussion was held off the record)
 7 HEARING OFFICER JOSEPH-TAYLOR: *I've just had an*
 8 *off-the-record discussion with counsel about time because I'm*
 9 *concerned about Mr. Venturacci's case being cut short.*
 10 *Mr. Taggart, how much longer do you think you have with*
 11 *Mr. Buschelman and who else do you have?*
 12 MR. TAGGART: I have -- Mr. Buschelman will
 13 probably be another half an hour and then I have Dwight Smith
 14 and I also have Levi Shoda, who will be a short witness and
 15 that's it.
 16 HEARING OFFICER JOSEPH-TAYLOR: *And how much time*
 17 *do you think you need with Mr. Smith?*
 18 MR. TAGGART: I think we need an hour.
 19 HEARING OFFICER JOSEPH-TAYLOR: *I'm seeing the*
 20 *day pretty much evaporate. Mr. Kolvet, are you going to be*
 21 *satisfied with having one day tomorrow?*
 22 MR. KOLVET: If I can get at least one witness on
 23 today, that would be Mr. Katzer, who will be about an hour
 24 total, I believe. So if I get an hour today, I can finish up
 25 tomorrow.

1 Alfalfa, native grasses, native hay is its term. Also wheat
 2 and other grain type of crops. So a fairly extensive variety
 3 of crops.
 4 Q. Are you -- I'm going to turn to Exhibit 194. And
 5 this is a document that's been prepared by the Division of
 6 Water Resources. Do you see that?
 7 A. I do.
 8 Q. And in that document it references what's called
 9 the net irrigation water requirement. Are you familiar with
 10 that?
 11 A. I am.
 12 Q. And I think maybe it would be quicker for me to
 13 just talk through what we've got in these exhibits. In
 14 Exhibit 194 there is discussion of net irrigation water
 15 requirement on page 68. And within that, the portion that's
 16 been highlighted in the exhibit that was submitted to the
 17 State Engineer it says the NIWR is defined as the ETACT
 18 active minus precipitation regarding the root zone and
 19 represents the amount of additional water that the crop would
 20 evapotranspire beyond precipitation regarding the root zone.
 21 Do you see that?
 22 A. I do.
 23 Q. And it says NIWR is synonymous with the terms net
 24 consumptive use and precipitation deficit; right?
 25 A. Yes.

1 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 2 Mr. Taggart, I'm going to shoot you for being done at 2:30
 3 max. And if Mr. Kolvet agrees to let you go over, I'll let
 4 you go a little longer. But you guys made an agreement to
 5 split up the time and I don't want him coming back saying I
 6 didn't get enough time.
 7 MR. KOLVET: Well, in part, some of my statement
 8 is due to the fact that some of the general discussion that
 9 Mr. Buschelman just put on the record I want to incorporate
 10 in my case, so I won't have to ask those questions of
 11 Mr. Thiel perhaps. So some of what he has already testified
 12 to will be relevant to our case as well.
 13 HEARING OFFICER JOSEPH-TAYLOR: *Okay. You guys*
 14 *are just going over your time and I want to make a record.*
 15 *You agreed to the three days.*
 16 MR. KOLVET: We did.
 17 HEARING OFFICER JOSEPH-TAYLOR: Go ahead,
 18 Mr. Taggart.
 19 Q. (By Mr. Taggart) Mr. Buschelman, I'm going to
 20 make an effort to speed this up. We might go through some
 21 things faster than we had anticipated. But from your
 22 research, and I'm going to reference page five of your
 23 report, which is -- Excuse me. 105. What types of crops are
 24 historically cultivated on the Sadler Ranch?
 25 A. There's actually a fairly wide variety of crops.

1 Q. And then in Exhibit 193, which is what's referred
 2 to as the dictionary, it's put out by Nevada Division of
 3 Water Planning. It's a dictionary of technical water, water
 4 quality and environmental and water-related terms. We've
 5 provided pages from that. And if you can turn to page 63 of
 6 that, there is a definition of consumptive use. Excuse me.
 7 Page 62. And you understand the definitions of these terms?
 8 A. I do.
 9 Q. And does the net irrigation water requirement
 10 include all the water that's required to grow a crop?
 11 A. No.
 12 MS. PETERSON: Objection. I think this is
 13 outside the scope of his expertise.
 14 HEARING OFFICER JOSEPH-TAYLOR: *I'll overrule it.*
 15 MR. TAGGART: Do you remember the question?
 16 THE WITNESS: I do.
 17 MR. TAGGART: Before I get started, can I just
 18 offer 193 and 194 in to evidence?
 19 HEARING OFFICER JOSEPH: *Any objection to 193 and*
 20 *194?*
 21 MS. PETERSON: No objection.
 22 HEARING OFFICER JOSEPH-TAYLOR: They'll be
 23 admitted.
 24 MR. TAGGART: Go ahead and answer.
 25 THE WITNESS: The net irrigation water

1 requirement for consumptive use portion identified here is
 2 only one component of determining a duty to serve the needs
 3 of a crop.
 4 Q. (By Mr. Taggart) And if you go to page 68 of
 5 Exhibit 194, there is a definition of crop irrigation
 6 requirement. Do you see that?
 7 A. I do.
 8 Q. It says that the amount of irrigation water in
 9 acre-feet per acre required by the crop, it is the difference
 10 between crop consumptive use or crop requirement in the
 11 affected precipitation for client growth. To this amount the
 12 following items as applicable are added, irrigation applied
 13 prior to crop growth, water required for leaching,
 14 miscellaneous requirements of germination, frost protection,
 15 plant cooling, et cetera and for the decrease in soil
 16 moisture should be subtracted. Explain how this definition I
 17 just read is relevant in your opinion to the duty that's
 18 necessary to grow a crop.
 19 A. The definition of duty, as I understand it,
 20 incorporates many of the aspects that you just identified
 21 under crop irrigation requirement. And it is imperative when
 22 establishing or trying to estimate a duty that you take in to
 23 account, first of all, the need to transport the water from
 24 one location to the crop, to the source of water to the crop
 25 and the irrigation method. If it's an open ditch, flood

1 HEARING OFFICER JOSEPH-TAYLOR: What's the
 2 objection?
 3 MS. PETERSON: It's irrelevant because it's
 4 outside the scope of the vested claim.
 5 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 6 MR. TAGGART: Can I just respond for the record?
 7 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 8 MR. TAGGART: What we're establishing is the duty
 9 of water that is necessary to irrigate crops in the
 10 pre-statutory period, the vested claim period. And so we're
 11 looking at the amount of water that would be necessary to
 12 irrigate the lands that Mr. Buschelman testified about in
 13 that pre-statutory period. And so that's the relevance of
 14 this information.
 15 MS. PETERSON: And then just so can I put it on
 16 the record too? The claim states a duty of four or 4.5.
 17 Q. (By Mr. Taggart) All right. So in table 106 --
 18 I'm sorry. Exhibit 106, you have those net irrigation water
 19 requirements indicated. Describe for me, if you will,
 20 efficiencies and how to determine what efficiency -- Well,
 21 first of all, what is efficiency and how does it apply duty?
 22 A. Efficiency is a term utilized to kind of
 23 understand what it takes to, again, bring the water from the
 24 source to the crop and then apply it to the plant and then
 25 even somehow amend the soil chemistry to encourage the plant

1 irrigation, there's going to be transportation losses that
 2 are incurred to transport the water from the source to the
 3 crop. There's also going to be the need to improve the soil
 4 chemistry to get a crop to grow. That's the leaching factor
 5 that is sometimes included in duty, sometimes is additive.
 6 There's also the need to consider the type of plant that
 7 you're irrigating, the frequency of irrigation, the time of
 8 year due to evapotranspiration. There's a number of factors
 9 that are needed in order to calculate or estimate a total
 10 duty to irrigate a crop.
 11 Q. Let's go to Exhibit 278. And on the last page is
 12 what we provided, page 251, it lists the net irrigation water
 13 requirement for Diamond Valley; correct?
 14 A. Yes.
 15 Q. And did you use these numbers in your analysis of
 16 what duty was required to irrigate crops on Sadler Ranch?
 17 A. Yes.
 18 Q. And let's go to Exhibit 1 of 6 then. And this is
 19 a table that you prepared. And are those the figures that
 20 are shown in the table?
 21 A. Yes.
 22 MS. PETERSON: So I'm trying to make my record
 23 here. I would object to this exhibit also and any testimony
 24 about it, just so that it's clear in the record before he
 25 starts testifying.

1 to grow. So efficiencies take all of those factors in to
 2 consideration.
 3 Q. And did you investigate efficiencies that would
 4 be necessary on Sadler Ranch in that pre-statutory time
 5 frame?
 6 A. I did. I researched the web and asked -- I
 7 queried efficiencies and methods to calculate or understand
 8 efficiencies. And I utilized an example or a report that was
 9 prepared by the food and agriculture organization of the
 10 United Nations, which is also part of the National Resource
 11 and Conservation Service, which is also a part of the
 12 Department of Agriculture.
 13 Q. And that's been identified as Exhibit 123. And
 14 as you just described it, you relied upon it. We'll offer
 15 Exhibit 123 in to evidence?
 16 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 17 MS. PETERSON: Same objection.
 18 HEARING OFFICER JOSEPH-TAYLOR: Overruled. It
 19 will be admitted.
 20 Q. (By Mr. Taggart) Does the grade or the slope of
 21 ditches on a ranch influence the efficiency of the
 22 application of water to irrigate crops?
 23 A. It does. Specifically in a flood irrigation
 24 method or open ditch methods to deliver water to crops, it
 25 has a very big impact on efficiency.

1 Q. Would you look at the grade of the ditches in
 2 Sadler Ranch to determine what those grades are?
 3 A. I did.
 4 Q. And describe that.
 5 A. First of all, I noted on the proof of
 6 appropriation, that Allen Boyack had actually listed the
 7 grade to be .5 percent. So in an effort to check myself, I
 8 went to the USGS map for that particular section of the area
 9 and utilizing elevations noted on the USGS map I calculated
 10 an average slope of .2 percent. So under those two
 11 circumstances, Mr. Boyack's calculation and my calculation
 12 were somewhere between .2 and .5 percent grade between the
 13 spring and the outer reaches of the irrigated acreage on the
 14 Sadler Ranch.
 15 Q. So the lower the slope, the more water is
 16 necessary to irrigate? Is that a fair statement?
 17 A. It is. In many cases if the grade is as flat as
 18 these numbers tell us, in many cases you have to develop a
 19 head of water, which is basically a higher flow of water to
 20 get it to push itself further down the ditch system. So
 21 under those conditions, more water is required to transport
 22 the water than it would be under a steeper slope.
 23 Q. Did you review the USGS quad sheet for this area
 24 in doing your calculation grade?
 25 A. I did.

1 THE WITNESS: Yes.
 2 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 3 Q. (By Mr. Taggart) 40 percent more than the amount
 4 of water necessary to grow the crop to the net irrigation
 5 watering?
 6 A. No. Actually 40 percent that's left over. You
 7 put a -- You put one CFS in at the head gate, you're only
 8 going to get four-tenths of a CFS at the crop or consumed by
 9 the crop.
 10 Q. At a 40 percent efficiency?
 11 A. At a 40 percent efficiency.
 12 Q. Turn to document 287. This was a power point
 13 presented by the State Engineer in, I believe, 2009. If you
 14 could turn to page 27 of that power point. That's 287. Does
 15 that page indicate an efficiency for sprinkler irrigation?
 16 A. It does.
 17 Q. What does it say?
 18 A. It says the efficiencies range between 65 and 75
 19 percent for a gross pumpage estimate.
 20 Q. Is sprinkler irrigation more efficient than flood
 21 irrigation?
 22 A. Yes.
 23 Q. Based upon your analysis, describe your
 24 conclusion of what the duty of water is necessary for Sadler
 25 Ranch on average per acre.

1 Q. And when you looked at that document that's been
 2 admitted as Exhibit 123, did it say what an efficiency for
 3 flood irrigation would be -- should be in a situation like
 4 Sadler Ranch?
 5 A. Yes. It actually gave a range of efficiencies
 6 and they range from 40 percent to 60 percent.
 7 Q. And on -- Strike that. If you can turn to
 8 exhibit --
 9 HEARING OFFICER JOSEPH-TAYLOR: Excuse me a
 10 second. Is that water lost back to the system 40 to 60
 11 percent?
 12 THE WITNESS: Not necessarily lost. It's the --
 13 In other words, if you diverted one CFS at the source and
 14 wanted to get 40 percent of it, you would only get 40 percent
 15 of it to a specific crop based on a 40 percent efficiency.
 16 So lost, part of it would be evaporated. Part of it would be
 17 recharged in to the soil profile. Part of it would be
 18 consumed by the crop itself. And part of it may even be a
 19 waste or drain component of that crop. The efficiencies are
 20 based on what they call scheme irrigation efficiencies and
 21 the scheme efficiency is a component of all of those.
 22 HEARING OFFICER JOSEPH-TAYLOR: What I'm trying
 23 to get for the record, Mr. Buschelman, does that mean, 40
 24 percent efficiency, does that mean 40 percent gets to the
 25 crop?

1 MS. PETERSON: And again, just for the record, my
 2 objection, my continuing objection.
 3 HEARING OFFICER JOSEPH-TAYLOR: So noted.
 4 THE WITNESS: Utilizing the efficiencies stated
 5 in the food and agricultural organization, irrigation
 6 deficiencies information that I received, and looking at the
 7 40, 50 and 60 percent efficiency ranges, I calculated that at
 8 a 40 percent efficiency it would require 6.25 acre-feet per
 9 acre as a maximum amount of duty required. Then I also
 10 looked at a higher efficiency at the 60 percent and also did
 11 the calculation at 60 percent to try to obtain a lower or the
 12 lower number of acre-foot per acre and I came up with 3.33
 13 acre-feet per acre. So the low of the range is 3.33. The
 14 high of the range is 6.25. I simply averaged those and I
 15 came up with 4.73 acre-feet per acre as an average duty based
 16 on those efficiencies.
 17 Q. And that would be during the irrigation season?
 18 A. Yes, that's during the irrigation season.
 19 Q. There was some testimony earlier about the
 20 temperature of Shipley Spring being 105 or 104 degrees. Do
 21 you recall that?
 22 A. I do.
 23 Q. What relevance does the temperature at 104
 24 degrees approximately have to your analysis of duty?
 25 A. Having a higher temperature, hot or warm water is

1 a big advantage, especially in a situation that we see out in
2 Diamond Valley. During the wintertime that water is not
3 frozen at the source, so at the spring. So it allows the
4 owner to have access to water cattle, where a colder water
5 source would freeze. That's a huge benefit. It also allows
6 the use of that water to flow down a ditch system and enable
7 it to stay liquid enough to get to certain areas on the ranch
8 that could be -- where water could be stored so it can still
9 be transported in freezing weather. It allows the ditches
10 to, you know, remain open at times of the year when a colder
11 water source would have stayed frozen.

12 So with that warmer water source, it allows you
13 to do -- allows you to divert the water and actually place
14 water in areas that you couldn't normally do that under a
15 cold water system.

16 Q. Do you have an opinion about whether all of the
17 water from Shipley and Indian Camp Spring was put to
18 beneficial use prior to 1905?

19 A. I do.

20 Q. And could you with reference to Exhibit 145
21 describe your opinion.

22 A. Based on the historical accounts that Dr. Yednock
23 was able to describe earlier in his testimony and looking at
24 the area of irrigation that we saw in the field and the
25 aerial photography, it, to me, verifies that the full flow of

1 that spring was used on a year-round basis, not only for
2 irrigation but other uses, ice production, soil augmentation,
3 soil moisture augmentation, leaching of salts that would have
4 occurred in areas on the ranch and getting those salts out in
5 to the alkali flats so that you can utilize the improved soil
6 chemistry to encourage growth or increase growth.

7 So based upon those multiple uses and the extent
8 of the irrigation, I feel all of the water was actually
9 utilized for beneficial use.

10 Q. Exhibit 145 is a field investigation that was
11 done in 1912, as I recall. Yes, 1912. And does that have
12 any indication of water being used in the wintertime?

13 A. It does. There's a section here that's included
14 within the red box. It's the larger of the two red boxes on
15 the right-hand side of the exhibit. And it speaks of
16 reservoirs are used in connection with the source is quite
17 large. That speaks, again, of what we saw in the aerial
18 photographs, what we have seen in the other photo
19 representations of the ranch where water was actually out in
20 the fields and used as a storage mechanism in the wintertime.

21 And then it also goes on to say, and it's right
22 here, in the winter, and this is not circled by a box, but
23 it's roughly about three sentences below that larger box. In
24 the wintertime the water is turned down through Sadler's
25 ranch and finally reaches its land at Romano's. So the

1 wintertime components of distributing water was an asset to
2 this ranch. It was imperative to use that winter component,
3 the warm water feature to get water in areas that would be
4 difficult in other circumstances.

5 Q. For the record, the red boxes are only on the
6 screen and in the exhibit we're showing in the hearing room
7 but not the one that's in the exhibits.

8 All right. In your report you also talk about
9 leaching and the requirement for leaching. And if I can,
10 I'll just restate for the record where -- what documents you
11 referenced if you were -- Let's not go through each one of
12 those individually. And then at the end I'll ask you about
13 that. But you referenced Exhibit 126. And I'm doing this in
14 an effort to save time. So you referenced Exhibit 126, page
15 164. Also the 1986 topographical map done, which is Exhibit
16 177. You referenced the Boyack map. This is all referenced
17 in the report. You referenced the certificate for
18 Application Number 4273. And you referenced portions of the
19 Romano v. Sadler litigation. And so with those pieces of
20 information in mind, please describe to the State Engineer
21 your understanding of why water is necessary for the leaching
22 on Sadler Ranch.

23 A. Again, when you consider looking at the aerial
24 photography and then also doing the field investigation, it
25 is quite obvious that the lower, or I should say the easterly

1 portions of the ranch are influenced by salt that you can see
2 that are out in to the playa. And as the ranch extends
3 easterly, the evidence of salt in the soil is very much
4 there. And the white nature of the soil is a signature color
5 or signature shade of soil in the soils -- or salts in the
6 soils.

7 In order to maintain those areas in such a way
8 that the soil chemistry will either allow growth or enhance
9 growth, it has to be somehow leached of those salts. And it
10 may not have to happen every year, but at certain times those
11 salts have to be taken out in to the playa and away from the
12 soils that are supporting your crop.

13 So based on the aerial photography history and
14 being in the field and then seeing historical accounts, that
15 was a common practice in order to encourage growth.

16 Q. You've also mentioned storage of water as a use
17 existing in the non-irrigation season. Describe how that
18 occurred, in your understanding, at Sadler Ranch.

19 A. During the wintertime, the non-irrigation season,
20 water would be transported down the ditch systems. The dams
21 that were across the narrows between the two hummock, higher
22 areas, were constructed. Those waters would be diverted in
23 to those temporary storage facilities. Throughout the ranch
24 they had many places that they could store this water on the
25 ranch. And as time progressed, the ditches would freeze and

1 that warm water would be able to continue further out in to
 2 the ranch boundaries, they would continue to store more water
 3 further out.
 4 Once the season began to warm up, they would
 5 breach those facilities in order to irrigate land below them
 6 because it allowed them to bring water to the fields almost
 7 immediately upon breaching the storage facility instead of
 8 having to transport three and a half miles to get to the same
 9 location.
 10 Icing the fields is another form of storage. We
 11 see that recognized in other areas throughout the state where
 12 icing of the field is a form of storage and is allowed. So
 13 it's very common practice.
 14 Q. And I won't go in to it again. But we've talked
 15 about Exhibit 141, which is Permit 4273, and this is an
 16 actual approval of a winter water right on part of this
 17 property; correct?
 18 A. That's correct.
 19 Q. What other uses of water here on the ranch --
 20 Again, we won't go in to detail here, but if you give a list
 21 of other types of uses other than irrigation of water on the
 22 ranch.
 23 A. Utilizing the historical accounts and information
 24 that was available to us, it was evident that the ranch was a
 25 very significant piece of agricultural property in Diamond

1 continuous.
 2 Q. And year round?
 3 A. And year round.
 4 Q. How does the evidence that you've been discussing
 5 involving non-irrigation season, water use and non-irrigation
 6 water uses, how does that support the duty that's been
 7 requested in these applications?
 8 A. It is not included. The 4.5 acre-feet does not
 9 include the other types of uses. Only agricultural.
 10 Q. But the vested claim would include more than just
 11 the agricultural use?
 12 A. Definitely.
 13 MS. PETERSON: Well, let's just clarify. The
 14 vested claim on record?
 15 MR. TAGGART: Yes.
 16 THE WITNESS: Yes. The vested claim on record
 17 can be amended to include other uses that were not originally
 18 identified under the filing that was presented in 1980 by
 19 Allen Boyack.
 20 Q. (By Mr. Taggart) Now I want to ask you a final
 21 set of questions. Protestants allege that formal
 22 adjudication must occur before the State Engineer can protect
 23 vested claims for water rights. In your experience, what
 24 situation usually causes an adjudication to occur?
 25 A. An adjudication is -- occurs when there's a

1 Valley. It supported a store in town. The Sadler family had
 2 a store in Eureka. And they sold produce. They sold animal
 3 products, meat products, dairy products. They supported a
 4 staff as well as the family at the ranch in order to do all
 5 of the work necessary to complete the tasks necessary to run
 6 a ranch, harvested, et cetera.
 7 So all in all there's numerous accounts of
 8 commercial use of the water, quasi-municipal use of the
 9 water, agricultural use, of course, as well as icing, which
 10 is kind of unique in a sense, but it's definitely recognized
 11 in many places where ice is produced, stored and used for
 12 summer cooling of produce. The history is very clear that
 13 there was a year round and multiple use of that water.
 14 Q. What about the muskrats?
 15 A. That would be a side benefit, kind of a
 16 non-consumptive use but a definite beneficial use.
 17 Q. What does it indicate to you that there were
 18 muskrats in the numbers that we saw in Dr. Yednock's
 19 testimony, what does that indicate to you?
 20 A. That that stream of water flowed considerably,
 21 had a considerable flow to it. To support an animal like the
 22 muskrat, it has to have at least enough water to swim in and
 23 develop its, you know, habitat. So it encouraged so much
 24 that it grew to a point where they could harvest that many
 25 animals shows that that water was significant in flow and

1 conflict on the source of water, where two individuals or
 2 multiple individuals are having a difficulty trying to decide
 3 who gets water and how much. Under those circumstances then,
 4 an adjudication is required in order to identify priorities,
 5 places of use, ownership and period -- season of use.
 6 Q. Does that kind of conflict that you mentioned
 7 earlier exist on Shipley Spring?
 8 A. It does not.
 9 Q. Do you think that an adjudication is required
 10 before the State Engineer can protect the vested rights at
 11 Sadler Ranch?
 12 A. I think an adjudication has already occurred in
 13 1913. And Romano and Sadler went to court in order to
 14 determine who had an interest in that water. And the Court
 15 identified that the water was fully appropriated by Sadler.
 16 Q. Are you familiar with situations in Nevada where
 17 the State Engineer has protected vested claims for water
 18 rights before those water rights have been adjudicated in a
 19 formal adjudication?
 20 A. Yes.
 21 Q. And in an effort to save time, I'm going to just
 22 reference Exhibit 609. What we have here is a series of
 23 rulings by the State Engineer. And if I can, I'll just walk
 24 through what those are for the record. The first ruling --
 25 MS. PETERSON: Well, wait. You know what, I

1 don't have an objection to admitting them. That way you
 2 don't have to walk through them because you're just going to
 3 be testifying and that would not be an appropriate way.
 4 MR. TAGGART: Well, I'm not testifying. But I
 5 can have the witness read them.
 6 MS. PETERSON: We can just admit it.
 7 MR. TAGGART: Well, I would like them read. I
 8 want it to be clear what they say.
 9 HEARING OFFICER JOSEPH-TAYLOR: Go ahead,
 10 Mr. Taggart.
 11 MR. TAGGART: In the first ruling, 18482 --
 12 HEARING OFFICER JOSEPH-TAYLOR: What? I don't
 13 know if you have that number right.
 14 MR. TAGGART: I'm sorry. It's a ruling on
 15 Application 18482. And in the opinion it indicates its the
 16 opinion of this office that the granting of Applications
 17 18482 and 20908 would tend to impair the value of existing
 18 vested rights for limit and extent of which have not been
 19 determined. Another ruling involving Applications 47404
 20 and --
 21 HEARING OFFICER JOSEPH-TAYLOR: Are you going to
 22 have a question from this? Because you are testifying now.
 23 MR. TAGGART: I am.
 24 Q. (By Mr. Taggart) Well, are these examples of
 25 times when the Nevada State Engineer has protected vested

1 Q. (By Mr. Taggart) Okay. Now, are you familiar
 2 with situations where change applications have been granted
 3 on unadjudicated vested claims?
 4 A. Yes.
 5 Q. And just for the record, that is what is included
 6 in Exhibit 1 -- I'm sorry. 603, and we offer that in to
 7 evidence at this time.
 8 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 9 Exhibit 603?
 10 MS. PETERSON: No objection.
 11 HEARING OFFICER JOSEPH-TAYLOR: It will be
 12 admitted.
 13 Q. (By Mr. Taggart) Are you aware of situations
 14 where the State Engineer has previously protected water
 15 rights in this basin, Diamond Valley, to mitigate or replace
 16 impacts to vested water rights that were not adjudicated?
 17 A. Yes.
 18 Q. And let's turn to Exhibit 297. You want to
 19 describe what that is?
 20 A. This is a copy of corrected permit 63497. This
 21 permit was approved December 21st 1998.
 22 Q. And is it -- this is for Bailey Ranch; correct?
 23 A. That's correct.
 24 Q. And if you could go to the permit terms on the
 25 second page there. Can you read what it says in the second

1 rights that were not yet adjudicated?
 2 A. Yes.
 3 MS. TAGGART: So that -- And -- I mean, I can do
 4 this if you want me to and I will go and it will take time.
 5 HEARING OFFICER JOSEPH-TAYLOR: I can just take
 6 administrative notice of it. They're our records.
 7 MR. TAGGART: But no one will look at them if we
 8 do that. I mean, the State Engineer will not be aware
 9 specifically of what we think is important about these
 10 documents if we don't point it out, so that's why I'd like to
 11 point it out.
 12 We've highlighted the area in 47404, that ruling,
 13 that indicates what the protest ground was and then what the
 14 reason for the denial was. And with that, go ahead and I'll
 15 offer them in to evidence. I think it's pretty self-evident
 16 what they say from the areas that have been highlighted.
 17 HEARING OFFICER JOSEPH-TAYLOR: You're offering
 18 Exhibit 609?
 19 MR. TAGGART: Yes.
 20 HEARING OFFICER JOSEPH-TAYLOR: And we do look at
 21 them.
 22 MR. TAGGART: I understand. I regretted the
 23 words as they came out of my mouth.
 24 HEARING OFFICER JOSEPH-TAYLOR: I'm glad to hear
 25 you say that. Exhibit 609 will be admitted.

1 to last paragraph?
 2 A. Yes. This permit is issued for the expressed
 3 purpose of allowing this permit to replace the water
 4 historically placed to beneficial use under proof number
 5 01104, Certificate 140 and 147 and with the understanding
 6 that this right cannot be moved outside of the spring
 7 discharge area as determined by the State Engineer.
 8 Q. Do you know if anyone protested the granting of
 9 this application?
 10 A. I don't think anyone has. I did not see any
 11 indication of that on the application.
 12 Q. All right. And then if you can turn to the -- if
 13 you turn forward in that exhibit there is a certificate page
 14 and it's for certificate 16935. Do you see that?
 15 A. I do.
 16 Q. And just go ahead and read what it says below the
 17 table that shows the acreage.
 18 A. This certificate is subject to the terms of the
 19 permit and issued totally supplemental to proof 01104 and
 20 with the understanding that this right cannot be moved
 21 outside of the spring discharge area as determined by the
 22 State Engineer and that the total duty of water shall not
 23 exceed 3.39 acre-feet per acre per season for any and all
 24 sources for the irrigation of 120.713 acres in the above
 25 described place of use.

1 Q. Now, do you know why the State Engineer concluded
 2 that that's the duty for this particular water right?
 3 A. Under -- When a proof of beneficial use is filed,
 4 it requires you to quantify the flow rate and the volume of
 5 water applied. And in this case there would have been meter
 6 readings as it recalls for a totalizing meter to be
 7 installed. So meter readings would have been included as
 8 part of the proof of beneficial use. And so the 3.39 would
 9 have been based on actual delivery of water -- or pumped
 10 water from the well.
 11 Q. And just going back to the permit itself, the
 12 permit was granted at four acre-feet per acre?
 13 A. Yes.
 14 HEARING OFFICER JOSEPH-TAYLOR: What's the source
 15 of the water identified in the application?
 16 THE WITNESS: Underground.
 17 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 18 Q. (By Mr. Taggart) Okay. And now, are you
 19 familiar with actions the State Engineer has taken to protect
 20 the very rights that we are discussing today, the Sadler
 21 Ranch vested claims?
 22 A. I am.
 23 Q. And what action is that?
 24 A. Again, it goes back to the stipulated, the
 25 adjudication process and the denial of Permit 2679 where the

1 MR. TAGGART: That's beautiful.
 2 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 297 will
 3 be admitted.
 4 MR. TAGGART: 137, that's already in?
 5 HEARING OFFICER JOSEPH-TAYLOR: Uh-huh, yes.
 6 MR. TAGGART: 194.
 7 MS. PETERSON: I think it's in.
 8 HEARING OFFICER JOSEPH-TAYLOR: It's in.
 9 MR. TAGGART: Okay. Why don't I just
 10 double-check with you at recess.
 11 HEARING OFFICER JOSEPH-TAYLOR: Let me go through
 12 some, Mr. Taggart, that you mentioned. 106.
 13 MS. PETERSON: That's objected to.
 14 HEARING OFFICER JOSEPH-TAYLOR: I know. I'm
 15 overruling it if he moves to admit it. It's the historic
 16 duty calculations.
 17 MR. TAGGART: Yes, we offer that in to evidence.
 18 HEARING OFFICER JOSEPH-TAYLOR: Objection noted.
 19 It will be admitted.
 20 MR. TAGGART: Also 104.
 21 HEARING OFFICER JOSEPH-TAYLOR: Mr. Buschelman's
 22 CV. Any objection?
 23 MS. PETERSON: No objection.
 24 HEARING OFFICER JOSEPH-TAYLOR: 104 will be
 25 admitted.

1 State Engineer denied that application based on -- that the
 2 source of water was fully appropriated.
 3 MR. TAGGART: Thank you. I have no further
 4 questions, but I want to offer some exhibits in to evidence.
 5 603 and 609 I'd like to offer in to evidence.
 6 MS. PETERSON: I think those are admitted
 7 already.
 8 HEARING OFFICER JOSEPH-TAYLOR: 603 is -- They
 9 are in already.
 10 MR. TAGGART: 105, which is his expert report.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 12 Exhibit 105?
 13 MS. PETERSON: Only to the extent that it calls
 14 for an amendment of the claim outside of the proof that's on
 15 file.
 16 HEARING OFFICER JOSEPH-TAYLOR: So noted. 105
 17 will be admitted.
 18 MR. TAGGART: 190 is his rebuttal report. I'd
 19 offer that in to evidence.
 20 MS. PETERSON: Same objection.
 21 HEARING OFFICER JOSEPH-TAYLOR: So noted. It
 22 will be admitted.
 23 MR. TAGGART: 297, which was that power point
 24 from the -- No. 297 was the Bailey water right.
 25 MS. PETERSON: Definitely want that in.

1 MR. TAGGART: 123. I might have offered that
 2 already. I apologize.
 3 HEARING OFFICER JOSEPH-TAYLOR: 123 is in. I can
 4 handle it, Ms. Peterson. Thank you. Hold on.
 5 MR. TAGGART: 126, 127.
 6 HEARING OFFICER JOSEPH-TAYLOR: 126 and 27 are
 7 in.
 8 MR. TAGGART: 128.
 9 HEARING OFFICER JOSEPH-TAYLOR: 128 has not been
 10 admitted.
 11 MS. PETERSON: What is 128?
 12 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 13 It's a BLM field notebook.
 14 MS. PETERSON: No objection.
 15 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 128
 16 will be admitted.
 17 MR. TAGGART: 124 and 125.
 18 HEARING OFFICER JOSEPH-TAYLOR: 125 has not been
 19 admitted yet. Any objection?
 20 MS. PETERSON: Let me just look at that. Field
 21 notes?
 22 HEARING OFFICER JOSEPH-TAYLOR: Uh-huh.
 23 MS. PETERSON: Did your witness talk about those?
 24 MR. TAGGART: They're referenced in his report.
 25 MS. PETERSON: Oh, okay. That's fine.

1 HEARING OFFICER JOSEPH-TAYLOR: 125 will be
 2 admitted.
 3 MR. TAGGART: 129, same thing it's referenced
 4 inside his report. He did not testify about them.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 6 MS. PETERSON: Is 129 field notes?
 7 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 8 MS. PETERSON: Yes. No objection.
 9 HEARING OFFICER JOSEPH-TAYLOR: 129 will be
 10 admitted.
 11 MR. TAGGART: That's all.
 12 HEARING OFFICER JOSEPH-TAYLOR: Why do I have --
 13 Oh, never mind. Do you want a short break before cross?
 14 MS. URE: Five minutes would be good.
 15 HEARING OFFICER JOSEPH-TAYLOR: Okay. Let's be
 16 in recess until 11:15. Off the record.
 17 (Recess was taken)
 18 HEARING OFFICER JOSEPH-TAYLOR:
 19 Cross-examination, Ms. Ure. Did I pronounce it right?
 20 MS. URE: Yes. Thank you.
 21 CROSS-EXAMINATION
 22 By Ms. Ure:
 23 Q. Good morning, Mr. Buschelman.
 24 A. Good morning.
 25 Q. In your testimony you talked about some of your

1 not finding it immediately.
 2 MS. URE: It's on the screen display. Will that
 3 be sufficient for you?
 4 THE WITNESS: Yeah, that works.
 5 Q. (By Ms. Ure) Do you know which property was
 6 under either ownership or under a possessory claim by
 7 Shipley's predecessors in interest at the time this map was
 8 prepared?
 9 A. No, I don't.
 10 Q. Sorry. Turning to Exhibit 126 --
 11 HEARING OFFICER JOSEPH-TAYLOR: Therese --
 12 Ms. Ure, I'm going to ask do you want them trying to put them
 13 up here? Do you need them?
 14 MS. URE: I don't need them if Mr. Buschelman has
 15 the exhibits in front of him.
 16 MR. TAGGART: I don't think he'll have all of
 17 126. That was the table that we used.
 18 Q. (By Ms. Ure) I believe 126 is the field survey
 19 notes. Do you have that in front of you?
 20 A. I just have the summary that was part of my
 21 presentation. I don't have the full notes in front of me.
 22 Q. Did you review the entire notes?
 23 A. I did.
 24 Q. Do you remember if there was any evidence of
 25 ditches referenced in the notes?

1 work for -- in the Snake River adjudication for Owyhee and
 2 Bruno; is that correct?
 3 A. Yes.
 4 Q. What state was that adjudication completed in?
 5 A. Actually there were several adjudications. Each
 6 state conducts their own series of court hearings. Nevada
 7 had theirs. Idaho had theirs. Oregon had theirs. So it was
 8 an attempt to adjudicate the head waters before they jumped
 9 in to the main stream, as I understand it.
 10 Q. And was your work on those systems done for
 11 property in Nevada?
 12 A. Yes.
 13 Q. You discussed the ability as the ranch continued
 14 to expand its use based on efficiency, is that correct,
 15 adding dams and being able to push water further, did you
 16 testify to that?
 17 A. Yes.
 18 Q. Isn't this in fact not using any more acre-feet
 19 but spreading that water further?
 20 A. I can't answer that question. I don't know the
 21 answer to that.
 22 Q. Okay. Turning to Exhibit 110.
 23 HEARING OFFICER JOSEPH-TAYLOR: She didn't ask
 24 you to put it up. Tammy, until somebody asks you.
 25 THE WITNESS: I am looking for 110, however, I'm

1 A. And again, which --
 2 Q. I'm looking in Exhibit 126. And if you can -- I
 3 mean, obviously pay particular attention to the township line
 4 between ranges 53 and -- 52 and 53.
 5 HEARING OFFICER JOSEPH-TAYLOR: Do you have a
 6 page you can get him to?
 7 MS. URE: Huh-uh.
 8 HEARING OFFICER JOSEPH-TAYLOR: How many pages in
 9 to the document?
 10 MS. URE: There's, I don't know, 40 or so.
 11 THE WITNESS: I believe I know where you're at.
 12 You're speaking of the line that's starting north between
 13 those two townships and there's several sections that they
 14 speak of that are along that line?
 15 MS. URE: Correct. I'm wondering if in the notes
 16 if there was any documentation of ditches along the township
 17 line.
 18 THE WITNESS: I believe in this particular series
 19 of notes --
 20 HEARING OFFICER JOSEPH-TAYLOR: Hold on a second.
 21 Gentlemen, we're trying to court report over you. Thank you.
 22 Go ahead, Mr. Buschelman.
 23 THE WITNESS: Thank you. In this series of notes
 24 I do not see a reference to a ditch along that township line.
 25 Q. (By Ms. Ure) That would confirm what I found as

1 well.
 2 So turning to Exhibit 127, and it's page 71 of
 3 the notes. And I'm sorry -- Oh, you've got it in front of
 4 you. Are you there?
 5 A. I am.
 6 Q. Is this the first time that the word "ditch" is
 7 mentioned in Exhibit 27 thus far?
 8 A. I don't know if it's the first time. But I know
 9 ditches are mentioned several times along that -- in this
 10 series of notes.
 11 Q. Okay. And then I believe you testified, and just
 12 continuing on page 73 and 74, that there is a few irrigation
 13 districts mentioned; is that correct?
 14 A. I'm sorry. Can you ask the question again,
 15 please?
 16 Q. I said I believe that you testified on page 73
 17 and 74 that field survey notes that there were -- or actually
 18 on page 74, two irrigation ditches mentioned?
 19 HEARING OFFICER JOSEPH-TAYLOR: Oh, you said
 20 districts the first time.
 21 MS. URE: Oh, sorry.
 22 THE WITNESS: I don't know if I cited a page
 23 number.
 24 Q. (By Ms. Ure) I think you had the PDF numbers and
 25 I didn't correlate because I didn't have your PDF numbers.

1 Q. And did you find any evidence of ditches in this
 2 exhibit?
 3 A. Not that I recall.
 4 Q. Turning to Exhibit 111.
 5 A. Okay. I'm there.
 6 Q. How many fields are shown on this map?
 7 A. I would ask your definition of a field.
 8 Q. A field that would be called out by a surveyor
 9 and delineated on this map.
 10 HEARING OFFICER JOSEPH-TAYLOR: I want to make
 11 sure you're looking at both the same map.
 12 MS. URE: I'm on Exhibit 111. So it's not the
 13 map that's on the screen.
 14 HEARING OFFICER JOSEPH-TAYLOR: I know. But I'm
 15 looking at what's in front of Mr. Buschelman and I want to
 16 make sure you're looking at the same thing.
 17 MS. URE: Thank you.
 18 THE WITNESS: What I have is the culture map
 19 submitted by Allen Boyack.
 20 MS. URE: For 111?
 21 THE WITNESS: No. Wait a minute. I think I
 22 grabbed the wrong one. I did. Sorry. Thank you. Your
 23 question again?
 24 Q. (By Ms. Ure) How many fields are evidenced on
 25 this map?

1 But is that an accurate representation of that page?
 2 A. I would have to correlate the PDF numbers with
 3 the notes. I'm sorry. I don't have that correlation.
 4 Q. Okay. Did you correlate these field notes with
 5 the GLO plat map that's provided on the screen at Exhibit
 6 110?
 7 A. I reviewed and read the notes and I reviewed the
 8 plat. I didn't proof the notes to the plat. I did not go
 9 line for line or call for call.
 10 Q. Turning to Exhibit 124. I didn't ask this. And
 11 on page 20 of the notes. And again, I don't have the PDF
 12 number.
 13 A. I'm on page 20.
 14 Q. Okay. I believe you testified that the
 15 information on this page showed that there was a harvestable
 16 crop there. However, do you find -- is there any ditches or
 17 irrigation ditches mentioned on -- in the notes for this
 18 section line between Sections 13 and 18?
 19 A. There are no ditches mentioned.
 20 Q. And what kind of soil is listed there?
 21 A. Soil is first rate.
 22 Q. And what's found there, like the line above that?
 23 A. Land level, sage grass.
 24 Q. And did you review the entire exhibit, 124?
 25 A. I read the notes, yes.

1 A. The map identifies one cultivated area titled
 2 field.
 3 Q. I believe in your testimony you testified that
 4 other evident -- like you testified to a list of information
 5 that you looked at to establish your priority date. Would
 6 you argue that the evidence that you found suggesting the
 7 1870 priority date is better evidence than that on these GLO
 8 plat maps at Exhibits 110 and 111?
 9 A. The GLO plat maps are a secondary product. The
 10 first product is the field notes and the plat maps are a
 11 visual representation of those notes. So the notes are the
 12 founding document. The maps are a pictorial representation
 13 of those.
 14 Q. So in your opinion what document do you base the
 15 priority on?
 16 A. The notes.
 17 Q. Okay. And I'm talking about the priority for the
 18 vested claim. Was that your understanding of my question?
 19 A. Yes.
 20 Q. Okay. Turning to Exhibit 135 and the last page
 21 of that exhibit. Would you agree that this is the 1891 land
 22 year assessment? Is that what you're looking at?
 23 A. Yes.
 24 HEARING OFFICER JOSEPH-TAYLOR: '91?
 25 MS. URE: 1871, sorry.

1 THE WITNESS: I've got to listen.
 2 Q. (By Ms. Ure) Can you read for us what the
 3 possessory acres that were claimed -- what's listed there.
 4 A. I see no listing of acres.
 5 Q. On the bottom of that page does it say possessory
 6 claim at 160 acres of grazing land?
 7 A. It does. But it's referencing a ranch in Garden
 8 Valley.
 9 Q. I thought that said William Shipley.
 10 A. It does.
 11 Q. Oh, thank you. Sorry. Turning to Exhibit 134 on
 12 the first page. Can you tell us how many acres are claimed
 13 here by William Shipley and is this what's known as Sadler
 14 Ranch?
 15 A. It's a little difficult to read. I'm trying to
 16 find it.
 17 Q. I guess I could --
 18 A. I think I found it. There's a reference to 320
 19 acres.
 20 Q. Okay. And at the top upper, like the beginning
 21 of that entry, does it reference how many head of cattle
 22 Mr. Shipley had or paid taxes on?
 23 A. I believe it says 850 head of cattle. I'm sorry.
 24 It's a little difficult to pick out without a magnifying
 25 glass.

1 Q. We can just let the document speak for itself on
 2 this to speed things up.
 3 HEARING OFFICER JOSEPH-TAYLOR: Go ahead.
 4 Q. (By Ms. Ure) Okay. Mr. Buschelman, turning to
 5 Exhibit 116, I believe in your testimony you testified that
 6 this was for 160 acres. Would you like to look at that
 7 again? I believe it says 356; is that correct?
 8 A. It does, 356 acres.
 9 Q. Okay. Turning to Exhibit 138, now, did you read
 10 the complaint that started this action?
 11 A. I have read the, basically the transcription that
 12 you see here in the exhibit. I have not read through the
 13 cursive.
 14 HEARING OFFICER JOSEPH-TAYLOR: No. She asked
 15 you if you read the complaint in the litigation.
 16 THE WITNESS: I have not read the complaint.
 17 Q. (By Ms. Ure) So is it fair to say that you don't
 18 know if this was an adjudication versus a bankruptcy
 19 proceeding versus something else?
 20 A. An adjudication based on my knowledge is an order
 21 from a court. It's not limited to a specific type,
 22 bankruptcy or whatever it is. Adjudicated means adjudged by
 23 the Court.
 24 Q. Is this document that you read an adjudication,
 25 in your opinion?

1 Q. I show that as 250 head. But maybe I just ask
 2 that when we get it transcribed that the record would reflect
 3 the number of head as evidence?
 4 HEARING OFFICER JOSEPH-TAYLOR: Okay. We won't
 5 argue about what it says.
 6 Q. (By Ms. Ure) Okay. Turning to Exhibit 115. I
 7 have this as the Shipley to Hill. Do you have that in front
 8 of you, Mr. Buschelman?
 9 A. I do.
 10 Q. Are any number of acres evidenced in this
 11 document?
 12 A. I see one reference to 80 acres and another
 13 reference to 80 acres. So far that's all I've found.
 14 Q. I think if you follow that down, it shows a total
 15 of 320 acres.
 16 A. Oh, I see that number.
 17 Q. Now, is this document transferring property from
 18 Shipley to Hill?
 19 A. Yes.
 20 Q. Is it transferring a patent or is it a possessory
 21 claim? Or do we know, I guess?
 22 A. I'm trying to skim this thing quickly and I don't
 23 know at this point if it's a possessory claim or a patent. I
 24 don't know the answer without giving more time to reading the
 25 document.

1 A. Yes.
 2 HEARING OFFICER JOSEPH-TAYLOR: In what term?
 3 We're really mixing adjudication terms here. You're going to
 4 go on?
 5 MS. URE: Yeah.
 6 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 7 Q. (By Ms. Ure) Mr. Buschelman, do you know if the
 8 Court signed off on this stipulation that's been transcribed?
 9 A. I don't understand your question, signed off?
 10 Q. Sometimes when you have a stipulation in court,
 11 the judge says it is so ordered or otherwise puts his mark on
 12 that document. Did the judge in this stipulation put his
 13 mark on the document?
 14 A. I don't know.
 15 Q. Was the State Engineer party to the proceeding
 16 that resulted in this document?
 17 MR. TAGGART: Objection. Relevance.
 18 THE WITNESS: I don't know.
 19 MR. TAGGART: It doesn't matter if the State
 20 Engineer was a party or not.
 21 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 22 MS. URE: In your --
 23 HEARING OFFICER JOSEPH-TAYLOR: Let me try this.
 24 Mr. Buschelman, there's two meanings of the word adjudicated.
 25 One is the court to adjudicate a dispute between parties.

1 And then you have the term of art in the water law statute
 2 adjudicating water rights. When you said this was an
 3 adjudication, did you mean this was a result of litigation or
 4 an adjudication of water rights?
 5 THE WITNESS: I understand from this action there
 6 was some need to clarify the existence of a water right as
 7 part of this process. As a result of that, there was a
 8 stipulation and it was conducted in a court setting. There
 9 were positions taken and documents provided that supported
 10 this stipulation. I've been involved in a number of
 11 situations where these types of judgments are included in a
 12 more formal adjudication through the State Engineer's office
 13 where water rights may be the specific topic of a judgment.
 14 However, these stipulations, even agreements, are included as
 15 a definition of a water right in a more formal setting.
 16 HEARING OFFICER JOSEPH-TAYLOR: You didn't
 17 understand my question. Was this a civil decree adjudicating
 18 the water rights, if you know?
 19 THE WITNESS: I don't know.
 20 HEARING OFFICER JOSEPH-TAYLOR: Does that cut to
 21 your question?
 22 MS. URE: Uh-huh.
 23 Q. (By Ms. Ure) And also just to clarify,
 24 Mr. Buschelman, do you know what documents were submitted in
 25 support of the stipulation?

1 regulations that relate to trespass on public lands?
 2 MR. TAGGART: Objection. Asked and answered.
 3 HEARING OFFICER JOSEPH-TAYLOR: That's a
 4 different question. Overruled.
 5 THE WITNESS: I'm not familiar when the trespass
 6 rules came in to play.
 7 Q. (By Ms. Ure) Do you understand what the trespass
 8 rules are today?
 9 A. In the simple sense, being on public land without
 10 a specific permit to do a specific action. So, I mean,
 11 that's my sum knowledge of the trespass on public land.
 12 Q. Okay. I believe you talked about your overall
 13 impression of the ranch and that you stated it supported a
 14 huge amount of growth. Is that statement your opinion as to
 15 when you were out on the ground or is that supporting a huge
 16 amount of growth as related to prior to 1905?
 17 A. That statement is the result of my field review
 18 observation of ditch systems, flow lines, other improvements
 19 that would have supported growth.
 20 Q. And what is your definition of growth?
 21 A. A plant that grows, matures, increases in size.
 22 Q. So would you say that plant growth of greasewood
 23 or sagebrush or rabbit brush is growth in your statement?
 24 A. Growth is not limited to a specific plant type.
 25 Q. Okay. Are your -- The applications at Sadler

1 A. I don't.
 2 Q. Under today's application and permitting scheme
 3 in the water code, can a person file for an irrigation right
 4 on property they do not own?
 5 A. Yes.
 6 Q. Can they file for an irrigation right on public
 7 land?
 8 A. Yes.
 9 Q. Do they need authorization to actually apply
 10 water on that -- apply water for irrigation to a beneficial
 11 use on that public land?
 12 A. In today -- today?
 13 Q. Under the 1905 water code, today's scheme?
 14 MR. TAGGART: Objection. That's confusing and
 15 vague.
 16 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 17 MS. URE: Since 1905 does a person have to have
 18 authorization from the administer of the public lands to
 19 apply water on public lands for irrigation to harvest a crop
 20 to beneficial use?
 21 MR. TAGGART: Objection. Calls for a legal
 22 conclusion.
 23 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 24 THE WITNESS: Not that I'm aware of.
 25 MS. URE: So you're not aware of the federal

1 Ranch filed based on a vested claim?
 2 A. Yes.
 3 Q. And is that vested claim for water from Shipley
 4 Springs?
 5 A. Yes.
 6 Q. So given that we are all here today, would you
 7 say that there is a conflict with the use of Shipley Springs?
 8 MR. TAGGART: Objection. Vague.
 9 HEARING OFFICER JOSEPH-TAYLOR: Sustained. I
 10 didn't get it either.
 11 MS. URE: So your application that Sadler Ranch
 12 is filing is based on the use for Shipley Springs. And the
 13 Shipley Springs use is based on a vested claim. And while
 14 under objection we are not adjudicating Shipley Springs here
 15 today. Wouldn't you -- Is it your belief that there is no
 16 conflict with Shipley Springs water use? Is that better?
 17 HEARING OFFICER JOSEPH-TAYLOR: I still don't
 18 understand it. I'm sorry.
 19 MR. TAGGART: I'm just going to object. The same
 20 people own both water right applications. The same people
 21 own the vested claim and the applications. How can there be
 22 a conflict?
 23 THE STATE ENGINEER: I thought that she was
 24 trying to ask Mr. Buschelman whether or not Shipley Springs
 25 has been conflicted and that has resulted in these

1 applications being filed. Is that what you're asking?
 2 MS. URE: Sorry. Mr. Buschelman testified that
 3 in order for an adjudication to occur that there must be a
 4 conflict on a source. And so I'm wondering given that there
 5 were protests filed on the applications whose underlying
 6 vested claims relate to a source whether or not there's a
 7 conflict. If you understand.
 8 THE WITNESS: If I understand, the protests are
 9 on the proposed supplemental or mitigating well, not on the
 10 proof of appropriation or vested right.
 11 Q. (By Ms. Ure) Is that application based on the
 12 proof of the vested claim?
 13 A. Only the place of use. That's the basis of the
 14 place of use, not the source. The sources are two distinct
 15 sources.
 16 Q. In your testimony you testified that there is a
 17 sufficient amount of historical information to support the
 18 claims; is that correct?
 19 A. Yes.
 20 Q. Of that information that you testified that you
 21 reviewed, would you weigh some information more direct or a
 22 higher weight than others?
 23 A. I think just the ability to have a reference to
 24 specific irrigation or use of water and then have it
 25 corroborated with another independent recollection or

1 that.
 2 A. It's not my opinion. If you check out the Orr
 3 Ditch decree, there is actually claims where land is
 4 irrigated from waste and drain water. So yes, waste can be a
 5 beneficial use.
 6 Q. So you're talking about a return flow or other
 7 water as opposed to wasting water?
 8 MR. TAGGART: Objection. Vague as to what waste
 9 is.
 10 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry. I was
 11 discussing with the State Engineer that -- Mr. Buschelman,
 12 you said waste is a beneficial use. I think you meant to
 13 say, correct me if I'm wrong, waste can be beneficially used.
 14 THE WITNESS: Semantics, but yes, that's
 15 accurate.
 16 HEARING OFFICER JOSEPH-TAYLOR: Why would it be
 17 waste if it's a beneficial use?
 18 THE WITNESS: It's a term used in agriculture and
 19 waste is synonymous with drain, synonymous with return flow,
 20 synonymous with tail water.
 21 HEARING OFFICER JOSEPH-TAYLOR: You're not
 22 understanding my semantics. But read the question back for
 23 me, please. I didn't hear the question that he --
 24 MS. URE: I don't -- We can move on because I
 25 think you clarified.

1 historical account is important. I don't necessarily weigh
 2 one heavier than the other. But I do like the circumstance
 3 we have here where we have more than one account providing us
 4 information on the use of water from Shipley Spring.
 5 Q. Would you put more weight in to the GLO survey
 6 notes as opposed to an oral history that was several years
 7 later?
 8 A. Not necessarily. I think they work hand in hand
 9 as opposed to one more so than the other.
 10 Q. Were those providing the oral history under oath?
 11 A. Not to my knowledge.
 12 Q. When talking about efficiency I believe it was
 13 clarified that a 40 percent efficiency means that 40 percent
 14 of the water would reach the land; is that correct?
 15 A. Well, in their -- in the exhibit that I provided,
 16 it does show that possibly part of that efficiency is the
 17 result of drain or waste water. I mean, that's going past
 18 the plants. So in a flood irrigation scenario, which this
 19 was providing information on, the document actually shows
 20 that there is the waste water or tail water component, which
 21 contributes to the efficiency, so it would be to the field
 22 and possibly past the field.
 23 Q. Is waste a beneficial use?
 24 A. It can be.
 25 Q. Can you describe how that -- your opinion of

1 HEARING OFFICER JOSEPH-TAYLOR: Okay. Please do.
 2 Q. (By Ms. Ure) In Exhibit 145 on the second page,
 3 are you there, Mr. Buschelman?
 4 A. Yes.
 5 Q. Do you know -- I'm looking at where it states
 6 Mr. Edgar Sadler informed me there was nearly 3,000 acres of
 7 land in the ranch. Do you know if Mr. Sadler at that time,
 8 is that his deeded ground?
 9 A. I don't know.
 10 Q. Going on, it says 250 acres of which were
 11 alfalfa, grain and garden, the rest being meadowland. Do you
 12 know if that meadowland was harvested?
 13 A. Well, it says part -- Just past -- There's a
 14 comment that says part of which is cut for hay and the
 15 remainder being used for pasture.
 16 Q. Do we know which part was hay and which part was
 17 pasture?
 18 A. At the time of this document, no.
 19 Q. And Exhibit 602 --
 20 HEARING OFFICER JOSEPH-TAYLOR: Exhibit what?
 21 I'm sorry.
 22 MS. URE: 602.
 23 THE WITNESS: I don't have that exhibit.
 24 HEARING OFFICER JOSEPH-TAYLOR: It's the example
 25 of the induction well permits.

1 MS. URE: Application 70656 is the first page.
 2 THE WITNESS: Okay.
 3 Q. (By Ms. Ure) Do you know how deep this well was
 4 drilled?
 5 A. I do not.
 6 Q. Going back to Exhibit 126.
 7 MR. TAGGART: Which one?
 8 MS. URE: 126. Page 140 to 141 of the survey
 9 notes.
 10 THE WITNESS: I'm there.
 11 Q. (By Ms. Ure) Can you read the general
 12 description that's starting at the bottom part of that page?
 13 A. The western part of the township is near --
 14 nearly all fine natural meadow with mineral springs and
 15 creeks and with fine soil suitable for raising all --
 16 Q. Kinds, I think.
 17 A. I think kinds of grain and vegetables without
 18 irrigation. Eastern part is all an alkali desert with
 19 worthless soil and nearly destitute of vegetation.
 20 Q. And we're talking about Township 24 north, Range
 21 53 east; correct?
 22 A. Correct.
 23 MS. URE: I have no further questions.
 24 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 25 What's your pleasure, folks? The State Engineer, I know,

1 TUESDAY, NOVEMBER 19, 2013, 1:00 P.M.
 2 ---oOo---
 3 HEARING OFFICER JOSEPH-TAYLOR:
 4 Cross-examination, Ms. Peterson.
 5 MS. PETERSON: Thank you.
 6 CROSS-EXAMINATION
 7 By Ms. Peterson:
 8 Q. Hi, Mr. Buschelman. My name is Karen Peterson.
 9 I represent Eureka County. And if you need to look at an
 10 exhibit or want to look at an exhibit when I'm going through
 11 my cross-examination, please let me know and we can get it to
 12 you or put it up on the screen. But I'm going to try to do
 13 cross-examination without having to pull out every single
 14 exhibit and look at it. So just let me know if you're
 15 uncomfortable with any of my questions in not seeing the
 16 exhibit.
 17 So Exhibit 602 was your induction well examples.
 18 Do you remember that exhibit?
 19 A. Yes.
 20 Q. And isn't it true that in some of those examples
 21 that you provided the rights in those cases have been
 22 formally adjudicated?
 23 A. Some of them, yes.
 24 Q. And is it -- Were any of those examples induction
 25 wells, any of those examples of induction wells claims of

1 would like to keep plugging. I'm hungry.
 2 MR. TAGGART: Go ahead. Let's keep going.
 3 HEARING OFFICER JOSEPH-TAYLOR: How much time do
 4 you think you need for cross, Ms. Peterson?
 5 MS. PETERSON: Well, if we took a break I could
 6 try to consolidate it and move along quickly. Or I can
 7 ponder through while going through my notes.
 8 HEARING OFFICER JOSEPH-TAYLOR: Let's take a
 9 break. We'll be in recess until 1:00 o'clock. Let's be off
 10 the record.
 11 (Lunch recess was taken)
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1 vested rights, example -- I'm sorry. Let me start over
 2 again. In any of those examples that you gave for induction
 3 wells, did any of those examples involve claims of vested
 4 rights that were going to be mitigated by granting
 5 groundwater applications?
 6 A. I don't understand the question.
 7 Q. You gave some examples of induction wells.
 8 A. Yes.
 9 Q. Is that correct?
 10 A. That's correct.
 11 Q. In any of those examples that you gave were --
 12 did the water rights involve claims of vested rights that
 13 were to be mitigated by granting groundwater applications?
 14 A. I don't know what you mean by mitigated.
 15 Q. Well, have you read Order 1226?
 16 A. I have.
 17 Q. And aren't we involved in a proceeding here today
 18 where claims of vested surface rights are sought to be
 19 mitigated by granting new groundwater rights?
 20 A. I'm still struggling with the term mitigation.
 21 Does that mean that they retain the same priority as the
 22 rights they're mitigating or do they receive a priority as a
 23 supplemental groundwater right?
 24 Q. That's a big issue here. My question didn't mean
 25 to have anything to do with priority. It meant the factual

1 situation similar to this situation where there were claims
 2 of vested rights that were to be mitigated, don't worry about
 3 a priority, by granting groundwater rights?
 4 A. I guess the word that I'm struggling with is
 5 mitigation because I know that is an important definition in
 6 this proceeding. So I would need your definition of
 7 mitigation in order to answer that question.
 8 Q. Okay. We can move on. Exhibit 28 is your
 9 Application 82268. You don't need to look at it. You,
 10 Sadler Ranch, have applied for 7,457.76 acre-feet; is that
 11 correct?
 12 A. As I recall, yes.
 13 Q. Okay. What is the CFS of that?
 14 A. It would be the maximum amount that the flow
 15 would -- a flow from the spring would have produced.
 16 Q. But the actual quantity of 7457, what's the CFS?
 17 A. That's a volume. It isn't a flow rate.
 18 Q. Did you calculate it?
 19 A. No. I calculated it based on a duty times an
 20 acreage, not on a flow rate.
 21 Q. Can you calculate what the CFS is of the 7400?
 22 A. I can.
 23 Q. Okay. Maybe at a break?
 24 A. I can.
 25 Q. Okay. Thank you.

1 Q. Oh, okay. And I actually have the wrong exhibit
 2 number for you. So if you can look at Exhibit 26. Do you
 3 see there on the third page, fourth --
 4 MR. TAGGART: I'm sorry. What exhibit number?
 5 MS. PETERSON: Exhibit 26 on the second page
 6 under the remarks.
 7 THE WITNESS: Yes, I see that.
 8 MS. PETERSON: And to your knowledge is that
 9 deposition of Mr. Reinhold Sadler part of the record in this
 10 proceeding?
 11 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry. Say
 12 that again, Ms. Peterson.
 13 MS. PETERSON: To your knowledge is the
 14 deposition of Reinhold Sadler an exhibit in this proceeding?
 15 THE WITNESS: Not that I've seen.
 16 Q. (By Ms. Peterson) Was there a reason why this
 17 deposition wasn't included as part of the record in this
 18 proceeding?
 19 A. Not that I know of.
 20 Q. Would you have an objection to admitting the
 21 deposition of Reinhold Sadler?
 22 MR. TAGGART: Objection. I don't know why she's
 23 asking the witness whether he would have an objection.
 24 HEARING OFFICER JOSEPH-TAYLOR: Thank you. It's
 25 not his objection.

1 THE STATE ENGINEER: I can tell you what it is.
 2 MS. PETERSON: Okay. Great.
 3 THE WITNESS: But I would need to know under what
 4 time frame. I mean, is it over 365 days a year or over 180
 5 days a year?
 6 MS. PETERSON: What does your application ask
 7 for?
 8 THE WITNESS: 365 days a year.
 9 MS. PETERSON: So that would be the calculation?
 10 MR. TAGGART: Objection. I mean, you can take
 11 administrative notice of what the conversion is to CFS. He
 12 doesn't have to do the calculation.
 13 MS. PETERSON: I would like to know a number, so
 14 we can use your number.
 15 THE STATE ENGINEER: 10.3 CFS.
 16 MS. PETERSON: Okay. Thank you.
 17 Q. (By Ms. Peterson) Exhibit 112 that is the
 18 culture map, the map that supported the claims of vested
 19 right. I can't remember the gentleman's name that did that.
 20 A. Understood.
 21 Q. There was noted in the claim, the proof of claim
 22 that there was a deposition of Reinhold Sadler that was
 23 included as part of the claim. Do you remember that?
 24 A. Not exactly, but I know that's -- that was
 25 something we've seen.

1 MR. TAGGART: The State Engineer has already
 2 taken administrative notice of the records of the office and
 3 that is part of your records. Certainly we looked at it and
 4 are aware of it.
 5 MS. PETERSON: Okay. Thank you. Romano, is
 6 Sadler Ranch claiming a vested right on the Romano property?
 7 THE WITNESS: Yes.
 8 MR. TAGGART: Objection as to clarity. There's a
 9 Romano Ranch and there's a Romano Field, two separate
 10 geographic areas. I want to make sure we're clear on which
 11 one we're asking about.
 12 Q. (By Ms. Peterson) I'll ask both. I have both
 13 the Romano Field and the Romano Ranch total 480 acres. Is
 14 that your understanding?
 15 A. Well, as I understand, there's a Romano Ranch
 16 several miles south of the Sadler Ranch, but there's a Romano
 17 Field that is included in part of the private property we
 18 call today the Sadler Ranch.
 19 Q. Okay. And that's 360 acres?
 20 A. Romano Ranch or the Romano Field?
 21 Q. Field.
 22 A. I believe that's the number. I would have to
 23 look at the map to confirm that.
 24 Q. And then you're also including I think it's
 25 called Johns Field, that area that's lower than the Romano

1 Field; is that correct?
 2 A. Yes.
 3 Q. And that was 120 acres?
 4 A. Approximately, yes.
 5 Q. So about 480 acres?
 6 A. Yes.
 7 Q. What's the priority date that you're claiming for
 8 that property for a vested right?
 9 A. Prior to 1870.
 10 Q. And did you provide any tax records for the
 11 Romano property?
 12 A. The tax records that were included as an exhibit
 13 in this identify numerous parties that had possessory claims
 14 that were in that area of what we call today the Sadler
 15 Ranch. The Sadler Ranch as we know it today is actually a
 16 combination of several smaller places that had possessory
 17 claims and that accumulation of smaller places is what we
 18 call today the Sadler Ranch. So in the tax records in 1870,
 19 1871 and later, there would be multiple names that would be
 20 associated with that property.
 21 Q. So Sadler Ranch as you know it today?
 22 A. As we know it today, correct.
 23 Q. So what were those names?
 24 A. I don't have a list of those names.
 25 Q. Okay. Well, I think that's kind of important for

1 of the transcript of that exhibit, of the stipulation. And
 2 it's on the left-hand side it starts with, the paragraph I'm
 3 looking at starts with page 528 continued.
 4 A. I see it.
 5 Q. And it goes three lines down.
 6 A. Yes, I see that.
 7 Q. And then if you go to the third page of the
 8 transcript.
 9 HEARING OFFICER JOSEPH-TAYLOR: Okay. I just got
 10 lost here. Was there a question that was pending that didn't
 11 get answered?
 12 MS. PETERSON: He just needed to read that so
 13 that he could answer the next question.
 14 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 15 Q. (By Ms. Peterson) The paragraph that ends or
 16 starts with "now therefore," towards the bottom of the page.
 17 A. I believe I'm in the right spot. Now, therefore
 18 it is hereby agreed.
 19 Q. Okay. So if you go up one line, one or two
 20 lines.
 21 A. Yes.
 22 Q. It states that the custom had been for the
 23 defendant corporation and its predecessors and interest to
 24 open said ditches each year during the more than 20 years for
 25 the benefit of the defendant's lands?

1 the State Engineer to know.
 2 MR. TAGGART: Objection. Argumentative.
 3 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 4 THE WITNESS: Umm --
 5 HEARING OFFICER JOSEPH-TAYLOR: No question is
 6 pending.
 7 THE WITNESS: Okay. What --
 8 MR. TAGGART: No. There's no question pending.
 9 THE WITNESS: Oh, there's no question. Sorry.
 10 Thank you.
 11 Q. (By Ms. Peterson) So you don't have a list with
 12 you here today of the names of all the possessory interests
 13 associated with your claim to the Sadler Ranch?
 14 A. No.
 15 Q. The other thing I wanted to clarify was your
 16 understanding of the Romano stipulation, which was Exhibit
 17 138, and you might want to take that out and look at that.
 18 And is it your understanding that the Romano portion of water
 19 and infrastructure that had been used as stated in the
 20 stipulation was for a period of 20 years prior to the
 21 stipulation?
 22 A. The comment is, is that the water had been
 23 entering the property in the same manner that they were
 24 proposing for 20 years or more prior to that time.
 25 Q. So if you could go to I guess it's the first page

1 A. I see that, yes.
 2 Q. Is -- Well, is there a conflict between 20 and 30
 3 for the plaintiff and the defendant?
 4 MR. TAGGART: Objection. Vague as to 20 and 30.
 5 MS. PETERSON: Years.
 6 HEARING OFFICER JOSEPH-TAYLOR: I don't think
 7 it's vague. I'm just not understanding what you're trying to
 8 get at, Ms. Peterson.
 9 Q. (By Ms. Peterson) Well, it was my understanding
 10 from reading this document that the water had been placed on
 11 the Romano property for 20 years and that the water had been
 12 used by the defendant corporation for 30 years. Was that
 13 your understanding?
 14 A. To me it just speaks to the fact that it says
 15 more than 20 years, not just 20. And it was more than 30
 16 when it talks about the defendants and the ownership of the
 17 spring. I think the practice may have been of allowing it to
 18 flow on to Romano's land was going on for at least a 20-year
 19 period of time or more, but it doesn't necessarily mean that
 20 it is, in my mind, it was happening prior to the 1905, which
 21 was the creation of the statute so it's a vested right. It
 22 doesn't necessarily speak to the fact that the water wasn't
 23 used there 30 years before either.
 24 Q. Okay. That's fair. And then the other question
 25 I had about this stipulation is that the defendant

1 corporation, if you look at the second page of the transcript
 2 in the bolded, the bolded.
 3 A. Sorry. Again where are you?
 4 Q. The second page of the transcript, the first full
 5 paragraph, there's a line that says "and has been
 6 continuously maintained at the eastern edge of said Shipley
 7 Spring by the defendant corporation herein and its
 8 predecessors and grantors." Do you see that?
 9 A. I'm still trying to catch up with you.
 10 Q. Oh, okay. If you look at the bolded portion.
 11 A. Yes. On the first paragraph?
 12 Q. Yes. End of the first paragraph.
 13 A. Okay.
 14 Q. And do you see the language "and has been
 15 continuously maintained at the eastern edge of said Big
 16 Shipley Spring by the defendant corporation herein and its
 17 predecessors and grantors"?
 18 A. I see that sentence, yes.
 19 Q. Okay. Did you do any research as to the
 20 defendant corporation and what lands were owned by the
 21 defendant corporation in your priority research?
 22 A. No.
 23 Q. And earlier in your testimony with regard to this
 24 exhibit, you testified that you thought because these parties
 25 were so precise and water was so important that there must

1 Q. You had some testimony, I believe it was probably
 2 yesterday, that this summer, this past summer the flow in
 3 Shipley Springs had decreased to below one CFS. Do you
 4 recall that?
 5 A. Yes.
 6 Q. Was your -- You have a permit for -- a temporary
 7 permit for an induction well, is that correct, Sadler Ranch?
 8 A. Yes.
 9 Q. And was the induction well operating this past
 10 summer?
 11 A. I don't know that answer.
 12 Q. If the induction well had been operating could it
 13 have affected the flow to Shipley Spring?
 14 A. I don't know that answer.
 15 Q. Well, your application for your induction well, I
 16 think it's Exhibit 28, states in the remarks that you had
 17 done some testing and that your induction well would
 18 intercept the flow at Big Shipley Spring?
 19 A. I have not done any testing.
 20 MR. TAGGART: Is there a question pending?
 21 MS. PETERSON: I'm asking him if that's what his
 22 application says that he signed for Application 82268.
 23 THE WITNESS: It states under item 15, which
 24 is -- provides additional detail and description is that a
 25 well designed to intercept the Big Shipley Springs complex

1 have been a measurement of some sort of that five CFS. Do
 2 you recall that testimony?
 3 A. Yes.
 4 Q. Do you have any knowledge that there was any
 5 measurement used to calculate or what was used to calculate
 6 the five CFS number that was part of this stipulated
 7 agreement?
 8 A. No.
 9 Q. And then turning to Exhibit 137, this was the
 10 document where you had testimony regarding you thought that
 11 there had been an adjudication of Big Shipley Springs or Old
 12 Shipley Springs, Shipley Springs. Do you recall that
 13 testimony?
 14 A. I do.
 15 Q. And it was based on the letters that are in the
 16 file. Do you recall that?
 17 A. I remember that I had spoke to this document or
 18 letter, but I don't remember any other letter.
 19 Q. Did -- In this file or this exhibit was there any
 20 priority date set other than pre-1905 or any priority date
 21 stated?
 22 A. No, there is no priority date stated.
 23 Q. And the only mention of the CFS of Big Shipley
 24 Spring in this letter is seven to eight CFS; is that correct?
 25 A. That's correct.

1 has been completed and test pumped. This well is a direct
 2 communication with the geologic features that provide water
 3 to the Big Shipley Springs complex.
 4 Q. (By Ms. Peterson) As shown by -- Keep on
 5 reading.
 6 A. As shown by the reduction in flows from the
 7 spring when the well is pumping and the recovery of the
 8 spring flows when the well is shut off.
 9 Q. Thank you. You had some testimony yesterday
 10 about your applications, the three applications that are the
 11 subject of this proceeding, 81719, 81720 and 82268. Do you
 12 recall your testimony yesterday?
 13 A. I do.
 14 Q. You indicated that 81719 and 81720 would be
 15 supplemental to Application 82268. Was that your testimony
 16 yesterday?
 17 A. I believe I said mitigate.
 18 Q. I didn't really understand your testimony then.
 19 Can you just tell me what the plan is for these three
 20 applications?
 21 A. To supply water that is not supplied by this
 22 spring. If the spring is not capable of flowing at the flows
 23 that we can historically show, then these wells are to
 24 provide a separate source of water to make up for that
 25 difference.

1 Q. Okay. So 81719 and 81720 are supplemental to
 2 your induction well?
 3 A. In -- They're supplemental to the proof of
 4 appropriation.
 5 Q. Your vested claim?
 6 A. Right.
 7 Q. Okay. I had a couple questions about your -- the
 8 Relation Back Doctrine that you testified to yesterday.
 9 A. Yes.
 10 Q. Could you just briefly explain that document
 11 again.
 12 A. In very simple terms that priority is established
 13 when there is an attempt to divert water or utilize water
 14 from a source. The date of priority is on that date. So in
 15 the case of Big Shipley Springs as an example, if water is
 16 utilized from the Big Shipley Springs prior to 1870 to -- I
 17 mean, even if a diversion structure is just put in the stream
 18 for the intent to diversion and use it, that becomes the
 19 date. So the next few days or weeks afterwards you put in a
 20 ditch, establish a small field. Then the next year you're
 21 able to enlarge that field. And as time continues, you're
 22 able to put more and more and more land in to production.
 23 The doctrine of relation, as I understand it,
 24 relates back even though successive years in time were taken
 25 to put more and more land in to production, the date of each

1 was talking about meeting the statutory adjudication or the
 2 court adjudication. Are you familiar with those procedures?
 3 A. Well, we've had a bit of a debate on what
 4 adjudication means earlier, so I'm a little leery of what you
 5 mean by that now.
 6 Q. I mean the court adjudication procedure or the
 7 State Engineer's adjudication procedure.
 8 MR. TAGGART: Objection. Vague. Obviously we
 9 all know there's a statutory adjudication procedure. There's
 10 also been civil decrees entered in Nevada that act as, I
 11 won't use the word, but they act as some judgment on water
 12 rights. So if we're talking about the difference between
 13 statutory adjudication that's outlined in the statute or a
 14 civil decree and that's the question, then I think the
 15 witness might understand it.
 16 HEARING OFFICER JOSEPH-TAYLOR: I'm struggling
 17 with it too because of the time frame, Ms. Peterson.
 18 Mr. Buschelman, is there a concept in the
 19 doctrine of relation back that also must take in to account
 20 good faith, reasonable diligence, steady application of
 21 effort?
 22 THE WITNESS: Yes.
 23 HEARING OFFICER JOSEPH-TAYLOR: And if there's a
 24 break in that effort of doctrine of relation would it apply?
 25 THE WITNESS: It would have to be proven that

1 of those years still reverts back to the date that the
 2 structure -- that the diversion structure or the use of that
 3 water began prior to 1879.
 4 Q. And is there any end to the Relation Back
 5 Doctrine?
 6 A. There is. I mean, if for some reason there was a
 7 conflict of some kind where someone came in and challenged
 8 the diversion of that water by that person, then at that
 9 point there would be the need to -- the challenge being,
 10 well, I'm diverting water from that same source. They just
 11 can't walk up and say, hey, that's my water. They actually
 12 have to go in and do the same process. They have to put in
 13 either a structure to divert the water or begin using the
 14 water in some fashion. At that point you have a conflict
 15 between people and at that point the doctrine of relation
 16 would then cease and you would not be able to continue that
 17 relation back to that priority.
 18 Q. Would an adjudication cut off the Relation Back
 19 Doctrine?
 20 A. Not necessarily. I mean, in this case that party
 21 that -- an adjudication, if you bought that party or that
 22 parcel or that person's interest, you would absorb that
 23 interest in to your own. Then there is no conflict and your
 24 relation continues.
 25 Q. But when I was talking about an adjudication, I

1 those gaps existed, but yes.
 2 HEARING OFFICER JOSEPH-TAYLOR: Doesn't it cut
 3 off being able to use the doctrine and go back, that steady
 4 effort isn't continuing?
 5 THE WITNESS: It depends on what you define as
 6 steady effort.
 7 HEARING OFFICER JOSEPH-TAYLOR: And I think the
 8 struggle with your question, Ms. Peterson, if we're in 1875
 9 and we have a civil decree and all the water is not
 10 appropriated, I can see Mr. Buschelman saying, well, the
 11 doctrine may still apply. But if we're in 1905 and the water
 12 law now applies, are you making a distinction between those
 13 times and I think that's part of the vagueness. So I'm going
 14 to sustain the objection on vagueness. I think you need to
 15 kind of reference the times and resources and water
 16 availability. There's a lot of questions, factors that I
 17 think go in to that.
 18 MS. PETERSON: Would a court adjudication cut off
 19 amending a claim?
 20 MR. TAGGART: Objection. Court adjudication
 21 could be either a state adjudication through the statutes or
 22 a civil decree entered before the statutes were adopted. So
 23 a court adjudication is vague.
 24 Q. (By Ms. Peterson) Would an adjudication started
 25 in a court and ended in a court entering a final decree,

1 would that cut off amending the claim?
 2 A. I don't know.
 3 Q. Exhibit 26 is the proof of appropriation claim
 4 for the 1,657.23 acres. Do you have that in front of you?
 5 A. I do.
 6 HEARING OFFICER JOSEPH-TAYLOR: Proof 03289 for
 7 the record.
 8 MS. PETERSON: Thank you.
 9 HEARING OFFICER JOSEPH-TAYLOR: You're welcome.
 10 Q. (By Ms. Peterson) In response to question 13,
 11 there's specific acreage that's listed with a priority date
 12 of 1879. Do you see all of that?
 13 A. I do.
 14 Q. And then in question 14 it says the maximum
 15 acreage irrigated in any year was 1,657.23 acres. Do you see
 16 that?
 17 A. I do.
 18 Q. Is -- I read the claim to be that all the work
 19 necessary to put 1,657 acres water or 1,657 acres, all that
 20 work as having been completed by 1879. Is that your
 21 understanding of how this is filled out?
 22 A. No.
 23 Q. What's your understanding?
 24 A. My understanding is that Allen Boyack in 1978
 25 conducted a field investigation of the survey. And based on

1 Q. Have you seen any proof of appropriation claim
 2 forms that show different priority dates for the different
 3 acreages in your response to, like, question 13?
 4 A. Yes.
 5 Q. And is it your understanding that when the State
 6 Engineer might grant a vested claim under such proof with
 7 different priorities that he relates all the acreage back to
 8 the first priority?
 9 A. Can you ask that again, please?
 10 Q. Sorry.
 11 HEARING OFFICER JOSEPH-TAYLOR: It's actually a
 12 pretty simple question. If a proof has five priorities, does
 13 the decree give one priority or five priorities?
 14 THE WITNESS: The proof is a different document
 15 than the decree. So I wouldn't know that answer.
 16 HEARING OFFICER JOSEPH-TAYLOR: Have you seen
 17 decree proofs that have different priorities in them?
 18 THE WITNESS: I have seen different decrees, yes,
 19 with different priorities, yes.
 20 HEARING OFFICER JOSEPH-TAYLOR: No. One proof.
 21 Have you seen different land for different priorities under
 22 one proof?
 23 THE WITNESS: Yes.
 24 HEARING OFFICER JOSEPH-TAYLOR: Is that your
 25 question, Ms. Peterson?

1 his observations in the field and his ability to map those
 2 acreages, he came up with a total of 1,657.42 acres that were
 3 at that time to be included under this claim or proof of
 4 appropriation.
 5 Q. Right. But the claim says, if you look at page
 6 one under number four, it states that all the works were
 7 completed by 1879.
 8 MR. TAGGART: Objection. That's not a fair
 9 characterization of the statement of what it says in number
 10 four.
 11 Q. (By Ms. Peterson) Could you read number four in
 12 to the record?
 13 A. A construction of the ditch and other works was
 14 begun prior to 1879 and completed by 1879.
 15 Q. And then all the acreage that's listed and the
 16 priority for the acreage under 13 and on the attachment to 13
 17 total the 1,657 acres; is that correct?
 18 A. That's correct.
 19 Q. And all the acreages in number 13 have the
 20 priority date of 1879; is that correct?
 21 A. That's correct.
 22 Q. Have you seen any claims, proof of claim forms
 23 where there are different dates listed under number 13 for
 24 different acreages?
 25 A. I'm sorry. I don't understand the question.

1 MS. PETERSON: Yes. Thank you.
 2 HEARING OFFICER JOSEPH-TAYLOR: Sometimes it's a
 3 lot simpler up here.
 4 MS. PETERSON: I know that. You know what, I
 5 think I wanted to go to Exhibit 129. And those are some
 6 field notes that are admitted. Do you have those?
 7 THE WITNESS: I do not.
 8 MS. PETERSON: Do you happen to have a copy?
 9 HEARING OFFICER JOSEPH-TAYLOR: 129 you need for
 10 the witness?
 11 MS. PETERSON: Yes.
 12 MR. TAGGART: I only have my copy.
 13 HEARING OFFICER JOSEPH-TAYLOR: We'll get one.
 14 MS. PETERSON: Thank you.
 15 HEARING OFFICER JOSEPH-TAYLOR: And while Mac is
 16 pulling that, can I take care of a little housekeeping?
 17 Sadler Ranch Exhibit 101 and 102, which are the exhibit list
 18 and the witness summary, I'd like to move them in to the
 19 record. Any objection? Mr. Taggart, any objection?
 20 MR. TAGGART: No.
 21 HEARING OFFICER JOSEPH-TAYLOR: 101 and 102 will
 22 be admitted.
 23 MR. TAGGART: We also have the rebuttal witness
 24 list and rebuttal exhibit list if you want to put those in at
 25 this time.

1 HEARING OFFICER JOSEPH-TAYLOR: Sure. Where are
 2 they?
 3 MR. TAGGART: 185 and 186.
 4 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Any
 5 objection?
 6 MS. PETERSON: No objection.
 7 HEARING OFFICER JOSEPH-TAYLOR: 185 and 186 will
 8 be admitted.
 9 Now you can proceed.
 10 MS. PETERSON: Thank you.
 11 HEARING OFFICER JOSEPH-TAYLOR: Do you have the
 12 exhibit, Mr. Buschelman?
 13 THE WITNESS: I do.
 14 Q. (By Ms. Peterson) Thank you. And those are the
 15 1972 surveyor notes. Are you familiar with those?
 16 A. No.
 17 Q. You didn't look at these in any of your research?
 18 A. No.
 19 Q. I'm going to ask you to look at page 68. It's
 20 bate stamped 68 on the upper left.
 21 MR. TAGGART: I'm sorry. Which page?
 22 MS. PETERSON: 068 on the upper left. It looks
 23 like a bate stamp.
 24 THE WITNESS: On the upper left; correct?
 25 MS. PETERSON: Yes, upper left.

1 formations of consequence are noted.
 2 Q. And then if you could go three pages back further
 3 in the exhibit, there's a map.
 4 HEARING OFFICER JOSEPH-TAYLOR: Back meaning back
 5 that way?
 6 MS. PETERSON: Towards the end of the exhibit.
 7 HEARING OFFICER JOSEPH-TAYLOR: What page,
 8 Ms. Peterson?
 9 MS. PETERSON: There's no bate stamp on this
 10 page. It's a map. Township 24 north, Range 52 east.
 11 THE WITNESS: Yes, I have it.
 12 Q. (By Ms. Peterson) Do you see that? Do you see
 13 where Sadler Ranch is located on the map?
 14 A. Yes, I do.
 15 Q. And is it fair to say there's only one ditch
 16 located in that area on this survey map?
 17 A. There is one flow line indicated that has ditch
 18 next to it.
 19 Q. Near the Sadler Ranch property; is that correct?
 20 A. Yes.
 21 Q. And then if you turn to the next page, it's a
 22 map, Township 24 north, Range 53 east. Do you see that map?
 23 A. I do.
 24 Q. Do you see any ditches depicted on this map?
 25 A. Well, on the line between Sections 18 and 17, I

1 THE WITNESS: Thank you. I'm there.
 2 Q. (By Ms. Peterson) And then it says page 24 in
 3 the middle?
 4 A. Yes.
 5 Q. Top middle?
 6 A. Yes.
 7 Q. Okay. Would you look at that general
 8 description?
 9 HEARING OFFICER JOSEPH-TAYLOR: You mean at the
 10 top?
 11 MS. PETERSON: On the bottom. Bottom half.
 12 THE WITNESS: General description, yes, I'm
 13 looking at it.
 14 Q. (By Ms. Peterson) And does that general
 15 description note any cultivation in Township 24 north, Range
 16 52 east?
 17 A. No, it does not mention an irrigation.
 18 Q. And then there's an entry about the Sadler Ranch
 19 on that page. Do you see that?
 20 A. Yes.
 21 Q. Could you read that in to the record?
 22 A. It's the third paragraph in the general
 23 description box. It says the Sadler Ranch is located in
 24 Section 23 and the Bailey Ranch is located in Section 36.
 25 The principal users of the area are cattlemen, no minimal

1 see a flow line with an arrow pointing to the east or a line
 2 with an arrow pointing to the east. I don't know if that's a
 3 ditch or a drainage or what that may be.
 4 Q. There's no wording that says it's a ditch?
 5 A. No, no wording.
 6 Q. Okay.
 7 HEARING OFFICER JOSEPH-TAYLOR: What are you
 8 calling a flow line, Mr. Buschelman?
 9 THE WITNESS: It's common to indicate a -- I
 10 don't know if it would be a drainage or a line with an arrow
 11 on it indicating that if you see something like that, that
 12 it's usually indicative of a flow in a direction of a
 13 drainage or something like that. That's what -- the best
 14 magnification --
 15 HEARING OFFICER JOSEPH-TAYLOR: Okay. Hold on a
 16 second. Are you talking about below where it says Section
 17 18, Section 17, the arrow pointing east?
 18 THE WITNESS: Yes.
 19 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 20 Q. (By Ms. Peterson) These are field survey notes.
 21 They're not hydrologic study, are they?
 22 A. That's correct.
 23 Q. Okay. Thanks. And then just generally on the
 24 1879 field notes, your recollection -- Well, in the 1870
 25 field notes also, surveyor notes.

1 A. Yes.
 2 Q. Are there dams -- Are there dams mentioned in any
 3 of the notes?
 4 A. I don't recall.
 5 Q. Exhibit 127 you had testimony regarding the
 6 notations on certain pages under the general description.
 7 A. What exhibit again, please?
 8 Q. It's 127. It's the surveyor notes.
 9 A. Okay.
 10 Q. And do you remember references to settlers?
 11 A. Yes.
 12 Q. Do you know which settlers those were by the
 13 notes?
 14 A. No, no.
 15 Q. And there also was a reference to hay?
 16 A. Yes.
 17 Q. And do you know whose hay that was?
 18 A. No.
 19 Q. Would it be fair to say that the Bailey Ranch and
 20 the Brown Ranch are also included in that -- in this section
 21 of the field notes that reference Sadlers and hay?
 22 A. I would have to look at the map to see if they
 23 were along the township line. The 1870 survey was a township
 24 line between township, or I should say Range 52 east and
 25 Range 53 east. And I'm not sure if that line includes the

1 A. Yes.
 2 Q. And I can put it up, slide five, it's shown on
 3 slide five.
 4 A. I'm familiar. I can see it here.
 5 Q. Is it true that some of the dams that were shown
 6 in slide 98 are included in that ground that's not owned by
 7 the Sadlers?
 8 A. Say that again, please.
 9 Q. Is it true that some of the dams that you
 10 testified to in slide 98 are located in that area of land
 11 not -- that square area of land not owned by the Sadlers?
 12 A. I don't know for sure if the dams extend on to
 13 that parcel, but I know they're around it, so yes, I'm
 14 familiar with the area and familiar with the dams.
 15 Q. Okay. Did you read Harrill's 1968 report in
 16 preparing for this hearing or any of your work that you did?
 17 A. No.
 18 Q. And then Exhibit 123 was the study about -- Well,
 19 I call it the study about the duty for the ditches. Do you
 20 recall Exhibit 123?
 21 HEARING OFFICER JOSEPH-TAYLOR: The irrigation
 22 ditches. The web printout.
 23 THE WITNESS: Thank you. Yes, I recall that.
 24 Q. (By Ms. Peterson) Was that exhibit or any
 25 information contained in that exhibit specific to the Sadler

1 Bailey Ranch or other ranches.
 2 Q. And then Exhibit 617, slide 99 was the slide, and
 3 we can put it up if you want, that showed all of the ditches,
 4 various ditches. I think --
 5 HEARING OFFICER JOSEPH-TAYLOR: It's the
 6 infrastructure one?
 7 Q. (By Ms. Peterson) Yeah, the infrastructure one.
 8 Do you recall that?
 9 A. If I'm thinking of the correct one, it had the
 10 blue lines that indicated the ditch systems.
 11 Q. Yeah. And I think it had red lines that were the
 12 dams.
 13 A. Yes.
 14 Q. Thank you, Mr. Taggart.
 15 Were all of those ditches or -- And I think you
 16 already answered this part about the dams. But were they
 17 noted in the 1870 or the 1879 field notes?
 18 A. Not to my knowledge.
 19 Q. Were any of the dams referenced in the Eureka
 20 County or the Lander County tax records?
 21 A. Not that I know of.
 22 Q. And then are you familiar with the Sadler Ranch
 23 property and there is a certain little section that's cut out
 24 that's not actually owned by Sadlers. Are you familiar with
 25 that section?

1 Ranch ditches?
 2 A. No.
 3 Q. Exhibit 145 were the field notes. Do you have
 4 Exhibit 145 in front of you?
 5 A. 145?
 6 Q. Yes.
 7 A. Yes, I do.
 8 Q. And during your testimony with regard to Exhibit
 9 145, I wrote that you stated the full flow could be used year
 10 round was your statement based on your reading of Exhibit
 11 145. Do you recall that testimony?
 12 A. I do.
 13 Q. What is the full flow that you were referring to
 14 there?
 15 A. The full flow of?
 16 Q. Shipley.
 17 A. Shipley Springs.
 18 Q. Springs. But what is it? What number were you
 19 referring to?
 20 MR. TAGGART: Objection. That's beyond the
 21 scope. This witness hasn't testified about the flow in
 22 Shipley Springs. Another witness will be testifying and
 23 that's his main subject.
 24 MS. PETERSON: Well, he made a statement that the
 25 full flow of Shipley Springs could be used year round and I

1 would like to know his understanding of and the basis for his
 2 statement of the full flow.
 3 HEARING OFFICER JOSEPH-TAYLOR: *That's different*
 4 than asking him a number. Your question is fine. So your
 5 objection is overruled. But it's different than asking him a
 6 number. I hear it as two different questions.
 7 MS. PETERSON: I have to regroup here.
 8 MR. TAGGART: You're asking, so I'm clear here --
 9 HEARING OFFICER JOSEPH-TAYLOR: *She's regrouping.*
 10 She's going to reformulate the question.
 11 Q. (By Ms. Peterson) Do you recall your testimony
 12 that the -- with regard to Exhibit 145 that the full flow
 13 could be used year round?
 14 A. Yes.
 15 Q. Do you recall that?
 16 A. I do.
 17 Q. What was the full flow in volume that you were
 18 referring to?
 19 A. 15 CFS.
 20 Q. Exhibit 297.
 21 HEARING OFFICER JOSEPH-TAYLOR: *Which one?*
 22 Q. (By Ms. Peterson) 297. Do you have that exhibit
 23 in front of you?
 24 A. I do.
 25 Q. And that was one of your examples of when a

1 MR. TAGGART: Objection. Did you hear the
 2 question?
 3 THE WITNESS: I didn't. I'm sorry.
 4 HEARING OFFICER JOSEPH-TAYLOR: *I didn't either.*
 5 I'm sorry. What was the question?
 6 (Question was read back)
 7 HEARING OFFICER JOSEPH-TAYLOR: *And what's your*
 8 objection?
 9 MR. TAGGART: They talked over each other and he
 10 wasn't able to hear it.
 11 THE WITNESS: Yes. 63497 is approved to replace
 12 the water historically placed to beneficial use under Proof
 13 01104, Certificate 140 and Certificate 147.
 14 MS. PETERSON: And did you -- Do you know what
 15 the procedures were before the State Engineer in the 1910 to
 16 the 1913 time frame for proving up vested claims and
 17 obtaining a certificate for those claims?
 18 THE WITNESS: I do not.
 19 HEARING OFFICER JOSEPH-TAYLOR: *While you're*
 20 thinking, Mr. Buschelman, are you familiar that early on in
 21 the statutes that there were certificates issued that were
 22 not part of the permitting process?
 23 THE WITNESS: Yes.
 24 HEARING OFFICER JOSEPH-TAYLOR: *Do you want to*
 25 explain those a little? I think we're confusing the term

1 mitigation right was granted for a vested claim. Is that
 2 fair to say?
 3 A. Yes.
 4 Q. Did you read the vested claim referenced in that
 5 permit?
 6 A. I glanced at it. I don't necessarily know that I
 7 read it in depth, but I did look at it.
 8 Q. And do you note in the permit that the State
 9 Engineer notes that Certificates 140 and 147 had been issued
 10 for that vested claim?
 11 A. It cites Certificates 140 and 147 in permit
 12 terms.
 13 Q. Do you know what those certificates are?
 14 A. No.
 15 Q. You didn't look at those?
 16 A. No.
 17 Q. So you don't know if they were certificates that
 18 were issued after the adjudication process by the State
 19 Engineer in 19 -- 1913?
 20 A. This point of diversion was not included in that
 21 stipulation agreement. It wasn't even cited as a -- I don't
 22 see the relationship between the 1913 stipulation and this
 23 Permit 63497.
 24 Q. So Permit 63497 was the mitigation right for the
 25 vested claim; is that correct?

1 "certificate" here.
 2 THE WITNESS: I have seen certificates issued on
 3 a number of different rights. Claims I think is one of them.
 4 It's rare. I have seen it maybe once or twice in all of my
 5 years of research. So it's not something I know to be
 6 common.
 7 HEARING OFFICER JOSEPH-TAYLOR: *Are you familiar*
 8 with the statutes changed earlier on after the adjudication
 9 statutes were initiated or put in to law?
 10 THE WITNESS: No.
 11 HEARING OFFICER JOSEPH-TAYLOR: *Okay. I'll quit*
 12 explaining. Yes, I am. When you live here a long time you
 13 find a lot of stuff.
 14 MS. PETERSON: No further questions.
 15 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 16 Any redirect, Mr. Taggart?
 17 MR. TAGGART: Yes.
 18 HEARING OFFICER JOSEPH-TAYLOR: *Really? You're*
 19 running out of time.
 20 MR. TAGGART: Well.
 21 HEARING OFFICER JOSEPH-TAYLOR: *Your choice.*
 22 MR. TAGGART: Well, I have to do my case. I
 23 don't know how we're going to make the time. I really don't.
 24 HEARING OFFICER JOSEPH-TAYLOR: *Keep going. We*
 25 already argued.

1 REDIRECT EXAMINATION
 2 By Mr. Taggart:
 3 Q. Okay. Let's go to Exhibit 127. I'll give you a
 4 copy of that. And you were asked about the survey notes and
 5 whether any of them talked about ditches. And I'd like to
 6 point to two locations and ask you if -- Well, maybe I can
 7 just ask it this way. As you indicated earlier that when
 8 they did these surveys they would walk the line of the
 9 township?
 10 A. Correct.
 11 Q. So if a ditch was not on that line, would it be
 12 in their notes?
 13 A. No.
 14 Q. So there could be many ditches out in the field
 15 that are not in the field notes; correct?
 16 A. Yes.
 17 Q. What if they're on the map but they're not on the
 18 field notes, does that mean there was a ditch there or there
 19 wasn't a ditch there?
 20 A. I don't know that answer.
 21 Q. Well, if they're on the map but they weren't on
 22 the field notes, is it possible there was a ditch in between
 23 the lines of the township?
 24 A. It is possible, yes.
 25 Q. You were asked about the tax rolls and the

1 rights?
 2 A. Yes.
 3 Q. You were asked about some -- a lot of historic
 4 documents. In your conclusions, did you rely upon all of the
 5 information that Dr. Yednock prepared and presented at this
 6 hearing?
 7 A. I did.
 8 Q. And did you also rely upon the information that
 9 Mr. Frazer provided?
 10 A. Yes.
 11 Q. You were asked about Exhibit 602 and were any of
 12 those permits -- Remember, those were the inductual
 13 permits. You were asked whether any of those permits
 14 involved an adjudicated vested claim. Do you recall that
 15 question?
 16 A. Yes.
 17 Q. Isn't it true that the Bailey well permit did
 18 grant a groundwater right for an adjudicated vested claim?
 19 A. Yes.
 20 Q. You were asked about relation back. I want to
 21 read you a statement and ask you if this is consistent with
 22 your understanding of relation back. This is from State
 23 Engineer Ruling 4825. It's a citation to a case called
 24 Gopher Silver Mining Company versus Carpenter, 4 Nevada 524,
 25 pages 533 through 544 from 1869. And the case said, the law

1 acreages that were listed in the tax rolls. Was it your
 2 intent to describe every possessory interest in the area
 3 that's now the Sadler Ranch when you described those tax
 4 rolls?
 5 A. No.
 6 Q. What was your intent?
 7 A. Basically to establish that there was activity,
 8 that Shipley who, the namesake of the spring was actually
 9 there and constructed improvements and was paying taxes to
 10 show that he had done so.
 11 Q. And with respect to the deeds that were put in to
 12 evidence, is that all the deeds that exist or was that a
 13 representative group or what was that intention?
 14 A. That was a representative group. Not intended to
 15 be a full accounting for all of the deeds.
 16 Q. You were asked about adjudications and the
 17 meaning of the word. Do you understand -- Do you have an
 18 understanding of what has been referred to as a civil decree
 19 in water rights?
 20 A. Yes.
 21 Q. And is that a court decree between two private
 22 parties that decide water allocations between the two?
 23 A. Yes.
 24 Q. And in your understanding of water rights does
 25 that become a final decision with respect to those water

1 gives the claimant a reasonable time within which to do it
 2 and although the appropriation is not deemed complete until
 3 the actual diversion in use of the water, still it's such
 4 work be prosecuted with reasonable diligence the right
 5 relates to the time when the first step was taken to secure.
 6 Is that your understanding of relation back?
 7 A. Yes.
 8 Q. You were asked about whether the two
 9 applications, 81719 and 20 are mitigation rights with
 10 supplemental rights. Do you have an understanding of what a
 11 supplemental right is in the State of Nevada when that term
 12 is used in groundwater or surface water?
 13 A. Yes.
 14 Q. And would you agree with me that it's when you
 15 have one right that can be used when the other right is not
 16 available?
 17 A. Correct.
 18 Q. And in this case is the intent to have mitigation
 19 water for the vested claim?
 20 A. Mitigation defined in what way?
 21 Q. As replacement water.
 22 A. Yes.
 23 Q. You were asked about whether you've seen decrees
 24 that have multiple priorities within the same claim. What
 25 decree were you referring to, if you can recall?

1 A. One that comes to mind is the Humboldt River
 2 decree. And in that decree there are multiple priorities
 3 under one proof. And they do call them proofs in that
 4 decree. So yes, under that Humboldt River decree I've seen
 5 that.
 6 Q. You were asked about Exhibit 129, which is the
 7 1970 survey notes. Do you have that?
 8 A. I do.
 9 Q. Could you go to the page, the last page there's a
 10 map there. And there's a statement in that map I'd like you
 11 to read.
 12 A. The history of surveys is contained in the field
 13 notes. A dependent resurvey of the west boundary was
 14 executed concurrently under Township 24 north, Range 52 east
 15 of this group. This plat represents a dependent resurvey of
 16 the south boundary, a portion of the north boundary and a
 17 portion of the subdivisional lines of Township 24 north,
 18 Range 53 east designed to restore the corners of their true
 19 original locations according to the best available evidence.
 20 Lotting and areas are as shown on the plat approved October
 21 22nd, 1879. Survey executed by James R. Munson, Cadastral,
 22 surveyor, September 17th to November 5th 1973 under special
 23 instructions dated October 13th 1972 for group number 493,
 24 Nevada.
 25 Q. So from your reading of that, is this a resurvey

1 A. I'm having a bit of difficulty seeing in the more
 2 densely noted areas if there is one or not. I can't tell by
 3 this at this level of magnification.
 4 Q. Okay. We can let the document speak for itself.
 5 And then if you turn to Exhibit 617, slide 99, that's the
 6 exhibit with the slide of the blue lines of ditches. Do you
 7 recall that?
 8 A. I do.
 9 Q. Do any of these ditches cross section lines and
 10 township lines?
 11 A. They do.
 12 MS. URE: I have no further questions.
 13 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 14 Ms. Peterson?
 15 MS. PETERSON: No questions.
 16 HEARING OFFICER JOSEPH-TAYLOR: Thank you. We're
 17 going to be in recess for about 15 minutes. Let's be off the
 18 record.
 19 (Recess was taken)
 20 HEARING OFFICER JOSEPH-TAYLOR: Questions of
 21 staff. Where do we want to start? Mr. Felling, do you want
 22 to start?
 23 MR. FELLING: I can, yeah.
 24 ///
 25 ///

1 for the location of a corner?
 2 A. Yes.
 3 Q. And do you have an understanding of why resurveys
 4 are done?
 5 A. Yes.
 6 Q. And is the intent of a resurvey to replicate the
 7 way the original survey was done or is it to address the
 8 concern that that resurvey is focused on?
 9 A. The intent is to follow the footsteps of the
 10 original surveyor and locate the original monument set by
 11 that original surveyor.
 12 Q. And if you saw aerial photographs that showed
 13 ditches in Sadler Ranch at the same time as the date of that
 14 survey, would you believe the aerial photographs or what was
 15 stated in that survey?
 16 A. Ask the question again, please.
 17 MR. TAGGART: That's all right. I don't think
 18 it's necessary. I don't have any further questions.
 19 HEARING OFFICER JOSEPH-TAYLOR: Recess, Ms. Ure?
 20 MS. URE: Yes.
 21 RE-CROSS-EXAMINATION
 22 By Ms. Ure:
 23 Q. Mr. Buschelman, if you look at Exhibit 111, are
 24 there any ditches on the map that do not cross a township or
 25 section line?

1 EXAMINATION
 2 By Mr. Felling:
 3 Q. Good afternoon, Mr. Buschelman. I have maybe
 4 half a dozen questions. For the Boyack map, as I understand
 5 it, you initially used the 1870 survey notes; is that
 6 correct?
 7 A. I believe in his proof he cited the 1879.
 8 Q. The '79?
 9 A. Various notes.
 10 Q. And then in your evaluation of the 1870 survey
 11 notes, you noted that there were lands mentioned as irrigated
 12 that were not noted by Boyack; is that correct?
 13 A. Yes.
 14 Q. And then you added those acreages to the Boyack
 15 map to get a new total; is that right?
 16 A. We haven't included that total in the application
 17 to change. But we are doing an assessment of the lands
 18 irrigated that Mr. Boyack showed on his culture map. And
 19 then we went out there to ground proof his map essentially is
 20 what we did. As part of that we found that there was
 21 additional acreage outside of his map and even inside of his
 22 map that we felt warranted noting as a cultural acreage. But
 23 I want to be clear that it's the number that is on the
 24 application. Sorry. I don't have that number in front of
 25 me. 82268 is the number that's stated on the proof of

1 appropriation filed by Allen Boyack.
 2 Q. Okay. But you add -- Those acreages did add up
 3 to some 2244 acres; is that correct?
 4 A. Yes.
 5 Q. And through this proceeding enough water is being
 6 sought to irrigate that 2244 acres?
 7 A. No. The 1657.
 8 Q. That's the total?
 9 A. That we're seeking under the application to
 10 change, yes.
 11 Q. All applications being heard at this hearing
 12 total 1600 and -- total duty is 1657. So that's what you're
 13 saying?
 14 A. That's correct.
 15 Q. Okay. Is there any information that demonstrates
 16 that all of those acres were irrigated at the same time in
 17 given years?
 18 A. No. May I ask a question?
 19 HEARING OFFICER JOSEPH-TAYLOR: No.
 20 THE WITNESS: Sorry.
 21 HEARING OFFICER JOSEPH-TAYLOR: You knew the
 22 answer to that. Nice try.
 23 MR. TAGGART: It would be helpful to clarify if
 24 there's confusion.
 25 HEARING OFFICER JOSEPH-TAYLOR: Well, he can talk

1 and -- you know, the source, the NRCS Department of
 2 Agriculture source that the range was from 40 percent
 3 efficiency to 60 percent efficiency. And in that efficiency
 4 range there were duties that went as high as 6.25 acre-feet
 5 per acre and duties that went as low as 3.33 acre-feet per
 6 acre based on my calculation. I believe that the average is
 7 4.5 or close enough to 4.5 that we can utilize that. I think
 8 that in that number there is some reuse of the water as it
 9 comes down the system. Because the closer you are to the
 10 spring source, there is going to be some reuse of that water
 11 once it flows past that field and on to another field and on
 12 to another field.
 13 Q. And you calculated in one of your exhibits, and I
 14 believe it's -- I don't recall the number of the exhibit
 15 offhand. You calculated the duty required based on various
 16 efficiencies as you just mentioned, the 40, 50 and 60
 17 percent. That's to irrigate a crop year round; is that
 18 correct?
 19 A. No. That is to irrigate a crop during what would
 20 be considered the irrigation season.
 21 Q. Okay. And then the lower parts of the ranch,
 22 were those areas irrigated through the entire irrigation
 23 season?
 24 A. I don't know if irrigated is the right word.
 25 Water was stored on those lands during the non-irrigation

1 to his lawyer.
 2 Q. (By Mr. Felling) I'll give you an opportunity to
 3 expand on that answer if you'd like.
 4 A. I would.
 5 Q. Go ahead.
 6 A. I understood your question to be was the full
 7 1,657 acres irrigated during one time, meaning one year.
 8 That answer I don't know. I do --
 9 Q. That was my question.
 10 A. Okay. Then my answer is no, I don't know if all
 11 of it was irrigated on one year.
 12 Q. Okay. You discussed duties based on some
 13 references that you had. And in one of your exhibits,
 14 Exhibit 114, you derived the number 4.79. But again, you're
 15 just asking for 4.5 acre-feet per acre for these lands. Are
 16 there return flows included in those duties or do all -- does
 17 that full amount need to come from Shipley Spring spread out
 18 over the entire acreage?
 19 A. Exhibit -- Which exhibit?
 20 Q. I'll rephrase that. Are you asking for 4.5
 21 acre-feet per acre by the entire 1600-some acres or is there
 22 an opportunity for return flow to make up some of those
 23 flows?
 24 A. I believe that when I looked at the range of
 25 efficiencies based on information I received from the food

1 season.
 2 Q. You missed my question. My question was, was
 3 water supplied for irrigation on those lands during the
 4 entire growing season?
 5 A. During the entire growing season?
 6 Q. Yeah.
 7 A. Yes.
 8 Q. So in all of those documents where they noted
 9 that really this whole source of water was January, February
 10 and March, and that was when they received their water, do
 11 you consider that water available for the entire growing
 12 season?
 13 A. Under that permit that was issued would have only
 14 been limited to those three months.
 15 Q. We'll get to that too. But in terms of the
 16 documented evidence of when water was supplied to those lower
 17 acreages, and I'm talking about the lower lands in the
 18 southeast, the Eccles property and Romano fields. Do you
 19 recall the evidence that indicated that those fields were dry
 20 in July, August?
 21 A. I don't recall any mention in there that -- In
 22 the stipulation agreement I don't recall any mention of it
 23 being dry.
 24 Q. One second. Can you point me to an exhibit that
 25 shows that these lower fields actually receive water during

1 the summer months?
 2 A. I believe we can if we review the aerial
 3 photography, the 1946 and fifties aerial photographs. I
 4 would have to look at them, but I believe that they were
 5 taken in the summer irrigation season months and there is
 6 water shown on those properties during that time.
 7 Q. Okay. We'll have to look in to the record then.
 8 For the Eccles --
 9 HEARING OFFICER JOSEPH-TAYLOR: Excuse me. For
 10 this court reporter, E-c-c-e-l-e-s; correct?
 11 MR. FELLING: E-c-c-l-e-s.
 12 Q. (By Mr. Felling) And that's Exhibit 141. Could
 13 we pull that?
 14 A. I have it.
 15 Q. I want to talk about what these numbers really
 16 total. So on the first page, and I'll just read off what I
 17 think is pertinent here, 234.2 acres at a diversion rate of
 18 2.342 cubic feet per second from January 1st to April 1st.
 19 Is that accurate?
 20 A. Yes.
 21 Q. Any idea how many acre-feet that would actually
 22 amount to?
 23 A. I could calculate it up. I'm not sure.
 24 Q. Would you do that, please.
 25 A. My calculation is 418 acre-feet.

1 A. Yes.
 2 Q. So the 418 acre-feet being diverted from a .3
 3 miles west, what did the State Engineer at this time think
 4 that the water rights were on these acreages? I mean -- I'll
 5 ask you a question. Is this a representative of what the
 6 State Engineer thought were the appropriate duties for that
 7 land?
 8 A. I would -- That was the duties they assigned to
 9 the land, so I would assume they would have felt they were
 10 appropriate.
 11 Q. Okay. For your estimates of consumptive use, are
 12 you familiar with the -- our definition that for net
 13 consumptive use it's for a crop that is in a near pristine
 14 condition and is not water limited?
 15 A. I'm familiar with the term of net consumptive
 16 use. The pristine part I'm not familiar with.
 17 Q. And that in our consumptive use net irrigation
 18 water requirements in Nevada, those numbers apply for the
 19 various crops only for those crops that receive water and are
 20 not in any way limited by a water supply?
 21 A. Yes.
 22 Q. Did you use our net consumptive use numbers in
 23 your table?
 24 A. I did.
 25 Q. Do you feel that all of the acres on this -- on

1 Q. Do you also see where the amount of appropriation
 2 is 702 acre-feet?
 3 A. I do.
 4 Q. So if this certificate was limited to 2.34 CFS
 5 for that three-month period, they could never reach that 702
 6 acre-feet; is that accurate?
 7 A. If it was limited to 2.32 -- 342 acre-feet, I
 8 would say that's accurate. But if you read that, it says
 9 amount of appropriation 2.342 cubic feet per second or 702.6
 10 acre-feet. So I don't necessarily see a limitation -- the
 11 "or" helps me see that maybe they could deliver 702.6 at a
 12 different rate.
 13 Q. Is the season defined on this page?
 14 A. It is.
 15 Q. And what is the season?
 16 A. Approximately 90 days.
 17 Q. So the numbers don't seem to work; is that right?
 18 A. They don't.
 19 Q. Okay. And the point of diversion, do you know
 20 where that point of diversion is?
 21 A. Yes.
 22 Q. And where is that?
 23 A. Approximately three and a half miles west of this
 24 location.
 25 Q. At Big Shipley Spring?

1 the entire ranch have a whole supply of water and are never
 2 water limited?
 3 A. The exercise that I went through was to calculate
 4 a range of duty based on efficiencies. I utilized the net
 5 irrigation water requirement or the net consumptive use
 6 figures out of the report as a component of that duty
 7 calculation. It is a part of it but not the total amount.
 8 Q. Well, if the net consumptive use were different
 9 because there wasn't an unlimited supply of water, would your
 10 calculations have been different?
 11 A. I'd like to go to the sheet where I did my
 12 calculations.
 13 MR. TAGGART: It's Exhibit 106.
 14 THE WITNESS: Thank you. When I provided the
 15 range of 3.33 acre-feet per acre to 6.25 acre-feet per acre,
 16 the lower range of 3.33 was based on 60 percent efficiency of
 17 low-managed pasture grass. Low-managed pasture grass has a
 18 duty of two acre-feet per acre under the net irrigation water
 19 requirement. So that is the number I plugged in to that
 20 calculation to get 3.33. When I calculated the higher end,
 21 the maximum end of duty, I used a 40 percent efficiency with
 22 alfalfa, which has a duty of 2.5 acre-feet per acre. So in
 23 those calculations I did consider different cultures
 24 requiring different net irrigation water requirements.
 25 Q. (By Mr. Felling) So for the low-managed pasture

1 you used two acre-feet per acre as the net irrigation water
 2 requirement. But that's only for low-managed pasture that is
 3 never water deficient. If that pasture was water deficient,
 4 would you agree that net consumptive use would be less than
 5 two acre-feet per acre?
 6 A. Yes.
 7 Q. And then would that difference propagate through
 8 your entire calculation?
 9 A. Yes.
 10 Q. Was the full flow of Shipley Springs in your
 11 opinion put to beneficial use?
 12 A. Yes.
 13 Q. No waste at all?
 14 A. Again, I have a need to define waste. Waste is
 15 used in many different ways in agriculture. Waste water can
 16 be reused over and over again. Waste in a sense of leaching
 17 soils, when you apply water to the soils to leach out the
 18 soluble salts and you discharge that highly salt-laden water
 19 at the end of your field is it considered waste. I mean,
 20 there's a lot of ways to define waste. High salt solubles
 21 are no longer usable for agriculture, but they could be used.
 22 Q. Okay. I notice on the land map for the north
 23 meadow and the south meadow too that the lands owned by
 24 Sadler Ranch don't include the entire north meadow. Do you
 25 know if there are other private lands up there?

1 Ranches. Would you -- Is that accurate?
 2 A. Using the word "may," yes, that's accurate.
 3 MR. FELLING: Actually I'll just stop right here.
 4 I don't have any more questions.
 5 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 6 Mr. Buschelman, if I filed a proof of
 7 appropriation and I only had an 80 or 90 -- and I had an 80
 8 or 90 percent ditch loss, is that considered a beneficial use
 9 of water?
 10 THE WITNESS: In some cases I would believe yes.
 11 HEARING OFFICER JOSEPH-TAYLOR: Really? You
 12 wouldn't consider that waste?
 13 THE WITNESS: No. It depends on the soil types,
 14 the conditions in which you're trying to transport that
 15 ditch. There are many cases where the -- Well, even if the
 16 publication that I utilized as a basis for my calculations
 17 indicates in there that a 48 or 50 percent efficiency is
 18 reasonable.
 19 HEARING OFFICER JOSEPH-TAYLOR: I said 80 or 90
 20 percent loss.
 21 THE WITNESS: Even in a situation where there may
 22 be 80 or 90 percent ditch loss, it depends, again, on the
 23 history of the use and how the soil types are set up. I
 24 would not say that is not beneficial if you're still getting
 25 the water to where you needed to go.

1 A. I know of one.
 2 Q. If that land owner made a claim for water from
 3 Shipley Spring, the vested claim or the replacement water,
 4 where would that water then come from?
 5 A. Shipley Springs.
 6 Q. So in other words, Sadler Ranch since they didn't
 7 use the full flow of Shipley because someone else used part
 8 of it, they wouldn't get the full flow of Shipley Springs
 9 under these proceedings; is that correct?
 10 A. No. Just because the land is owned by someone
 11 else doesn't mean that they are using the water or applying
 12 the water. If I'm applying water to public or private land,
 13 I am the water right applicator, therefore the water right
 14 owner under a vested right, not the land owner.
 15 Q. Well, do you know if those other private lands on
 16 that north meadow are irrigated by Shipley Spring water?
 17 A. They are.
 18 Q. Are they controlled by someone other than Sadler
 19 Ranches?
 20 A. Is what controlled?
 21 Q. Those other private lands.
 22 A. I need to know what you mean by controlled.
 23 Q. I'll go back. There are private lands irrigated
 24 by Shipley Spring water currently or historically that may
 25 have a claim to Shipley Spring and are not owned by Sadler

1 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 2 Mr. Walmsley?
 3 MR. WALMSLEY: Yes, a few basic questions.
 4 EXAMINATION
 5 By Mr. Walmsley:
 6 Q. Good afternoon, Mr. Buschelman. Is it true that
 7 your testimony relied heavily on GLO surveyor notes and the
 8 associated maps that were generated?
 9 A. It was one component. But I did rely on those.
 10 Q. You did rely on them. In those notes, they make
 11 comments such as rich soil and grasses; is that true?
 12 A. Yes.
 13 Q. Do you know whether or not a GLO land surveyor
 14 was trained in soil science or in plant science prior to them
 15 doing their survey?
 16 A. Yes. Actually as part of the instructions that
 17 were given to the GLO, general land office, surveyors at the
 18 time, they actually had to demonstrate their knowledge of
 19 soils and plants in order to be selected and awarded
 20 contracts under the surveyor general. So they did have to
 21 have knowledge of those things, yes.
 22 Q. And based on that training on soils, did they go
 23 as far as having an understanding of soil chemistry? Or
 24 should I ask that question to Mr. Frazer?
 25 A. I do know that as part of their qualifications to

1 be a contract surveyor they had to identify whether or not
 2 soils were salty. And you'll see, in some notes you'll even
 3 say that they tasted the soil and it was salty. And you'll
 4 see them refer to water sources as either salty tasting or
 5 not salty. Good water. It was not uncommon to see
 6 references in actually tasting things.
 7 Q. Okay. Well, that's a good answer to that
 8 question.
 9 When we're talking about grass meadows and hay
 10 production, anywhere in the notes did they actually identify
 11 the actual grass type?
 12 A. There's references to natural or native hay. So
 13 I'm assuming on my part that those are grasses that would
 14 grow there naturally without being planted artificially, such
 15 as a Timothy or clover. They were native or natural grasses
 16 that grew out there.
 17 Q. Would -- Well, this would probably not be a good
 18 question. I'll ask it anyhow. Would they have been able to
 19 differentiate between the grass and the sedge?
 20 A. I don't know that answer.
 21 Q. Okay. Thank you. You said you relied heavily on
 22 the information produced and provided by Mr. Yednock and
 23 Mr. Frazer and the figures associated with that; is that
 24 correct?
 25 A. They played a big part in the assembly of

1 it is an appurtenance?
 2 A. There's a couple of things that I consider when
 3 I'm going down that path. One, at 1870 to 1879 all the way
 4 up in to the sixties and even demonstrated in Diamond Valley,
 5 the federal government was encouraging privatization of their
 6 public lands through desert land entry, homestead entry,
 7 carry act, those programs. As a function of you getting
 8 title, you had to trespass, if that's the right word, on
 9 their land, irrigate and actually establish residency all in
 10 what you might call trespass before you could gain patent.
 11 So my answer is based on that understanding as
 12 well as the understanding that I don't have to own the land
 13 in order to gain a water right on that land.
 14 MR. WALMSLEY: I don't believe I have any further
 15 questions. Thank you very much.
 16 HEARING OFFICER JOSEPH-TAYLOR: Ms. Geddes, any
 17 questions?
 18 MS. GEDDES: No.
 19 HEARING OFFICER JOSEPH-TAYLOR: Mr. Wilson?
 20 MR. WILSON: No.
 21 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 22 EXAMINATION
 23 By the State Engineer:
 24 Q. You've been qualified as an expert in Nevada
 25 water rights in these proceedings. We've heard a lot of

1 information to make my conclusion, yes.
 2 Q. And do you agree that it's been stated by you and
 3 also the others in this hearing that it would be necessary to
 4 spend large sums of money to bring production back to the
 5 Sadler Ranch?
 6 A. I didn't say that, but I agree with that
 7 statement.
 8 Q. And based on that, if the large sums of money are
 9 spent and the land and the ranch is brought back to be a
 10 viable economical unit, has anybody or have you looked at how
 11 many acres would be necessary under modern irrigation
 12 practices to recreate the tons of hay that were produced
 13 historically?
 14 A. I have not gone in to those calculations, no.
 15 Q. I only have one other question. You talked about
 16 a water right being established essentially in trespass on
 17 government land. Is that true?
 18 A. Yes.
 19 Q. And you stated that that water right would be
 20 owned by the appropriator of the water?
 21 A. Yes.
 22 Q. When we do assignments of water rights, we make a
 23 determination whether water is appurtenant to the land.
 24 Based on that do you believe that since the right is on BLM
 25 land that they could have an actual claim to that water since

1 testimony about potential beneficial use pre-1905. We've
 2 heard the twenties, thirties and through the forties but that
 3 was about it. I'd like to hear your opinion on whether or
 4 not you think the vested claim that we've been talking about
 5 is subject to abandonment.
 6 A. I think what encourages me to have the opinion
 7 that it has not been abandoned is the intensity of
 8 documentation throughout time. Even the aerial photographs
 9 that we see in the sixties, seventies, eighties, nineties,
 10 show a purposeful intent to push water on the properties
 11 known as the Sadler Ranch. We've seen improvements such as
 12 the dams where they appear to be really bright white-ish
 13 color where that means that they've been freshly made during
 14 that time frame or a little before. And those are there to
 15 help back that water up and store it in the lower reaches of
 16 the ranch. We see continued payment of taxes by predecessors
 17 to the owners today.
 18 I mean, in the seventies they hired Allen Boyack
 19 to come out and actually survey the property and illustrate
 20 the limits of their cultural boundaries as he illustrated it
 21 on his map and filed a proof. That was in the late
 22 seventies, early eighties.
 23 There's been the USGS, US Geological Survey has
 24 come out and actually monitored flows at the spring in an
 25 effort to get an idea of how much water is there and with

1 respect to the ranch's ability and right to use the water. I
 2 just see an abundance of information in the records that do
 3 not foretell any abandonment.
 4 Q. Thank you. Is Allen Noyack --
 5 A. It's Boyack.
 6 Q. Boyack.
 7 A. It's B-o-y-a-c-k.
 8 Q. I knew that. I've heard it a thousand times. Is
 9 he still alive?
 10 A. I don't know that?
 11 Q. And I don't know if Mr. Frazer or Dr. Yednock had
 12 testified to that or not. I'm just curious. You don't know
 13 if he is or not?
 14 A. No, I don't.
 15 Q. Okay. And we're beating to death the Boyack map.
 16 But to me it's a real important piece of this puzzle and I'm
 17 sorry to make you testify about it again. We can kind of
 18 keep it short. But I want to try to understand the kind of
 19 weight we're going to give this map. As we discussed, you
 20 took 1879 field notes and then went out to the field. How
 21 did he incorporate these 1879 field notes in to the map that
 22 we see that he prepared in 1978?
 23 A. Well, one of the things that's in the notes in
 24 1879 there was much more detail about crossing irrigation
 25 ditches as the original surveyors crossed -- I mean followed

1 Q. Proof 03289 we talked about the acreages and
 2 there were questions asked of you about the 1879 priority.
 3 Is it your testimony that that acreage was put to -- was
 4 cultivated or water was put to beneficial use on that acreage
 5 in 1879 or are you saying that through the doctrine of
 6 relation back that through the course of perhaps decades, and
 7 again this wasn't until '78, that all of that acreage was
 8 assigned that 1879 priority?
 9 A. Logic tells me that in order to construct those
 10 ditches and put in facilities, especially in the fields that
 11 were the furthest west on the ranch that were closest to the
 12 ranch headquarters that were the highly managed areas that it
 13 would take time. Time based on the machinery or lack of
 14 machinery they had in that time -- at that time. They had
 15 horses. They had plows. They had manual labor. It would
 16 take years. I wouldn't necessarily say decades. But it
 17 would take years in order to construct those ditches and put
 18 in and plant those fields as well as construct ditches and
 19 facilities to move water through more of the meadowy area
 20 that is irrigated. So yes, it did take time. It didn't all
 21 happen on January 1st 1879, but it did take a reasonable
 22 amount of time to go forward.
 23 The historical accounts tell us that prior to
 24 1905 there was a lot going on in that ranch. People were
 25 hired. The Sadler family consolidated many small possessory

1 section lines and township lines. I think, again, if I was
 2 doing the map as Allen was doing the map, to me that would be
 3 important because I could actually in some ways see those
 4 lines as I was drafting them. And he had the benefit of the
 5 early '72, 1972 aerial photography as well at his disposal
 6 that he could use. And we see a real agreement between that
 7 photo and the boundaries that he created on his map.
 8 The 1879 notes were far more descriptive of the
 9 improvements that were out there. They provided a real base
 10 for him to strike as a priority. Because he said prior to
 11 1879, knowing that those facilities actually were constructed
 12 at that time so he knew it had to happen before then. So in
 13 that case that's why they played a big part in his analysis.
 14 Q. Okay. I believe it was Exhibit 114. You don't
 15 need to pull it up. But I think you had a corrected Boyack
 16 map. Do you remember that?
 17 A. Yes.
 18 Q. And you went through your findings and you
 19 discussed acreage that were added and some acreage that were
 20 removed from the Boyack map. In round numbers is it fair to
 21 say that it looks like through your corrected Boyack map
 22 you've added about 600 acres and you subtracted out about 90?
 23 A. Yes.
 24 Q. Does that sound right?
 25 A. That's about right.

1 claims in to their ranch. So not only did the Sadler family,
 2 the Shipley family have people working on the land, so did
 3 the Hills and the Whites and the many other claimants that we
 4 saw illustrated on that map. So it took time, yes. It
 5 didn't happen all in one day.
 6 Q. I think I know the answer to this question before
 7 I ask it. Do you understand that the Diamond Valley
 8 hydrographic basin is over appropriated?
 9 A. I do.
 10 Q. Significantly would you say?
 11 A. Significantly, yes.
 12 Q. If a groundwater permit were to be issued as a
 13 result of these proceedings and it were to be an additional
 14 withdrawal of ground water on the basin -- And I understand
 15 the arguments about priority. Again, do you as an expert in
 16 Nevada water rights sitting in the State Engineer's office
 17 chair faced with incorporating more groundwater on the basin
 18 that sits as Diamond Valley sits, and we've had discussion of
 19 critical management area, it's a long-winded question, how
 20 would you view the approval or denial of that replacement
 21 water?
 22 A. I think one of the key foundations that we work
 23 with in the State of Nevada is prior appropriation. To me
 24 that is a cornerstone of why we're here. Also, proof of
 25 beneficial use. Those two are two guiding lights that we

1 focus on when we get in to a situation like this. I think in
2 many ways we can't ignore that set of guidelines to work
3 with. There may be ways to help soften the blow, so to
4 speak, in a sense by administering these consents. However,
5 I think that we have to protect the senior rights. Junior
6 right holders that come along have essentially an opportunity
7 to do things as they've been granted under the applications.
8 However, if we find underlying circumstances like the
9 lowering or drastically lowering of the water source we're
10 all pumping from, unfortunately it takes action not only to
11 protect senior rights but other more junior rights that are
12 in the valley as well.

13 I believe there's an opportunity for everybody to
14 get together and come up with a solution. It may not be
15 palatable for everyone. But I think there's an opportunity
16 to make some things happen in this valley. We yet don't know
17 the impacts of approving a well or a series of wells in the
18 area of the Sadler Ranch on how they may impact the ground
19 water table to the south. We do know that there has been
20 influenced to the spring.

21 But I really do think that we have to keep the
22 prior appropriation in the mix no matter where we do and we
23 have to keep it as a guiding element for where we go.

24 Q. Thank you.

25 A. Long answer.

1 HEARING OFFICER JOSEPH-TAYLOR: Thank
2 you, Mr. Buschelman. You may be excused.

3 What are we going to do, Gentlemen? Your time is
4 up, Mr. Taggart. Did you have any discussion with
5 Mr. Kolvet?

6 MR. TAGGART: Yes, we've talked. And we'll put
7 another witness on.

8 HEARING OFFICER JOSEPH-TAYLOR: *Are you agreeable*
9 to that, Mr. Kolvet?

10 MR. KOLVET: Yes. The witness he's intending to
11 put on kind of dovetails on my first witness. It works.

12 HEARING OFFICER JOSEPH-TAYLOR: *If he agrees with*
13 it, I'll allow it to happen.

14 THE STATE ENGINEER: Again, do you have two more
15 witnesses?

16 MR. TAGGART: Maybe. But I only have one that's
17 of substantial time. The other I think will be relatively
18 short.

19 THE STATE ENGINEER: I've heard that a couple
20 times too.

21 HEARING OFFICER JOSEPH-TAYLOR: *You also said he*
22 was two hours and here we are nine hours later.

23 MR. TAGGART: Well, I mean, I hope it's
24 beneficial. I mean, if you think we're giving you
25 information that you don't want, we'll cut it short. I think

1 you want to hear what we've come to present.

2 THE STATE ENGINEER: We do want to hear it. It's
3 just that we have a schedule.

4 MR. TAGGART: I mean, our next witness I'm very
5 concerned that he won't be able to present what we have
6 prepared him to present in the time allowed. And so that
7 means we will speed up and that's unfortunate, but I
8 understand we have a time constraint. But I mean, he's going
9 to talk about drawdown. He's going to talk about conflict,
10 what the drawdown cone is, you know, the hydrologic concerns
11 that we all have. And I think it's really important.

12 HEARING OFFICER JOSEPH-TAYLOR: *Let's be off the*
13 record.

14 (Discussion was held off the record)

15 HEARING OFFICER JOSEPH-TAYLOR: *Call your next*
16 witness, Mr. Taggart.

17 MR. TAGGART: Sadler Ranch calls Dwight Smith.
18 We're off the record; right?

19 HEARING OFFICER JOSEPH-TAYLOR: *No, we're on the*
20 record.

21 MR. TAGGART: Can we go off?

22 HEARING OFFICER JOSEPH-TAYLOR: Yes.

23 (Recess was taken)

24 HEARING OFFICER JOSEPH-TAYLOR: *Please call your*
25 next witness, Mr. Taggart.

1 MR. TAGGART: Sadler Ranch calls Mr. Dwight
2 Smith.

3 MR. KOLVET: And Daniel Venturacci calls Terry
4 Katzer.

5 HEARING OFFICER JOSEPH-TAYLOR: *For the record,*
6 we are trying to expedite time and accommodate both
7 applicants, Sadler Ranch and Venturacci, and the parties have
8 agreed to allow Mr. Smith and Mr. Katzer and the State
9 Engineer has agreed to testify as a panel. Mr. Taggart will
10 be questioning Mr. Smith and Mr. Kolvet will be questioning
11 Mr. Katzer.

12 MR. TAGGART: Thank you.

13 HEARING OFFICER JOSEPH-TAYLOR: *Gentlemen, please*
14 stand and be sworn.

15 (Witnesses were sworn in)

16 MR. TAGGART: First we'll go through
17 qualifications.

18 HEARING OFFICER JOSEPH-TAYLOR: *You're going to*
19 qualify these gentlemen as experts?

20 MR. TAGGART: Yes. And for the record, in
21 Mr. Smith's CV he has a section called testimony as a
22 qualified witness as to all the times he's been qualified.

23 HEARING OFFICER JOSEPH-TAYLOR: *I can stop you*
24 right there. Mr. Smith has been qualified here one, two,
25 three, four, five, six times as an expert in hydrogeology. I

1 would appreciate if that's what you're going to qualify him
 2 in, having the protestants stipulate to that.
 3 MR. TAGGART: That is the subject we would ask
 4 him to be qualified in.
 5 MS. PETERSON: No objection.
 6 MS. URE: No objection.
 7 HEARING OFFICER JOSEPH-TAYLOR: Mr. Smith will
 8 be qualified as an expert in hydrogeology.
 9 And moving on to Mr. Katzer. Mr. Katzer --
 10 MR. KOLVET: His CV is also an exhibit. I
 11 believe it's 221.
 12 HEARING OFFICER JOSEPH-TAYLOR: Mr. Katzer has
 13 been qualified here as far as I know at least five times as
 14 an expert in hydrogeology. Is that what you were going to
 15 qualify him in?
 16 MR. KOLVET: Yes.
 17 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 18 Mr. Katzer being qualified as an expert in hydrogeology?
 19 MS. PETERSON: No objection.
 20 MS. URE: No objection.
 21 HEARING OFFICER JOSEPH-TAYLOR: Thank you. That
 22 saves two hours.
 23 MR. KOLVET: I would offer Mr. Katzer's CV, which
 24 I believe is 221.
 25 HEARING OFFICER JOSEPH-TAYLOR: Let me get that

1 A. Correct.
 2 Q. And have you also prepared a rebuttal report?
 3 A. That's correct.
 4 Q. I believe that's been identified as Exhibit 189.
 5 I want to ask you initially what your main conclusions are
 6 and then we'll talk through how you reached those conclusions
 7 through your testimony.
 8 A. Okay.
 9 Q. And then at the end of that I will ask for
 10 admission of those experts reports in to evidence. So my
 11 first questions are about Shipley Springs. Did you review
 12 the historic record of flows at the springs and the current
 13 flows of water at Shipley Springs?
 14 A. I have reviewed all of the available parts of
 15 flow.
 16 (The court reporter interrupts)
 17 THE WITNESS: Yes, I have. I have reviewed the
 18 available reports and records of flow that we have been able
 19 to find.
 20 Q. (By Mr. Taggart) And what did you conclude that
 21 the natural discharge of Shipley Spring was before
 22 development of wells in southern Diamond Valley?
 23 A. Probably the main impression I would like to make
 24 on the State Engineer and the staff is that the -- when we
 25 talk about pre-development spring flow on Shipley Hot

1 one. Any objection to the admission of Exhibit 221,
 2 Mr. Katzer's CV?
 3 MS. PETERSON: No objection.
 4 HEARING OFFICER JOSEPH-TAYLOR: And I bet you
 5 want to do the same for Mr. Smith?
 6 MR. TAGGART: 107.
 7 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 8 Any objection to the admission of 107?
 9 MS. PETERSON: No objection.
 10 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 11 Ms. Peterson. I appreciate your cooperation. And Ms. Ure.
 12 MS. URE: Thank you.
 13
 14 DWIGHT SMITH
 15 Called as a witness on behalf of the
 16 Applicant, having been first duly sworn,
 17 Was examined and testified as follows:
 18
 19 DIRECT EXAMINATION
 20 By Mr. Taggart:
 21 Q. Mr. Smith, good afternoon. Have you prepared an
 22 expert report for this proceeding?
 23 A. Yes.
 24 Q. And I believe that's been identified as Exhibit
 25 108?

1 Springs, it's not pre-1960s. It's actually pre-1940s.
 2 There's a history of well and groundwater development on the
 3 west side of the valley that goes back to about 1943. So I
 4 think it's important to recognize that.
 5 So there's also a number of reports, some of
 6 which have been -- there's been some evidence presented by
 7 Dr. Yednock and others. But there's also some additional
 8 reports of flow that predate this time period that I also
 9 want to make sure that you're aware of.
 10 The reports of flow from your office we know that
 11 there is an eight CFS visual estimate. There's notes. We
 12 have information on what the conditions were when that visual
 13 estimate was made. It wasn't a condition where there was a
 14 confined channel of flow. And we'll go through those
 15 conditions. That's the low end. Then we have reports of 15
 16 CFS. We have reports of 12 CFS, 13 CFS, 11 CFS, 12 and a
 17 half CFS. All of these reports discharge from Shipley Hot
 18 Springs, the early ones.
 19 We don't have any evidence that there are
 20 actually measurements made. So you can treat them all
 21 equally in my viewpoint. Assume they're all visual
 22 estimates. What would you do as a scientist? I think we
 23 know the answer. You all make visual estimates so you're
 24 plus or minus. There you go.
 25 That leads me to my conclusion that the

1 pre-development, pre-1940 discharge in Shipley Hot Springs
2 was somewhere in the neighborhood of 11 to 12 CFS and that's
3 the range.

4 And then I'll go on to further present some
5 evidence that there was development of groundwater via
6 flowing artesian wells. Not small. Substantial flowing
7 artesian wells starting in 1943 and progressing all the way
8 through 1960 within the proximity of Shipley within anywhere
9 from two to five miles. So I think that all had a cumulative
10 effect, leading up to the time frame where we actually have
11 measurements.

12 Q. And what did you conclude is the discharge from
13 Shipley Springs today?

14 A. Today I've been out, most recently I was out with
15 my colleague, Mr. Katzer, in August. There have been other
16 hydrologists out there to measure the flow in the summer.
17 All of the flows that we measured have been less than two
18 CFS.

19 MR. TAGGART: Thank you, Mr. Smith.

20
21 TERRY KATZER

22 Called as a witness on behalf of the
23 Applicant, having been first duly sworn,
24 Was examined and testified as follows:
25

1 DIRECT EXAMINATION

2 By Mr. Kolvet:

3 Q. Mr. Katzer, basically the same question, have you
4 had an opportunity to examine the spring flows in the
5 Thompson Ranch area as well as on the other side of the
6 valley, the Sadler Ranch area?

7 A. I have. I've looked at both sets of data. The
8 data that Dwight and I and another hydrologist, Robert
9 Squires, collected for General Moly between '08 and '13, is
10 really good data. And that means that we walked the entire
11 perimeter because there are four separate points of potential
12 diversion. We scraped out moss and made sections wherever we
13 had to. And we made sure that we did not have any change in
14 storage in the pond and that's really critical.

15 Q. Now, you're talking about the Shipley?

16 A. I'm talking about Shipley right now, yeah.

17 Q. And --

18 A. And I don't know. I wouldn't say the same for
19 the measurements that were made previous all of those years
20 because I didn't have anything to do with them. But on these
21 measurements that we made for General Moly, and they give me
22 permission to publish that, I feel very confident.

23 And the critical thing about that is that Dwight
24 and I were at those springs back in '08 and we measured
25 three-point-something CFS. The measurement that Bob Squires

1 made this last August was one-point-something. So there's
2 been a two CFS decline in those few short years.

3 On the other side of the valley, on Thompson
4 Springs, it's been unfortunate. There's really a poor
5 record. Jim Harrill had three measurements back in '65 and
6 '66 and they were made by a well known hydrologist at the
7 time. And again, it's like Shipley. There were three
8 different orifices. It all ran in to one big pond, measured
9 the outflow from the pond. The problem was there were
10 diversions out of the pond. And so the measurements that
11 were made after -- after '66, I would have very little faith
12 in. They're probable a minimal number when you start looking
13 at that data and trying to evaluate it. I'm sure they were
14 all light. I'm 100 percent sure of that, but I can't prove
15 it.

16 HEARING OFFICER JOSEPH-TAYLOR: They were all
17 what?

18 THE WITNESS: Light. Thin. Low.

19 HEARING OFFICER JOSEPH-TAYLOR: I thought you
20 said like.

21 THE WITNESS: Well, I did. They were light in
22 water.

23 HEARING OFFICER JOSEPH-TAYLOR: No. L-i-k-e is
24 what I heard.

25 THE WITNESS: So that's really a problem when you

1 measure these springs. I mean, it's just not a simple thing
2 to do.

3 Q. (By Mr. Kolvet) Would you also agree with what
4 Mr. Smith said about the pre-development time frame?

5 A. Absolutely.

6 Q. Why is that?

7 A. Well, I think estimates of flow are one thing and
8 they're great for Recon type work when you're trying to get
9 some idea of what's there. But the only way to really
10 measure it is with some volumetric technique. And I think
11 many of those measurements that Dwight talked about were just
12 kind of eyeball measurements. I mean, there wasn't any
13 critical thing for them to do with that at that time.

14 Q. Okay. My question more went to when do you think
15 there were effects being seen at Thompson Springs? What was
16 the earlier time frame?

17 A. I think the measurements that Bob Lamke made in
18 '64 -- '65 and '66 already had the top taken off of the
19 springs. When you look at some of the hydrographs in the
20 valley, and there's a lot of them to look at, you can see
21 '64, '65 there's just the start of the decline in the slope.
22 And I think the head was coming off of the springs at that
23 time.

24 Jim Harrill published in his bulletin 35 that by
25 1965 there was 50,000 acre-feet had been taken out of the

1 basin, cumulative amount taken out. That's a significant
 2 number to me. And there was, what, probably a couple hundred
 3 wells in that time. Most of them in the sixties, a lot of
 4 them in the sixties. And I just feel that the valley was
 5 starting to be mined at that time, over mined.
 6 Q. (By Mr. Taggart) All right. Mr. Smith, I want
 7 to start asking you specific questions about Shipley Spring.
 8 In your opinion is Shipley Spring a local spring or a
 9 regional spring?
 10 A. Shipley Spring I would call a regional spring.
 11 Q. Why is that?
 12 A. It's a thermal spring. It discharges water at
 13 about 104 degrees Fahrenheit. Also water flow today is only
 14 two CFS. In its recent past it was discharging much greater
 15 and much greater than one can support from just the local
 16 water shed that feeds it from the Sulphur Spring Ranch. So
 17 we had to have a source of water coming from some other
 18 regional source than just the tributary watershed.
 19 Q. Thank you. I want to --
 20 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry, but
 21 try to talk right to her. And we've got to get you a
 22 microphone.
 23 MR. TAGGART: I'm going to ask you about Exhibit
 24 108 and what's on page two. And I'm going to hang this up on
 25 the wall behind you so every one can look at it while you're

1 HEARING OFFICER JOSEPH-TAYLOR: Okay. I couldn't
 2 hear. Sorry.
 3 Q. (By Mr. Taggart) So that's what's shown as
 4 Eccles v. Sadler on your figure one; right?
 5 A. That's correct.
 6 Q. Then you have Payne 1912. And for that let's
 7 look at Exhibit 145. We've looked at this a number of times.
 8 What's the estimate of flow there that you placed on figure
 9 one?
 10 A. Yes. On the field notes from H.M. Payne November
 11 18th 1912, at the bottom of the first page that was
 12 exchanged, I intended to take an accurate measurement of the
 13 source but was unable to do so on account of there being a
 14 break in the dam at the reservoir.
 15 Continuing on the next page -- Excuse me. And
 16 the water not confined to any one channel. By an estimate I
 17 should place the flow of this spring at about eight
 18 second-feet or a little more.
 19 Q. All right. So that's where you got that Payne
 20 1912 on your figure one; correct?
 21 A. Correct.
 22 Q. Now, Exhibit 146 is an exhibit we have not talked
 23 about yet. Can you describe what that is?
 24 A. This exhibit has copies of water supply cards on
 25 file here at the State Engineer's office. Several of these

1 talking.
 2 HEARING OFFICER JOSEPH-TAYLOR: Take it off the
 3 board.
 4 Q. (By Mr. Taggart) All right. So what is figure
 5 one?
 6 A. Figure one is a compilation of the reported
 7 discharge from Shipley Hot Spring, both reports of discharge
 8 and later measurements of discharge.
 9 Q. And in testimony so far, and I'm going to ask you
 10 about each one of the readings that are on this graph, and
 11 I'm going to move through this quickly since some of these
 12 things have already been discussed. But your first item that
 13 is listed in your legend is Romano v. Sadler, 1913. And is
 14 that based upon that information that Dr. Yednock discussed?
 15 A. That's correct. A third of the flow being five
 16 CFS, it imputes out to 15 CFS.
 17 Q. And then there's also in Exhibit 142 there's
 18 something called Eccles v. Sadler. I'm sorry. Let me
 19 restate that. On your legend you list Eccles v. Sadler,
 20 1917. And is that from Exhibit 142?
 21 A. That's Dr. Yednock's?
 22 Q. Yes.
 23 A. Yes, that's correct.
 24 HEARING OFFICER JOSEPH-TAYLOR: Doctor who?
 25 THE WITNESS: Dr. Yednock.

1 are reporting applied for diversion rates from Big Shipley
 2 Hot Spring. And there's also a copy of a card that refers
 3 back to the field notes that I just read. Again, it
 4 documents, it has recorded the measurement of the observation
 5 of Payne of eight CFS on November 18, 1912.
 6 MR. TAGGART: We would like to move admission of
 7 Exhibit 146 at this time.
 8 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 9 MS. PETERSON: 146?
 10 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 11 MS. PETERSON: I just have a question about the
 12 second page of that exhibit. I didn't know who K.W. Corkill
 13 was.
 14 MR. TAGGART: Actually if I could for the record.
 15 I believe that that is not -- We asked for records from the
 16 State Engineer's office. This was on the copy that we
 17 received. This is a different water source. This is Corkill
 18 is the name there and I think it's -- I can't explain what
 19 the water source is. But I think that's a different water --
 20 a different location altogether in the state.
 21 HEARING OFFICER JOSEPH-TAYLOR: Corkill,
 22 C-o-r-k-i-l-l?
 23 MR. TAGGART: Yes. I say that partly because I
 24 know the name and it's usually associated with the Newlands
 25 Project in the Fallon area.

1 MS. PETERSON: It says Shipley or Pete Hansen.
 2 So I think the Pete Hansen is over there.
 3 MR. TAGGART: Other than that, I don't have any
 4 other -- I can't explain what that means.
 5 HEARING OFFICER JOSEPH-TAYLOR: I'm not intending
 6 to rely on page two of this exhibit?
 7 MR. TAGGART: No.
 8 HEARING OFFICER JOSEPH-TAYLOR: Then can we just
 9 pull it out if you're not going to rely on it?
 10 MR. TAGGART: Yes, we can.
 11 HEARING OFFICER JOSEPH-TAYLOR: If we pull out
 12 page two, Ms. Peterson, any objection to the admission of
 13 Exhibit 146?
 14 MS. PETERSON: No objection.
 15 HEARING OFFICER JOSEPH-TAYLOR: Mac, get rid of
 16 that page. Exhibit 146 will be admitted.
 17 MR. TAGGART: Thank you.
 18 Q. (By Mr. Taggart) Now, Mr. Smith, let's turn to
 19 Exhibit 137. This too has been discussed at length on the
 20 third page of that exhibit. This is a letter from the State
 21 Engineer. It involves Application 2679. Mr. Buschelman
 22 referred to this and this is a denial letter for that 429,
 23 2679. And in the third paragraph there's a statement, the
 24 water amount to go approximately seven or eight cubic feet
 25 per second is ditched to several parts of the ranch. This is

1 Q. Now let's move to Exhibit 121. And you've
 2 identified on your figure USGS WSP-679-B. Was that value
 3 obtained from a document that's been marked as Exhibit 121?
 4 A. That's correct. This is a publication by the US
 5 Geological Survey water supply paper 679-B entitled thermal
 6 springs in the United States.
 7 Q. What year was it published?
 8 A. The publication on the inside cover is 1937.
 9 Q. Does it have a reported discharge for Shipley
 10 Springs?
 11 A. Yes, it does. On page 162 listed as map number
 12 91-B, it's called in the first -- in the name column Sadler
 13 Springs. There's a notation in the remarks formerly Big
 14 Shipley Springs. And it's reported discharge in the column,
 15 approximate discharge gallons per minute is 5,000 gallons a
 16 minute. There are three references for data that's presented
 17 in the table.
 18 Q. And how many CFS is 5,000 gallons per minute?
 19 A. It's approximately 11.1 CFS.
 20 Q. And what is the use of that spring as noted in
 21 the table?
 22 A. It's noted as irrigation.
 23 Q. In the protestant's report or expert report they
 24 state that Mifflin in a later document that we're going to
 25 get to used this value and it's actually derived from a

1 not listed separately on your chart. Can you please explain
 2 that?
 3 A. My interpretation upon reading this is this
 4 letter was authored approximately ten months after Payne made
 5 his inspection of the ranch and his visual estimate. I did
 6 not find any other record of flow on the water supply card.
 7 So my interpretation was is this was referring back to the
 8 observations that had been made ten months prior.
 9 Q. And is there a separate indication of an estimate
 10 of flow on that water card?
 11 A. There's not.
 12 Q. So again, Exhibit 146 there's a water card, the
 13 only estimate there is the one done by Payne on November
 14 18th, 1912; right?
 15 A. Correct.
 16 Q. So now let's move on to the next item on your
 17 figure, which is A. Sadler, 1931. Exhibit 139 has been
 18 previously admitted in to evidence. There's a page there
 19 that's marked page 319. Is that the source of this symbol?
 20 A. That's correct. This was a letter that, a
 21 document that was entered in to evidence. It is a letter
 22 from 1931 that goes through and describes the characteristics
 23 and the assets, I believe, of the Sadler Ranch. And it lists
 24 spring supply 13 second-feet of water from which runs in to
 25 reservoir and ditches.

1 reported discharge in the late 1800s. Are you familiar with
 2 the protestant's statement like that?
 3 A. Yeah. That statement is in error.
 4 Q. Why is that?
 5 A. The Mifflin document, Mifflin 1968 document
 6 references a source as Eakin 1962. Eakin being
 7 Reconnaissance report number six, I believe, for Diamond
 8 Valley.
 9 HEARING OFFICER JOSEPH-TAYLOR: E-a-k-i-n.
 10 Q. (By Mr. Taggart) And you also have in Exhibit
 11 122 -- And do you have a copy of that? I just wanted to ask
 12 you is this another publication that reports that same value
 13 that we just had on the thermal waters?
 14 A. The thermal waters of the US, the 1937
 15 publication there are three references. Two of the
 16 references are from US Geological Survey's publications in
 17 the 1800s. Both of these documents acknowledge Shipley
 18 Spring as a thermal resource. But neither of those two
 19 publications that are referenced actually cite a discharge
 20 amount.
 21 Q. Let's move on to the Slagowski 1937 through 1940
 22 value that you have on your figure. Is that information
 23 coming from what's been marked as Exhibit 132?
 24 A. That's correct.
 25 Q. Please describe that.

1 A. Dr. Yednock went through the Eureka Memories
 2 publication. And Mr. Slagowski, S-l-a-g-o-w-s-k-i, his
 3 report, and he worked on the ranch from 1937 to 1940. And
 4 his report is they have big ditches up from this huge spring.
 5 It's a big spring, about 12 second-feet of water.
 6 Q. Okay. So that's where the 12 second-foot value
 7 comes from in your figure?
 8 HEARING OFFICER JOSEPH-TAYLOR: In your what?
 9 MR. TAGGART: In your figure, figure one of
 10 Exhibit 108.
 11 THE WITNESS: That's correct.
 12 Q. (By Mr. Taggart) All right. Now, if you turn to
 13 what's been marked as Exhibit 151, and this is a new exhibit
 14 that we haven't talked about yet, what is that?
 15 A. This is a well schedule. It's a field card that
 16 the staff of the US Geological Survey recorded field notes on
 17 when they're out making inspections. And in this case this
 18 is the September 1961 notes by Tom Eakin and H. Winchester.
 19 They were on the Sadler Ranch at the time. They documented a
 20 well which we call the middle well on the ranch. And on the
 21 back of his note card he has also made notes on both Indian
 22 Camp Spring and Shipley Hot Spring.
 23 Q. So on the back page it's a little hard to read.
 24 It looks like the letters from the front page are bleeding
 25 through on that copy. But at the bottom of that page what

1 Eureka County Exhibit 303. Both sides offered the same
 2 exhibit. I think we'll be using the Eureka County 303 number
 3 as we ask questions because that's the exhibit where the
 4 document actually exists. We just intended to resubmit it in
 5 an attempt to use single page to save space. So this is
 6 Eureka County 303. And if you could turn to the inside cover
 7 of the front page and please describe what that's a picture
 8 of.
 9 A. There's a picture of Shipley Hot Spring. And the
 10 caption beneath the photo reads "discharge is reported to be
 11 about 15 CFS."
 12 Q. And this is the publication that Eakin prepared
 13 that is in the Reconnaissance report for Diamond Valley?
 14 A. That's correct.
 15 MR. TAGGART: We would offer Exhibit 303.
 16 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 17 MS. PETERSON: No objection. I think it will be
 18 a big help.
 19 HEARING OFFICER JOSEPH-TAYLOR: 303 will be
 20 admitted.
 21 Q. (By Mr. Taggart) All right. Now let's skip to
 22 Exhibit 304, again Eureka County 304. And please turn in
 23 that document to page 30 through 31. And this is a report by
 24 Harrill; correct?
 25 A. That's correct.

1 does it say?
 2 A. At the bottom it has report Shipley Hot Spring
 3 discharge about 12 and a half CFS.
 4 Q. And what does it say about Indian Camp Spring?
 5 A. For Indian Camp it says report discharge about
 6 two and a half CFS, present estimate discharge one and a half
 7 to two CFS. And there's also some notes on how Indian Camp
 8 Spring had been developed via some trenches both north/south
 9 and a trench east/west to collect and convey the spring
 10 water.
 11 MR. TAGGART: All right. We would ask to admit
 12 Exhibit 151 at this time.
 13 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 14 151?
 15 MS. PETERSON: No objection.
 16 HEARING OFFICER JOSEPH-TAYLOR: While we're doing
 17 that, Mr. Taggart, 121 and 122?
 18 MR. TAGGART: Yes. Thank you. 121 and 122.
 19 MS. PETERSON: Was the thermal?
 20 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 21 MS. PETERSON: No objection.
 22 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 121
 23 and 122 will be admitted.
 24 Q. (By Mr. Taggart) Now we get to Eakin 1962 on the
 25 figure. And the exhibits are marked as 276. It's also

1 Q. Does he provide measurements of flow at Shipley
 2 Hot Springs?
 3 A. Yes. So this is water resources bulletin number
 4 35 by Harrill and Lamke published in 1968. The section on
 5 spring discharge, page 30 in the bottom paragraph, slight
 6 discharges in spring -- slight decreases in spring discharge
 7 have occurred in both Shipley Hot Spring and Thompson Ranch
 8 Spring. These changes are interpreted as adjustments to
 9 local development or as natural fluctuations, which may
 10 represent below average precipitation in the 1950s. And the
 11 sentence continues on, but I'll end there.
 12 Q. All right. And those flow readings are provided
 13 on your figure?
 14 A. They are. As listed in table nine on page 31.
 15 Q. And on your table you have USGS measurements and
 16 there's quite a few. But the ones between 1960 and 1970,
 17 those come from this report?
 18 A. No. Only the three measurements of 1965 and
 19 1966, they're the first -- the left most red points, squares
 20 on my figure one.
 21 Q. Okay. Did those come from this report?
 22 A. That's correct.
 23 Q. All right. Now, Exhibit 289 is the next one I
 24 want to ask you about. Do you have an indication of Mifflin
 25 1968, and does that come from what's been marked as Exhibit

1 289?

2 A. That's correct.

3 Q. And please describe that.

4 A. A publication by the Desert Research Institute at
5 the University of Nevada, July 1968 delineation of
6 groundwater flow systems in Nevada by M.D. Mifflin. In this
7 document they do acknowledge Shipley Hot Spring as a regional
8 carbonate rock source spring. In it they do refer to
9 discharge of 6,750 gallons a minute. It's difficult to find
10 in the documentation. But they do cite Eakin in 1962 as a
11 data source. And so that is -- 6,750 gallons a minute is
12 approximately 15 CFS. So I believe this document is simply
13 sighting Eakin's 1962 report.

14 MR. TAGGART: Okay. Thank you. We offer in to
15 evidence Exhibit 304 and 289.

16 HEARING OFFICER JOSEPH-TAYLOR: Any objection?

17 MS. PETERSON: No objection.

18 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

19 They'll be admitted.

20 Q. (By Mr. Taggart) Okay. Now let's talk about
21 Exhibit 119. What is this report?

22 A. This report is publication bulletin number 91 by
23 the Nevada Bureau of Mining and Geology, thermal waters of
24 Nevada by Garside and Schilling, 1979. In it, Shipley Hot
25 Springs is site number 103. Reported range discharge 3,000

1 occasion. This is a compilation of 47 discharge measurements
2 made between the time frame of May 7th 2008 through June
3 12th, 2013.

4 Q. Okay. And is that -- that's identified as
5 Exhibit 147; is that correct?

6 A. That's correct.

7 Q. And then you also have on your figure DS/TK
8 August 2013. What is that?

9 A. Mr. Katzer and I made a site inspection and a
10 measurement of spring discharge in August of this year. We
11 made two different measurements. Mr. Katzer mentioned that
12 there are four different outflow diversions out of the main
13 pond at the time the main diversion was acted. And we made
14 measurements of flow from the diversion out of the Shipley
15 Hot Spring.

16 Q. All right. Now, Eureka County put in an Exhibit
17 306 that I'm going to show you. Again, this is the only time
18 I'll be able to ask you about this exhibit. They haven't had
19 a chance to describe why they put it in -- why they've
20 offered it. But I want to ask you do you recognize it?

21 A. I do.

22 Q. What is it?

23 A. This is the cover for the July 2010 report,
24 hydrogeology numeric flow model, roundhill project, Eureka
25 County, Nevada, and it was prepared by Montgomery

1 to 6,750 gallons per minute. And on page 79 tabulation it
2 cites those ranges of discharge and their sources. You'll
3 recognize the sources, Eakin '62, Harrill 1968. There's also
4 an additional source, Warning 1965. The Warning 1965
5 document, however, is referring to the thermal springs in the
6 US 1937 information.

7 MR. TAGGART: Okay. And let's move on now to --
8 Well, let me offer Exhibit 119 in to evidence.

9 HEARING OFFICER JOSEPH-TAYLOR: Any objection?

10 MS. PETERSON: No objection.

11 HEARING OFFICER JOSEPH-TAYLOR: 119 will be
12 admitted.

13 Q. (By Mr. Taggart) Now, where did you get the
14 values that have been entered as USGS measurements from the
15 late 1970s to the mid 1990s?

16 A. Uh-huh. Two sources. Measurements through 1990
17 are reported in the USGS publication of 1995 by Arteaga and
18 others. But all of these data, including the 1965 and '66
19 measurements through 1994, are available on the USGS National
20 Water Information System database, NWIS.

21 Q. Now, let me ask you about what's been marked --
22 what is identified as GMI measurements. What are those?

23 A. These are measurements that have been made on
24 behalf of General Moly, the Eureka Moly project, by a number
25 of hydrologists, including Mr. Katzer, Mr. Squires, myself on

1 Associates --
2 (The court reporter interrupts)

3 THE WITNESS: Montgomery and Associates interflow
4 hydrology and Barranca, B-a-r-r-a-n-c-a.

5 Q. (By Mr. Taggart) Now, they provided one page
6 from that document. And what page number is that or does it
7 have it on there?

8 A. I'm not seeing the page number.

9 Q. Is it a figure?

10 A. It is a figure.

11 Q. And this figure reports discharge at Shipley
12 Spring; correct?

13 A. This figure reports model simulations of
14 discharge at Shipley Hot Spring and several other springs in
15 Diamond Valley.

16 Q. Is this -- Is this model simulation consistent
17 with your understanding of the flow estimates at Shipley
18 Spring that we just described?

19 A. The numeric flow model for this particular
20 project and client does not agree very well with current
21 Shipley Spring discharge. The spring discharge in the --

22 HEARING OFFICER JOSEPH-TAYLOR: Speak up. I lost
23 you.

24 THE WITNESS: The simulated discharge by the
25 model over predicts what we actually observe today and what

1 we have observed in the past several years.
 2 Q. (By Mr. Taggart) What do you believe a better
 3 record of actual flow at Shipley Spring is of this model
 4 simulation or the record of measurements that we just
 5 reviewed?
 6 A. Now, obviously the physical measurements dictate,
 7 when we develop a numeric model we're striving to try to
 8 match that data. So the physical measurements are the data
 9 for the spring discharge.
 10 HEARING OFFICER JOSEPH-TAYLOR: Spring discharge
 11 or stream?
 12 THE WITNESS: Spring discharge.
 13 HEARING OFFICER JOSEPH-TAYLOR: Sorry to
 14 interrupt you, but I've got to make sure the record is made.
 15 Q. (By Mr. Taggart) All right. Let's go to Exhibit
 16 108, page five, figure three. And please -- Well, have you
 17 made a prediction about what the future flows will be at
 18 Shipley Spring?
 19 A. Yes, I have.
 20 Q. And is that included in this figure?
 21 A. Yes. Figure three in Exhibit 108 is the plot of
 22 the measurements of Shipley Hot Spring discharge from May of
 23 2008 through our field observation in August of 2013. You
 24 can see there's been a fairly rapidly decline in trend in
 25 discharge. There's variability. We can talk about that if

1 familiar with the method of making measurements of flow at
 2 Shipley Spring?
 3 A. Yes.
 4 Q. And I have up on the screen page two of Exhibit
 5 109. This is figure one. Before I ask you any questions,
 6 what is Exhibit 109?
 7 A. Exhibit 109 is entitled summary of exploration
 8 drilling and pumping test at Shipley Hot Spring, Eureka
 9 County, Nevada. It was prepared by my company, Interflow
 10 Hydrology, March of 2013. And it's a summary of the efforts
 11 that were undertaken last year by the Sadler Ranch to
 12 identify the spring discharge flow system, fault system and
 13 to complete a test production well in to that flow conduit
 14 for the spring.
 15 Q. Now, using the figure that's on the screen, which
 16 is again page two from Exhibit 109, please describe for the
 17 State Engineer how measurements are taken at the spring. Do
 18 you need a pointer?
 19 A. Please.
 20 Q. Oh, there it is?
 21 UNIDENTIFIED SPEAKER: I've got all kinds of
 22 pointers.
 23 THE WITNESS: Okay. So this is a picture that
 24 Mr. Frazer took by mounting a camera on to a balloon and
 25 floating it over the Shipley Hot Spring pond, so that's why

1 needed. But you project that trend downward and Shipley Hot
 2 Spring will have ceased the flow by about 2019.
 3 Q. All right. And the measurements that you base
 4 that on are the same ones we saw on the prior figure, figure
 5 one, identified as the GMI measurements and the DS/TK August
 6 2013 measurements?
 7 A. Yes. That's correct. And I should note on the
 8 right-hand column there are three measurements,
 9 September/October time frame where it's noted that well is
 10 on. We'll be entering some evidence on that. But there was
 11 a production, a production well drilled and there was pumping
 12 tests ongoing in that September/October time frame of last
 13 year.
 14 Q. And so in Exhibit 147 there is a list of flow
 15 measurements; correct?
 16 A. That's correct.
 17 Q. And on that figure in the right-hand column
 18 there's an indication of well?
 19 A. Correct.
 20 Q. And those three measurements were not included in
 21 your figure three?
 22 A. That's correct, they are not on the plot.
 23 Q. Now I want to ask you specifically about the
 24 reliability of the historic flow estimates at Shipley Spring.
 25 And you already talked about this a bit. Obviously you're

1 the orientation is a little awkward. North you can see is
 2 oriented up to the top right corner of this figure. So on
 3 the west-hand side is where there's actually a spring seat in
 4 the bank of this pool. The pool is approximately three acres
 5 in size. And you can observe some discharge here, but it's
 6 fairly small.
 7 MR. TAGGART: And here is the --
 8 THE WITNESS: On the west -- the upper -- the
 9 northwest corner of the pond, the top left. What we also
 10 observe in the pool here is the western, lightly-colored
 11 areas is observe a number of orifices, they're submerged in
 12 the bottom of the pool area. So this western side is where
 13 the majority of the inflow that we understand sources the
 14 pond has derived on the west-hand side.
 15 There are, as was mentioned, four diversions out
 16 of the pond. There's the southern diversion at the bottom of
 17 the photo. That's called out at the label. There is what
 18 you'll call the main channel where the primary diversion is
 19 out the eastern direction from the pond. And then there are
 20 two northern diversion channels out of the pond.
 21 Q. (By Mr. Taggart) Now, when you make measurements
 22 of flow at this spring you can't actually measure the amount
 23 of flow that comes out of the ground directly; right?
 24 A. That's correct. You have to measure the
 25 discharge at the time that you're out at all four of these

1 outfalls. So the combined discharges at that point in time,
 2 the discharge of pond. If the pond stage is not equivalent,
 3 this is an active source of irrigation. If the pond is
 4 filling or lowering, that's going to affect your discharge
 5 measurement.
 6 Also, one thing that's important to know is the
 7 inverts for these are not all the same. The northern
 8 discharge requires a higher pond level to get a volume of
 9 irrigation water out. And in fact today they can no longer
 10 get irrigation water out of these northern channels. And
 11 part of the reason -- I believe we may discuss this later --
 12 is there's only about one foot, one to one and a half foot of
 13 artesian head on the spring source as of this summer.
 14 There's very little head driving spring discharge presently
 15 at Shipley Hot Spring. So they have lost the ability to
 16 raise the pond level high enough. But again, this is
 17 submerged or for this spring system.
 18 So also this is important for all to put this in
 19 context on all the historic measurements. They have to raise
 20 the pond level to get water out the northern diversion or to
 21 some degree out of the southern diversion. That puts more
 22 pressure, back pressure on the spring system. It affects the
 23 spring discharge. So if you're diverting out of the main
 24 channel out to the east, that can operate at a little lower
 25 stage. There's less pressure than you would expect and

1 Q. If you don't recall that, that's fine. I can --
 2 A. I can skip to that if you'd like.
 3 Q. It's okay. We'll get to it in a minute. The
 4 factors you just described, what the irrigation practice is,
 5 whether the water is going underneath the dam, the head, do
 6 all of these factors influence the ability to make a visual
 7 estimate of the actual flow at the spring?
 8 A. It would be very -- It would be very difficult.
 9 You know, we all make visual estimates at times. In fact, a
 10 lot of times we'll make them before we make the real estimate
 11 and see how accurate we are. But having to look at multiple
 12 sources, sometimes you might make a visual estimate if
 13 there's only a small amount of flow, a tenth or two-tenths of
 14 CFS flowing north, we'll make a visual estimate on that. But
 15 visual estimates are there.
 16 Q. (By Mr. Kolvet) Mr. Katzer, you just heard the
 17 testimony regarding measuring spring flows. Do you concur or
 18 disagree with the fact that they're difficult to make?
 19 A. Dwight just wrote the manual. They're very
 20 difficult to make, they are.
 21 Q. Did you in fact do some of the measurements that
 22 have been referenced here today?
 23 A. I did.
 24 Q. Which ones did you do?
 25 A. My initials are there on the sheet scattered

1 hydraulically more spring discharge if you're diverting out
 2 of that. And it's assuming that the pond is all
 3 equilibrated. That's the other thing too.
 4 So it is complicated and the actual discharge is
 5 dependant upon how the spring water is being diverted out at
 6 a time.
 7 Q. Are you aware of whether water escapes underneath
 8 the dam or gets around where water is measured?
 9 A. Well, you do observe the dam is on the southern
 10 edge and wraps around a pond here, actually southeastern, but
 11 on the bottom of the figure. And there is, as with a lot of
 12 dams, there's seepage out the toe. Normally we don't assign
 13 any outflow to that source of seepage.
 14 Q. If there is seepage in that location, it would
 15 not be included in an estimate; right?
 16 A. I have not and I don't believe hydrologists for
 17 General Moly have included that as an additional component.
 18 Q. In reviewing the documents that Harrill prepared
 19 that we have in evidence, did he ever remark about the
 20 difficulty of making measurements or the reservoir operations
 21 at this spring?
 22 A. Yes. And I believe, Mr. Taggart, you're
 23 referring to the 1982 testimony by Mr. Harrill?
 24 Q. The 1982 memo.
 25 A. Oh, I'm sorry. The 1982 memo.

1 throughout. I was there many times with Bob Squires and with
 2 Dwight a couple times.
 3 Q. And the time frame?
 4 A. Between '08 and '13.
 5 Q. And did you have difficulty making accurate
 6 measurements during that time?
 7 A. No, I didn't have difficulty.
 8 Q. You weren't making them?
 9 A. I was making them. They're really difficult to
 10 make. Sometimes you get caught with moss and you start all
 11 over. It's not a simple thing to do.
 12 Q. (By Mr. Taggart) Okay. Mr. Smith, you indicated
 13 before that you concluded that the flow at Shipley was
 14 between 11 and 12 CFS prior to the 1940s?
 15 A. Correct.
 16 Q. How did you factor the reliability of the flow
 17 estimates in to that conclusion?
 18 A. Well, again, in my initial statement, we don't
 19 know for certain that any of these are actually measurements.
 20 We know for certain that the initial, the lowest estimate
 21 from 1912 was a visual estimate. We don't know the source.
 22 I would like to believe that the USGS publication. I
 23 mentioned there were three sources. The other source is data
 24 on file with the USGS. They're not on file in Carson City
 25 because I looked. And the problem is Carson City records

1 here only go back to about 1940. This publication is 1937.
 2 So again, but we have no direct evidence that any
 3 of these measurements between eight and 15 CFS were actually
 4 measurements. I like to believe that some of those were
 5 measurement-based. But taken all equally, if you have half a
 6 dozen estimates of flow, say they're all estimates, what's
 7 the most accurate estimate? And this is kind of a basic
 8 principle of statistics. You take a group of kids and you
 9 ask them how many marbles in a jar and you take the average
 10 of them all and almost every time they are almost exactly on.
 11 When you have a bunch of estimated numbers, the best
 12 available scientific estimate is the average. And I think
 13 that -- I feel better, but that turns out to be exactly where
 14 the 1937 USGS publication puts the spring discharge at
 15 approximately 11 to 12 CFS.
 16 Now, there's some physical basis to my
 17 interpretation too, because then you would ask, well, why
 18 were measurements begun in the mid-sixties and not
 19 documenting that much flow. I think there's a good physical
 20 basis for that also.
 21 Q. Right. And we'll get in to that. All right.
 22 Now I want to ask you about Indian Camp Spring real quickly.
 23 Is there a reported flow at Indian Camp Spring? I'll show
 24 you --
 25 A. Yes. Harrill -- Again, we mentioned that Eakin's

1 A. Yes.
 2 Q. And do you have any knowledge of whether that's
 3 true?
 4 A. You can also bracket the time frame on the
 5 improvement. If you look at the 1950s aerial photography and
 6 1940s, you'll see that Indian Camp Spring was a spring line
 7 of about a dozen seeps along a probable fault. So somewhere
 8 between early fifties photography and when Mr. Eakin visited
 9 in 1961 there had been a trenching effort to where they had
 10 trenched along the spring line to better collect that flow
 11 and then also trenched out east, I presume, to then convey
 12 that flow out towards the irrigated lands.
 13 Q. And were there other springs between Shipley
 14 Spring and Indian Camp Spring?
 15 A. There were. And Mr. Frazer, we presented some of
 16 his photography on that. There was actually about a quarter
 17 mile to the south what appears to be a fairly substantial
 18 spring pool there. It was actually labeled on the
 19 topographic map and still is labeled as Big Shipley Hot
 20 Spring. It's not, but there was a spring source there also.
 21 And there's pipes in evidence that it was also somehow
 22 utilized for -- on the ranch.
 23 Q. I'm going to show you what's slide 62 from
 24 Exhibit 617. And that's that time series that you just
 25 described. Is that the time series you just described?

1 1961 visual estimate of the discharge one and a half to two
 2 CFS. Harrill also visited Indian Camp Spring and made
 3 measurements.
 4 Q. I'm going to show you Exhibit 304 on page 31,
 5 table nine from Harrill, 1968.
 6 A. So basically in table nine, Indian Camp Spring is
 7 not labeled Indian Camp Spring. It's labeled an unnamed.
 8 But that is the correct township, range and the section and
 9 quarter section. So Township 24 north, Range 52 east,
 10 Section 26 D. That is Indian Camp Spring. So Mr. Harrill
 11 reports two discharge measurements, one in 1965, one in 1966
 12 of 0.66 and 0.82 CFS.
 13 Q. Do you recall what Eakin noted the flow at Indian
 14 Camp Spring was?
 15 A. Again, his, on the back of his field card was one
 16 and a half to two CFS as a visual estimate.
 17 Q. Do you know when Indian Camp Spring went dry?
 18 A. We can make an approximation based on the aerial
 19 photography, which places cessation of flow at Indian Camp
 20 Spring between the mid eighties to perhaps the early nineties
 21 time frame.
 22 Q. Do you know if Indian Camp Spring was ever
 23 improved? In the protestant's reports they've made
 24 statements indicating that Indian Camp Spring was improved.
 25 Do you recall those statements?

1 A. Yes. That shows the -- As Mr. Frazer pointed
 2 out, there were other springs also. A spring seep line to
 3 the south. Another spring out to the east a little further.
 4 So there were a number of springs in this area.
 5 Q. All right. And are those two water located --
 6 those springs or seeps or whatever you call them, are they
 7 dry today?
 8 A. They are dry with the exception of, I believe I
 9 recall visiting the eastern -- the eastern most seep. And I
 10 believe there is still a very small amount of pooled water --
 11 HEARING OFFICER JOSEPH-TAYLOR: I couldn't hear
 12 the end. A very small amount of pooled water?
 13 THE WITNESS: Of pooled water and a little bit of
 14 riparian vegetation.
 15 MR. TAGGART: And at this time I'm going to turn
 16 it over to Mr. Kolvet who's going to ask some questions about
 17 the other side of that.
 18 MR. KOLVET: Mr. Katzer, have you prepared a
 19 summary of your testimony in this matter? And I would refer
 20 to you Exhibit 201.
 21 HEARING OFFICER JOSEPH-TAYLOR: I'm going to hold
 22 you up two seconds, Mr. Kolvet.
 23 Mr. Taggart, let's get your exhibits in.
 24 MR. TAGGART: Thank you.
 25 HEARING OFFICER JOSEPH-TAYLOR: Let's start with

1 147.
 2 I'm sorry, Mr. Kolvet.
 3 MR. TAGGART: Yes, we'd like to offer 147 in to
 4 evidence.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 6 MS. PETERSON: No objection.
 7 HEARING OFFICER JOSEPH-TAYLOR: 147 will be
 8 admitted. 108 and 109.
 9 MR. TAGGART: That we'll wait until he's done.
 10 And 109 we have more work on. 108 is his expert report.
 11 HEARING OFFICER JOSEPH-TAYLOR: 306.
 12 MR. TAGGART: 306 I'll wait and see if Eureka
 13 County uses it.
 14 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 15 Go ahead, Mr. Kolvet.
 16 Q. (By Mr. Kolvet) Mr. Katzer, my question to start
 17 was had you prepared a summary of your testimony?
 18 A. Yes, I have.
 19 Q. And that would be Exhibit 201; is that correct?
 20 A. 201, that's correct.
 21 Q. And you also prepared a rebuttal report, is that
 22 also correct?
 23 A. That's correct.
 24 Q. And if I can find that. 263, would that be your
 25 rebuttal report?

1 also to Thompson Springs.
 2 Q. And does that cone of depression being spread in
 3 those directions affect the spring flows in this location?
 4 A. Yes, it does. And this started a long time ago.
 5 And this is kind of like déjà vu because it's like the
 6 carbonate aquifer memo. Pete Morros called me one day when I
 7 was acting district chief with the GS and he wanted to send
 8 Jim Harrill out to Diamond Valley because Jim was the most
 9 knowledgeable person in the office to do a field
 10 investigation. So Jim went out and spent a couple days out
 11 there. Came back and wrote a memo. And that's Exhibit 202.
 12 I put a letter on -- letter to it, sent it to --
 13 sent it back to Pete with Jim Harrill's remarks. And I'd
 14 like to read the -- read the part of my letter. This is
 15 Exhibit 202. And it's not in the present exhibits, the
 16 exhibit list for the board, but it's in the hard copy. The
 17 conclusions we have reached are essentially the same --
 18 HEARING OFFICER JOSEPH-TAYLOR: Slow down.
 19 THE WITNESS: -- as those discussed in water
 20 resources bulletin 35, page 30 and 50, 52. Sustained pumping
 21 from the south diamond subarea is probably responsible for
 22 the general decrease in water levels and spring discharge.
 23 Accelerating this condition is the combined effect of the
 24 discharge from the shot holes in the 1976-77 drought.
 25 Fast forward 31 years later, I would write that

1 A. I don't know the number. That sounds right.
 2 HEARING OFFICER JOSEPH-TAYLOR: Yes, 263.
 3 THE WITNESS: Yes.
 4 MR. KOLVET: I would offer both of those.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 6 MS. PETERSON: No objection.
 7 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 263
 8 and 201 will be admitted.
 9 Q. (By Mr. Kolvet) Mr. Katzer, in preparing that
 10 report, did you analyze various spring flows in the Diamond
 11 Valley area?
 12 A. I did.
 13 Q. What did you analyze?
 14 A. Well, I looked -- I looked mostly at Thompson
 15 Spring, but I also looked at Shipley because you have to look
 16 at both of the springs in the valley because they both have
 17 been severely impacted by over pumping.
 18 Q. When you say they've been impacted by over
 19 pumping, what do you base that on?
 20 A. Well, just on the amount of water that's been
 21 taken out of the valley that greatly exceeds the perennial
 22 yield. I think it's a pretty well known fact that Diamond
 23 Valley is over pumped. And the irrigators in the south
 24 subarea are responsible for taking all of that water. And
 25 the cone of depression has spread to Shipley Hot Springs and

1 differently. I wouldn't say that the pumping in the south
 2 has probably impacted the springs. I would say it has
 3 impacted the springs. I don't think there's any doubt that
 4 that's happened.
 5 HEARING OFFICER JOSEPH-TAYLOR: What's the date
 6 on that letter, Mr. Katzer?
 7 THE WITNESS: April 5th 1982.
 8 HEARING OFFICER JOSEPH-TAYLOR: That is Exhibit
 9 203?
 10 THE WITNESS: Correct.
 11 MR. KOLVET: I would offer 203 at this point.
 12 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 13 MS. PETERSON: No objection.
 14 HEARING OFFICER JOSEPH-TAYLOR: It's admitted.
 15 MR. KOLVET: And Exhibit 202 as well.
 16 HEARING OFFICER JOSEPH-TAYLOR: 203 will be
 17 admitted. Any objection to Exhibit 202?
 18 MS. PETERSON: No objection.
 19 HEARING OFFICER JOSEPH-TAYLOR: 202 will be
 20 admitted.
 21 Q. (By Mr. Kolvet) With respect to the impacts on
 22 spring flow as you've kind of summarized that, what did you
 23 do to determine if that was in fact the current at Thompson
 24 Springs?
 25 A. Well, Thompson Springs is a real difficult one

1 because there's very little data. There was never a recorder
 2 in the spring to measure the flow on a continuing basis.
 3 There are just a series of miscellaneous measurements that
 4 were made. And I talked a few minutes ago about the
 5 measurements made in '65 and '66 by Robert Lamke.
 6 And then there's a big, big blank area. And the
 7 measurements don't start again until the early eighties. And
 8 then they start making several measurements out there.
 9 Q. Before we get too far, 204 is up on the screen
 10 right now. That's a map of the Diamond Valley; is that
 11 right?
 12 A. Right.
 13 Q. And Thompson Spring, Thompson Ranch Spring is
 14 designated; is that correct?
 15 A. Right here. Shipley is over here. And then
 16 there are a couple wells that I want to talk about. And then
 17 of course there's the playa.
 18 Q. Okay. Now, Exhibit 205, let's skip to that.
 19 205. Where is 205?
 20 A. That was that second one you had up there.
 21 Q. Seven. We don't have 205?
 22 A. Oh, you don't. 204 and 205 are listing of
 23 discharge measurements for Shipley and for Thompson Springs.
 24 Q. And what was the source of those exhibits?
 25 A. Well, the one for Shipley Hot Springs are the

1 A. 1982?
 2 Q. Yes.
 3 A. Considerable. Could we -- One more.
 4 Q. Okay. What is 208?
 5 A. 208, Dwight prepared this for me. A series of
 6 three narrowly parallel lines. And they show the amount of
 7 water that was used, the amount of groundwater that was used
 8 in the whole south diamond subarea. There's three curves
 9 there. And the first one, the red one, represents a four
 10 foot duty of water. The green one represents 2.5 ET plus ten
 11 percent. And the third one is just 2.5.
 12 And the only reason I show these is I wanted to
 13 show what was happening to the groundwater system in the
 14 19 -- as time goes by. But the very first -- first thing you
 15 can look at is like 1965. And you can see that they had
 16 10,000 that year. By 1970 they were up to -- they were
 17 probably nearly a little over 30,000. And then ten years
 18 later, another decade, they had increased by another 30,000.
 19 And this is actual pumpage.
 20 And rather, and I don't know if the ET is 2.5 or
 21 2.5 plus ten percent, but what I do know is that the volumes
 22 of water are massive that were taken out of storage. They
 23 were all taken out of storage. And at the same time, the
 24 same time I have this pumpage you also have ET going on. So
 25 not only do you have, say, 30,000 acre-feet going out in any

1 measurements that Dwight and I and Bob Squires made for GMO.
 2 The measurements for Thompson Springs come out of the USGS
 3 database, NWIS.
 4 Q. Do you have that exhibit in front of you, 205?
 5 A. I do.
 6 Q. I didn't tell --
 7 (The court reporter interrupted)
 8 MR. KOLVET: I misspoke on the exhibit number. I
 9 meant to refer him to Exhibit 206.
 10 Q. (By Mr. Kolvet) What does 206 show us?
 11 A. What this shows you is a series of measurements
 12 that were made and it shows what the spring flow is
 13 responding to a pretty good series of water years in the
 14 early eighties, '82, '83, '84. And so the measurements that
 15 Thompson show, I think, a high of about I think it's four CFS
 16 and then they taper back off. And these are in response to
 17 the big water years.
 18 Q. Prior to the eighties what were the measurements
 19 if you're aware of the spring flow from Thompson?
 20 A. None. There were none -- no measurements that I
 21 know of, at least made by the GS.
 22 Q. Any others that you've been able to locate?
 23 A. No.
 24 Q. By 1982, which is the first year on Exhibit 206,
 25 had there been pumping in the valley?

1 one given year from pumpage, but you also have another, I
 2 don't know, another 30,000 for a while until the cone of
 3 depression finally started to capture some of that
 4 groundwater. So it was a massive amount of water. And this,
 5 I believe, is what caused the decline in spring flow and the
 6 drying up of the springs.
 7 Q. In the case of Thompson Springs, do you see the
 8 gradual decline in spring flows in Exhibit 206?
 9 A. Well, it's really hard to see.
 10 Q. 206 is the spring flows?
 11 A. Next one. Whoa, right there. Here's two wells
 12 that I pointed out on the map. The upper one is about two
 13 and a half to three miles north of the Thompson Ranch on the
 14 east side of the valley. The lower one is about two and a
 15 half to three miles south of the ranch. And this is the
 16 available record. And that comes out of a variety of the
 17 data bases. But the upper one has a decline of about, it's
 18 about six to eight feet over that period of time. But during
 19 the early sixties it was just barely starting to decline.
 20 The one that has the really steep slope, the
 21 southern one, has a decline of around, I think it's around 54
 22 or 55 feet through time.
 23 So in between then, we have Thompson Springs
 24 sitting there. And the water level is still going down. Not
 25 only have the springs dried up, but when Dwight and I were

1 there in '08, we measured, at Thompson's main spring by the
 2 house we measured a little over six feet to the water table.
 3 You can still see the water table.
 4 When we went back this last August, you couldn't
 5 see any water was gone. But there was a little pond out away
 6 from the house about 150 feet or so where he had -- where
 7 Milton had dug down to the groundwater table. And that
 8 had -- We ran a level between him and it told us that the
 9 groundwater level had dropped an additional two feet.
 10 So, I mean, I think these lines relatively tell
 11 the whole story that the springs have dried up because the
 12 head was taken off of them. I mean, that water even though
 13 it's geothermal is part of the basin's groundwater supply.
 14 You've got to have the recharge in the mountain block to get
 15 that water in there. The circuitous route that it takes will
 16 drive you crazy trying to figure it out. I mean, it's got to
 17 go down at -- Geochemists have told me that if you have 72,
 18 75 degree water it's got to go down two to 3,000 feet. And
 19 of course, it depends on what is supplying that water,
 20 whether it's coming out of some volcanic magma or if it's
 21 just the general heat, and I can't speak to anything like
 22 that.
 23 I think conceivably that water might be coming
 24 off of Diamond Peak. It wouldn't surprise me a bit to see it
 25 come -- if you could track it down through the bedrock, down

1 A. I have. Cox Ranch Spring. There used to be a
 2 big spring there. You can see the big spring depression.
 3 And that's north of -- north of Thompson Spring a little bit.
 4 And the next one. This is a shot of the Cox
 5 Ranch house that burned down. But back in 1957 I lived there
 6 for about a month. And I was with geology summer camp at the
 7 time. And we used to take baths in Shipley Hot Springs. But
 8 anyway, that's just moot. I couldn't resist taking that
 9 picture.
 10 Q. You're referring to Exhibit 214?
 11 A. Yes.
 12 Q. Exhibit 215 is labeled Box Spring. Where is that
 13 located?
 14 A. North of Cox Ranch Springs, still on the east
 15 side. And this is -- I think this one -- Yeah, ten to 15
 16 feet water table below land surface. And that was just an
 17 estimate. So there's still water there but it's -- and the
 18 springs, the springs even though they've dried up at the
 19 surface, the only reason they've done that is because the
 20 composite head that drives them is gone. The spring water is
 21 still coming in to the valley. No question about that. I
 22 mean, where is it going to go? It's not backing up in to the
 23 mountain range and spilling over. And it's still discharging
 24 in to the valley. Whatever was coming in back those days is
 25 still coming in today. It's still flowing. It's just that

1 through fractures and faults in to the -- almost to the
 2 valley fill and it hits the mountain front fall and flows to
 3 the north. Now, it's probably losing water all the time
 4 and/or gaining basin water because it's not very hot. I
 5 mean, it's warm water. And as I think all the wells, all the
 6 water on the east side have an elevated temperature; right?
 7 MR. SMITH: Just the springs.
 8 THE WITNESS: I mean just the springs. So I
 9 think that's pretty common out there. How it gets there, I
 10 don't know. But it is basin groundwater. It is basin
 11 groundwater.
 12 And back to that '82, '83 bit, '84, I looked just
 13 very briefly at the discharge of Lamoille Creek near
 14 Lamoille, and that's not too far north of Diamond Valley.
 15 And '82, '83 and '84 are the three back-to-back years of
 16 record for that stream. I mean, it was a big stream, all
 17 across Nevada. Storms, I mean. And that's why those streams
 18 have come back briefly. And then the flow died off in -- I
 19 think they were dry by the early nineties, I would have to
 20 look at the record.
 21 Q. (By Mr. Kolvet) Currently Thompson Springs is no
 22 longer flowing; is that correct?
 23 A. That's true.
 24 Q. And have you examined any other springs in the
 25 vicinity of Thompson Springs?

1 it's not flowing to the surface because the head has been
 2 taken off the springs.
 3 Q. And so the applications that are pending for
 4 Mr. Venturacci, to mitigate the loss of the spring source
 5 would be tapping in to that same source of recharge?
 6 A. Yes, it would be the same source, that's correct.
 7 Q. 216?
 8 HEARING OFFICER JOSEPH-TAYLOR: 216.
 9 MR. KOLVET: 216, what is this?
 10 THE WITNESS: This is the last half of our day
 11 there Dwight and I drove down the west side of the valley in
 12 company with the owners of the Sadler Ranch. This is Siri
 13 Ranch Springs. And you can see it's sort of like the Cox
 14 Ranch Springs. There's a big depression there where the
 15 spring flow used to be. It's gone now. Indian Camp Springs
 16 the same.
 17 And in all of these springs, the ones we're
 18 looking at now and the ones on the other side on the Thompson
 19 side of the valley, they're all really dark, dark soils,
 20 really organic. And Doug talked about that yesterday about
 21 how it's really rich stuff. I mean, you can put that in your
 22 garden and grow a great garden, I'm sure. But clearly
 23 there's no water there.
 24 MR. KOLVET: I'll save some additional questions
 25 for later and let Mr. Taggart take over.

1 HEARING OFFICER JOSEPH-TAYLOR: Do you want to
 2 take care of any of your exhibits?
 3 MR. KOLVET: Oh, yeah. Thank you. I think we've
 4 got 202 and 203 in the record.
 5 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 6 MR. KOLVET: 204 is just a map. 205 and 206 even
 7 though he hasn't testified about 205 it's part of the
 8 exhibits that are in his report, which is 201.
 9 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 10 the admission of 204, 205 and 206?
 11 MS. PETERSON: None.
 12 HEARING OFFICER JOSEPH-TAYLOR: They'll be
 13 admitted.
 14 208.
 15 MR. KOLVET: 208 I'd offer.
 16 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 17 208?
 18 MS. PETERSON: No objection.
 19 HEARING OFFICER JOSEPH-TAYLOR: It will be
 20 admitted.
 21 MR. KOLVET: And the 209, the graph of the well
 22 declines.
 23 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 24 209?
 25 MS. PETERSON: I'm sorry. Which one is 209?

1 A. Okay.
 2 Q. And so the next section I'm going to ask you
 3 about is the over appropriation in Diamond Valley. First of
 4 all, Exhibit 287 is the power point that we had put in to
 5 evidence earlier from the State Engineer. On page 17 of that
 6 document there is an indication of the perennial yield of
 7 Diamond Valley being 30,000 acre-feet. Do you see that?
 8 A. Yes.
 9 Q. And I want to turn you to Exhibit 303. We're
 10 going to talk about just the origin of that perennial yield
 11 estimate briefly. In Exhibit 303, this is the 1962
 12 Reconnaissance report, number six, by Tom Eakin. This had a
 13 perennial yield estimate in it; is that correct?
 14 A. That's correct. 23,000 acre-feet annually.
 15 Q. All right. And then in Exhibit 277, which is the
 16 1968 Harrill water resources bulletin 35 for the USGS, does
 17 he have also perennial yield estimate?
 18 A. He does. And that is the currently utilized
 19 estimate of 30,000 acre-feet annually.
 20 Q. What is the reason for the difference in the --
 21 the main reason for the difference between the two estimates?
 22 A. The main reason is Harrill quantified what he
 23 felt was an inflow, an interbasin flow from the Pine Valley
 24 hydrographic area and specifically the Garden Valley subarea
 25 in to northern Diamond Valley. And he -- his estimate of

1 MR. KOLVET: It's the graph showing the wells
 2 below and above north and south.
 3 MS. PETERSON: No objection.
 4 HEARING OFFICER JOSEPH-TAYLOR: 209 will be
 5 admitted. 14 and 16.
 6 MR. KOLVET: 14 and 16, thank you.
 7 MS. PETERSON: No objection.
 8 HEARING OFFICER JOSEPH-TAYLOR: 214 and 216 will
 9 be admitted.
 10 MR. KOLVET: And I think we offered -- I'd offer
 11 215 too. That was the Box Spring photograph.
 12 MS. PETERSON: No objection.
 13 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 215
 14 will be admitted.
 15 MR. KOLVET: And 217.
 16 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 17 MS. PETERSON: No.
 18 HEARING OFFICER JOSEPH-TAYLOR: 217 will be
 19 admitted.
 20 Mr. Taggart.
 21 MR. TAGGART: Thank you.
 22 Q. (By Mr. Taggart) Again, I'm going to endeavor to
 23 go through this next section quickly, so I might describe a
 24 little bit more than I normally would of what's in an exhibit
 25 and just ask you to confirm that.

1 that inflow was 9,000 acre-feet annually. And that is the
 2 largest difference between the two estimates.
 3 Q. And now I want to ask you about the permitted
 4 rights in Diamond Valley. And again, referring to that State
 5 Engineer power point, Exhibit 287, this time at page 17.
 6 They indicate there that 133,000 acre-feet, 133,248 acre-feet
 7 of committed groundwater resources exist in Diamond Valley;
 8 is that right?
 9 A. That's correct, as of the March 2009 date of that
 10 presentation.
 11 Q. And do you know if that value is supplementally
 12 adjusted?
 13 A. It indicates that it is.
 14 Q. And what does that mean?
 15 A. In this context it's not referring to adjustments
 16 of water rights. It had varying sources. Sometimes we have
 17 groundwater being supplemental to surface water, for example.
 18 In this case it's basically considering the combined duties
 19 that have been issued for groundwater. So if you have
 20 multiple wells, providing a source of water to an irrigated
 21 area, sometimes those permits are combined for a total
 22 combined duty. And so I believe this number reflects that
 23 adjustment.
 24 Q. Now, in your Exhibit 108 in your report, there's
 25 a Figure 4 on page ten. And does that figure demonstrate the

1 permitted rights in Diamond Valley?
 2 A. Yes. And of course I made this plot as of this
 3 year, 2013. And the total number is as of the time of this
 4 compilation is 131,000 plus some change acre-feet annually.
 5 Q. Okay. And this indicates a large increase in
 6 early 1960's. Do you know what caused that increase in
 7 permits?
 8 A. Yes. There has been a little bit of testimony
 9 about the desert land entry efforts to cultivate public lands
 10 and convert them to private ownership. So there is a large
 11 scale movement and a large scale submittals or attempts to
 12 perfect desert land entries.
 13 Q. And what's your understanding of why so many
 14 permits ended up being granted in Diamond Valley?
 15 A. Right. There normally -- And this is described
 16 in some detail by Hugh A. Shamberger, Memoirs of a Nevada
 17 Engineer and Conservationist. Basically my understanding is
 18 a lot of these applications and attempts to develop lands,
 19 patent lands under the desert land entry have failed. It
 20 took substantial effort to develop groundwater and start an
 21 agricultural effort to cultivate lands. Most of the time
 22 these were not successful in Nevada.
 23 Mr. Shamberger indicated that about nine out of
 24 ten failed, but that did not happen in Diamond Valley. So
 25 the state -- My understanding is at the time, late fifties,

1 detailed investigation is the real quantity pumped is
 2 probably more like three feet. It looks like the numbers
 3 range from 2.9 to maybe 3.2 as far as physical quantities of
 4 water pumped. And that needs to be differentiated from the
 5 groundwater consumed by agriculture, which is a number below
 6 that.
 7 Q. And you referred to your report, Exhibit 108,
 8 page 11, here's this chart again that Mr. Katzer talked
 9 about. This is your representation of pumpage in the valley;
 10 right?
 11 A. That's correct. So the states would use an
 12 estimate of three feet of groundwater pumped. It would fall
 13 between the upper red four feet water right duty and the
 14 intermediate green line for quantities of the best available
 15 estimate of the quantities physically pumped.
 16 Q. And in what's been marked as Exhibit 290, it's
 17 their USGS report by an author Arteaga. Did he also estimate
 18 pumpage in Diamond Valley?
 19 A. He did. And I should note that a basis for a lot
 20 of these estimates is actually the crop inventories conducted
 21 by the state.
 22 HEARING OFFICER JOSEPH-TAYLOR: Spell Arteaga for
 23 the court reporter. I know she's going to ask.
 24 THE WITNESS: A-r-t-e-a-g-a.
 25 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

1 early 1960s, the state was issuing permits to applications
 2 because that was part of the process of the desert land
 3 entries, but probably with the expectation that a lot of
 4 these were never actually purchased.
 5 Q. And I'd like to ask you, there's an Exhibit 294,
 6 is that that Shamberger history that you talked about?
 7 A. That's correct.
 8 Q. All right. Now I want to ask you about pumpage
 9 in Diamond Valley and again starting with that power point
 10 the State Engineer had, Exhibit 287, this time page 35. It
 11 indicates that in 1990 there was 64,400 acre-feet pumped in
 12 Diamond Valley; correct?
 13 A. Yes. And I believe that's citing work by Arteaga
 14 1995.
 15 Q. And then on page 37 of that report. I'm sorry.
 16 That power point, it indicates that in 2008, 72,568 acre-feet
 17 was pumped; right?
 18 A. That's correct. I should note that in the
 19 state's presentation they had been through a number of
 20 different ways to try to assess what's the actual pumped
 21 quantity. In the plot of pumpage and consumptive use that
 22 Mr. Katzer testified to just briefly for me, I assumed that
 23 there's the water right duty of four acre-feet per acre in
 24 that total pumpage.
 25 In actuality, I think what we see in a more

1 THE WITNESS: So the basis for a lot of this
 2 comes from the state's own crop inventory data. So they in
 3 many years starting in the early sixties went out and
 4 assessed estimated acreages actually being cultivated in that
 5 year.
 6 Q. (By Mr. Taggart) So is it your understanding
 7 that all of these estimates of pumping are based upon the
 8 starting factor of acreage that was irrigated?
 9 A. That's correct.
 10 Q. And that's been determined from field
 11 investigations of acres irrigated in a given year?
 12 A. Crop inventories. And again, I believe in recent
 13 work the state has possibly looked at some land sat imagery
 14 in their other basis for proving up their field estimates.
 15 Q. Do you know if well logs -- or not well logs. Do
 16 you know if information is available of the actual pumpage
 17 from the meters from the wells in southern Diamond Valley?
 18 A. Yeah. To my knowledge most of the wells do not
 19 have flow meters. There's been estimates by Arteaga based on
 20 power consumption. But to my knowledge there is not actual
 21 metered, comprehensive meter pumping cumulative totals out in
 22 the valley.
 23 Q. All right. So according to your Exhibit 108,
 24 page 11, there's at least 60,000 acre-feet of consumptive use
 25 occurring?

1 A. Yes.
 2 Q. In Diamond Valley?
 3 A. Yes. So if we look at a portion of the applied
 4 irrigation, water infiltrates past the zones and returns back
 5 to the aquifer. So the portion that is estimated to actually
 6 be physically consumed by agriculture in southern Diamond
 7 Valley is approximately 60 to 65,000 acre-feet annually and
 8 under current conditions.
 9 MR. TAGGART: We offer Exhibit 290 in to
 10 evidence.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 12 MS. PETERSON: No objection.
 13 MR. TAGGART: And we offer Exhibit 294 in to
 14 evidence.
 15 HEARING OFFICER JOSEPH-TAYLOR: Any objection,
 16 Shamberger memoirs?
 17 MS. PETERSON: That's fine, yes.
 18 HEARING OFFICER JOSEPH-TAYLOR: 294 will be
 19 admitted.
 20 There's a bunch more, Mr. Taggart, that you
 21 referenced. I have a bunch more that you referenced. 277,
 22 287.
 23 MR. TAGGART: We offer 287 in to evidence. I
 24 thought I already had.
 25 HEARING OFFICER JOSEPH-TAYLOR: Any objection to

1 perennial yield concept and how it's applied in Nevada?
 2 A. Yes.
 3 Q. How has the State Engineer used the perennial
 4 yield estimate to manage groundwater in Nevada in your
 5 understanding?
 6 A. Yeah. Well, we strive for sustainability, so
 7 that is meant to be an upper limit on long term consumptive
 8 use of groundwater.
 9 Q. And are there -- What are the dangers you
 10 understand exist from over appropriating of the groundwater
 11 basin?
 12 A. Well, there's always the issue of conflicting
 13 issues between water right holders junior and senior. But
 14 there's also physical dangers to increasing drawdowns and
 15 depth to water in the basin, degradation of water quality,
 16 land subsidence. It's just not a -- not a path that the
 17 state wants to go down.
 18 Q. All right. In your opinion is Diamond Valley
 19 over appropriated?
 20 A. Severely.
 21 Q. And I have a series of orders from the State
 22 Engineer that are identified as Exhibit 279 through 284. Do
 23 these represent efforts by the State Engineer to address the
 24 issue of over appropriation in Diamond Valley?
 25 A. That's my understanding.

1 287, State Engineer's power point?
 2 MS. PETERSON: No objection.
 3 HEARING OFFICER JOSEPH-TAYLOR: 287 will be
 4 admitted.
 5 MR. KOLVET: And just for the record, these are
 6 joint exhibits between Venturacci and Sadler. And so I would
 7 join in the offer of these exhibits.
 8 HEARING OFFICER JOSEPH-TAYLOR: Thank you. So
 9 why don't we move 275, which was your joint exhibit list.
 10 MR. TAGGART: Thank you.
 11 HEARING OFFICER JOSEPH-TAYLOR: What about 277?
 12 MR. TAGGART: We offer 277 in to evidence. It's
 13 a duplicate to Eureka County Exhibit 304.
 14 HEARING OFFICER JOSEPH-TAYLOR: Do we need them
 15 both?
 16 MR. TAGGART: No.
 17 HEARING OFFICER JOSEPH-TAYLOR: So we're not
 18 going to do 277.
 19 MR. TAGGART: That's fine.
 20 HEARING OFFICER JOSEPH-TAYLOR: Okay. And then I
 21 also show 108, 109 and 306.
 22 MR. TAGGART: Yes. All of those I'm waiting.
 23 HEARING OFFICER JOSEPH-TAYLOR: Waiting still,
 24 okay.
 25 Q. (By Mr. Taggart) All right. You understand the

1 MR. TAGGART: I'm not going to go through each
 2 one of these and what they each do, but I offer them in to
 3 evidence at this time.
 4 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 5 MS. PETERSON: No objection.
 6 HEARING OFFICER JOSEPH-TAYLOR: You said 284,
 7 Mr. Taggart. Did you mean 285?
 8 MR. TAGGART: Yes. Thank you.
 9 HEARING OFFICER JOSEPH-TAYLOR: Exhibits 279
 10 through 285 will be admitted.
 11 MR. KOLVET: And I would offer them as well for
 12 Venturacci.
 13 Q. (By Mr. Taggart) Mr. Smith, are water rights
 14 that exist from spring sources part of the groundwater
 15 perennial yield?
 16 A. In my view, yes, they're part of the groundwater
 17 budget. The spring discharge is normally to support
 18 discharge by phreatophyte vegetation or evaporation. So you
 19 have to be careful not to -- to treat them appropriately and
 20 accounting the water budgets. But yes, they are a discharge
 21 of groundwater, part of the water budget part of the
 22 perennial yield.
 23 Q. And does that include all springs or does that
 24 include non-block springs, springs on the valley floor, all
 25 springs or particular springs?

1 A. Well, from my perspective, it's really most
 2 critical for springs on the valley floor, especially springs
 3 that have been appropriated and are being used. They need to
 4 be accounted for in the perennial groundwater yield in the
 5 basin. They are treated in the water budget. If you have a
 6 basin like Diamond Valley that has significant spring
 7 resource that is a discharge of groundwater, that needs to be
 8 factored in to that perennial yield budget.
 9 Q. So if there are water rights for Sadler
 10 Springs -- I'm sorry -- Shipley Spring, should those be
 11 deducted from the perennial yield for Diamond Valley?
 12 A. I believe the consumptive use associated with
 13 those spring discharges should be deducted.
 14 Q. So what would be necessary in your opinion to
 15 bring the Diamond Valley water usage within the perennial
 16 yield of that basin?
 17 A. Well, there's probably only two practical avenues
 18 here. One of them is to curtail the pumping. The other one
 19 is to bring an additional water source in to the valley.
 20 You've got to either increase the recharge to the valley or
 21 decrease the pumping discharge. One of the two is needed to
 22 bring it back.
 23 Q. And if the consumptive use is 60,000 acre-feet
 24 like you said earlier and the perennial yield is 30,000
 25 acre-feet, in your opinion does that mean that pumping has to

1 A. Yes, I would agree.
 2 HEARING OFFICER JOSEPH-TAYLOR: *Let him finish*
 3 the question, please.
 4 Q. (By Mr. Kolvet) With respect to Thompson Spring
 5 then, the testimony to this point has been that the high
 6 measurement in the eighties of the spring discharge from
 7 Thompson Spring was around four CFS and then it fell back to
 8 around two CFS. Do you remember that?
 9 A. Yes.
 10 Q. In the case of Thompson Spring in the Thompson
 11 Spring complex, would two CFS be the amount of water
 12 discharged from those spring that you would have to account
 13 for in this water budget?
 14 A. No. I think it would be somewhere around five.
 15 And I don't have any data to support that. But I know there
 16 were several spring orifices in that whole spring complex
 17 just west of the ranch, west and to the north a little bit.
 18 Q. And what about the springs to the north of Cox
 19 Springs that you referenced, were there ever any discharge
 20 measurements made on that spring?
 21 A. Not that I know of.
 22 Q. And how about even further up where the Willow
 23 Ranch is that's part of these applications?
 24 A. I've never seen any measurements made.
 25 Q. But there were springs discharging those

1 decrease by half?
 2 A. Actually it would have to decrease by greater
 3 than that, because, again, in that 30,000 we need to allocate
 4 some portion of that to the springs that we're having this
 5 hearing about and possibly some other springs in the basin
 6 that need to be acknowledged. So we've got to fit all of
 7 this in to that 30,000, both the consumptive use of
 8 groundwater pumped and the consumptive use of spring
 9 groundwater that's put to beneficial use.
 10 MR. TAGGART: All right. Thank you.
 11 HEARING OFFICER JOSEPH-TAYLOR: *Let's be off the*
 12 *record.*
 13 (Recess was taken)
 14 HEARING OFFICER JOSEPH-TAYLOR: *Please continue.*
 15 Mr. Taggart.
 16 MR. KOLVET: Before he continues and we get too
 17 far off, just a couple of questions of Mr. Katzer related to
 18 some of Mr. Smith's testimony.
 19 Q. (By Mr. Kolvet) Mr. Katzer, do you recall the
 20 area of testimony just before we took the break concerning
 21 the inclusion of spring discharge in to the water budgets?
 22 A. Yes.
 23 Q. Would you agree with Mr. Smith on the fact that
 24 you have to include the spring discharge in the groundwater
 25 budget?

1 locations?
 2 A. There were springs. You can look at the soils.
 3 Clearly they've had water for a long period of time. They
 4 were irrigated. There were fields there. Yes, I think the
 5 flow from the Thompson Spring complex was a lot higher than
 6 what was measured in '65, '66, which was about the first time
 7 the GS measured.
 8 Q. In looking at information that would support
 9 that, would you also look at the amount of acreage that
 10 historically may have been irrigated from those springs?
 11 A. That's a good way to do it, yes.
 12 Q. With respect to a couple of points, and if I get
 13 to them now I may not have to ask any further questions, so
 14 shortening up his appearance up there, I would like to go
 15 with a couple of other questions. With respect to the
 16 information that was provided by Eureka County and the other
 17 protestants, have you had a chance to review those?
 18 A. Yes, I did.
 19 Q. In those documents they refer to other possible
 20 reasons for the decline in spring discharge in Thompson and
 21 the Thompson Spring complex.
 22 A. They do.
 23 Q. Do you agree with that assessment?
 24 A. No, I don't agree. I think that when you start
 25 talking about climate change, I don't think the data is there

1 to make any judgment on climate change and what its impacts
2 are.

3 I mean, when you look at Nevada weather history
4 throughout time, there's been big years and average years and
5 droughts. And the neat thing about that alluvial basin is
6 that even though there are droughts, the only thing the
7 droughts impact are the recharge areas. And it doesn't
8 matter to the alluvial pumpers what happened in any given
9 year. They're living off of transitional storage. They can
10 keep pumping and nothing has happened. And they've had it
11 great over, a big advantage over the spring flow users whose
12 springs dried up because of the water levels going down.

13 So I think that trying to tie any sort of drought
14 or climate change to the spring discharge cannot be done. I
15 don't think it can be done.

16 Q. How about the shot holes that were referenced?

17 A. The shot holes -- There's a shot hole. But we
18 visited with the Sadlers, Dwight and I did. And I know
19 there's a couple of those. There's one on the north end.
20 And a lot of the holes have dried up. A lot have been
21 plugged, I guess. I'm not sure. I know there was a whole
22 bunch over by the Thompson Ranch. And if I remember
23 correctly, he told me that most of those have been plugged up
24 or ceased flowing.

25 But sure, they add to it, they add to the

1 discharge, but they didn't really impact the alluvial system.
2 I don't believe they did. Because they're in those really,
3 really fine grain silts that make up the deposit clays and
4 they're really tight. But yeah, that's water that's leaving
5 the system.

6 Q. Would it account though for the decline and the
7 eventual drying up of Thompson Springs?

8 A. No, not at all.

9 Q. And when you refer to Thompson Spring I'm not
10 just referring to the one spring but that whole complex --

11 A. That whole complex, yes.

12 HEARING OFFICER JOSEPH-TAYLOR: Mr. Katzer,
13 you've got to let him finish. You're kind of jumping over
14 him.

15 MR. KOLVET: You would agree to that terminology?

16 THE WITNESS: Yes.

17 MR. KOLVET: Thompson Spring. I talked over him
18 that time and I apologize.

19 HEARING OFFICER JOSEPH-TAYLOR: *You're both doing*
20 it. You're jumping in awful fast too, Mr. Kolvet.

21 MR. KOLVET: I tend to do that. I apologize.

22 That's all I have for now.

23 HEARING OFFICER JOSEPH-TAYLOR: *Any additional*
24 questions, Mr. Taggart?

25 MR. TAGGART: Yes.

1 Q. (By Mr. Taggart) I want to ask some questions
2 about what's shown on plate one to Exhibit 108, which is
3 Mr. Smith's expert report. And Mr. Smith, I'm going to again
4 try to talk through this a little quicker. In your plate
5 one, you picked the drawdown in Diamond Valley; is that
6 correct?

7 A. That's correct. There's hydrographs for a number
8 of the wells we have in this record. There's actually every
9 pink point on this map is a well with historic records of
10 water levels from 1960s through current.

11 Q. All right. And I want to ask you about the two
12 largest drawdowns in the southern part of the valley. And
13 they are identified with hydrographs on the left side of the
14 plate at the bottom, the second and third to the bottom, two
15 hydrographs, one points to a 97 in the center of the valley.
16 One points to a 100 in the middle of the valley. Do you see
17 those two hydrographs?

18 A. Yes.

19 Q. Would you agree those two hydrographs show the
20 largest drawdown of any of the hydrographs on this plate?

21 A. That's correct. Approximately 100 feet of
22 drawdown over the 50 plus or minus year time span.

23 Q. Would you consider this to be the center of the
24 cone of depression?

25 A. Generally, yes.

1 Q. Okay. And describe, if you could, how as a
2 hydrologist you would expect that cone of depression to
3 propagate?

4 A. Okay. So the cone of depression, you can see
5 from the two hydrographs just referenced, started almost
6 immediately, in fact started immediately with the start of
7 pumping. As the cone both goes down but also spreads out
8 laterally, it spreads out to the east and west until it gets
9 up roughly to the amount in front and it's spread down to the
10 south again to approximately the amount of front and then
11 continues to both get deeper and to spread to the north. To
12 the north is the direction now laterally that the cone of
13 depression has available to move.

14 HEARING OFFICER JOSEPH-TAYLOR: Has what?

15 THE WITNESS: Has available to move.

16 Q. (By Mr. Taggart) And explain what happens with
17 that cone reaches a barrier and if it has reached a barrier
18 in the southeast and west sides of the cone of depression?

19 A. Yeah. Effectively, yes. The cone of depression
20 has extended out to the edge of the mountain, the edge of the
21 valley in the mountain front. Consider that a barrier.
22 There's a lower transmissivity amount of blocks with a higher
23 transmissivity basin. So that's where the drawdown is
24 concentrated is in the basin fill.

25 To the south, although there is a fault barrier

1 that we're aware of to the south it's near the amount in
 2 front, the cone of depression spreads out laterally to that
 3 point and then starts to actually exasperates the drawdown in
 4 depth once it hits those barriers.
 5 Q. So when it hits those barriers it tends to go
 6 deeper?
 7 A. Deeper. But at the same time it's going to focus
 8 the spread laterally to the north.
 9 Q. So it will then spread more in the direction of
 10 more transmissivity --
 11 A. It is --
 12 HEARING OFFICER JOSEPH-TAYLOR: Hold on. You're
 13 talking over him.
 14 Q. (By Mr. Taggart) So it will tend to spread north
 15 in the direction of the transmissive material?
 16 A. The cone is basically chasing the water in
 17 storage. Where is the water in storage? It's in the basin
 18 fill. You continue to go down in depth. We're effectively
 19 mining here. Every well and every pumping center has a
 20 drawdown. You've got to remove storage until you reestablish
 21 gradients. And then the cone of depression stabilizes. In
 22 this case it's not able to stabilize because we're pumping in
 23 excess of a water balance here. There's not enough discharge
 24 physically in the valley for this pumping center to capture.
 25 It's going to continue to go down and continue to spread to

1 laterally and become deeper.
 2 Q. Can you tell from the dates of drawdown in the
 3 hydrograph how the timeline of the drawdown looks in terms of
 4 progress north? Do you understand my question?
 5 A. Yeah. For along the western edge, the four upper
 6 hydrographs for not the very top but the three below that,
 7 you'll see there is a pretty big time gap. The state and in
 8 conjunction with the USGS for seven years have been
 9 collecting water level data for the past decade or so. And
 10 so we do have those trends for the past decade pretty clearly
 11 defined. It did -- It would take some period of time for
 12 that drawdown to have started to occur up to the north, but
 13 we don't have data in that gap.
 14 Q. There is a hydrograph that points to a three,
 15 three-foot drawdown more in the direction of the center of
 16 the valley from that number 35. Do you see that?
 17 A. Yes.
 18 Q. Why in your opinion is that hydrograph only
 19 indicating a three-foot drawdown?
 20 A. There are a number of wells along the Pony
 21 Express Road. These were installed by the USGS in 1964.
 22 They're shallow. The two you see with three feet of drawdown
 23 are 22 feet in depth. And my interpretation is that the cone
 24 of depression as it extended northward started to run in to
 25 finer grain clay sediments associated with the playa. But

1 the north in an effort to try to achieve balance. But in
 2 reality until pumping is curtailed dramatically, it's not
 3 going to achieve a balance.
 4 Q. Now, there's a hydrograph on the left side, the
 5 fourth one from the bottom. It points to a point 51. And is
 6 that point where the 51, is that a well?
 7 A. That's correct. That's the well where the water
 8 loads have been measured and the drawdown is about half that,
 9 about 51 feet, so about half that of the deepest part of the
 10 cone of depression.
 11 Q. And north of that, two hydrographs up, there's a
 12 hydrograph that points to the number 35. Do you see that?
 13 A. Yes.
 14 Q. Okay. And that indicates a 35-foot drawdown at
 15 that location?
 16 A. That's correct.
 17 Q. And each one of the numbers we're talking about
 18 indicates the quantity of drawdown at that location; correct?
 19 A. It's the drawdown in feet. And 35 feet we're
 20 referring to is a well at what was formerly Sulphur Spring.
 21 Q. So has the cone propagated to that well that it
 22 has a number 51 on it and to the well that has the 35 on it.
 23 Has it propagated to those locations?
 24 A. Yes. And you continue to see the declining trend
 25 in water levels over time as this cone continues to expand

1 where we do not have fine grain sediment is along the edges
 2 of the playa up to the mountain block. So while the cone of
 3 depression spreads to the north and you count this tighter,
 4 hydraulically tighter area, it's been a mild encroachment of
 5 drawdown in to that area. Where the drawdown is concentrated
 6 is along the more hydraulically transmissive materials along
 7 the edge of the valley. And that's also coincidentally where
 8 all the springs are located.
 9 Q. And in Exhibit 304, which is Harrill's 1968
 10 report, on page 30 he says, logs of wells drilled near the
 11 center of the valley indicate that there the valley fill is
 12 predominantly silt, clay and fine sand and is less capable of
 13 transmitting water. Is that in support of what you just
 14 described the materials in the center valley to be?
 15 A. That's correct.
 16 Q. So in your view the drawdowns hit that tighter
 17 area in the center of the valley and then move more
 18 dramatically up the ranges of the mountain front, valley
 19 interface?
 20 A. That's correct.
 21 Q. And that happens on both sides of the valley?
 22 A. It's a mirror image on both sides of the valley.
 23 Q. Now, in 1964 Harrill said this about Diamond
 24 Valley, eventually a gradual decrease of spring discharge in
 25 north Diamond Valley subarea should occur in response to

1 pumping in the southern diamond or the south diamond subarea
 2 as sufficient water is removed from storage to induce
 3 subsurface flow from the spring areas towards the well.
 4 A. Yes.
 5 Q. Was he right?
 6 A. That's correct.
 7 Q. So he predicted that in 1968 and is that what we
 8 see today?
 9 A. It is.
 10 Q. And then he says on page 60 of his report,
 11 there's two paragraphs, number five says, pumping in the
 12 south diamond subarea eventually should decrease the natural
 13 discharge from springs in northern diamond subarea which
 14 during the summer of 1965 was largely being used
 15 beneficially. Again, was he correct in his prediction?
 16 A. Yes.
 17 Q. All right. Now I want to look at some specific
 18 springs. First I'm going to ask you about an area in the
 19 southern playa. And there is a -- did you go out in to the
 20 field and look at the springs in the southern playa in
 21 Diamond Valley?
 22 A. Yes, I have. The blue spring points are from the
 23 USGS topographic maps. They're over 60 map springs on the
 24 topographic quads that occur on the southern end of the playa
 25 in Diamond Valley. I've went out to a number of these kind

1 were fairly small, they actually, there was a large area of
 2 tule marshes, so it wasn't exactly a point source. It was a
 3 large spring area, spring and seep area all in these, Tule
 4 Spring, Sulphur Spring area and they're all dry.
 5 Q. And you recall the 1946 aerial that Mr. Frazer
 6 showed where there was actually spring flow from those
 7 locations?
 8 A. Yes.
 9 Q. And so when you visited them there was no longer
 10 spring flow?
 11 A. Absolutely dry.
 12 Q. And you believe that was caused by pumping in
 13 southern Diamond Valley?
 14 A. Yes, that's correct.
 15 Q. And is that -- Strike that. I want to ask you
 16 about other factors that might be considered by you in
 17 determining what causes a decline of flow. You heard about
 18 the shot holes. Mr. Katzer testified about that. What's
 19 your opinion about whether shot holes are responsible for the
 20 decline in flow at Shipley Springs?
 21 A. I don't think it has anything to do with the
 22 decline that's observed.
 23 Q. And climate change, there has been testimony
 24 about climate change by Mr. Katzer and also indications in
 25 the record from the protestants that climate change is a

1 of spring groupings and have observed all of these to be dry.
 2 Q. All right. So you saw that they were all dry?
 3 A. That's correct.
 4 Q. And you saw Mr. Frazer's presentation earlier?
 5 A. Yes.
 6 Q. And the photographs that he showed?
 7 A. Yes.
 8 Q. And those are consistent with your experience in
 9 the area?
 10 A. Yes.
 11 Q. And do you believe those were dry because of
 12 pumping in southern Diamond Valley?
 13 A. Yes.
 14 Q. Now, Sulphur Spring is the next item north of the
 15 last point I asked you about on your plate. Is that dry?
 16 A. Sulphur Spring is dry. It was observed to have
 17 ceased flow in 1982 by Harrill.
 18 Q. All right. And then the next spring to the north
 19 of that is Tule Spring. And have you visited that spring?
 20 A. I have.
 21 Q. And is that spring dry?
 22 A. Tule Spring is also dry. You'll see the level of
 23 the water level drawdowns predicted in this area. Also it
 24 was dry in 1982 during Harrill's site inspections. That
 25 area -- Both of these areas while the reported discharges

1 factor or is responsible for decline in flow at Shipley Hot
 2 Springs. Did you do an analysis of whether there's a
 3 correlation between precipitation and flow records at Shipley
 4 Spring?
 5 A. Yes. What I examined was whether there possibly
 6 might be an observed increase in spring discharge during wet
 7 years. I found no relationship I was able to address in
 8 around 11 years where I took the water year total with the
 9 January through April time frame average spring discharge.
 10 Again, I do not see -- And this is I think somewhat typical
 11 of a regional spring. I don't see the flashiness, I don't
 12 see the correlation with wet year spring discharge increase
 13 and decreasing. It doesn't show that association.
 14 Q. There's some information rebuttal reports talking
 15 about freezing levels and changes in freezing levels. Do you
 16 think that has any impact on declining flow in Shipley
 17 Spring?
 18 A. Absolutely not. There's no evidence of that. We
 19 know that temperatures may be rising. But what does that do
 20 to water levels and water budgets throughout the great basin
 21 in Nevada? We basically see outside of the Diamond Valley
 22 pumping center we see stability. We see water levels that on
 23 average are stable. There's always some up and down. We see
 24 spring -- Again, what's exhibited is stability. This is not
 25 anything to do with climate. That's rather absurd, quite

1 frankly.
 2 Q. Have you looked at the precipitation record for
 3 the State of Nevada?
 4 A. Yes.
 5 Q. And I believe that that is in Exhibit 195. Can
 6 you tell from that, and I think it's on page A2-17 of that
 7 exhibit. Is there any -- Let me make sure.
 8 MS. PETERSON: I'm going to object to this
 9 because that exhibit hasn't been admitted and the author of
 10 that exhibit is not here and would not be able to be
 11 cross-examined. So I am going to object to any evidence with
 12 regard to Exhibit 195.
 13 MR. TAGGART: All right. I'll ask about Exhibit
 14 310, which is a Eureka County exhibit that has the same
 15 hydrograph. I'll come back to that.
 16 Okay. Go to page 310. I'm sorry. Exhibit 310,
 17 page 33.
 18 HEARING OFFICER JOSEPH-TAYLOR: You can just look
 19 at it on the screen.
 20 Q. (By Mr. Taggart) Okay. Do you see any decline
 21 in precipitation from the evidence of the hundred-year
 22 record?
 23 A. No, I do not.
 24 Q. And did you look at the Eureka gauge, the full
 25 record, the hundred-year record of the Eureka gauge?

1 circulating deep obviously.
 2 If there was some type of gross regional change
 3 in our precipitation, in our recharge, that would have to be
 4 something that's reflected regionally. And you wouldn't be
 5 able to see in Diamond Valley. There's too large of a stress
 6 to try to overcome. But you can look through basins all
 7 around central Nevada and look at water level trends and
 8 spring discharge trends, and I have seen nobody make the case
 9 that there's any type of climate-related, long-term climate
 10 change related to impact to our water resources.
 11 Q. All right. What I'd like to do is ask you to
 12 summarize your opinion regarding the impact of the decline --
 13 I'm sorry -- the reason for the decline of the flow at
 14 Shipley Springs and to do that I want to you reach to your
 15 hydrograph that's on the wall behind you. And I'm going to
 16 ask you to draw on that the actual hydrograph, your best
 17 opinion on what the hydrograph would look like through the
 18 points of data that you have depicted there. And while we do
 19 this, I'll ask you to describe your understanding of what was
 20 probably occurring during certain time periods.
 21 A. Okay.
 22 Q. So what I'd like you to do, and I'm going to ask
 23 you to do it in a way that we can fold up this exhibit and
 24 make it a part of the record. So starting in 1910, if you
 25 could put an A in 1910 on the map and then draw what you

1 A. Yes, I did.
 2 Q. And did you see any indication of a decline in
 3 trend of precipitation over that hundred-year period?
 4 A. When you take the whole period of record, you do
 5 not see a decline in trend. There's been a -- the last
 6 couple decades have been a little drier than average. The
 7 couple decades before then were wetter. But if you look back
 8 through the period of record, we've had dry periods in the
 9 1920s and the 1950s. We had wet periods in the early part of
 10 the century. What we're observing in the past four decades
 11 is certainly basically more of the same that's been
 12 documented over the period of record.
 13 Q. All right. You testified earlier that in your
 14 view Shipley Springs is a regional spring. How do you
 15 reconcile the notion that it's a regional spring fed by a
 16 regional source but being impacted by local pumping? Is it
 17 possible and did you analyze whether the declines in Shipley
 18 are really because of declines in the recharge source for
 19 that spring?
 20 A. Well, it's interpreted that the water that's
 21 flowing in from the west from Garden Valley, that would be
 22 recharged mostly in the Roberts Mountains is then flowing
 23 through the Sulphur Spring range, probably some local
 24 recharge mixed in. But that is -- We believe that's the
 25 probable source of water to Shipley Hot Spring and it's

1 believe the hydrograph would be from 1910 to 1945 and then
 2 put a B at 1945.
 3 A. I've already offered testimony about what I
 4 believe the most accurate estimate for spring discharge to
 5 have been prior to any development, so prior to the 1940s,
 6 the mid-1940s. I believe that to be around 11 to 12 CFS.
 7 Q. Now, from 1945 to 1960, I didn't ask you about
 8 this yet, but could you describe for the State Engineer the
 9 wells that were utilized on the Romano Ranch at that time and
 10 how you believe they affected the flow at Shipley Spring if
 11 at all?
 12 A. Right. One thing that's not very well documented
 13 is the existence of flowing artesian wells that we use for
 14 agriculture. So there are not flowing, small flowing
 15 artesian wells for stock water sources. These are large
 16 sources of water. So we have the report of three artesian
 17 wells being drilled on the Romano Ranch approximately four to
 18 five miles south of Shipley Hot Springs in 1943. These were
 19 measured later in the 1940s by the USGS. And if we get the
 20 exact number of discharge, I believe it's 250 gallons a
 21 minute at that time. It's in my document.
 22 Then in the late forties, '48 and '49, we have
 23 actually -- we have no well logs, no other records of those
 24 other than the USGS is out I believe in 1946 and measured the
 25 document and they do show up on the topo map.

1 And then we have five well logs submitted in '48
2 and '49 that we put discharge on the order of a half to one
3 to one and a half CFS from the five wells, additional wells
4 from the Romano Ranch.

5 Then we don't have information in the 1950s. But
6 all of a sudden you go back out to the USGS being on the
7 ground measuring spring discharge in the mid-sixties. And
8 this is work by Harrill and he's talking 13 flowing artesian
9 wells on the Romano Ranch.

10 So between 1943 and somewhere in early to
11 mid-sixties, we had 13 artesian wells flowing on the Romano
12 Ranch used for irrigation.

13 Likewise, and skip forward to the middle well,
14 there's also a couple other artesian wells that we are aware
15 of. In 1960 there's what we call the middle well. It's on
16 plate one. The northern part of Sadler Ranch was drilled,
17 had an initial discharge report at 400 gallons a minute. And
18 then as is the case with every one of these artesian wells.
19 The initial reported flow is higher. When there's
20 observation a couple years later, their flows are half or a
21 third. It's kind of what we as hydrologists would expect
22 from the flowing artesian well. Initially drilled down,
23 you've got strong potentiometric head. The potentiometric
24 head is going to decline and going to decrease around that
25 well until it strikes and reaches equilibrium. A pump well

1 artesian wells have been drilled. They're starting to affect
2 and reduce the artesian head along the west edge of Diamond
3 Valley.

4 Q. (By Mr. Taggart) Are you still seeing the impact
5 of those artesian wells on Shipley Spring today?

6 A. No, I don't believe so. I think these
7 incorporated, generally probably a majority of these
8 incorporated took place in the first couple years and you can
9 run some basic analytical methods to look at that trend.
10 We've done so. I estimated that possibly, depending on the
11 hydraulic ground parameters, it might have taken three to
12 five years. It might have happened much sooner. But
13 certainly it's not something that takes decades. The
14 artesian flow wells are going to reduce. They're going to
15 decline and find that equilibrium with the reduced pressure
16 head and then that's what they're going to, if nothing else
17 takes place, would sustain the reduced flow.

18 Q. All right. And then if you can draw a C at that
19 end of the line. And then now describe what you think
20 occurred from 1960 to 1985.

21 A. Okay. By the mid-sixties, again the history of
22 artesian wells being drilled, the last one we know that was
23 drilled in this time frame was 1960. I believe that
24 equilibrating effect was in place by the mid-sixties. And
25 really I think at that point the system was in equilibrium to

1 we're pumping. An artesian well is trying to find that new
2 balance.

3 So over the course of several years you see
4 decline flows from all of these wells. But there was
5 additionally in 1960 a well, a flowing well on the Brown
6 Ranch, similar high capacity of about 400 gallons a minute.
7 This all occurred, those occurred in 1960.

8 There was a small stock well on the lower end of
9 Sadler Ranch that flowed around ten gallons a minute. That
10 was the only one out of 16 wells in the vicinity that was
11 actually a small well that probably didn't have a great deal
12 of effect.

13 But all of these wells reduced the pressure head
14 in the aquifer system that we now know has an association
15 with the spring discharge. So that's the physical reality.
16 These wells are present and documented and they discharge
17 significant amounts of water. There's a response. It didn't
18 happen that they are all drilled instantaneously. They're
19 spread out over time. Mr. Taggart, can I proceed to 1960 or
20 '65?

21 MR. TAGGART: Yes.

22 HEARING OFFICER JOSEPH-TAYLOR: We've got about
23 ten minutes, folks.

24 THE WITNESS: I'm going to put C down here in the
25 early sixties. So again, this is the time frame when the

1 that new stress on the system through the sixties, seventies
2 and eighties. We see a range of flow that we describe what's
3 going on with the regulation pond, surge orifices, height,
4 width, diversion ditches. There's just a lot of reasons why
5 there's this whole scatter of point. But I've drawn a line
6 about seven CFS, even longer, for several decades from
7 Shipley Hot Springs.

8 Q. And what about from 1985 to 2010?

9 A. Well, somewhere, and I'll put D in the early
10 nineties, around say 1990 or so, all of a sudden you start to
11 see this new trend of declining spring discharge from Shipley
12 Hot Spring. And that carries all the way through to current.
13 And that is my interpretation of the regional cone of
14 depression. As we know in the early eighties it was southern
15 springs that dried, it's progressing north. It's finally
16 reached northern -- up to the north to Shipley Hot Springs.
17 So now we're experiencing water level drawdown from this new
18 and very dominant stress on the system now in the valley.
19 And that's progressed all the way through here and we see
20 that today.

21 Q. Are the wells at the Romano Ranch, are they owned
22 by or were they owned by the same individuals who owned the
23 Sadler Ranch?

24 A. On the Romano Ranch?

25 Q. Right.

1 A. Not to my knowledge.
 2 Q. Let's -- If you could then please summarize the
 3 reasons why you concluded that pumping in southern Diamond
 4 Valley has caused the declined flow of Shipley and will cause
 5 it to cease to flow in the future?
 6 A. That cone of depression is going to continue to
 7 expand in both depth and expand up to the north as pumping
 8 continues. So, you know, just there's a direct relationship
 9 pressure head versus spring discharge. That pressure head
 10 has progressively been reduced over the past two decades and
 11 is going to continue to -- pumping continues in the valleys
 12 so that decline is going to continue.
 13 Q. And does part of the reason for your answer
 14 involve the other springs that have gone dry between Shipley
 15 Spring and the cone of depression?
 16 A. We have a lot of points on plate one. That's
 17 right. Indian Camp has ceased the flow. Again, the time
 18 frame I described earlier was late eighties, early nineties.
 19 That fits right in to this picture. It's that progression of
 20 cessation of flow from springs. We're able to go and observe
 21 water levels. There's some artesian well points. So that's,
 22 measurements this summer allowed me to make some estimates on
 23 the degree and extent of the drawdown up to the north.
 24 Q. Is your opinion consistent with the hydrologic
 25 concepts about propagation of a cone of depression?

1 discharge ten gallons a minute. It has a note on the log of
 2 six feet of head. I put at least two feet of drawdown water
 3 levels right near the ground surface now. It doesn't produce
 4 flow. There's probably been closer to six feet of drawdown
 5 there. I've been conservative.
 6 Q. Did you look at the drawdown at the Brown well
 7 and how does that influence your opinion?
 8 A. The Brown well is monitored. We have water level
 9 data since 1997 that's monitored by the state primarily.
 10 Initially that well flowed artesian so we know there's been
 11 some equilibration to that well that was drilled in 1960 on
 12 the Brown Ranch. That well and Siri Spring up there ceased
 13 to flow and other sources are pumped. But the water levels
 14 interestingly are fairly level. You do not see that
 15 declining trend in the past 15 years of record at the Brown
 16 Ranch.
 17 So my interpretation is the various changes on
 18 the Brown Ranch over time since that artesian well was
 19 drilled in the sixties, it's been a fairly equilibrated
 20 condition. There is additional stress on the aquifer. It
 21 was realized back in that time frame in the sixties and from
 22 that time frame forward as demonstrated by the water levels.
 23 It's been in a dynamic equilibrium.
 24 Q. Did you do an analysis of whether there was a
 25 correlation between drawdown to the Brown well and flow at

1 A. Yeah. I mean, this is fundamental in my science.
 2 This is cone of depression expanding out as the basin strives
 3 to try to reach equilibrium. It's going to continue to
 4 remove water for storage until the discharge equals the
 5 recharge. But that is never going to be reached at the
 6 present state in Diamond Valley.
 7 Q. We haven't talked about the Bailey Spring. But
 8 did the Bailey Spring go dry?
 9 A. It went dry also.
 10 Q. Is that part of -- Does that help in forming your
 11 opinion?
 12 A. Yeah. It's all very systematic. If you look at
 13 the degree of drawdown, as you work from deepest up to the
 14 north, it gets shallower and shallower until you get to
 15 Shipley Hot Spring. It's very systematic. Bailey Spring is
 16 south of -- north of Romano and south of Shipley and it has
 17 ceased the flow.
 18 HEARING OFFICER JOSEPH-TAYLOR: Five minutes.
 19 Q. (By Mr. Taggart) There's a point on your map I
 20 guess referred to as artesian well B.
 21 A. Yes.
 22 Q. Any information from that that supports your
 23 opinion?
 24 A. Yeah. That's the stock well I referred to on the
 25 lower end of the Sadler Ranch from the 1959 reporting,

1 Shipley Spring?
 2 A. There is no correlation between discharges at the
 3 Shipley Hot Springs and water levels at the Brown Ranch.
 4 There is, however, a correlation between water declines to
 5 the south and Shipley Hot Spring declining discharge.
 6 Q. Now, I want to ask you, Bailey -- I'm sorry.
 7 Harrill in his report in 1968 indicated that in item five on
 8 page 60, in time the discharge from springs may have to be
 9 supplemented or replaced by pumping from wells. Have you
 10 done an analysis of whether or not there's a well, an
 11 induction well that can be drilled near Shipley Spring that
 12 can capture water that was a recharge for the source of
 13 discharge from Shipley Spring?
 14 A. Yeah, that's correct. We've submitted in to
 15 evidence the document I referred to from the Interflow March
 16 2013 report on exploration drilling and testing. We have
 17 conclusively built a production well in to a source of
 18 Shipley Hot Spring. And we can pump that well. It's been
 19 tested only, but we can pump it and immediately see the
 20 cessation of flow from Shipley Hot Spring. We can produce
 21 identical quality water, identical temperature water from
 22 that well.
 23 Q. And can you be certain though that that well can
 24 produce the amount of water that's requested in these
 25 applications?

1 A. That's another question. We're trying to
 2 duplicate mother nature. We know it's very transmissive. We
 3 know we can get a large volume of water out of that
 4 individual well. Only time will tell whether we could
 5 sustain high volumes of water like we're desiring from wells.
 6 Q. And if you could not capture from that induction
 7 well near the spring, are there other locations on the ranch
 8 where wells could be drilled?
 9 A. Yeah, absolutely. There's a well that was
 10 drilled this summer in the alluvium under temporary transfer
 11 to try to establish some cultivation on the ranch. It is a
 12 reasonably successful irrigation well.
 13 HEARING OFFICER JOSEPH-TAYLOR: We've got to
 14 stop.
 15 MR. TAGGART: I have no further questions.
 16 HEARING OFFICER JOSEPH-TAYLOR: Exhibit,
 17 Mr. Taggart, 218, 219 to start with. Or, Mr. Kolvet, I think
 18 these are yours actually.
 19 MR. KOLVET: They are and I'd offer them.
 20 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 21 Exhibits 218 and 219?
 22 MS. PETERSON: No objection.
 23 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 24 They'll be admitted.
 25 Mr. Taggart, you have 108, 109.

1 that takes care of your exhibits. Thank you, everyone.
 2 Christy, we're off the record until 8:00 o'clock
 3 tomorrow morning.
 4 (Hearing concluded at 6:00 p.m.)
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1 MR. TAGGART: Yes. We offer 108 at this time.
 2 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 3 108?
 4 MS. PETERSON: No.
 5 MR. TAGGART: And 109.
 6 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 7 109?
 8 MS. PETERSON: No.
 9 HEARING OFFICER JOSEPH-TAYLOR: 108 and 109 will
 10 be admitted. 306 and 310.
 11 MR. TAGGART: We're not going to offer 306, but
 12 we will offer 310.
 13 MS. PETERSON: No. 310 was the power point
 14 presentation I objected --
 15 (The court reporter interrupts)
 16 HEARING OFFICER JOSEPH-TAYLOR: Folks, please,
 17 we're still on the record. Gentlemen in the back, we're
 18 still on record, please.
 19 MR. TAGGART: 310 is an exhibit from Eureka
 20 County.
 21 MS. PETERSON: Okay. Thank you. No objection.
 22 HEARING OFFICER JOSEPH-TAYLOR: 310 will be
 23 admitted. 306 you said you're not offering, Mr. Taggart?
 24 MR. TAGGART: No.
 25 HEARING OFFICER JOSEPH-TAYLOR: Okay. I think

1 STATE OF NEVADA)
 2 COUNTY OF WASHOE)ss.
 3
 4 I, CHRISTY Y. JOYCE, Official Certified Court
 5 Reporter for the State of Nevada, Department of Conservation
 6 and Natural Resources, Division of Water Resources, do hereby
 7 certify:
 8 That on Tuesday, the 19th day of November,
 9 2013, I was present at the Division of Water Resources,
 10 Carson City, Nevada, for the purpose of reporting in verbatim
 11 stenotype notes the within-entitled public hearing;
 12 That the foregoing transcript, consisting of
 13 pages 301 through 583, inclusive, includes a full, true and
 14 correct transcription of my stenotype notes of said public
 15 hearing.
 16
 17 Dated at Reno, Nevada, this 13th day of
 18 December, 2013.
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 22
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CHRISTY Y. JOYCE, CCR #625

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In The Matter Of:

*Applications 81719, 81720, 81825, 82268, 82570, 82571,
82572 and 82573*

Public Hearing - Wednesday

Vol. 3

November 20, 2013

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7 IN THE MATTER OF APPLICATIONS
8 81719, 81720, 81825, 82268,
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1 CARSON CITY, NEVADA, WEDNESDAY, NOVEMBER 20, 2013, 8:00 A.M.
 2 -o0o-
 3
 4 HEARING OFFICER JOSEPH-TAYLOR: Okay. Let's be
 5 on the record. Mr. Kolvet?
 6 MR. KOLVET: Thank you.
 7 HEARING OFFICER JOSEPH-TAYLOR: Your turn.
 8 MR. KOLVET: I just have a few more or less
 9 follow-up questions of the testimony yesterday of Mr. Katzer.
 10 RE-CROSS-EXAMINATION
 11 BY MR. KOLVET:
 12 Q. Mr. Katzer, you recall the testimony that
 13 Mr. Smith gave regarding the cone of depression and the
 14 assessment of that and the effects of that as having on the
 15 springs?
 16 A. I do.
 17 Q. And his focus was primarily on Sadler. Have you
 18 had an occasion to examine those same issues with respect to
 19 Thompson Springs?
 20 A. Yes, I have.
 21 Q. What conclusions, if any, have you reached on
 22 that?
 23 A. When the cone of depression started to move north
 24 and it hit the fine grain sediments of the playa, it broke
 25 into two separate arms that work their way on the west side

1 Q. With respect to the ability of the system to
 2 recover, you heard some testimony again by Mr. Smith that
 3 related to that.
 4 Do you have any opinion as to the ability of the
 5 system to recover in the springs of Thompson Ranch and the Cox
 6 Ranch and other springs on the west side -- or east side of
 7 the valley being able to recover?
 8 A. I've not made the calculations, but I'm sure
 9 you're looking at tens of decades. If all the -- if all the
 10 pumping ceased immediately, which is not going to happen, but
 11 if it did, it would take -- the ET is still going on, it would
 12 take a very, very long time to recover to a balance and to
 13 bring back the water level that would force the springs to
 14 flow. A long time.
 15 Q. In your opinion then is there an alternative to
 16 obtain the water at Thompson Ranch and Cox Ranch and the
 17 Willow Ranch other than by allowing drilling in those
 18 locations?
 19 A. By allowing drilling for --
 20 Q. A well?
 21 A. I think that's the only option to provide -- to
 22 provide that water in the immediacy, and the immediacy is our
 23 lifetimes, I guess. Well, not mine, but perhaps some of the
 24 kids. And there's a big advantage in doing that that we
 25 haven't really talked about.

1 towards Shipley and on the east side towards Thompson Springs
 2 and have been working their way all -- the groundwater decline
 3 has been working its way all the way to the north.
 4 Q. On the Thompson Spring side, when do you believe
 5 that those effects first became evident in Thompson Springs?
 6 A. I think you can start to see the decline in the
 7 mid-'60s.
 8 Q. And what would account for the decline in head?
 9 A. Over-pumping in the south. But on the Thompson
 10 side, on the east side of the valley there's a -- there are a
 11 series of pivots much closer to the springs than anything on
 12 the west side of the valley. And I think those have really
 13 contributed to the decline.
 14 There's also the mountain front fault that runs
 15 along there. And I think somehow the fault is acting as a
 16 partial barrier but also as a conduit. And I think the
 17 decline in head probably got to that part of the fault that is
 18 further to the south than the Thompson Ranch and was
 19 transmitted north very quickly. And I can't prove that, but I
 20 think that's what happened.
 21 Q. There is -- you do have information about the
 22 location of that fault though; is that correct?
 23 A. It's mapped, yes.
 24 Q. And that's the mountain front fault?
 25 A. Yes.

1 Q. Advantage of doing what?
 2 A. Advantage in drilling and replacing the spring
 3 flow with wells.
 4 Q. What's the advantage?
 5 A. The advantage is that water right now is -- the
 6 spring flow is still coming in even though the springs do not
 7 reach the surface, that water is all headed for the ET areas.
 8 Q. Where are they located?
 9 A. Downgradient and to the -- to the west. Or so --
 10 Q. Towards the playa?
 11 A. Towards the playa.
 12 HEARING OFFICER JOSEPH-TAYLOR: You're talking
 13 over each other.
 14 MR. KOLVET: Trying.
 15 THE WITNESS: My turn.
 16 HEARING OFFICER JOSEPH-TAYLOR: He's just bad.
 17 THE WITNESS: The water is all -- the groundwater
 18 flow is to the west from Thompson's to the line of springs
 19 that he used to have. And that water is still coming into the
 20 valley and it's going to the west, but it's -- it's all being
 21 consumed by ET.
 22 So by pumping that, by pumping that water you
 23 capture the ET in the immediacy. And I don't know how long
 24 that would take, but it wouldn't take long I bet before --
 25 depending on the volumes of course, but you would start to see

1 some impact on the -- on the near phreatophytes, which as I
2 remember, it's mostly rabbit brush right in there. There must
3 be some greasewood somewhere, but I don't remember seeing it,
4 the rabbit brush is out competing it.

5 But that would capture the ET in the immediacy.
6 And so what that means is then there would be drawdowns at the
7 well obviously, but those drawdowns would not be propagated to
8 the west and they would not add to the -- to the total
9 groundwater decline that's there now. That's what I'm
10 thinking.

11 Q. So in effect the allowance of wells in the
12 location of those springs would not affect the overall
13 situation with the over-pumping in the south?

14 A. I do not believe so.

15 Q. Are there any other conclusions that you've
16 reached in this case that we haven't discussed yet?

17 A. No, that's about it. I said it all. It seems to
18 me though, I'd like to say one more thing about the perennial
19 yield. And we've talked about that ad nauseam, I know, but
20 there's -- it's taken 50, 60 years to get where we are today.
21 And groundwater levels I know have dropped as much as a
22 hundred feet in some areas. And all that water that's been
23 removed is transitional storage.

24 So I think the opportunity is there, I'm sure
25 there are several decades left when the basin could be brought

1 into -- into balance. And there's -- there's a multitude of
2 things that could be done. And of course none of them are
3 cheap. And I think that's what needs to be thought about
4 rather than going in and start chopping off pumping, I would
5 think that with the transitional storage will support that
6 basin for a long time. I mean, it has, it's done it for
7 60 years. And I think with some proper -- proper programs you
8 could begin to see some effect very quickly.

9 MR. KOLVET: Thank you, Mr. Katzer.

10 HEARING OFFICER JOSEPH-TAYLOR: What do you mean
11 by some effect?

12 THE WITNESS: Well, I think -- I think you could
13 start to bring that water table back and -- I would be talking
14 about things like artificial recharge, bringing water in from
15 different basins, phreatophyte control. I mean, know in some
16 areas where all of the greasewood and rabbit brush have been
17 decimated. And -- and that reduces the ET and the immediacy.
18 I mean, that's a quick thing that happens, but it happened in
19 Las Vegas Valley, for instance. I mean, they put subdivisions
20 in, but they took out all of the ET. I mean, there's hardly
21 any ET left down there. It's all -- it's all managed water
22 now.

23 But -- and the water table would come back in
24 the -- if you started doing things like that.

25 HEARING OFFICER JOSEPH-TAYLOR: Is most of the ET

1 in the northern part of the valley?

2 THE WITNESS: Yes, yes. Most of the ET, there's
3 like -- something like 20-some-odd thousand, 29,000 ET in the
4 north, there was 1400 in the south and that's Jim Harrill's
5 numbers from bulletin 35.

6 HEARING OFFICER JOSEPH-TAYLOR: How would getting
7 rid of the ET in the north part of the valley stop the drop in
8 groundwater levels in the southern part of the valley?

9 THE WITNESS: Well, they wouldn't be used, you
10 would change the gradients. Gradients right now have been
11 reversed and all of that water in the north is going to the
12 south to fill up the big void.

13 Well, if you cut -- you cut off what is being
14 used in the north, which is -- it's probably -- I don't know
15 what the actual number is, but I would imagine the cone of
16 depression has captured maybe somewhere around 10- to
17 15,000-acre-feet of ET already, maybe almost half of it. But
18 you could stop the other -- you could -- you could slow it
19 down, you can't stop it, you can slow it down. And you'd
20 never do anything to the 4 or 5,000 that goes off the playa.

21 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

22 THE STATE ENGINEER: While we're on this topic,
23 if you don't mind, the first thing that comes to mind is so
24 you take up that ET, aren't there concerns about what moves
25 in, I mean -- or is it just you're going to have to manage

1 that significant -- are you worried about invasive species
2 moving in if you take out that ET?

3 THE WITNESS: There's a great example in Owens
4 Valley where it dropped -- the water table went down, the
5 phreatophytes, everything died that lived off of the
6 groundwater. But the plants that lived off of the soil
7 moisture zone did fine. And that's what you have to depend
8 on.

9 You have to -- whatever those -- and Steve was
10 talking about some of that stuff yesterday about the types --
11 different types of grasses that you could probably plant in
12 there. But I know it's -- I know it could be done.

13 HEARING OFFICER JOSEPH-TAYLOR: I'm just thinking
14 critical management area.

15 THE WITNESS: Right.

16 HEARING OFFICER JOSEPH-TAYLOR: These are the
17 kind of things that people need to be talking about.

18 Cross-examination? Who's first, Ms. Ure?

19 MS. URE: Sure. I'm going to try to start with
20 Mr. Smith first and then --

21 HEARING OFFICER JOSEPH-TAYLOR: Sure.

22 MS. URE: -- Mr. Katzer.

23 CROSS-EXAMINATION

24 BY MS. URE:

25 Q. Good morning, Mr. Smith, my name is Therese Ure

1 and I'm representing the Etcheverry Family Trust and Cattle
 2 Company and Mr. Benson. How are you today?
 3 ANSWERS BY MR. SMITH:
 4 A. Great. Thank you.
 5 Q. Did you develop a regional groundwater model for
 6 the Mount Hope project?
 7 A. That's correct.
 8 Q. Did the model incorporate Diamond Valley?
 9 A. It did.
 10 Q. And then did you calibrate the model to a steady
 11 state predevelopment condition?
 12 A. I did. And what I defined as predevelopment
 13 conditions was the late '50s into the early '60s time frame,
 14 that those are the data I used to define my steady state.
 15 Q. Did you utilize any of the information provided
 16 by Mr. Harrill's reconnaissance series report as input into
 17 the model?
 18 A. Yes.
 19 Q. Did that information incorporate the annual
 20 discharge from Big Shipley and Thompson Springs?
 21 A. It included the discharge as of the time frame
 22 that I was calibrating to, so that would be the -- that the
 23 1965 measurements I assumed were steady state. And I have to
 24 be clear in Diamond Valley, that's not absolutely
 25 predevelopment. I assumed it's a steady coded rated state,

1 reported discharge 15 CFS.
 2 BY MS. URE:
 3 Q. Do you know where that 15 CFS number came from?
 4 A. I do not.
 5 Q. Have you ever expressed in writing that climate
 6 change has a potential to affect the flow of springs?
 7 A. Climate change. I -- I -- I believe that climate
 8 affects springs to varying degrees, every spring is an
 9 individual, you know, has its individual characteristics.
 10 Q. Okay. So in your inner flow hydrology 2012
 11 report, didn't you state that long-term climate change and
 12 variability including lag and response time effects are a
 13 potential for discharge decline?
 14 A. I believe -- can you point me to the right
 15 document?
 16 Q. I believe it's -- I have it quoted in
 17 Exhibit 302, but it's from your inner flow hydrology 2012
 18 report.
 19 HEARING OFFICER JOSEPH-TAYLOR: Is that
 20 Exhibit 108, his expert report?
 21 MS. URE: Our experts actually quoted it in 302
 22 and I didn't cross-reference it, I'm sorry.
 23 HEARING OFFICER JOSEPH-TAYLOR: *I don't think she*
 24 *can point you to your document, Mr. Smith.*
 25 THE WITNESS: I think I can, if you'd like I

1 steady state.
 2 Q. So, for Big Shipley was that number -- I guess
 3 what number did you use for Big Shipley?
 4 A. For Big Shipley Spring it was approximately the
 5 values that -- that Harrill presented from the 1965-66
 6 measurements, which would be somewhere in the neighborhood of
 7 67 CFS.
 8 Q. Okay. And then which did you use for -- or what
 9 measurement did you use for Thompson?
 10 A. I honestly can't recall.
 11 HEARING OFFICER JOSEPH-TAYLOR: *And I want to*
 12 *know how the general modeling model is relevant here.*
 13 MS. URE: I'm just questioning him on what he
 14 believed was the steady state and what time period.
 15 HEARING OFFICER JOSEPH-TAYLOR: *Okay. I'm not*
 16 *going to let you go a lot further on another case.*
 17 MS. URE: Oh, yeah, I'm done with that line of
 18 questioning.
 19 BY MS. URE:
 20 Q. In Exhibit 303 there's a picture of Big Shipley
 21 and under that picture is a measurement and I believe you
 22 testified to that yesterday?
 23 A. Exhibit 303, is that Mr. Eakin's 1962 report?
 24 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 25 THE WITNESS: Right there is a photo caption, a

1 think I can clarify it, but I want to make sure I'm reciting
 2 the same document.
 3 MS. PETERSON: Do you want a copy of Exhibit 302?
 4 He can have my copy.
 5 MS. URE: No, I think I am corrected.
 6 MR. TAGGART: Objection. If she can't find the
 7 document she can't ask the question.
 8 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 9 BY MS. URE:
 10 Q. In your -- did you write a journal report for
 11 NWRA?
 12 A. I have coauthored a report.
 13 Q. In that report did you make reference to the
 14 climate change as a potential effect?
 15 MR. TAGGART: Objection, vague. A report, I
 16 mean, I'm not sure what report we're talking about. The
 17 witness has written many things for NWRA.
 18 HEARING OFFICER JOSEPH-TAYLOR: *I still don't*
 19 *know what document you're talking about either so I'll*
 20 *sustain.*
 21 THE WITNESS: I'm a little confused too, so.
 22 BY MS. URE:
 23 Q. Okay. So am I correct in saying that your NWRA
 24 report is in 2004 and it was entitled Climate and Barometric
 25 Pressure Influences on Peterson's Spring Discharge in the

1 Carbonate Aquifer Near Muddy Springs, Southern Nevada, and it
 2 was in the Journal of the Nevada Water Resources Association,
 3 volume 1, number 1, pages 76 through 103?
 4 A. I'm familiar with that journal article.
 5 Q. And did that journal article -- in that journal
 6 article did you make a statement that the long-term climate
 7 change and variability are a potential cause or explanation
 8 for long-term water level trends?
 9 A. Long-term water level trends. I would have to
 10 look at the article, but I -- that is very possible that's
 11 related to the southern carbonate aquifer in the Muddy River
 12 Springs area. And we have spent quite a bit of time looking
 13 at climate variability. I do not recall seeing any long-term
 14 climate change associated with water levels of spring
 15 discharge, but we do see shorter climate cycle influences on
 16 water levels in the spring discharges.
 17 Q. Okay. You testified as to the different sources
 18 of measurements that were on your figure 1, I believe, and
 19 figure 2?
 20 A. Yeah.
 21 Q. The estimates prior to 1966, did you testify that
 22 you did not know about the quality of those estimates, am I
 23 recalling that correctly?
 24 A. The only estimate that we -- we know for certain
 25 was only a visual estimate. Did not have a physical basis of

1 A. No.
 2 Q. Okay. Do you believe that -- or do you know
 3 Robert Lansky?
 4 A. Yes.
 5 Q. Have you worked with him before?
 6 A. Yes.
 7 Q. Do you believe that he is competent to take water
 8 measurements?
 9 A. Yes, I do.
 10 Q. I believe in your testimony you stated that the
 11 best way to determine spring water discharge is irrigated
 12 acres; is that correct?
 13 A. I think that's one of the better ways, yes.
 14 Q. Did you estimate how many acres were irrigated at
 15 the Cox Ranch?
 16 A. I did not.
 17 Q. How about Willow?
 18 A. No.
 19 Q. Thompson?
 20 A. No.
 21 Q. Shipley -- or Sadler Ranch?
 22 MR. TAGGART: Objection, he wasn't offered to
 23 give testimony about irrigation at Shipley Spring.
 24 MS. PETERSON: That's not his witness.
 25 MR. TAGGART: That's --

1 measurement is the measurement by Paine -- or the visual
 2 observation, visual estimate of Paine in 1912.
 3 The other reported discharges from Shipley Hot
 4 Spring I was not able to find the precise basis for those
 5 reports.
 6 Q. Okay.
 7 MS. URE: Okay. Good morning, Mr. Katzer, I'm
 8 going to move on to you.
 9 MR. KATZER: Good morning.
 10 CROSS-EXAMINATION
 11 BY MS. URE:
 12 Q. Do you have personal knowledge of this spring
 13 flow other than Thompson Springs prior to 2008 did you go out?
 14 ANSWERS BY MR. KATZER:
 15 A. Yes, yes.
 16 Q. Okay. Can you explain that for me?
 17 A. I was out there for the -- for the USGS back in
 18 the early '80s. Prior to the onset of wet -- the wet years
 19 '82, '83 and '84 when the springs were dry.
 20 Q. And when you say the springs, which springs are
 21 you --
 22 A. Thompson Springs. And all of the other springs
 23 along the 5800 contour line.
 24 Q. Did you do any measurements prior to 2008 on
 25 Shipley?

1 HEARING OFFICER JOSEPH-TAYLOR: Well, we're doing
 2 it as a panel and one, you're answering too fast. Overruled.
 3 Overruled.
 4 MR. TAGGART: Can I make my objection for the
 5 record?
 6 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 7 MR. TAGGART: This witness was not put on by us
 8 to present evidence about irrigated acreage at Shipley Spring
 9 and he did not offer testimony in his -- in his direct on
 10 irrigated acreage at Shipley Spring. So in our view it's
 11 beyond the scope of his direct.
 12 HEARING OFFICER JOSEPH-TAYLOR: So noted.
 13 Proceed.
 14 BY MS. URE:
 15 Q. Okay. Mr. Katzer, I believe in your testimony
 16 yesterday you discussed that spring discharge was part of the
 17 water budget; is that correct?
 18 A. Yes.
 19 Q. And then I believe you stated that, and I'm
 20 trying to clarify because you guys were going really fast for
 21 me yesterday. But, I have in my notes that you stated that
 22 Thompson was four CFS and then it fell to two CFS; is that
 23 correct?
 24 A. I thought I said five.
 25 Q. Okay. Now, what are you basing your five CFS on?

1 A. I was raised on a farm. I have done a lot of
 2 irrigation, I've moved a lot of water in ditches and it would
 3 seem to me that -- that just -- and I don't know the acreage,
 4 but just looking at what -- what Milt Thompson had in front of
 5 him on all of those fields that it would take somewhere around
 6 five CFS, and that's just thinking back to my -- to my
 7 upbringing thinking about those -- the amount of water in a
 8 ditch and how far you could spread it.
 9 Q. Okay.
 10 MS. URE: Okay. I have no further questions.
 11 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 12 Ms. Peterson?
 13 MS. PETERSON: Thank you. I was going to start
 14 with Mr. Smith.
 15 CROSS-EXAMINATION
 16 BY MS. PETERSON:
 17 Q. Mr. Smith, I'm Karen Peterson representing Eureka
 18 County and one of the questions I have for you was do you have
 19 any other opinions based on your work that you've done in this
 20 case for your client that have not -- you didn't testify to
 21 yesterday or are not contained in your reports?
 22 MR. TAGGART: I'm going to just object, we're
 23 not -- we're not allowed to offer an opinion that's not
 24 included in a report, so I think it's inappropriate to ask him
 25 if he has any conclusions, if I'm not -- if I'm not allowed to

1 well in 1977 on -- installed on the Brown Ranch?
 2 A. Yes.
 3 Q. Is that the well you're talking about when you
 4 just gave me that rate?
 5 A. I believe that the well, I'm not a hundred
 6 percent sure, but I believe that the well that's being
 7 utilized today is actually the older 1960 well, but I could be
 8 incorrect on that. It's one or the other.
 9 Q. Okay. And to your knowledge, there's only one
 10 well pumping, is that what you stated?
 11 A. Just in the last year. If -- there have been
 12 periods where both wells were pumped and to support two
 13 pivots, but not this last year.
 14 Q. And do you know what the maximum -- because I'm
 15 assuming you've looked at records regarding those wells, have
 16 you looked at records regarding those wells?
 17 A. At some point in the past I've looked at the well
 18 logs.
 19 Q. And how about any -- I think there's
 20 measurements, aren't there USGS measurements on those wells?
 21 MR. TAGGART: Objection, that's a compound
 22 question.
 23 HEARING OFFICER JOSEPH-TAYLOR: Aren't there
 24 USGS --
 25 MR. TAGGART: Well, she asked a question before

1 ask him questions about conclusions that he made that aren't
 2 in his report.
 3 HEARING OFFICER JOSEPH-TAYLOR: You can stop,
 4 it's so broad. Ms. Peterson, opinions about what?
 5 MS. PETERSON: I said about his work that he's
 6 done on this project for his client.
 7 HEARING OFFICER JOSEPH-TAYLOR: I apologize, I
 8 missed that. I have a problem with that. Sustained.
 9 BY MS. PETERSON:
 10 Q. Mr. Smith, do you know how far the Brown wells
 11 are from Shipley Hot Spring?
 12 ANSWERS BY MR. SMITH:
 13 A. Approximately.
 14 Q. How far?
 15 A. The -- approximately three miles.
 16 Q. And do you -- there's wells that are on the Brown
 17 property; is that correct, the Brown Ranch?
 18 A. There are two wells that I'm aware of.
 19 Q. And what's the pumping at those wells, the
 20 pumping rate?
 21 A. I don't know precisely today. I believe only one
 22 well has been active in the recent years and it supports one
 23 pivot. So I would have to estimate that possibly in the
 24 neighborhood of 800 gallons a minute to support a pivot.
 25 Q. And I -- your report indicated that there was a

1 that and then she asked about USGS measurements.
 2 HEARING OFFICER JOSEPH-TAYLOR: Read it back to
 3 me, please, Michel.
 4 (Record read.)
 5 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 6 THE WITNESS: I believe you're referring to water
 7 level measurements, depth of water measurements.
 8 BY MS. PETERSON:
 9 Q. Sure.
 10 A. I am aware of the water level measurements and I
 11 believe that the majority of the measurements are made by the
 12 State, not the USGS, they're made in generally in the March
 13 time frame before the start of the irrigation season. And
 14 they're made at the lower well that was drilled in 1960 is the
 15 point of current water level monitoring.
 16 Q. And then how about -- I think your report
 17 mentions how much water has been pumped from those wells,
 18 historical records?
 19 A. Oh, yes. I have made a review of the aerial
 20 photography that Mr. Frazer testified to and compiled. So we
 21 have a series of -- of photos on -- that cover the Brown Ranch
 22 area.
 23 So what we see on the Brown Ranch area and to my
 24 credit I believe I offered some, an estimate that over the
 25 long term, over the past four and a half decades, plus or

1 minus, the long-term average irrigated area on the Brown Ranch
 2 has been approximately 250 acres.
 3 Now, it's varied back and forth, but the average
 4 has been about 250 acres. And that goes all the way back to
 5 the late 1960s time frame with the drilling of that first
 6 flowing artesian well.
 7 So prior to the drilling of that well in 1960 the
 8 main source -- the only source of water on the ranch was
 9 primarily Siri or Eva Spring, it goes back all different ways,
 10 and then there's also a smaller spring, I believe James White
 11 Spring to the south of that. And there may have been some
 12 smaller springs, but those were the primary sources.
 13 So in 1960 there was the drilling of a well on
 14 the ranch. It was initially reported the flow 400 gallons a
 15 minute. So there was an additional source of water. By the
 16 time we get to the aerial photography, the irrigated acreage
 17 was if I recall correctly maybe around 80 acres, something on
 18 that order of magnitude prior to the drilling of the well.
 19 Photographs after the drilling of that well indicate
 20 approximately 200 up to 250 being sustained throughout time.
 21 There's a period of time, 1977, an additional
 22 well was drilled. And what has happened is Siri Spring has
 23 ceased to flow. So there's been kind of an offsetting stress
 24 on the aquifer system there. You now have -- you originally
 25 had Siri Spring and the flowing artesian well. Now you have

1 is -- ET discharge is still consuming groundwater out there.
 2 I do recall him expressing that. So, I think, you know, we as
 3 technical people understand that we have the pumping
 4 consumption of water, but we still have ET consuming part of
 5 the water budget also, and that's where Mr. Katzer referred to
 6 transitional storage. You'll continue to withdraw
 7 transitional storage even in a balanced system until -- until
 8 you captured enough discharge to balance out.
 9 In Diamond Valley we can never reach that point
 10 in the present level of pumping, but there's ET still
 11 consuming groundwater also in Nevada.
 12 Q. Do you have -- turning to Harrill's, it's
 13 Exhibit 304, do you have that in front of you?
 14 A. I don't have a complete report.
 15 Q. You don't have the complete report?
 16 A. No.
 17 MS. PETERSON: Do you have one?
 18 HEARING OFFICER JOSEPH-TAYLOR: We'll get one,
 19 Ms. Peterson. 304.
 20 MS. PETERSON: And we should keep it up there
 21 because I do have a question for Mr. Katzer, too.
 22 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 23 THE WITNESS: Okay.
 24 BY MS. PETERSON:
 25 Q. Have you read this report before?

1 two pumped wells.
 2 In the 1980s, late 1980s the photography
 3 suggested the irrigated area increased up to the neighborhood
 4 of 500 acres. In the 1990s it looks like it shrunk all the
 5 way back down to about a hundred acres.
 6 The State has been including this area in the
 7 crop inventory since 2006. And the irrigated acreage has if I
 8 recall it's been between 100 and 300 approximate acres on the
 9 Bell Ranch. You take all of the information on the irrigated
 10 acreage and it's approximately 250. And it was up at that
 11 level in the late '60s and early '70s. It was --
 12 So from my perspective as a hydrologist the --
 13 there was an increase in groundwater development at the ranch,
 14 but it occurred in the 1960s, with the drilling of that
 15 artesian well. From that time forward there's been some ups
 16 and downs in the amount of stress in the aquifer system, but
 17 the average has been pretty constant over -- over five
 18 decades.
 19 Q. Thank you. You heard Mr. Katzer's testimony
 20 yesterday?
 21 A. Yes.
 22 Q. And do you agree with Mr. Katzer's opinion that
 23 ET is another factor that's affecting the water level declines
 24 in Diamond Valley?
 25 A. I don't know if I heard Mr. Katzer say that. It

1 A. Yes.
 2 Q. Could you turn to page 56?
 3 A. (Complies.) I'm on page 56.
 4 Q. Could you read the two paragraphs under natural
 5 groundwater yield?
 6 A. Sure. In the middle of the page, page 56.
 7 Q. Oh, you don't have to read them out loud, you
 8 just want to read --
 9 A. Oh.
 10 Q. -- well, go ahead, read it out loud, that's
 11 great.
 12 HEARING OFFICER JOSEPH-TAYLOR: Slowly.
 13 THE WITNESS: "The large springs principally in
 14 northern -- in the northern Diamond sub area (plate 2) provide
 15 a natural groundwater supply of about 80 -- 8,400-acre-feet
 16 per year (table 9). For many years most of the discharge has
 17 been used to irrigate hay, natural pasture, alfalfa and native
 18 grasses. Because of the relatively uniform flow throughout
 19 the year and because of the short growing season, only about a
 20 third of the total spring discharge is put to beneficial use.
 21 "The bulk of the flow is consumed largely by
 22 non-beneficial evaporation in areas of phreatophytes
 23 downstream from the spring outlets."
 24 BY MS. PETERSON:
 25 Q. And the table 9 that's referred to is the table

1 on page 55 of that -- wait, is the table on page 31 of that
 2 report?
 3 A. Correct.
 4 Q. And then flows for Shipley Spring on table 9, the
 5 average that I guess Mr. Harrill put there was 4,900-acre-feet
 6 per year?
 7 A. Correct. Based on his three measurements of 1965
 8 and 1966.
 9 Q. And my -- do -- is it fair to say that that
 10 paragraph on page 56 of the report is indicating that only
 11 one-third of the 4,900 gallons per minute -- or acre-feet per
 12 year is put to beneficial use?
 13 A. Well --
 14 Q. Based on Harrill's observation?
 15 A. I don't agree with that. Number one, it doesn't
 16 point to a specific spring in that statement, that's a very
 17 broad statement, but I also just don't agree with that
 18 statement.
 19 Q. That's fair.
 20 MS. PETERSON: Could we -- could we have from
 21 Exhibit 108 plate 1 put up on the screen?
 22 HEARING OFFICER JOSEPH-TAYLOR: *Let's be off the*
 23 *record.*
 24 *(Short off the record.)*
 25 HEARING OFFICER JOSEPH-TAYLOR: *Let's be on the*

1 A. The -- as in the title, it's Predicted Drawdown
 2 Between 1960 to this Year, 2013.
 3 Q. So what data is that based on?
 4 A. As of data collected through this summer, as all
 5 the historic data available up to the 1960 time frame.
 6 Q. Okay. Thank you. Do you know if any shot holes
 7 are still flowing near the Sadler Ranch?
 8 A. I wouldn't say near the Sadler Ranch, but I have
 9 observed some shot holes up to the north of the Brown Ranch.
 10 Out on the -- actually out into the edge of the playa, they're
 11 on the playa.
 12 Q. Are you familiar with the 1982 curtailment
 13 proceedings before the State Engineer in Diamond Valley?
 14 A. I'm aware that that occurred, but I have limited
 15 knowledge on the details.
 16 Q. Are you aware of anyone or have come across any
 17 information of anybody from the Sadler Ranch complaining to
 18 the State Engineer about declining water flows in 1982?
 19 A. I'm not aware as part of those proceedings, no.
 20 Q. Did you perform any analysis of what the impacts
 21 would be from pumping 6,924-acre-feet from the Sadler wells --
 22 the Sadler proposed wells in the Sadler Ranch application at
 23 issue in this proceeding?
 24 A. No, I have not made any analysis.
 25 Q. Did you make an analysis of the impacts from

1 record. So, Ms. Peterson, we've got plate 1 on Exhibit 108
 2 did you say?
 3 MS. PETERSON: Yes. I'm wondering if you could
 4 possibly get that a little larger on the screen?
 5 TECHNICAL ASSISTANT: Where do you want it?
 6 MR. KOLVET: All of it.
 7 MS. PETERSON: Yeah, that's great. Thank you.
 8 And maybe even a little bit more north to see a little bit
 9 more north. Thank you.
 10 BY MS. PETERSON:
 11 Q. Mr. Smith, what do the dash lines on plate 1
 12 represent?
 13 A. The dash line is my interpretation of a drawdown
 14 contour. I've dashed it where approximate. And the solid
 15 lines are where I can be more precise or exact.
 16 Q. And would it be fair to say that for your
 17 interpretations related to the dash lines you don't have data
 18 to support that?
 19 A. Absolutely not. I think I have quite a bit of
 20 data to support those lines.
 21 HEARING OFFICER JOSEPH-TAYLOR: *You've all seen*
 22 *the light.*
 23 BY MS. PETERSON:
 24 Q. So what -- so what date are you referring on for
 25 your dashed lines?

1 pumping 7,457-acre-feet from the proposed Sadler application
 2 at issue in this proceeding?
 3 A. I have not made any analysis of the effects of
 4 pumping, but I would offer that we're trying to reestablish
 5 what I feel strongly was the natural flow of the spring. So,
 6 I believe the source is there and we're basically trying to
 7 reestablish what was a preexisting discharge to land surface.
 8 Q. And are you -- have you looked at -- they have
 9 these township cards in the records of the State Engineer's
 10 Office, have you looked at any of the township cards related
 11 to the Sadler Ranch area to determine if there's any other
 12 water rights?
 13 A. No, I have not.
 14 Q. Are you aware that there is an 1880 vested claim
 15 at the Bailey Ranch? Certificated vested claim at the Bailey
 16 Ranch?
 17 A. I -- I have some general knowledge on the Bailey
 18 Ranch that that was a spring fed ranch also. Harrill measured
 19 the -- what he called the Bailey Spring at I believe 1.1 CFS
 20 in his 1965-66 fieldwork. I am aware that that spring ceases
 21 to flow and in the 1990s was granted a permit to pump
 22 groundwater to replace that lost source of spring flow. I am
 23 aware that they likewise had the vested claim on that spring.
 24 Q. And are you aware that there were two
 25 certificates issued by the State Engineer in 1913 --

1 MR. TAGGART: Objection.
 2 BY MS. PETERSON:
 3 Q. -- for those vested --
 4 HEARING OFFICER JOSEPH-TAYLOR: Grounds?
 5 MR. TAGGART: It's vague as to certificate.
 6 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 7 MR. TAGGART: Well, may I make a record then? My
 8 understanding is that there's certificates that are issued for
 9 water rights that are filed under the statutory procedure.
 10 And I think there's -- there's vagueness in the question of
 11 whether she's referring to those types of certificates or a
 12 different type of certificate that existed in the history of
 13 Nevada water law.
 14 HEARING OFFICER JOSEPH-TAYLOR: Okay. Overruled.
 15 THE WITNESS: I have not made a detailed review
 16 of the water rights on the Bailey Ranch. I just have the
 17 general knowledge that I just presented.
 18 BY MS. PETERSON:
 19 Q. Okay. And then there's another certificate to
 20 the Bailey's 147 on their vested right?
 21 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry, say
 22 that again, Ms. Peterson.
 23 BY MS. PETERSON:
 24 Q. There's another certificate 147 on the Bailey's
 25 vested right issued again by the State Engineer in early March

1 again.
 2 BY MS. PETERSON:
 3 Q. Have you performed any analysis to determine
 4 whether the pumping of -- the pumping of water applied for
 5 under Sadler Ranch's application will conflict with existing
 6 rights?
 7 A. I have not.
 8 Q. Okay. Thank you. And have you had any
 9 conversations with Tom Gallagher about these water rights?
 10 A. I have not.
 11 MS. PETERSON: Okay. Thank you. I was going to
 12 move on to Mr. Katzer.
 13 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 14 CROSS-EXAMINATION
 15 BY MS. PETERSON:
 16 Q. Mr. Katzer, you -- oh, I'm Karen Peterson
 17 representing Eureka County. And you testified yesterday that
 18 you were aware of certain water level measurements for
 19 Thompson Springs, Taft Springs; do you recall that testimony?
 20 ANSWERS BY MR. KATZER:
 21 A. Water level measurements?
 22 Q. Yes.
 23 A. Water discharge.
 24 Q. You -- okay. You were talking about that you
 25 were aware of the measurements or discharged measurements that

1 1913?
 2 MR. TAGGART: Same objection.
 3 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 4 THE WITNESS: Again, I did not review that
 5 document.
 6 BY MS. PETERSON:
 7 Q. And the reason I'm asking is that my
 8 understanding of order 1226 requires that Applicants for these
 9 mitigation replacement groundwater rights need to comply with
 10 the provisions of NRS 533 and 534 when making their
 11 applications. Are you aware of that?
 12 MR. TAGGART: Objection, that's outside the scope
 13 of his direct and calls for a legal conclusion.
 14 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 15 You're on hydrology, he's not here as people who filed the
 16 applications.
 17 MS. PETERSON: Well, one of the grounds of
 18 granting an application under 533370 is whether the proposed
 19 pumping is going to impact existing rights, conflict with
 20 existing rights.
 21 HEARING OFFICER JOSEPH-TAYLOR: He's here as a
 22 hydrologist.
 23 MS. PETERSON: I'm asking if he's performed that
 24 analysis.
 25 HEARING OFFICER JOSEPH-TAYLOR: Ask your question

1 were made by yourself for General Molly; do you recall that?
 2 A. We didn't make any discharge measurements on
 3 Thompson Spring for General Molly. We made them on Shipley.
 4 Q. Oh, on Shipley. Okay.
 5 A. Yes.
 6 Q. You were talking about there were some
 7 measurements made in the 1960s on Thompson Spring, USGS
 8 measurements; is that correct?
 9 A. Yes, there were three made.
 10 Q. And are you aware that there were measurements
 11 made by the State Engineer's Office in October 1912 by
 12 Mr. Paine on Horse Canyon and Taft Springs?
 13 A. I've heard that, but I don't know what they are.
 14 I haven't seen that data.
 15 MS. PETERSON: And this is part of the
 16 information that I only have one page related to this from the
 17 book in the State Engineer's Office, and so I'd like to show
 18 these.
 19 HEARING OFFICER JOSEPH-TAYLOR: I know what it
 20 is, Ms. Peterson. Go ahead.
 21 MS. PETERSON: Did you need copies?
 22 HEARING OFFICER JOSEPH-TAYLOR: Got it right
 23 here.
 24 MS. PETERSON: Okay.
 25 HEARING OFFICER JOSEPH-TAYLOR: Well, let me make

1 sure I'm looking at the same thing, please. Karen, let me
 2 make sure I'm looking at the same thing, please. Thank you.
 3 Go ahead.
 4 MS. PETERSON: Is that the same thing?
 5 HEARING OFFICER JOSEPH-TAYLOR: Yes, except my
 6 copies are better.
 7 THE WITNESS: Okay.
 8 BY MS. PETERSON:
 9 Q. Have you had a chance to read that, Mr. Katzer?
 10 A. Yes.
 11 Q. And would you agree that at least stated in this
 12 document, which I guess we should mark as an exhibit.
 13 HEARING OFFICER JOSEPH-TAYLOR: Let's mark it as
 14 339. It's 1912, I don't recall -- NDWR field book pages, Nels
 15 Toft, N-E-L-S, T-O-F-T.
 16 (Exhibit 339 marked for identification.)
 17 BY MS. PETERSON:
 18 Q. And is it fair to say, Mr. Katzer, that
 19 Exhibit 339 indicates that there was a measurement of Horse
 20 Canyon with a meter at .25 of a second-foot?
 21 A. Yes, I see that.
 22 Q. And that the larger source, which I believe he's
 23 referring to is Taft Springs had a measurement again by a
 24 current meter as 1.29-second-feet?
 25 A. Yes.

1 BY MS. PETERSON:
 2 Q. And you heard Mr. Smith read into the record that
 3 first paragraph under natural groundwater yield on page 56?
 4 A. I did.
 5 Q. And Harrill's observations about beneficial use?
 6 A. Yes.
 7 Q. And would you have any reason to dispute
 8 Mr. Harrill's observations about beneficial use of the springs
 9 in the north Diamond sub area?
 10 A. I guess I'm not sure about the volume. I know
 11 what he's saying, but I don't know if that's exactly right.
 12 Q. I'm going to again ask you couple of questions
 13 similar to those that I asked of Mr. Smith.
 14 Did you happen to look at the section cards?
 15 A. Oh, I know nothing about the water rights.
 16 Q. In that area?
 17 A. Any area.
 18 Q. Did you perform any analysis of pumping impacts
 19 of the five CFS or the eight CFS or the 2.5 CFS --
 20 A. No.
 21 HEARING OFFICER JOSEPH-TAYLOR: Let her finish
 22 her question.
 23 THE WITNESS: I'm trying to save some time.
 24 BY MS. PETERSON:
 25 Q. That are applied for in the applications pending

1 Q. And then this Exhibit 339 also describes the --
 2 the improvements and irrigation and portions of the property
 3 that were being used at that time; is that correct?
 4 A. Yes, that's correct.
 5 Q. Exhibit 219 was one of your photos, I'm turning
 6 now from this exhibit?
 7 A. Yes, yes.
 8 Q. Was one of your photos and it was the shot hole
 9 photo; do you remember that?
 10 A. Yes.
 11 Q. Do you know how many shot holes are still flowing
 12 in Diamond Valley?
 13 A. No.
 14 Q. And then directing your attention to Harrill
 15 Exhibit 304, I was going to direct your attention to page 56.
 16 A. To page?
 17 Q. 56.
 18 MR. TAGGART: What was the number on the Taft?
 19 MS. PETERSON: 339.
 20 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry, I was
 21 marking exhibits, Ms. Peterson, I missed your question.
 22 MS. PETERSON: I was just asking Mr. Katzer if he
 23 could go to page 56 of Exhibit 304.
 24 THE WITNESS: Okay.
 25 ///

1 in these proceedings?
 2 A. No.
 3 Q. I believe you testified yesterday that you lived
 4 at the Cox Ranch, was it the Cox Ranch --
 5 A. Yes.
 6 Q. -- for a while?
 7 A. Yes.
 8 Q. And when was that?
 9 A. That was about 1957, summer of '57.
 10 Q. And do you know how much acreage was irrigated
 11 when you were there?
 12 A. 2005 -- oh, just kidding. All I know is that at
 13 that time there was nothing but green to the west and there
 14 cows everywhere literally.
 15 Q. Did you have any conversations with Tom Gallagher
 16 about these water rights?
 17 A. No.
 18 Q. The Thompson Springs water rights?
 19 A. (Shakes head.)
 20 MS. PETERSON: Thank you. I don't have any other
 21 questions.
 22 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Do
 23 you need Exhibit 304 for redirect?
 24 THE WITNESS: Is there any chance I could make a
 25 statement about this?

1 HEARING OFFICER JOSEPH-TAYLOR: No.
 2 THE WITNESS: No chance at all.
 3 HEARING OFFICER JOSEPH-TAYLOR: Let me get
 4 Exhibit 304 back together. Nice try. He's never liked the
 5 hearing process, he's complained about it for 20 years.
 6 Redirect?
 7 MR. TAGGART: No questions.
 8 HEARING OFFICER JOSEPH-TAYLOR: No? Mr. Kolvet?
 9 CROSS-EXAMINATION
 10 BY MR. KOLVET:
 11 Q. Exhibit 339, which was introduced and you were
 12 asked about, do you have any response to put in that report?
 13 ANSWERS BY MR. KATZER:
 14 A. Well, I'd really be concerned. This is a
 15 snapshot in time, it's one measurement. And it doesn't tell
 16 you anything about the diurnal flow or the annual variability.
 17 I would not draw any conclusions on this at all. And it would
 18 help -- it would not help -- if I was doing an analyses like
 19 this again, this wouldn't be of any -- any use. I mean,
 20 that's just a number, it's a minimum flow. I don't even know
 21 what the precip was in two or three years preceding that,
 22 which is what it might take to bring the spring flow water
 23 into the valley. I'm not sure.
 24 Q. With respect to the measurements recorded on
 25 Thompson Springs in this report, which was 339, there are

1 CROSS-EXAMINATION
 2 BY MR. FELLING:
 3 Q. For Mr. Smith. Good morning.
 4 MR. FELLING: That hydrograph that we drew on
 5 yesterday, we're going to need that eventually.
 6 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 7 BY MR. FELLING:
 8 Q. The Exhibit 137 is the -- is the letter by the
 9 State Engineer from 1913, it's an estimate -- or it's in
 10 that -- in that letter he, the State Engineer says he made an
 11 examination of the premises and estimated the flow of Shipley
 12 to be seven or eight CFS.
 13 And you said you discounted that and did not
 14 include that on this graph. Can you tell me why you
 15 discounted that?
 16 ANSWERS BY MR. SMITH:
 17 A. Well, I didn't include it on the graph because I
 18 believe that that's referring to -- to Mr. Paine, his staff's
 19 observations ten months prior that I didn't find any other
 20 records of measurements by the State Engineer's Office that I
 21 could relate that statement to. So I felt that that was
 22 basically citing the same information.
 23 Q. That -- that information you're referring to was
 24 eight CFS or a little more; is that correct?
 25 A. That was the field note; correct.

1 later measurements in the '60s which exceed these numbers?
 2 A. Which are about twice that many.
 3 Q. Does that also raise concerns about the accuracy
 4 of these numbers --
 5 A. Yes.
 6 HEARING OFFICER JOSEPH-TAYLOR: Let him finish,
 7 Mr. Katzer. I'm not even hearing your questions.
 8 THE WITNESS: Sorry.
 9 BY MR. KOLVET:
 10 Q. The later measurements in the '60s, do those
 11 cause you some reason to question the numbers in Exhibit 339?
 12 A. Yes.
 13 MR. KOLVET: That's all I have.
 14 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Any
 15 recross?
 16 MS. URE: No.
 17 MS. PETERSON: No.
 18 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 19 Questions of staff? Do you want to take a quick break or do
 20 you want to --
 21 MR. FELLING: I don't need a break.
 22 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 23 Mr. Felling?
 24 ///
 25 ///

1 Q. And this is seven or eight CFS and in this letter
 2 does if not say that, quote, I have made an examination on the
 3 premises and estimated the water available from Big Shipley?
 4 A. That's what it says.
 5 Q. All right. And I'll just leave that as that.
 6 I want to talk a little bit about predevelopment
 7 flow of Shipley. And -- and I understand that there's not a
 8 lot of solid measurements that we can use to estimate that
 9 flow.
 10 So, what is -- what do you estimate to be the
 11 decline in flow from an average predevelopment flow to we'll
 12 say 19 -- 1980, and for that I'm referring to figure 1 from
 13 your Exhibit 108?
 14 A. Right. My interpretation is, and I believe this
 15 kind of converges from two different perspectives or angles.
 16 Number one, we went through the history of reported discharges
 17 from the spring. I've offered my opinion that assuming that
 18 all of these are visual, that the best available estimate is
 19 the average in there, that would be our most accurate estimate
 20 if they were all treated equally.
 21 But then going into that time frame that you
 22 mentioned, I actually placed it into the mid-'60s, but that
 23 whole mid-'60s through mid-'80s going into the possible 1990
 24 time frame, it looks to me like there's about a one-third
 25 reduction.

1 Q. And how many CFS would that be?
 2 A. On my chart that's about four CFS.
 3 Q. And you attribute that to artesian wells; is that
 4 correct?
 5 A. That is my physical explanation for that
 6 response.
 7 Q. So, would that mean that those artesian wells
 8 would have to flow an average of four CFS or more during that
 9 period of time?
 10 A. Not necessarily, not necessarily, because it's
 11 pressure head related.
 12 HEARING OFFICER JOSEPH-TAYLOR: Make sure she can
 13 hear you.
 14 THE WITNESS: I'm sorry. It's right. And it's a
 15 pressure-related phenomenon. So, what we have to think about
 16 is what was the initial pressure on the spring, we don't know
 17 that. I've offered that it could be as high -- it could have
 18 been as high as maybe 16 or 18 feet, but it could have been
 19 lower.
 20 Because we look at today there's only about -- we
 21 can measure it today because we have a well constructed in the
 22 fracture system. And we have used a survey level to measure
 23 the differentials. There's only about a foot, about 1.5 feet
 24 between the head and the fracture system on the elevation of
 25 the ditch. So you can kind of back compute from that. We

1 part of it and then -- and then caused an increased amount of
 2 discharge from another spring, so you've turned -- in your
 3 scenario, you've turned what maybe we'll call it
 4 9,000-acre-feet of discharge into 6,000-acre-feet of discharge
 5 just by changing the location of the discharge.
 6 How does that work on a water budget?
 7 A. The other adjustment is the phreatophytes. We
 8 have affected the phreatophytes to some degree also. So it's
 9 not just that that artesian well affected absolutely only the
 10 spring discharge, there's going to be some phreatophyte
 11 response in the equation also.
 12 Q. And what would that be?
 13 A. That would probably be the differential.
 14 Q. And would it be a decrease or an increase in
 15 phreatophyte discharge?
 16 A. I would expect a decrease, but think about -- it
 17 gets complicated, Mr. Felling, because that spring discharge
 18 under natural conditions, before anything was there, that
 19 spring discharge was feeding and sourcing a lot of the
 20 phreatophyte water also. But somewhere in there you want --
 21 it's going to want to re-establish an equilibrium when you've
 22 created a drawdown the water's not daylighting, it's taking
 23 water from phreatophytes, there's also a phreatophyte
 24 adjustment locally to the declining water level.
 25 And then you've also -- what happens though is

1 have two CFS today, maybe one-sixth of the flow that would
 2 back project to maybe ten feet of it.
 3 But the reality is if you take -- it's not flow,
 4 it's head-related response. So if we take two or three feet
 5 of head off of say a ten-foot head just for round numbers, you
 6 take two -- say we take a quarter of the head or three, we
 7 take three feet of head off, that's a third of the flow. But
 8 it's not that you have to pump a one to one.
 9 In fact, for the pumping center you're pumping
 10 much, much greater but that's -- that's the physical head
 11 response that you're receiving is much smaller.
 12 You could also come in next to a spring and a
 13 spring that's regulated by a submerged orifice that's
 14 discharging out and -- and reduce that head possibly by a
 15 smaller discharge rate, but you messed up the head down there
 16 and now it's not able to daylight.
 17 So that's -- that's my interpretation, you don't
 18 have to have a one for one pumping, but you do have -- it's
 19 the relationship and tension metric head that's driving the
 20 discharge, the daylighting of the source of the surface.
 21 BY MR. FELLING:
 22 Q. Okay. So I'd like to explore that a little
 23 further. And you've explained your point. How does that fit
 24 the water budget scenario where there's a certain amount of
 25 flow that is entering the valley and you have captured a small

1 when that water is not discharging to phreatophytes it's
 2 probably still there as a resource, it's just not daylighting.
 3 So where is it going, it's going towards -- it's helping
 4 moving supply some of the pumping discharge.
 5 Q. If you reduce the spring flow and reduce the
 6 phreatophyte ET you've cut the discharge even more and you
 7 violated the water budget even more than your previous
 8 scenario.
 9 So instead of having 10,000-acre-feet we're just
 10 using a number of discharge that comes from springs, wetlands,
 11 the works.
 12 A. Um-hum.
 13 Q. You have some amount of artesian flow and at one
 14 point it was -- well, according to Harrill and your
 15 documentation, it was -- was it 500, 500 gallons a minute in
 16 the 1960s?
 17 You've taken a discharge, a basin of
 18 10,000-acre-feet, taken 500-acre-feet a year of artesian
 19 spring flow and then reduced the Shipley's flow by four CFS,
 20 plus reduced the associated groundwater ET from phreatophytes,
 21 those numbers don't -- they don't add up?
 22 A. I think they do, Mr. Felling, because if you look
 23 at the -- well, let's add these up.
 24 The Brown Ranch artesian well was almost one CFS
 25 when it was drilled. So was the middle well, one CFS. The

1 Romano Ranch well, I mean, just for the five well logs we have
 2 was over four CFS when they were drilled.
 3 Now, by the time Harrill was out and the system
 4 was in my opinion relatively equilibrated, it was down to only
 5 maybe one-quarter CFS at that point from the Romano Ranch
 6 wells, but those other wells are still discharging water also.
 7 So if you add all this up and it was above that
 8 four CFS initially and then it subsided back down to some
 9 equilibrated flow rate, but again, you have to add all these
 10 flowing wells together.
 11 Q. I -- I -- I don't -- I don't disagree with that.
 12 What was the average flow of all those flowing wells for that
 13 time period when they were drilled until your first seven CFS
 14 measurement in 1965?
 15 A. I suspect the average flow was very close to that
 16 CFS -- or four CFS, I suspect. Because I know it was greater
 17 than that initially. And substantially possible at the Romano
 18 Ranch. And it equilibrated back to some level by the
 19 mid-'60s.
 20 Q. Even though Harrill estimated a significantly --
 21 well, he didn't estimate, he reported a significant lower
 22 amount from those flowing wells in the 1960 --
 23 A. If you add those flow measurements up from the
 24 Brown Ranch middle well to the Romano Ranch I believe you're
 25 going to get close to three CFS. I think you're in the

1 one other thing.
 2 On -- on your figure 2, that's your comparison of
 3 precipitation to spring discharge at Shipley --
 4 HEARING OFFICER JOSEPH-TAYLOR: Figure 2 of what
 5 exhibit?
 6 MR. FELLING: Of Exhibit 108.
 7 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 8 BY MR. FELLING:
 9 Q. In this case you compared Shipley Spring
 10 discharge to water year precipitation for I guess that year or
 11 the previous year; is that correct?
 12 A. For 11 years.
 13 Q. You characterize Shipley as a regional spring; is
 14 that right?
 15 A. Yes.
 16 Q. Would you expect a regional spring to respond
 17 directly to that year's precipitation?
 18 A. I wanted to check for it. I thought there was a
 19 possibility that there -- we might see some response, but I
 20 would expect that regional spring to be buffered to some
 21 degree from the variability we see year to year.
 22 Q. So did you compare Shipley Spring discharge to
 23 regional -- or trends in precipitation, cyclical
 24 precipitation?
 25 A. No, I didn't do any long-term-type analysis. I

1 ballpark. Now you have all these other complicated dynamics
 2 that you've got to consider too about where is the water going
 3 that I started off my response on. It wasn't just the Romano
 4 Ranch in the picture there --
 5 HEARING OFFICER JOSEPH-TAYLOR: Speak up, please.
 6 THE WITNESS: It was not only the Romano Ranch
 7 wells, but it was the other wells, artesian wells to the north
 8 also, the middle well on the Sadler Ranch and the Brown Ranch.
 9 I should add in there, Mr. Felling, and I don't
 10 know when the Brown Ranch started to pump their well either.
 11 We know it was drilled as a full artesian well in 1960, but at
 12 some point in time that started to be a pumped well too.
 13 BY MR. FELLING:
 14 Q. So, I want this -- I want this clear and on the
 15 record. You're stating for the record that the average flow
 16 of the artesian wells, that that average flow could reduce the
 17 discharge of the springs by an amount greater than those --
 18 the flow of those wells, is that what you're saying?
 19 A. I don't -- I don't think that's -- that's really
 20 correct. I think that average flow matches pretty well first
 21 off.
 22 Q. So now you think they're equal?
 23 A. I don't know if they're absolutely equal, I think
 24 they match pretty well.
 25 Q. Okay. I'd like to go up -- oh, I want to address

1 wanted to basically check to see if I could correlate that
 2 year's discharge with a water year high or low in
 3 precipitation.
 4 Q. Would you expect that Shipley Spring discharge
 5 could -- could vary depending on weather cycles?
 6 A. It's possible. It's certainly possible that
 7 there's some degree of variability that is climate cycle
 8 related. A climate cycle would be, you know, a larger drought
 9 or larger width period of a multiple year. That's possible,
 10 but we have so much other influence and effect on the spring
 11 here that I don't really know that one could define that.
 12 Q. In your hydrograph, figure 1, behind you, that's
 13 your hydrograph for Shipley Spring flows.
 14 A. Um-hum.
 15 Q. Do you -- do you -- those -- the brown squares,
 16 the USGS measurements.
 17 A. Um-hum.
 18 Q. Do you notice how they increased since the 1980s
 19 from a level of six CFS to eight CFS?
 20 A. Yes, by the late '80s you are -- you are --
 21 you're up to about 8.2 CFS.
 22 Q. And you're aware of the early to mid-'80s wet
 23 period in Nevada?
 24 A. Yes.
 25 Q. Do you think that might have had something to do

1 with that change in Shipley Spring flow?
 2 A. It could, but it's fairly speculative. Because I
 3 know that there are larger on the ground influences as far as
 4 what's happened with the stage on the spring flow, raising the
 5 water to try to divert out to the north, you know, I know that
 6 that has a physical effect also.
 7 But, yeah, it's possible, it's just not something
 8 I can de -- you know, I can define in this circumstance,
 9 there's too many other variables and factors.
 10 MR. FELLING: Thanks. No more questions.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any questions of
 12 staff? Mr. Walmsley?
 13 CROSS-EXAMINATION
 14 BY MR. WALMSLEY:
 15 Q. Yes. Good morning, Terry -- Mr. Katzer.
 16 ANSWERS BY MR. KATZER:
 17 A. Good morning.
 18 Q. I think it's a simple question. You discounted
 19 the 1912 Paine measurement as a snapshot in time; is that
 20 correct?
 21 A. I did.
 22 Q. From what I've heard through this hearing, many
 23 of the measurements on either springs from what I've seen
 24 constitute a snapshot in time; is that true?
 25 A. That's correct.

1 MR. TAGGART: I have a list I wanted to ask you
 2 about if I may.
 3 HEARING OFFICER JOSEPH-TAYLOR: Yeah, I wanted to
 4 go through with you too.
 5 MR. TAGGART: I went over with Ms. Geddes this
 6 morning but --
 7 HEARING OFFICER JOSEPH-TAYLOR: I think there's a
 8 few of yours that are not in.
 9 MR. TAGGART: What about -- do you want to
 10 start --
 11 HEARING OFFICER JOSEPH-TAYLOR: Folks, folks,
 12 we're on the record, please.
 13 MR. TAGGART: You want to start or would you like
 14 me to?
 15 HEARING OFFICER JOSEPH-TAYLOR: You can go ahead.
 16 MR. TAGGART: Okay. 120.
 17 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 18 the admission of Exhibit 120?
 19 MS. PETERSON: Let me -- I just need to look at
 20 it.
 21 HEARING OFFICER JOSEPH-TAYLOR: It's USGS
 22 bulletin.
 23 MS. PETERSON: That's fine.
 24 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 120 will
 25 be admitted.

1 Q. So in the absence of a well-maintained continuous
 2 measuring device on either Shipley Springs or Thompson
 3 Springs, there really isn't a way to analyze the diurnal
 4 effects on flow from either of these springs; is that true?
 5 A. It becomes very difficult. On Shipley Hot
 6 Springs, for example, we had 40-some-odd measurements over
 7 four years. Finally, we put a recorder in the pond, but we
 8 didn't do that until 2011. And there was no opportunity to do
 9 anything like that for Thompson.
 10 So, what the -- what the scientists did at the
 11 time was to take and make miscellaneous measurements and then
 12 connect the dots. And that's probably about the best they
 13 could do.
 14 Q. Okay. Well, I -- I can agree with that because
 15 if you have a -- in the case of a working ranch and utilizing
 16 the water I believe that that is the best he could do. So I
 17 can agree with that type of measurement.
 18 MR. WALMSLEY: So, that's pretty much all I have.
 19 Thank you, Terry.
 20 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 21 Mr. King?
 22 THE STATE ENGINEER: Nope.
 23 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 24 gentlemen. You may be excused. I want to make sure on
 25 exhibits --

1 (Exhibit 120 admitted into evidence.)
 2 MR. TAGGART: 146.
 3 HEARING OFFICER JOSEPH-TAYLOR: Is in.
 4 MR. TAGGART: All right. 152 and 153.
 5 HEARING OFFICER JOSEPH-TAYLOR: Have not been
 6 offered.
 7 MR. TAGGART: Okay. We offer those into
 8 evidence, that's the '82 Harrill memo and the '82 capture
 9 letter.
 10 MS. PETERSON: No objection.
 11 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 152
 12 and 153 will be admitted.
 13 (Exhibits 152 and 153 admitted into
 14 evidence.)
 15 MR. TAGGART: 154 are well logs for the Romano
 16 wells and for wells on Sadler Ranch. And -- and so they
 17 weren't talked about specifically, but they were utilized in
 18 Mr. Smith's analysis. So, I think they'd be helpful, but --
 19 and so we offer them into evidence.
 20 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 21 154?
 22 MS. PETERSON: No objection.
 23 HEARING OFFICER JOSEPH-TAYLOR: It will be
 24 admitted.
 25 (Exhibit 154 admitted into evidence.)

1 MR. TAGGART: 189 is Dwight Smith's rebuttal
 2 report, we offer that into evidence.
 3 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 4 MS. PETERSON: No objection.
 5 HEARING OFFICER JOSEPH-TAYLOR: 189 will be
 6 admitted.
 7 (Exhibit 189 admitted into evidence.)
 8 MR. TAGGART: All right. Then do you have -- and
 9 then I have a series at the end in the 600s that were all soil
 10 documents that Mr. Frazer relied upon in his testimony. He
 11 didn't mention them in his testimony, but they're -- they're
 12 the sources of -- of the statements he was making and I -- I
 13 asked opposing counsel two days ago, I said I'd be offering
 14 these in and they could take a look at them and see if they
 15 had any objection.
 16 HEARING OFFICER JOSEPH-TAYLOR: Who relied on
 17 these, Mr. Taggart?
 18 MR. TAGGART: Mr. Frazer.
 19 HEARING OFFICER JOSEPH-TAYLOR: Frazer.
 20 MR. TAGGART: They're soils reports and it would
 21 be 606.
 22 HEARING OFFICER JOSEPH-TAYLOR: Let's go through
 23 them one at a time.
 24 MR. TAGGART: All right.
 25 HEARING OFFICER JOSEPH-TAYLOR: Any objection to

1 HEARING OFFICER JOSEPH-TAYLOR: I know, but he
 2 nods to me too. Go ahead.
 3 MR. KOLVET: I do. Thank you. Yes, with respect
 4 to Mr. Katzer's testimony and report, the report's already in
 5 evidence, but he references several exhibits. One is 207, I
 6 don't believe is in yet.
 7 HEARING OFFICER JOSEPH-TAYLOR: It is not.
 8 MR. KOLVET: I would offer 207.
 9 MS. PETERSON: I actually had a question for
 10 Mr. Katzer on 207, but it was never offered during his
 11 testimony, so I don't --
 12 HEARING OFFICER JOSEPH-TAYLOR: That didn't stop
 13 you from asking about it, they've been picking up your
 14 exhibits and asking about it. So things in your exhibits.
 15 MS. PETERSON: Well, he had moved for most of the
 16 admission of Mr. Katzer's exhibits yesterday.
 17 MR. KOLVET: I did do that, but this exhibit was
 18 relied on by Mr. Katzer in preparing his report, it's
 19 referenced in his report specifically.
 20 HEARING OFFICER JOSEPH-TAYLOR: Is there going to
 21 be an objection to the admission?
 22 MS. PETERSON: I'm going to object.
 23 HEARING OFFICER JOSEPH-TAYLOR: I'm going to
 24 overrule it and admit it.
 25 MR. KOLVET: Thank you.

1 606?
 2 MS. PETERSON: No objection.
 3 HEARING OFFICER JOSEPH-TAYLOR: It will be
 4 admitted.
 5 (Exhibit 606 admitted into evidence.)
 6 MR. TAGGART: 608.
 7 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 8 MS. PETERSON: No objection.
 9 HEARING OFFICER JOSEPH-TAYLOR: 608 will be
 10 admitted.
 11 (Exhibit 608 admitted into evidence.)
 12 MR. TAGGART: And then 610 through 613.
 13 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 14 MS. PETERSON: No objection.
 15 HEARING OFFICER JOSEPH-TAYLOR: 610 through 613
 16 will be admitted.
 17 (Exhibits 610 through 613 admitted into
 18 evidence.)
 19 MR. TAGGART: And then is 614 in evidence?
 20 HEARING OFFICER JOSEPH-TAYLOR: It's in.
 21 MR. TAGGART: Thank you. That is the list that I
 22 see I want to have in evidence.
 23 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet, any
 24 housekeeping we need to take care of for you?
 25 MR. TAGGART: He's not done with his case.

1 (Exhibit 207 admitted into evidence.)
 2 MR. KOLVET: 210 likewise was relied on by
 3 Mr. Katzer in his report and it based -- it was the basis of
 4 some of his testimony out on the ledge.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 6 210?
 7 MS. PETERSON: No objection.
 8 HEARING OFFICER JOSEPH-TAYLOR: It will be
 9 admitted.
 10 (Exhibit 210 admitted into evidence.)
 11 MR. KOLVET: 211 wasn't referenced, it's another
 12 photograph that was submitted as part of his report. I'll
 13 offer it.
 14 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 15 211?
 16 MS. PETERSON: I don't have an objection.
 17 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 211
 18 will be admitted.
 19 (Exhibit 211 admitted into evidence.)
 20 MR. KOLVET: Same for 212.
 21 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 22 MS. PETERSON: No objection.
 23 HEARING OFFICER JOSEPH-TAYLOR: 212 will be
 24 admitted.
 25 (Exhibit 212 admitted into evidence.)

1 MR. KOLVET: 220 I believe is the last photograph
 2 that --
 3 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 4 220?
 5 MS. PETERSON: No objection.
 6 HEARING OFFICER JOSEPH-TAYLOR: 220.
 7 (Exhibit 220 admitted into evidence.)
 8 HEARING OFFICER JOSEPH-TAYLOR: Does that take
 9 care of yours for right now, Mr. Kolvet?
 10 MR. KOLVET: It does.
 11 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 12 record and --
 13 MS. PETERSON: I have a question.
 14 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 15 MS. PETERSON: Is the graph up there going to be
 16 admitted as an exhibit?
 17 HEARING OFFICER JOSEPH-TAYLOR: It hasn't been
 18 offered.
 19 MR. TAGGART: No.
 20 HEARING OFFICER JOSEPH-TAYLOR: Okay. We'll be
 21 off the record.
 22 MS. PETERSON: I -- I do have one more.
 23 HEARING OFFICER JOSEPH-TAYLOR: One more what?
 24 MS. PETERSON: We'd move to admit Exhibit 339.
 25 HEARING OFFICER JOSEPH-TAYLOR: Oh. 339, any

1 GEORGE THIEL,
 2 called as a witness in this matter,
 3 having been first duly sworn,
 4 testified as follows:
 5
 6 DIRECT EXAMINATION
 7 MR. KOLVET: I would prior to Mr. Thiel's
 8 testimony offer him as an expert in water rights and
 9 hydrobiology. I believe he's qualified several times before
 10 this body.
 11 HEARING OFFICER JOSEPH-TAYLOR: He has been
 12 qualified here in my records twice in water rights and
 13 hydrology, I'm a little concerned about hydrology, Mr. Thiel,
 14 what's your background in hydrology? Water rights I don't
 15 have a problem with.
 16 THE WITNESS: Okay. Through my coursework at the
 17 University of Washington I had courses in hydrology. When I
 18 went to the -- came to the State Engineer's Office in -- I
 19 think it was 1981 I worked extensively in various sections
 20 within the State Engineer's Office working on hydrology and
 21 geohydrology issues. Some of the stuff I worked on had to do
 22 with Eureka Valley, Steptoe Valley on doing analysis using the
 23 Maxey-Eakin method and looking at sub-basins as far as flow
 24 with White Pine power applications.
 25 I worked with the -- this basin I would say in

1 objection?
 2 MR. TAGGART: One second, please.
 3 HEARING OFFICER JOSEPH-TAYLOR: That's our field
 4 book, 1912 field book.
 5 MR. TAGGART: Of course, yes, I'm not involved in
 6 that.
 7 MR. KOLVET: No objection.
 8 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 339
 9 will be admitted.
 10 (Exhibit 339 admitted into evidence.)
 11 HEARING OFFICER JOSEPH-TAYLOR: Now we'll be off
 12 the record. Ten-, 15-minute recess.
 13 (Recess taken.)
 14 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 15 record. Mr. Taggart indicated that he wanted us to go ahead
 16 since this is your case, Mr. Kolvet. Call your next witness,
 17 please.
 18 MR. KOLVET: That makes me feel badly. I had to
 19 sit through all of his stuff.
 20 HEARING OFFICER JOSEPH-TAYLOR: Had to?
 21 MR. KOLVET: I call George Thiel.
 22 HEARING OFFICER JOSEPH-TAYLOR: Mr. Thiel, please
 23 stand and be sworn.
 24 ///
 25 ///

1 '81, '82, use and landsat imagery going through the various
 2 USGS reports that existed at the time working on certain
 3 analysis for Mr. Morros, who was the State Engineer with
 4 regard to basin flow and using landsat imagery with regard to
 5 pumping within the valley, built truthing, et cetera.
 6 HEARING OFFICER JOSEPH-TAYLOR: I do a lot of
 7 that kind of stuff too, Mr. Thiel, but I'm not a hydrologist,
 8 I need the hydrology.
 9 THE WITNESS: I worked with the Yucca Mountain
 10 project on doing groundwater modeling with the USGS. I
 11 coauthored the USGS model with Ival Shoe and Greg Billeau
 12 which were published on.
 13 That had to do with 26 different basins in the
 14 basin interflows on the discharge to Ash Meadows and Amargosa
 15 Desert, it was quite extensive.
 16 I worked on modeling and issues associated with
 17 water projects up at Hualapai Flat and San Emidio including
 18 pump testing and hydrology up there. Let me think, where
 19 else?
 20 HEARING OFFICER JOSEPH-TAYLOR: Tell me about
 21 your coursework in hydrology.
 22 THE WITNESS: Court work?
 23 HEARING OFFICER JOSEPH-TAYLOR: Course, education
 24 in hydrology.
 25 THE WITNESS: It's been so long ago.

1 HEARING OFFICER JOSEPH-TAYLOR: Yeah, but you're
 2 trying to qualify as an expert in this.
 3 THE WITNESS: I've been qualified before, it's
 4 just not showing up here.
 5 HEARING OFFICER JOSEPH-TAYLOR: I'm questioning
 6 it.
 7 THE WITNESS: But anyhow, I -- my coursework had
 8 to do with surface water with regard to flow measurements,
 9 general stuff for civil engineering with regard to that.
 10 I took courses with regard to pump testing and
 11 the results associated with pump testing on looking at
 12 transmissivity, storativity, constants. I've done quite a bit
 13 of work in that area.
 14 I've done work up on Clear Creek, for example, in
 15 locating the fault, Genoa fault and looking at fracture flow
 16 within that area. Yucca Mountain project I participated on
 17 the nests that were associated with -- up near the Yucca
 18 Mountain lock.
 19 HEARING OFFICER JOSEPH-TAYLOR: That what?
 20 THE WITNESS: There was a series of nests of
 21 wells.
 22 HEARING OFFICER JOSEPH-TAYLOR: Nests. Okay.
 23 THE WITNESS: Yeah, that were small zomoters put
 24 in. And we worked on radioactive tracing through the mountain
 25 walk.

1 Mr. Thiel as an expert in hydrogeology or hydrology and we
 2 think it was a mistake to have done so previously. We have no
 3 problem qualifying him as an expert in Nevada water rights and
 4 he'll be so qualified in that.
 5 MR. KOLVET: Just for the record, I am aware of
 6 two hearings in which he was qualified as a hydrologist and
 7 hydrogeologist. One was the Amargosa hearings which were held
 8 before Mr. Turnipseed. The other one was the Yucca Mountain
 9 project which I was the attorney for both of those cases and
 10 he qualified.
 11 HEARING OFFICER JOSEPH-TAYLOR: It's so noted,
 12 but we're questioning it.
 13 MR. KOLVET: I understand you're questioning it,
 14 but there will be questions related to the area of testimony
 15 and I believe that you can take it -- his testimony for what
 16 you want to give it, but he's going to be doing that
 17 testimony. I don't know how you deal with that, but.
 18 THE STATE ENGINEER: Mr. Kolvet, I would also add
 19 we certainly understand based on the CV he's a registered
 20 professional engineer, he's got some background in some
 21 hydrology so he is an expert in Nevada water rights, we don't
 22 need to qualify him as a registered professional engineer.
 23 But we certainly understand that he is that and that should
 24 get some deference as well.
 25 MR. KOLVET: Thank you. I would though offer

1 HEARING OFFICER JOSEPH-TAYLOR: Worked on
 2 radioactive tracing through the mountain walk.
 3 THE WITNESS: Yeah, in other words, there was
 4 some chemical and radioactive tracing, but my role was fairly
 5 minor in that, but I participated in the pump test on the
 6 Yucca Mountain project that was ongoing at that time.
 7 HEARING OFFICER JOSEPH-TAYLOR: I have no problem
 8 with water rights, Mr. Kolvet. Why do we need him as
 9 hydrogeology? I have some issues with hydrogeology.
 10 MR. KOLVET: Well, there are going to be and
 11 there have been testimony in this case about the flows and the
 12 impacts of pumping on certain flows and spring sources and
 13 things of that nature. Although Mr. Katzer's testified and
 14 touched on some of that. Mr. Thiel's testimony will also
 15 touch on those areas and will in part rely on that but also
 16 rely on USGS reports regarding those areas.
 17 Mr. Thiel's interpretation of that is also part
 18 of his report. His CV by the way is Exhibit 231, I would
 19 offer that to support his expertise in these areas. That's
 20 why.
 21 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 22 record.
 23 (Short off the record.)
 24 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 25 record. Mr. Kolvet, we are very uncomfortable with qualifying

1 before we go too much further 231, which is Mr. Thiel's CV.
 2 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 3 the admission of Exhibit 231?
 4 MS. PETERSON: No, no objection.
 5 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 6 MR. KOLVET: Before we get into --
 7 HEARING OFFICER JOSEPH-TAYLOR: 231 will be
 8 admitted. I'm sorry.
 9 MR. KOLVET: I'm sorry.
 10 HEARING OFFICER JOSEPH-TAYLOR: Trying to do
 11 three things at once.
 12 (Exhibit 231 admitted into evidence.)
 13 BY MR. KOLVET:
 14 Q. Mr. Thiel, could you state for the record your
 15 educational background?
 16 A. I have a bachelor of science of civil engineering
 17 from the University of Washington. I graduated there in 1976.
 18 Q. As part of your civil engineering coursework did
 19 you take any classes or courses specifically related to the
 20 issues of water, flow readings, that type of thing?
 21 A. I did.
 22 Q. What were those?
 23 A. I had classes associated with general hydrology
 24 regarding pump testing, determination of transmissivity,
 25 storativity, those issues related to that. I had classes

1 associated with it in general by -- or geology and groundwater
 2 movement.
 3 Q. Are you licensed as a civil engineer in any
 4 states?
 5 A. I'm licensed in five states.
 6 Q. What are those states?
 7 A. Arizona, Nevada, Idaho, California and I think I
 8 have one more, Utah.
 9 Q. When did you receive your license in Nevada?
 10 A. 1983.
 11 Q. As part of your employment background did you
 12 have occasion to work for the State Engineer's Office?
 13 A. I did.
 14 Q. When were you employed at the State Engineer's
 15 Office?
 16 A. I believe it was 1981 through 1984.
 17 Q. And what type of work did you do for the State
 18 Engineer?
 19 A. I basically worked in every section under the --
 20 Pete Morros, who was State Engineer at the time. I worked in
 21 the adjudication section for a while. I worked in the office
 22 engineering section for a while and I worked with the
 23 groundwater section for a while.
 24 Basically, Pete appointed me as a special
 25 projects engineer, anything that came up I would handle. I

1 and using another method to assess through landsat imagery
 2 system natural consumptive use programs for the future.
 3 Q. Subsequent to your employment with the State
 4 Engineer what have you been doing?
 5 A. Prior to that I worked for Washoe County Health
 6 Department. I was with them for a year and mostly that was
 7 having to do with sanitary engineering with wastewater
 8 treatment plants. And I also had -- worked on wells as far as
 9 going out and evaluating the wells for health standards
 10 primarily.
 11 Q. After your employment with the State Engineer --
 12 A. I'm sorry.
 13 Q. -- what were you doing?
 14 A. After my employment with the State of Nevada I
 15 left public work and went into working with CES in Reno,
 16 Nevada.
 17 Q. What is CES?
 18 A. Consulting Engineering Services. It was an
 19 environmental firm -- or actually it was a consulting firm.
 20 And I was running an office, a branch office out of Douglas
 21 County working with Bill Marshall. My tasks included doing a
 22 lot of water rights work for that firm and doing some water
 23 resource work.
 24 Q. How long were you at CES?
 25 A. I believe I was there about two and a half years

1 wrote rulings for the State Engineer, I reviewed permits, I
 2 did field investigations, did basin budgets, did various
 3 investigations with regard to recharging the basin,
 4 formulating technical results for the State Engineer for
 5 hearings and reviewing USGS publications in preparation for
 6 hearings and rulings, if you will.
 7 Q. Did any of your special project work involve
 8 Diamond Valley?
 9 A. It did.
 10 Q. When was that?
 11 A. That was in '81, '82. And basically what that
 12 work was in preparation I believe for the hearing that was
 13 held by Mr. Morros in 1982. And what my work involved was
 14 doing some investigation with regard to bulletin 35,
 15 reconnaissance report number 6 and looking at the issues
 16 regarding older pumpage. And the other aspect of it was to
 17 look at landsat imagery and working with USGS on the network
 18 that they had established on trying to set a remote station
 19 for the State Engineer's Office to further analyze that.
 20 That work included going out and doing field
 21 measurements on the discharge of the wells and calibrating
 22 instrumentation with the University of Nevada. And with that
 23 I was working with USGS taking landsat imagery and doing the
 24 field calibrations necessary to look at the application of
 25 Diamond Valley for determining water consumption in the basin

1 to my recollection.
 2 Q. After CES what was your employment?
 3 A. I went to work for a short period with Bentley, a
 4 Nevada corporation in Douglas County. And I was there for a
 5 short period working on the new science park that they were
 6 putting in.
 7 I left there and went into private consulting on
 8 my own and formed a company with my partner, which was
 9 David Winchell at the time.
 10 Q. And what kind of work did you do in that time
 11 frame?
 12 A. Most of my work was isolated to the water rights
 13 and water resources that -- that was kind of my specialty
 14 after leaving the State Engineer's Office.
 15 I handled some hearings, I think my first hearing
 16 that I had had to do with Goshute Valley with regard to
 17 protested applications on the Big Springs Ranch. And we were
 18 handling -- we were on the side of the Applicant and we
 19 were -- our advocate was the City of Wendover.
 20 Q. What kind of work did you do in that regard?
 21 A. I did work associated with investigations of the
 22 Big Springs Ranch discharge, looking at the discharge not only
 23 from the springs but what was occurring downgradient from the
 24 ranch. We looked at conveyance infrastructure delivered to
 25 the city of Wendover. And there was work that we were doing

1 based upon the dispute of what Wendover was doing with the
 2 development of the well field on the northern portion of
 3 Goshute Valley.
 4 Basically, I was involved with analyzing the
 5 effects of drawdown in relation to the spring discharge area.
 6 Q. Did you testify in any hearings related to that
 7 project?
 8 A. I did.
 9 Q. What hearings did you testify at?
 10 A. That had to be probably in 1985 I would
 11 speculate, maybe a little later. And it was the hearings
 12 before the State Engineer that was held in the town of West
 13 Wendover.
 14 Q. What was the nature of your testimony in that
 15 hearing?
 16 A. The nature of my testimony was to provide --
 17 there was a two-step issue here, I think. We had protested
 18 the City of Wendover applications and we had to show the
 19 relationship of their impact of pumping within the groundwater
 20 aquifer on what would happen to the springs.
 21 And we had looked at the -- we being myself
 22 because there was only two of us at the time looked at that
 23 impact occurring with regard to withdrawal within that
 24 groundwater basin.
 25 Q. Were you qualified as an expert in this area?

1 A. I don't recall exactly the specific hearings, but
 2 multiple times, many times.
 3 Q. And currently you are a licensed engineer in this
 4 state; is that correct?
 5 A. I'm a licensed engineer in this state and I'm
 6 also a state water rights surveyor.
 7 Q. How long have you held status as a water rights
 8 surveyor?
 9 A. About 30 years.
 10 MR. KOLVET: Just for the record I'd offer him
 11 again in those areas. I understand the ruling and the intent
 12 of the State Engineer to take his testimony in regards to his
 13 licensure and previous testimony.
 14 HEARING OFFICER JOSEPH-TAYLOR: So noted. Will
 15 be qualified as an expert in Nevada water rights and water
 16 resources.
 17 MR. KOLVET: Okay. Before I begin there's a
 18 couple of housekeeping matters. Mr. Thiel has prepared as
 19 what is Exhibit 234, which would be gone through in his
 20 testimony. There is a corrected version of 234 which I've
 21 provided to counsel and I have a couple copies here for the
 22 State Engineer.
 23 HEARING OFFICER JOSEPH-TAYLOR: Thank you. So
 24 are we substituting these --
 25 MR. KOLVET: I just added it as another exhibit,

1 A. I believe I was and -- it's been a long time ago,
 2 this was unexpected, but I believe I was qualified as an
 3 expert in water rights and water resources.
 4 Q. Okay. In your consulting capacity generally
 5 since leaving the State Engineer's Office, how many projects
 6 do you estimate you've been involved in that deal with water
 7 rights and various aspects of water rights?
 8 HEARING OFFICER JOSEPH-TAYLOR: And various
 9 aspects of what?
 10 MR. KOLVET: Water rights.
 11 THE WITNESS: Over the years probably hundreds.
 12 BY MR. KOLVET:
 13 Q. And in those hundreds have you been asked to
 14 provide opinions relating to the effects on an aquifer from
 15 pumping?
 16 A. Yes.
 17 Q. Have you been asked to testify regarding the
 18 approximate usage from various sources?
 19 A. Yes.
 20 Q. Historically?
 21 A. Yes.
 22 Q. Have you qualified before the State Engineer in
 23 those areas in previous hearings?
 24 A. I have.
 25 Q. How many times would you say?

1 that's probably the easiest housekeeping way to handle it.
 2 HEARING OFFICER JOSEPH-TAYLOR: So we are going
 3 to mark these as -- do it 229, it will be right above his CV
 4 in the exhibit list.
 5 MR. KOLVET: Thank you.
 6 HEARING OFFICER JOSEPH-TAYLOR: We're going to
 7 call this corrected Thiel report?
 8 MR. KOLVET: That's correct. I have extra
 9 copies.
 10 MS. PETERSON: I think it's the PowerPoint.
 11 MR. KOLVET: It is, it will be the PowerPoint
 12 presentation as it relates to his report. I'm sorry.
 13 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 14 record.
 15 (Short off the record.)
 16 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 17 record. I am marking as Exhibit 229 the corrected Thiel
 18 expert presentation report.
 19 (Exhibit 229 marked for identification.)
 20 MR. KOLVET: Thank you. One other additional
 21 matter, I'm trying to find what the current number is on this.
 22 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry, I was
 23 marking exhibits, what did you say, Mr. Kolvet?
 24 MR. KOLVET: There is one other matter and I need
 25 Mr. Thiel to tell me which specific one, Exhibit 250 or 251.

1 THE WITNESS: I think it's 250.
 2 MR. KOLVET: The '79 survey exhibit?
 3 THE WITNESS: It is.
 4 HEARING OFFICER JOSEPH-TAYLOR: We're actually on
 5 the record, so --
 6 MR. KOLVET: I understand.
 7 HEARING OFFICER JOSEPH-TAYLOR: -- your mumbings
 8 are being taken down.
 9 MR. KOLVET: I understand that, I'm just trying
 10 to clarify which exhibit this would go to. And for the
 11 record, what I'm providing is a transcription of the survey
 12 notes from 19 -- or 1879, which has previously been marked as
 13 Exhibit 250, which are the handwritten notes. This is a
 14 transcription of those notes.
 15 HEARING OFFICER JOSEPH-TAYLOR: Can we attach it
 16 without objection to 251?
 17 MS. PETERSON: 250.
 18 MR. KOLVET: 250, I believe.
 19 HEARING OFFICER JOSEPH-TAYLOR: Okay. They're
 20 both field survey notes. To 250, any objection to attaching
 21 it?
 22 MS. PETERSON: No.
 23 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 24 These are just going to be stapled to Exhibit 250. Okay. Any
 25 other housekeeping? We're on the record.

1 BY MR. KOLVET:
 2 Q. What I'm referencing I guess, I can't read my own
 3 stuff here. Did you amend the proof filed in support of the
 4 vested claim 0115?
 5 A. I did.
 6 Q. 1115. And is that Exhibit 24?
 7 A. It is.
 8 Q. And with respect to vested claim 01115 what does
 9 that encompass?
 10 A. The -- there was three proofs including my second
 11 amended proof. With Exhibit 24 I believe that was the amended
 12 proof that was done by a firm out of Elko. Bill Nisbet. I
 13 did the second amended proof and there was a filing back in
 14 1912 on Exhibit 23 that was the original proof filing.
 15 So what I did was the second amended proof.
 16 Q. And what specifically are the differences between
 17 the original vested claim filing and what you prepared?
 18 A. Well, then I would go into this in more detail
 19 with regard to what was filed in 1912 and what was filed in
 20 1975. But, the major difference in that I was involved with
 21 on the second amended proof under Exhibit Number 26 involved
 22 taking all of the data and all the research that I compiled
 23 over the period of time.
 24 What I found lacking within the original proofs
 25 was any evidence going back prior to the 1905 vesting.

1 MR. KOLVET: I don't believe at this time.
 2 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 3 BY MR. KOLVET:
 4 Q. Mr. Thiel, were you retained by Daniel Venturacci
 5 to prepare and submit to the State Engineer certain proofs of
 6 beneficial use on vested rights?
 7 A. I was.
 8 Q. And did you in that effort compile a submittal to
 9 the State Engineer supporting vested rights claim related to
 10 the Thompson Ranch, Cox Ranch and Willow Field?
 11 A. Yes. In fact, that submittal also covered two
 12 other properties to the north on the original submittal, which
 13 I believe is -- that would be I believe --
 14 Q. If I direct your attention to Exhibit 23, is that
 15 proof one of the ones you prepared?
 16 A. Yes, it is.
 17 Q. And that would be for vested claim 01115; is that
 18 correct?
 19 A. That's correct.
 20 Q. And Exhibit 26 that related to vested claim
 21 03289?
 22 A. Let's see, I believe 3289 is for Shipley Springs.
 23 HEARING OFFICER JOSEPH-TAYLOR: It is, it's
 24 Saddler.
 25 MR. KOLVET: Oh, okay. I'm sorry.

1 For example, on the original proof filed under
 2 0115 in 1912 by -- I believe it's Mrs. Taft, I often get Taft
 3 and Toft confused because they're close owners.
 4 But anyhow, there was different reasons for the
 5 original filing of the original proof. When the survey was
 6 done in 1975 that survey was predicated upon what existed in
 7 the field at the time and recognized by the survey. It did
 8 not go into any historic documentation or any data that
 9 existed in order to determine the vesting of those water
 10 rights.
 11 The issue I found with that was is that there's
 12 sufficient data and evidence that supports the new filings to
 13 support what I came up with after reviewing the 1879 survey
 14 map, which I didn't find that was done by either of the
 15 persons on the previous proofs.
 16 Looking at aerial photos for evidence of water
 17 use on the property and doing historical research on the land
 18 itself by reviewing any oral histories, reviewing some of the
 19 diaries that were out there. Reviewing what the records were.
 20 Unfortunately, what we have here is we have a
 21 situation where the best evidence has to be relied on the 1879
 22 survey based upon a guy being out in the field and his being
 23 there to support the physical land decrees and the process of
 24 going through the federal government to gain land, that was
 25 the only purpose for them being there.

1 You could not get a desert land entry or curiak
2 (ph.) without first survey on the property. And part of his
3 task was to witness any evidence of culture and activity that
4 existed on the property. So, from that standpoint I had to
5 look at that and what currently exists out there. And then I
6 had to look at when that activity changed.

7 So from my standpoint I did not weight one
8 document greater than the other. You know, part of the effort
9 we had to do is see what records existed in the county, you
10 know, we had the water records book, for example, that was
11 basically established by the 1866 legislature under chapter
12 100 where at the time the legislature wanted to see what was
13 necessary to go through and establish a water right and see
14 what people were out there. What activity was occurring in
15 the state.

16 So the legislature talked to chapter 100 and they
17 went through and said okay, here's what we have and we're
18 going to require -- if you want to dig a ditch we want you to
19 record it in the county recorder's office. So when you review
20 the water books it's an intent on what you're going to do. It
21 wasn't what you accomplished over a period of time.

22 So then of course it went through various statute
23 changes up through March 1st 1905 amendments and 1907
24 amendments and 1909. And finally the framework for Nevada
25 water law concerning surface water sources adjudication

1 procedures that was adopted March 22nd, 1913.

2 So anyhow, there's associated changes that I had
3 to look at. So my task was to give evidence that existed
4 prior to 1905 and trying to do a relations back to what I
5 could find of the evidence that existed after that.

6 And fortunately, there's no person alive today
7 that was around during that period of time and we can only
8 speak to current history which it's helpful but not exacting.

9 Q. In your review of the vested claims submitted did
10 you rely on the records of the local jurisdiction in Lander
11 County at one point or Eureka County?

12 A. Yes, I did. I directed Mr. Venturacci to pull
13 some of those records. And what I was looking for was, you
14 know, periods prior to 1905. In other words, we looked at tax
15 records in Eureka County from 1888 which would have been for
16 the tax year of 1887 and went over it based upon certain
17 periods of time randomly to find, you know, if we could be
18 supportive from those records on what sort of activities was
19 occurring and what interests were held by the people in that
20 area. And at that time they were called -- it was a
21 possessory interest. The patents didn't occur until later.

22 Q. And will your report later on go into more detail
23 about some of these areas?

24 A. It will.

25 Q. Could I now direct your attention, I believe it's

1 to Exhibit 15, which is in evidence which is application
2 81825?

3 A. Yes.

4 Q. Did you prepare this particular application?

5 A. I did not.

6 Q. Who did?

7 A. It was Bill Nisbet or William Nisbet.

8 HEARING OFFICER JOSEPH-TAYLOR: N-I-S-B-E-T.

9 THE WITNESS: Yeah, I'm sorry, I should have.

10 BY MR. KOLVET:

11 Q. Looking at the detailed description of the
12 proposed project that you were just at, go back, which is
13 number 12, what does it say?

14 A. It says, "Lands described to be irrigated under
15 this application are identical to those described the map
16 under amended claim 01115. It is presumed that the completion
17 of spring water subject of that claim has occurred by reason
18 of excessive pumping of underground water nearby.

19 "This application seeks to restore irrigation by
20 diverting from underground that water which formerly
21 discharged at the surface as Taft Springs and applied to said
22 land in a supplemental manner."

23 Q. Okay. What was the nature of the application,
24 was it for a new right, supplemental right, how was it
25 described?

1 A. It was requesting supplemental right, but by
2 the -- what's discussed in section 12 of this application was
3 basically using the supplemental right as a mitigation right
4 to be able to withdraw water from an underground source where
5 a spring existed previously.

6 Q. From paragraph 12 and the explanation there, is
7 it safe to assume that while it's designated as supplemental
8 this is an attempt to mitigate loss of what prior -- excuse
9 me, prior appropriated water right?

10 A. Obviously, yes.

11 Q. Can I get you to go to Exhibit 28, which is
12 application 82268?

13 A. I have it.

14 Q. Okay. Wrong ranch, I'm sorry.

15 A. I think we would be on application 82570,
16 Exhibit 37.

17 Q. That's what I was looking for, I'm sorry. 82570
18 would be Exhibit 37. Are you there?

19 A. I am.

20 Q. Did you prepare this application?

21 A. I did.

22 Q. Under the reasons for the application scroll on
23 down, number 12, what's it say?

24 A. "This appropriation seeks to replace the vested
25 rights existing on the property. From springs and seeps that

1 were used historically as a ranch within the place of use.
 2 Wells will be drilled to convey the water within the place of
 3 use for crop reduction, primarily for the production of
 4 alfalfa and other hay crops. This appropriation is sought to
 5 replace the historical use that occurred on or before 1858."
 6 Q. And in paragraph 13, miscellaneous remarks, would
 7 you read those into the record, please?
 8 A. Yes. "This application is being filed to
 9 mitigate impacts to existing vested rights on the Cox Ranch.
 10 This application seeks to supplement existing water --
 11 existing right for mitigation purpose only -- and is limited
 12 to the extent of historic senior water diversions associated
 13 with the Cox Ranch. This water is to be used in conjunction
 14 with the simultaneously filed application for Cox well number
 15 1.
 16 Q. What is well number 1?
 17 A. On the Cox Ranch, which is located just north of
 18 the Thompson/home ranch/Taft Ranch is the Cox Ranch. North of
 19 that is the Willow Ranch.
 20 Q. Well 1 is referenced there, what does that mean?
 21 A. There are two wells that are being proposed on
 22 the Cox Ranch for irrigation of 349 acres. Those wells were
 23 spaced apart so we're not having a huge drawdown effect on
 24 other wells within the area.
 25 Q. What is the total diversion rate and duty asked

1 of discharge that occurred.
 2 So typically these diversion rates are a lot
 3 higher than what occurred on the property because now the
 4 groundwater doesn't exist, I'm going to have to apply the
 5 water typical of normal from water irrigation methods just to
 6 replace what we have.
 7 So to compare a crop type or spring right to a
 8 transition to an underground water right doesn't work it, it's
 9 a different character, it's a different type of utilization.
 10 So unless we were able to drill wells and get a constant flow
 11 rate commensurate with what occurred in the springs and pumped
 12 it, you know, 24 hours a day, seven days a week, every minute
 13 of every day, that's the only way we could simulate what those
 14 springs did.
 15 MR. KOLVET: What -- what application number, I
 16 lost myself here?
 17 HEARING OFFICER JOSEPH-TAYLOR: 82570.
 18 BY MR. KOLVET:
 19 Q. Okay. Let's go to Exhibit 44, which is
 20 application 82571. Did you again prepare this?
 21 A. I did.
 22 Q. And what is the diversion rate under this
 23 application?
 24 A. This is also for 2.5 CFS that would be
 25 supplemental to 82570.

1 for in this particular application?
 2 A. The total diversion rate under Cox well number 2
 3 under this application is 2.5 CFS. The total number of acres
 4 is 344.89 acres.
 5 Q. Where was the amount of acreage derived from?
 6 A. It was based upon the research that was done that
 7 described earlier looking at what existed prior to 1905, what
 8 existed after 1905 with the -- with regard to water usage that
 9 I could evidence and relying on some tax records and the
 10 conglomeration of information I put together.
 11 Q. And the diversion rate, what do you base that on?
 12 A. I base that on the ability between this well and
 13 the other well to occur. The issue we have here is that we
 14 had spring water rights that discharge year round. And
 15 basically wetted the ground, provided consumptive use to the
 16 crops. And what we're trying to do is replace these spring
 17 rights with a groundwater source.
 18 So how do you simulate saturated soil when
 19 irrigation season starts in a different type of irrigation
 20 method?
 21 So from my standpoint I had to look at it from a
 22 constant -- taking a constant discharge that occurred through
 23 springs and seeps and then rolling that over to an underground
 24 diversion to try and effectively produce a crop that would
 25 have been there for a -- and based upon a natural consumption

1 Q. So what you're basically asking for in these two
 2 permits and this relates again to the Cox Ranch; is that
 3 correct?
 4 A. That's correct.
 5 Q. Is a total diversion rate for both sources of 2.5
 6 CFS?
 7 A. No. The total diversion rate would have been for
 8 five CFS for 344.89 acres.
 9 Q. So the duty would be not to exceed the duty
 10 necessary to irrigate that amount of land?
 11 A. Well, the reason I have the high diversion rate
 12 on is because you're going to be applying the water, a large
 13 volume of water over a short period of time. And there's got
 14 to be resting associated with the wells. So it's not a
 15 constant diversion rate.
 16 So, if I was going to apply a constant diversion
 17 rate of course that diversion rate would be lower in order to
 18 supply that duty.
 19 Q. Okay. And what is the duty you're seeking under
 20 these two applications?
 21 A. Well, from the issue that we're trying to
 22 transition from an ET that was relatively low to a different
 23 type of method of irrigation and simulate the same type of
 24 crop we wanted to get off that property. I think that the
 25 four-acre-feet per acre is what should be issued. Why should

1 we be different as a senior water right holder than what the
 2 junior water rights were given.
 3 Frankly, depending on the method of irrigation
 4 three-acre-feet per acre might be acceptable, but at this time
 5 it appears to be four-acre-feet based upon the facts that I
 6 presented before you.
 7 Q. Let's go to application then -- or before we go
 8 there, I'm sorry, could you drop down to the explanation of
 9 the application? Could you read into the record what's there?
 10 A. For item number 12 or 13?
 11 Q. 12?
 12 A. Yes. "This appropriation seeks to replace the
 13 vested water rights existing on the property from springs and
 14 seeps. There were historically used or used historically as a
 15 ranch within the place of use.
 16 "Wells will be drilled to convey the water within
 17 the place of use for crop production primarily for the
 18 production of alfalfa and other hay crops. The appropriation
 19 is sought to replace the historical use that occurred on or
 20 before 1858."
 21 Q. That is the identical language to the other
 22 permit for the Cox Ranch that we've already discussed; is that
 23 right?
 24 A. Yes, it is.
 25 Q. And so both of these applications for the Cox

1 there's a number of vested claims. So we'll tie them
 2 together, I just wanted to be clear that we're talking about
 3 other vested claims.
 4 THE WITNESS: Yes, this has nothing to do with
 5 01115 or 01114.
 6 THE STATE ENGINEER: Thank you.
 7 HEARING OFFICER JOSEPH-TAYLOR: Boy, I'd sure
 8 like to try to make the clearer that what vested claim numbers
 9 these two applications tie to. Are you able to do that, go
 10 down to about 424, Mr. Thiel -- or actually about -- yeah,
 11 about 424. Let's be off the record.
 12 (Short off the record.)
 13 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 14 record. Mr. Thiel, did we ask you to look at exhibits in the
 15 400 series to see if you could figure out which proofs these
 16 applications are tied to?
 17 THE WITNESS: I believe that the filings that we
 18 just discussed refer to proofs 425 -- or Exhibit 425, which
 19 would be the amended proof that I filed.
 20 HEARING OFFICER JOSEPH-TAYLOR: What was the date
 21 the application was filed?
 22 THE WITNESS: I believe April of --
 23 HEARING OFFICER JOSEPH-TAYLOR: There we go, 44.
 24 THE WITNESS: They were originally filed on
 25 March 28th, 2013. And that would have been --

1 Ranch seek to mitigate lost water from the spring sources?
 2 A. Yes.
 3 THE STATE ENGINEER: Mr. Kolvet, may I interrupt
 4 real fast?
 5 MR. KOLVET: Sure.
 6 THE STATE ENGINEER: Mr. Thiel, I just want to be
 7 clear. So you're talking about mitigating vested claims on
 8 the Cox Ranch, are we talking about the same deed, 01115?
 9 THE WITNESS: No.
 10 THE STATE ENGINEER: It's a different one?
 11 THE WITNESS: That's a different one. And those
 12 according to the State's exhibits aren't on here that I could
 13 find.
 14 THE STATE ENGINEER: So those vested claims are
 15 not exhibits, is that --
 16 THE WITNESS: They are under I think
 17 Etcheverry's, but not -- not on the State's exhibits or under
 18 mine. I assume that we were talking all about the same
 19 filings and the same vested rights.
 20 THE STATE ENGINEER: Do you know the vested claim
 21 number for the Cox Ranch?
 22 THE WITNESS: I knew you were going to ask that.
 23 I don't recall exactly what the number is.
 24 THE STATE ENGINEER: And that's fine, I just
 25 wanted to be clear, I go to Etcheverry's exhibits and I see

1 HEARING OFFICER JOSEPH-TAYLOR: So you filed
 2 applications and amended proofs on the same day it looks like.
 3 THE WITNESS: Yeah, I had the date of the filing
 4 as February 25th, 2013, and the map was filed March 28th, 2013
 5 under 82570. And I'm looking at Exhibit 44, application
 6 number 82571.
 7 HEARING OFFICER JOSEPH-TAYLOR: The reason I'm
 8 questioning is I don't think you can file an application in
 9 May and tie it to a proof that's amended in June if the
 10 application says proof on file in May.
 11 THE WITNESS: Would you run that through me
 12 again?
 13 HEARING OFFICER JOSEPH-TAYLOR: Well, I don't
 14 think you can file an application and say I'm filing this
 15 application on proof X and that's the proof that's on file,
 16 the date the application is filed, not an amendment that comes
 17 in six months later. You're referencing the proof that was on
 18 file at the time, that's why I'm looking at the dates.
 19 It looks like you amended the proof on the day
 20 you filed the application.
 21 THE WITNESS: I believe.
 22 HEARING OFFICER JOSEPH-TAYLOR: 424. Where's
 23 your exhibits?
 24 THE WITNESS: There it is.
 25 HEARING OFFICER JOSEPH-TAYLOR: That's the

1 original.

2 THE WITNESS: Yep. I believe that was received,

3 I don't quite understand what you're saying because the

4 application was received February 25th, 2013.

5 HEARING OFFICER JOSEPH-TAYLOR: *That's why I'm*

6 looking at the dates, Mr. Thiel. The amended proof came in on

7 the same day you filed the application. If an application

8 came in and said I'm filing on proof 123 that was on file the

9 date you filed the application, I don't think you can come in

10 with an amended proof three months later and say the

11 application relates to that amended proof.

12 THE WITNESS: Except for the fact that I think

13 the amended application had to do with corrections that had to

14 be resolved according to review by the State Engineer's

15 Office.

16 HEARING OFFICER JOSEPH-TAYLOR: You're not

17 tracking me. Go ahead, Mr. Kolvet.

18 MR. KOLVET: Well, I'm not totally tracking

19 either because the date of the amended proof is the same date

20 that the new application -- or the application was filed.

21 HEARING OFFICER JOSEPH-TAYLOR: *That's why I was*

22 asking about the dates.

23 MR. KOLVET: Right. So it's not like --

24 HEARING OFFICER JOSEPH-TAYLOR: *So I don't have a*

25 problem, that's why I was clearing up the dates.

1 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

2 They'll be admitted.

3 (Exhibits 424, 425, 430 and 431

4 admitted into evidence.)

5 BY MR. KOLVET:

6 Q. Would you turn to Exhibit 52?

7 A. (Complies.) Exhibit 52?

8 Q. Yes.

9 A. I have it.

10 Q. What is Exhibit 52?

11 A. This is the application on the -- for simplicity

12 I'll just call it the home ranch, which would have been the

13 Thompson Ranch/Taft Ranch.

14 Q. And what does this application seek?

15 A. This application is filed in conjunction -- or in

16 conjunction with 81825. It's for another point of diversion

17 on the ranch for five CFS for 1,636.36 acres.

18 Q. From where did you derive the acreage figure?

19 A. This was based upon the compilation of the data

20 and information I put together based upon historical and

21 current records of -- from all sources I could think of.

22 Q. And again, we'll go into that in more detail in

23 your presentation.

24 A. I will.

25 Q. And the diversion rate?

1 MR. KOLVET: I'm sorry, I misunderstood where you

2 were going.

3 HEARING OFFICER JOSEPH-TAYLOR: *If an amended*

4 proof came in three months after the application I would not

5 look at the amended proof.

6 MR. KOLVET: Okay.

7 HEARING OFFICER JOSEPH-TAYLOR: *Because that's*

8 not what the application said.

9 THE WITNESS: Understood.

10 HEARING OFFICER JOSEPH-TAYLOR: Okay.

11 THE WITNESS: Thank you.

12 BY MR. KOLVET:

13 Q. And then if you go to 430, please, that's -- or

14 431 is the amended proof for vested claim 02847?

15 A. And your Exhibit 431?

16 Q. Yes. What does this amended proof relate to,

17 what property?

18 A. This has to -- relates back to a surface water

19 source on the Cox Ranch. In other words, from Cox scan.

20 Q. Okay.

21 MR. KOLVET: I would offer at this time 424, 425,

22 430 and 431.

23 HEARING OFFICER JOSEPH-TAYLOR: *Any objection to*

24 the admission of 424, 425, 430 and 431?

25 MS. PETERSON: No objection.

1 A. Is 5.0 cubic feet per second.

2 Q. And again, the reason for this filing?

3 A. The reason for this filing was based upon order

4 number 1226 issued by the State Engineer allowing mitigation

5 for impacted surface water rights within the basin number 153.

6 Q. Let's go to Exhibit 60, please.

7 A. I'm sorry?

8 Q. 60.

9 A. I have it.

10 Q. What is Exhibit 60?

11 A. This is an application filed on the northerly

12 part of Mr. Venturacci's holdings which is referred to as

13 Willow Field or also referred to as Willow Creek Field.

14 Q. And what is the diversion rate?

15 A. 2.0 CFS.

16 Q. And on what did you base that?

17 A. That was based upon the water necessary to be

18 able to apply groundwater on the subject property that was

19 vested.

20 Q. And the amount of acreage that you seek to

21 irrigate?

22 A. 190.59.

23 Q. And again, we'll get into more specifics how you

24 arrived at that number.

25 A. We will.

1 Q. And that's based on what you determined to be
 2 historic use on this property?
 3 A. Yes.
 4 Q. And again, the purpose for which this is filed?
 5 A. It's for mitigation of the -- what we'll refer to
 6 as the Thompson Spring complex which is along the contour
 7 interval 5800 that's been well documented.
 8 Q. At this point then, Mr. Thiel, could I get you to
 9 go to your presentation, your PowerPoint presentation?
 10 A. (Complies.)
 11 Q. Which is the amended one which is Exhibit --
 12 HEARING OFFICER JOSEPH-TAYLOR: 229.
 13 MR. KOLVET: 229. Thank you.
 14 BY MR. KOLVET:
 15 Q. And have you for purposes of this hearing
 16 prepared some testimony and slides, some PowerPoint slides
 17 related to your testimony?
 18 A. I have.
 19 Q. Okay. Why don't you proceed through that
 20 presentation, please?
 21 A. Okay. The first six pages we'll omit because we
 22 already went through that, which is my experience in the past
 23 and start on slide number 7, which is the general overview.
 24 So referring to slide number 7 everything here is
 25 predicated upon the State Engineer issuing order 1226, which

1 intermittent at best, I mean, they're ephemeral springs which
 2 means of short duration and they don't provide much water to
 3 the area.
 4 So basically you have your primary right which is
 5 on the springs and seeps. You have your secondary right which
 6 would flow from the canyons and supplement what's ever use on
 7 those properties from the spring source.
 8 So in my opinion you have the primary source of
 9 water which was the discharge along that fault and along the
 10 Thompson Spring complex. And we have the secondary source is
 11 from perennial waters from snow melt discharging through the
 12 canyons.
 13 Q. Before you go past that is the application under
 14 consideration here, 81828 and the associated applications in
 15 any way related to the ephemeral stream source that's been
 16 mentioned?
 17 A. Well, 81825 is the -- is not related to the
 18 creeks flowing out of the mountains. It's related to the
 19 spring sources; in other words, it replaces the spring
 20 sources.
 21 I think you'll see amendments and -- where I've
 22 amended for Horse Canyon Creek, for example, is that water
 23 that flowed down from the property if we got a large amount of
 24 water it's used more than 50 acres within the place of use of
 25 the -- of the Taft Ranch or Thompson Ranch. And same with all

1 is Exhibit 2 within the Diamond Valley hydrographic basin.
 2 As we went through previously, Mr. Venturacci has
 3 filed for applications to mitigate the senior priority water
 4 rights in accordance with this order. And of course we all
 5 know what the purpose of this hearing is. And this is to
 6 refer back to exception number 4, which those applications
 7 filed to mitigate senior surface water rights that have been
 8 impacted by groundwater pumping under junior water rights.
 9 And that is one of those items under the consideration for
 10 applications in the future within Diamond Valley.
 11 Going on to slide number 8, we've already
 12 discussed 81825 which was filed to mitigate home ranch vested
 13 right application or vested right V-01115, which is Exhibits
 14 15 in the record. It's an application for supplemental
 15 irrigation use filed prior to order 1226 with the intent as a
 16 replacement well for the lost spring rights.
 17 We've already gone through the diversion rate.
 18 There's another application, I want to make this clear because
 19 I've seen some reports from Eureka County that question the
 20 Horse Canyon diversion and the other ephemeral streams in the
 21 area. Keep in mind that the primary use in most of these
 22 discharge areas from spring sources, the cultivation probably
 23 occurred first based upon the spring discharges and the growth
 24 of acreage of pasture or crop within those areas.
 25 The surface water discharges from the canyons are

1 the other areas.
 2 So from that example whatever water came from
 3 those creeks or those canyon discharges were used wherever
 4 they could on the ranch. So we're not saying we have
 5 four-acre-feet per acre from the springs and we're adding
 6 another four-acre-feet per acre, if we only got
 7 three-acre-feet and we get a quarter acre that was used.
 8 So in other words, it's all supplemental and
 9 mixed resources that we use to supply irrigation to these
 10 properties.
 11 Q. Go ahead.
 12 A. Okay. I believe we went through 81825 that
 13 described the third bullet down here which is regard to
 14 V-01114, which is from the Horse Canyon diversion. And
 15 basically that supplements whatever water is available from
 16 the spring source.
 17 It was for eight CFS like we discussed
 18 previously. And my opinion is a little bit optimistic and
 19 that may have to be adjusted down, but that's what was applied
 20 for. And the filing was to mitigate the loss of the springs.
 21 Moving on to slide number 9, we talked about
 22 82570, Exhibit 37, which is Cox well number 2, which is the
 23 first amended under V-02846. The use -- here's the problem we
 24 have. These applications, obviously my intent when I wanted
 25 to file them was to file for irrigation use, stock use and

1 domestic use as a mitigation right within the sources.
 2 When I requested or asked if that was acceptable
 3 I was told well no, because you can only file for one
 4 beneficial use at a time.
 5 So what I did was change all that and said okay,
 6 I'll come in and comply with the State. The issue I have was
 7 stock use is still current and there's domestic use still
 8 current. And that was all part of the vested use within that
 9 property. So, if I'm asked if I'm going to bring in
 10 additional filings, yes, I am because I'm going to replace
 11 what water existed under the historical use -- historical
 12 beneficial use on the property.
 13 In a mitigation right we should have been allowed
 14 it put in all those uses because it's to replace the historic
 15 uses that occurred on the ranch.
 16 THE STATE ENGINEER: Mr. Thiel, just again so I'm
 17 clear as we move forward through your testimony, the evidence
 18 you're going to present is because you're limited by
 19 irrigation domestic, it's going to be limited to how much the
 20 water's beneficial use for those two or are you also going to
 21 include stock --
 22 THE WITNESS: No --
 23 THE STATE ENGINEER: -- in your testimony?
 24 THE WITNESS: -- it's not. I mean, we may
 25 overlap a little bit because it appears that when we go back

1 HEARING OFFICER JOSEPH-TAYLOR: Mr. Thiel, why
 2 was the first application kept on file if 82572 appears to
 3 cover more -- does it cover the same ground? I guess I'm
 4 asking why wasn't the first one withdrawn and replaced with
 5 this one? Or are they stacking on the same ground?
 6 THE WITNESS: Well, there's a number of reasons
 7 for that. First of all, if you look at the protested
 8 application on 81825, Eureka County doesn't request denial.
 9 They basically ask for certain terms to be addressed through
 10 the protest.
 11 At that time they seemed to be somewhat
 12 reasonable to work with based upon that protest. So I felt
 13 we'll just allow that to go because it has the date of filing
 14 and I didn't want to file an additional application on that
 15 property since the work had already gone forward, the fees
 16 paid and everything else taken care of. So from my line of
 17 thinking, right, wrong or indifferent, I filed for an
 18 additional water right for the 1636.
 19 HEARING OFFICER JOSEPH-TAYLOR: Which are on top
 20 of 81825.
 21 THE WITNESS: Yeah. Basically think of a donut
 22 with a hole in it where the void is filled by 81825.
 23 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 24 THE WITNESS: Under 825 Exhibit 60 covers the
 25 Willow Ranch, which is for 190.59 acres. Judd Canyon under

1 to historical use, stock, this was used for grazing.
 2 THE STATE ENGINEER: Right.
 3 THE WITNESS: Okay. So stock had to drink water,
 4 not just eat crops. So at some point in the future I'll
 5 either have to change one of the mitigation rights or have to
 6 file additional appropriation for the stock water rights that
 7 we need to irrigate the stock on the property.
 8 Obviously when water is flowing on the ground the
 9 stock drank out of the springs or the ditches that existed.
 10 So, to answer your question, we have a little gap in where we
 11 are versus where we should be.
 12 THE STATE ENGINEER: Thank you.
 13 THE WITNESS: And we also refer to 82571, which
 14 is Exhibit 44, which is for Cox well number 1 and as for
 15 V-02846. And then we have Telegraph Canyon, which is V-02845
 16 and V-02847, which are all supplemental.
 17 BY MR. KOLVET:
 18 Q. Supplemental to what?
 19 A. To 82570.
 20 Q. Okay.
 21 A. And I'm trying to move quickly through this. So
 22 under 82572, it's the Exhibit 52 which is the home ranch filed
 23 under V-01115, it's for five CFS, 1,636.36 acres. And Horse
 24 Canyon would be supplemental in nature to that place of use
 25 wherever it could get to.

1 V-10368 is supplemental to the place of use. The Willow Ranch
 2 vested right filing is V-010368, which is the only one out of
 3 the ranches that it was not amended. It's a new filing on the
 4 property and that was filed based upon historical research
 5 that occurred and my investigations going through this.
 6 BY MR. KOLVET:
 7 Q. Just for sake of orientation, where is the Willow
 8 Ranch in relation to the home ranch, Thompson Ranch/Taft
 9 Ranch?
 10 A. I've brought an exhibit board that I've used in
 11 the past that it might make it easier for a visual. I don't
 12 think it's necessary to put it into evidence, but.
 13 Q. Why don't you go ahead and produce that?
 14 HEARING OFFICER JOSEPH-TAYLOR: Go ahead and
 15 what?
 16 MR. KOLVET: Produce that.
 17 HEARING OFFICER JOSEPH-TAYLOR: She's got to hear
 18 you.
 19 THE WITNESS: This is the map I exhibit from
 20 January 23rd, 2013 hearing when Mrs. Taylor asked me what are
 21 the names of the ranches I basically failed to answer
 22 adequately.
 23 The ranch to the south, and I'm pointing to the
 24 south end of the picture, but since it's not offered for an
 25 exhibit I don't I'll just refer to. This area outlined is the

1 Thompson/Taft Ranch. The area to the north, this rectangle
 2 that's in here is the Cox Ranch. The -- going to the north
 3 which is the section 22 is the Willow Ranch. And further
 4 north of that is the Rock Ranch. Further north is the Mau
 5 Ranch.
 6 HEARING OFFICER JOSEPH-TAYLOR: The what?
 7 THE WITNESS: Further north is the Mau, M-A-U.
 8 HEARING OFFICER JOSEPH-TAYLOR: Oh.
 9 THE WITNESS: Okay. The two more northerly
 10 ranches are not part of this hearing.
 11 BY MR. KOLVET:
 12 Q. Okay. What is the basis of the photograph, it
 13 appears to be an aerial photograph?
 14 A. This is an aerial photograph taken from 1973.
 15 Q. Unless you need to keep referring to it, we'll
 16 just put it down for now but we can put it up later if you'd
 17 like.
 18 HEARING OFFICER JOSEPH-TAYLOR: We've got it.
 19 MR. KOLVET: Okay.
 20 THE WITNESS: Thank you.
 21 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 22 BY MR. KOLVET:
 23 Q. I'm sorry, Mr. Thiel, continue.
 24 A. I think we went through Exhibit 52, Exhibit 60.
 25 So, in summary of the three springs subject of this hearing is

1 (Recess taken.)
 2 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 3 record. I'm going to get started. I don't know what the boss
 4 has been pulled aside to so we'll fill him in. Please
 5 continue, Mr. Kolvet.
 6 MR. KOLVET: Thank you.
 7 BY MR. KOLVET:
 8 Q. Mr. Thiel, would you continue please with your
 9 presentation?
 10 A. I will. Referring to slide number 12, there was
 11 a little quote from a document I researched on the internet
 12 which is Exhibit 247 that I have on the screen before you.
 13 And it basically has some interesting quotes down through here
 14 that I thought it was good to give some sort of perspective
 15 back on the historic nature of the use of these springs out
 16 here.
 17 Rather than going through this in detail I have a
 18 couple quotes that I would like to provide and one was from
 19 Sir Richard Burton that was written down on October 9th, 1860.
 20 And he describes Diamond Springs, which is a warm but sweet
 21 beautifully clear water bubbling up from the earth.
 22 And this is basically -- if you go into where
 23 this is located it is -- as it comes out of I believe
 24 Telegraph Canyon is the old immigrant path or the Simpson
 25 route. And this talks about coming out of the canyon and

1 the Taft Ranch and I'll probably be intermixing Thompson and
 2 home ranch all the time, just hopefully everyone bears with me
 3 that way. The Cox Ranch and the Willow Ranch and of course as
 4 I described earlier with Mr. King the vested use is irrigation
 5 stock water and domestic. And all vested filings are for
 6 springs, seeps and intermittent stream flows.
 7 So the issue we have here is on all these ranches
 8 there was more than -- it was a spring complex, if you will.
 9 We had multiple spring sources that I found through
 10 investigation out in the field through research and aerial
 11 photographs. And based upon some -- looking at the property
 12 back in '81, '82.
 13 The best thing I did was say well, we have these
 14 points where the spring sources are fully identified, but we
 15 all know that there was more discharges that occurred within
 16 that area of the basin.
 17 So when you look at the maps I didn't identify
 18 200 seeps and spring sources, I identified the two major
 19 springs which were probably affecting the discharge to the
 20 west.
 21 MR. KOLVET: We're going to now go into more of
 22 the historical usage. Is this a good time to take a short
 23 break?
 24 HEARING OFFICER JOSEPH-TAYLOR: Sure. Let's be
 25 off the record until 11 o'clock.

1 finding this lush area.
 2 And then Jim Simpson who was out there talks
 3 about the station folks, which were basically the people that
 4 lived at the pony express station and that they occupied it
 5 and there was an Indian uprising at the time and I guess they
 6 weren't very nice people so they fled before the Indian
 7 uprising as basically left four other people to come forward
 8 at that point.
 9 Other things that are researched on is this was
 10 part of the lower route of the Emigrant Trail, then we also
 11 had a map that I just recently saw that showed this was the
 12 route that the Donner party used in 1846-1847. And these
 13 springs were used as a layover area that was used by the
 14 immigrants come to pass so they could rest their livestock,
 15 gather food or whatever for them on the journey west.
 16 Moving forward the -- I think there's something
 17 that is worth talking about, I know Mrs. Taylor was interested
 18 in it when we talked about the filing by -- on the Taft Ranch
 19 on 6/26/1912. And that was filed by Nels Toft for Taft
 20 Springs. Now, there's -- originally Taft was the earliest
 21 holder on the springs in this conversation at least and Nels
 22 Toft came after. The earlier holder was George Taft.
 23 So what we have is a filing under V-01115, I
 24 think I left out one, V-01115 for 204.3 acres of which
 25 50 acres was from Horse Canyon and then the balance of it was

1 204 acres.
 2 Now, if you -- from the springs, if you read the
 3 actual filing it appears that it's 50 acres from Horse Canyon
 4 Creek and 150 acres from Taft Spring. In actuality what it
 5 says is is that you have -- when Horse Canyon is not available
 6 then Taft Springs have replaced that area being irrigated.
 7 So, anyhow, what's important on all these proof
 8 maps is the surveyor at the time goes in and says well, here's
 9 what I surveyed and here's what I found and it's an
 10 investigation as what his task was at the time.
 11 So, let's go through and rather than spend a lot
 12 of time on this, is we had the first filing which was done by
 13 Nels Toft on 1912. We have the second filing that was done in
 14 1975. And then we have my filings that were done in 2013.
 15 So moving on to slide 14. What we have is a --
 16 the supporting map that illustrates the place of use of the
 17 water rights, which by the way happens to deal with the 1890
 18 Dewey patent which is over in this area. And then we have to
 19 do with some filings that Taft was going for in 1912. There's
 20 also other properties that were acquired on the ranch that
 21 exist today that go outside of these areas where no proofs
 22 have been filed.
 23 As far as physical features what you have on this
 24 is what was referred to as going through from the east side of
 25 the map which is related to Thompson -- I'm sorry, Taft

1 accurate plot of the Horse Canyon, Taft Springs" --
 2 HEARING OFFICER JOSEPH-TAYLOR: Slow down.
 3 THE WITNESS: Too fast?
 4 HEARING OFFICER JOSEPH-TAYLOR: For her.
 5 THE WITNESS: Sorry. "Horse Canyon and Taft
 6 Springs irrigation works as taken from the field notes of the
 7 survey made by me on May 29th, 30th and 31st, 1912. At the
 8 instance of Nels Toft that represents the words described in
 9 the competent proof of appropriation together with the
 10 location of streams and ditches in the immediate vicinity."
 11 Now, from that jurat it doesn't really say I'm
 12 showing a cultural tabulation based upon the field
 13 investigation I did. It doesn't say what it was done for
 14 other than to locate streams and ditches in the immediate
 15 vicinity of the spring discharge area. And I wouldn't
 16 necessarily make a big deal out of it if it wasn't for the
 17 fact that the cultural tabulation that is shown on the map is
 18 done sometimes afterwards.
 19 Let's see, I need to get to a different slide.
 20 Get out of this for a second. What I'm trying to look at is
 21 State Engineer's Exhibit Number 23, which is the original
 22 filing. And I'm trying to get through this where I can.
 23 There's -- and remark number 10 on the filing itself. I may
 24 need a copy of that if it helps.
 25 HEARING OFFICER JOSEPH-TAYLOR: We're looking at

1 Springs on the right-hand side middle part of the map. And it
 2 flows to the northwest and discharges towards the playa.
 3 Going to the south out of the confluence of the
 4 springs is a ditch which is by the way shown pretty much in
 5 that same location on the 1879 map from the government land
 6 office that we haven't gone through.
 7 So -- and I'll just summarize the issues that I
 8 have with this map and we'll go through it past this point and
 9 I'll try and support that. The issue I have is if you read
 10 the -- the survey plat or the jurat on the map it basically
 11 says I'm going to show where the works of diversion are. It
 12 doesn't say I'm illustrating the culture tabulation on this.
 13 And frankly, this over on this right-hand side which is the
 14 cultural tabulation was done after the filing date and there's
 15 initials on who did it. And it was done in a later period of
 16 time.
 17 Now, maybe the State Engineer knows who it is,
 18 but I don't know who it is. And I also know that the place of
 19 use that's written in here is somewhat dissimilar from the
 20 rest of the writing. So a jurat is a testing of what effort
 21 he went through on this map and what it's supposed to exhibit.
 22 So moving on if you look at the jurat, which was
 23 signed by George Nickerson, and I can't tell what the middle
 24 initial is, it says, "By George S. Nickerson of Sacramento,
 25 California hereby certify that the above map is a true and

1 it, Mr. Thiel.
 2 THE WITNESS: Okay. It might help if I had a
 3 copy of it is the only thing I'm thinking.
 4 HEARING OFFICER JOSEPH-TAYLOR: You want our
 5 copy?
 6 THE WITNESS: Yes, it's not showing up on mine.
 7 MR. KOLVET: Is this Exhibit 23?
 8 THE WITNESS: Yes.
 9 Mr. Taggart has graciously volunteered his copy.
 10 HEARING OFFICER JOSEPH-TAYLOR: I got it.
 11 THE WITNESS: Thanks.
 12 HEARING OFFICER JOSEPH-TAYLOR: You're welcome.
 13 THE WITNESS: Looking at the proof that was filed
 14 you have -- and I'm referring to Exhibit Number 23, if you
 15 review the map you'll notice that the table was inserted by HR
 16 Huckle is my best guess, which occurred I think in 6/27/13,
 17 which would have been after the date of filing.
 18 Also, remark number 10 on the application
 19 indicates that the nature of title for which the water rights
 20 is claimed which is United States patent, and under that it
 21 says south half of the northeast of section 9 --
 22 HEARING OFFICER JOSEPH-TAYLOR: Hold on,
 23 Mr. Thiel, I'm sorry, we're --
 24 THE WITNESS: Trying to bring it up?
 25 HEARING OFFICER JOSEPH-TAYLOR: No, I apologize.

1 I'm noticing the exhibit that we scanned, we downloaded from
 2 the website and we're looking at the amended, the original, so
 3 I want to wait and get to it so I'm following you.
 4 THE WITNESS: Okay.
 5 HEARING OFFICER JOSEPH-TAYLOR: Okay. Now I'm
 6 with you. I'm sorry. Go ahead. Or go back so we're with
 7 you.
 8 THE WITNESS: Okay. So, anyhow, what I'm
 9 referring to is Exhibit Number 23 and the supporting map tied
 10 to that. So what I said with regard to the supporting map
 11 under Exhibit 23, there -- the application or the map itself
 12 has some issues in my mind.
 13 First of all, we have a map where the surveyor is
 14 attesting to the fact that it shows the works of diversion and
 15 those diversion structures that are on there. It doesn't
 16 really say I provided information as to the place of use. Or
 17 I did a cultural tabulation associated with it.
 18 I have a cultural tabulation that occurs sometime
 19 after the date of filing, which is about a year later, which
 20 is a cultural tabulation by HR Huckle. I have no clue where
 21 that cultural tabulation came from other than that's the
 22 initials underneath that cultural tabulation.
 23 So I do not know whether this person put the
 24 numbers for the cultural on the map since he did the cultural
 25 tabulation or how that got there.

1 So, you go to section 14. It says additional
 2 number of acres first irrigated in subsequent years was as
 3 follows. And you basically have about six acres -- excuse me,
 4 with some handwriting off to the left that says 6.1 acres that
 5 probably would have come from the supporting map. Whoever
 6 wrote that in.
 7 So, you keep on going down and you have different
 8 descriptions with regard to the amount of acres, et cetera.
 9 So we have an application that basically says it's a vested
 10 right supporting 6.18 acres in addition to what was filed on
 11 here as being vested prior to this time.
 12 Okay. So it may be that the map was being used
 13 as someone in the State Engineer's Office tabulating what it
 14 was. It may have been used as a support in the desert land
 15 entry or in this case a curiak, even though the curiak process
 16 really wasn't established in the state until 1909 in Southern
 17 Nevada and Pahrump.
 18 But basically from these applications and
 19 supporting maps it's hard to tell what it is. It would have
 20 required amendment no matter what was to happen. There's
 21 nothing conclusive on it.
 22 It says that some of the waters, looking in
 23 section 21, that some of the waters -- some of the lands in
 24 sections 9 and 10 are irrigated by water from both Taft
 25 Springs and Horse Canyon as a ditch is joined and as the flow

1 Now, the other issue we have is this is about the
 2 time that I taught this going through getting some desert land
 3 entries or in some cases curiak resolved. During that time
 4 you had to provide evidence as part of your claim to be
 5 submitted to the agency that you were dealing with. And it
 6 could have been filed on that basis. So, what I'm saying is
 7 that there's probably some issues associated with that
 8 supporting map itself.
 9 Going to the application under item number 10 it
 10 says that the title for which land water is claimed, it says
 11 United States patents, which I assume is the patent that was
 12 obtained by Dewey in 1890. And the rest of it has to do with
 13 the patent she's claiming during the same period of time which
 14 is the south half of the northeast quarter, section 9 is the
 15 State contract with which I would assume would have been the
 16 curiak.
 17 BY MR. KOLVET:
 18 Q. Would you also look at paragraph 13 and the
 19 comments there?
 20 A. Yes, I was getting to that. Thank you. Also
 21 under 13 water was first used for irrigation by a claimant of
 22 his grantors in the year 1880 when 150 acres were irrigated in
 23 sections 3, 9 and 10, township 23 north, 54 east by George
 24 Taft. The above statement of acreage is only an estimate as
 25 there is no actual evidence at hand.

1 from Horse Canyon fails it become -- it being only from
 2 melting snows in the spring more water is turned on to some of
 3 the land mentioned from Taft Springs. And combined irrigated
 4 acres for both sources supplies 206 acres.
 5 So, anyhow, what we have is a proof that's coming
 6 in for only that portion of land that was under possessory
 7 control of Toft at the time, Nels Toft. And we have all this
 8 other property that was under possessory interest that the
 9 springs and the creek went through that there was no filings
 10 on.
 11 So, we have an application that's incomplete. We
 12 have a supporting map that has some discrepancies on it from
 13 whoever did the cultural tabulation, it wasn't there in the
 14 beginning. And I'm suspect that the culture part of it that's
 15 shown on the map wasn't there either. As the surveyor says
 16 I'm showing you where the works of diversion and the ditches
 17 are located. And that's what he states.
 18 HEARING OFFICER JOSEPH-TAYLOR: Here, I'll take
 19 that, Mr. Thiel, so I can keep track of my exhibits.
 20 THE WITNESS: Okay. Thank you.
 21 HEARING OFFICER JOSEPH-TAYLOR: Um-hum.
 22 THE WITNESS: So, we've gone through this exhibit
 23 and through slide number 15. And in my opinion, the vested
 24 application is good for whatever they intended -- whatever was
 25 for the intent of the Applicant. Obviously this -- there was

1 no determination made upon what was being irrigated at the
2 time. What we have is a claim of vested right and subsequent
3 claims of vested rights.

4 Up until the day of the hearing we had the right
5 to amend it based upon the historical knowledge we gained
6 going through the process. And we had no instance to stop on
7 it other than the fact that I think we very well exhausted
8 everything that could possibly have been owned on these
9 springs and those sources from this point.

10 So, we come to the first amended proof, which was
11 Exhibit 24, which is V-01114 and V-01115. And this was done
12 on the Thompson or home ranch and was prepared in 1975 by I
13 believe a survey done in 1974.

14 This map is greatly detailed with regard to what
15 the surveyor found on the ground at the time. And going to
16 slide 16 on Exhibit 23 we have the proof of appropriation that
17 was filed I believe by Richard Forman, if I'm correct. Oh,
18 that's by me. Here we go. Here's where we are.

19 This application which I'm referring to here is
20 the first amended proof was filed by Richard Forman and it
21 basically says hey, I went out there and surveyed this, it's
22 607.93 acres of land and these are the conditions that exist
23 there at the time.

24 He said that there's 3.12 cubic feet of water per
25 second flowing from the springs to provide irrigation of the

1 property. There is stock water for 100 head of horses and 500
2 head of cattle.

3 So at the time this is a snapshot on what was
4 occurring at the date or the days of the survey. And if you
5 look at section 13 it talks about the -- what he saw within
6 the area that was being irrigated. And that's how he comes up
7 with the 607.3 acres or 607 acres.

8 So going back to the map, going back to the map
9 on page 16, we looked at what was provided there with regard
10 to the jurat. And what the jurat says and it's attesting, "I,
11 Richard W. Forman, being first duly sworn says that this map
12 consisting of one sheet has been correctly drawn to the
13 designated scale from field notes of a survey made by me
14 between the 14th day of November and the 18th day of
15 November 1974.

16 "That truly and correctly represents the location
17 and extent of the works used to divert water from Horse Canyon
18 to Taft Springs in Eureka County by Theodore M. Thompson and
19 Olive M. Thompson for irrigation and stock watering purposes.
20 That the point of diversion, the location, size of the
21 diverting channel and place of manner of use, the location and
22 names of all other works or streams which are crossed and
23 connected with said works and the boundary area of kind of
24 culture of lands irrigated are correctly shown and designated
25 thereon."

1 So in this instance we have the 1912 map that
2 doesn't have the same language on it saying well, I was out
3 there and I was able to verify what culture existed at the
4 time to a map that was done by Richard Forman that says well,
5 I surveyed it during the 18th day of November -- or 14th day
6 of November and the 18th day of November and here's what I
7 found at that point in time.

8 It doesn't say I found anything that historically
9 was there or anything that occurred prior to the old draft of
10 the groundwater pumping.

11 So by this time we know from previous testimony
12 and from work that I've looked at is that there was already
13 impacts occurring to the springs at this time. So, we were
14 looking at 1974, the springs were starting to decline and so
15 we have large area of discharge going down to a narrow area of
16 discharge and this is what he found.

17 So, going on to page 18 or slide 18. I pretty
18 well hit that it, I jumped ahead of myself. So we get into my
19 jurat that I prepared on February 25th, 2013 for
20 Daniel Venturacci for springs and seeps. And basically what I
21 said was, and here is my supporting map which was Exhibit 25
22 which is the second amended proof for V-01115 and V-01114
23 referenced as Exhibit 25.

24 So, the difference between the maps are that
25 basically in the first map for whatever purpose it was filed,

1 it was filed. So we have a small area of culture tabulation
2 that may have been a snapshot of what existed at the time or
3 may not have been a snapshot and that map in my opinion is
4 suspect. We have Richard Forman's map that comes along in
5 1975 that says I surveyed this between November 14th and
6 November 18th and this is what I found.

7 Then I have my map that basically has to rely on
8 previous work, record research, field investigations, aerial
9 photogrammetry and historical documents that I had to come up
10 with this cultural tabulation. And this is what I put
11 together in the jurat.

12 So, rather than going through it all I'll kind of
13 go through the bottom and about -- oh, I'll go ahead and read
14 it. "I, George M. Thiel, being first duly sworn and deposed
15 and say that the site inspections have been made by me or
16 under my supervision and direction on or before February 13th,
17 2013. That the location of each reference monument has been
18 verified by site inspection, that the place of use sites have
19 been inspected, that this map consisting of one sheet has been
20 correctly drawn to the designated scale from surveying
21 calculation notes prepared by me or under my supervision and
22 direction.

23 "Relying upon analysis of recorded survey maps,
24 other recorded surveying documents on file and in the office
25 of the State Engineer and the Eureka County Recorder's Office

1 as verified by aerial photograph, oral histories and other
2 documents. That this map truly and correctly represents the
3 location and extent of works used to divert water from Horse
4 Canyon, Taft Springs and upper springs in Eureka County,
5 Nevada by Daniel S. Venturacci." And that's blah, blah, blah,
6 no use going on from there.

7 HEARING OFFICER JOSEPH-TAYLOR: But go back,
8 Mr. Thiel.

9 THE WITNESS: Yeah.

10 HEARING OFFICER JOSEPH-TAYLOR: Because you say
11 water diverted by Daniel Venturacci. I thought there was no
12 water there for him to divert.

13 THE WITNESS: There was a little bit. And I'll
14 show that in a later picture.

15 HEARING OFFICER JOSEPH-TAYLOR: Okay.

16 THE WITNESS: So obviously that if there was more
17 water available it would have been a lot more. So I had to
18 rely on cultural tabulations, everything else that was out
19 there on the history. Obviously that ground is nothing but
20 rabbit brush as a predominant crop right now and greasewood,
21 that's all that's left. So it's a little bit hard to go out
22 there and do a cultural tabulation unless you look at pre-1992
23 documents. Okay?

24 So with regard to the vested right that I filed,
25 I filed for 1636.36 acres which is just shy of the area within

1 discharge, the area of the Thompson Spring complex flowed
2 further north and even further south of where this property
3 is.

4 So going on to slide 22. Now, the issue we get
5 into is first of all, you have to occupy the land. You have
6 to divert water, show ownership of the water and place water
7 to beneficial use.

8 Now, there are limitations to the amount of water
9 that you need to prove up in order to get a patent. So you
10 don't have to show -- if you get a patent or apply for a
11 desert land entry for 320 acres you don't have to prove up the
12 full 320 acres, you can prove up 40 acres and that would be
13 acceptable to the federal government at that time.

14 When I worked at the State Engineer's Office in
15 '80, '81, I forget which period it was, desert land entries
16 were still going very strong in the state of Nevada. The rule
17 with the State Engineer's Office was is you basically set the
18 on the statutes for a year and read what was in files and then
19 they may allow you to answer phone calls.

20 Well, for some reason after I got there after a
21 short period of time everybody left, I don't know why. But,
22 at that time we had people lined up in the old Nye building
23 lined up at the counter filing water rights applications with
24 their desert land entries going way out the door. So they had
25 no choice, it was either the State Engineer was going to

1 the boundary owned by Mr. Venturacci. There was also evidence
2 in this case that the irrigation went way past what I've
3 designated on this map.

4 Now, I've heard some discussions yesterday with
5 regard to trespassing on federal land. At the time of the
6 Desert Land and Tree Act, the Homestead Act or the Carry Act,
7 trespass is the only way you can get the land and you have to
8 prove that by getting the water rights. The issue is is that
9 if it flowed across federal lands would that water be
10 available to the federal government.

11 Well, only to be available if I was diverting
12 water, even if I used it on federal lands I would be the
13 primary water right holder. The federal government cannot
14 acquire that water rights by appurtenancy.

15 For example, the federal government owned the
16 land and conveyed the land -- owned the land and the water and
17 they were the persons that diverted the water and I got the
18 land through a patent, then I could acquire the water right
19 through appurtenancy. It doesn't work that way.

20 So we know from historical record that this land
21 outside of this ranch area was extensively cultivated grazed.
22 The patents didn't limit where the place of use was. But for
23 the purpose of these filings we're saying here's what we're
24 limited to. The discharge area by evidence of the photographs
25 which I'll go through further shows that the area of

1 handle all these people or I got stuck with them. So I
2 handled hundreds of filings a day for desert land entries all
3 around the state. And we'd have to process them and half of
4 them didn't have the forms filled out right.

5 At that time when the people came in we would
6 assist in filling out the forms and fill it out and get the
7 money and go file the thing. And -- and basically they had a
8 map but no supporting with it. We did probably hundreds of
9 desert land entry filings in a short period of time and then
10 we'd get 30 or 40 phone calls a day asking when they're going
11 to get their permit.

12 So we were spending a lot of time at that period
13 on sorting through what the requirements were with desert land
14 entries and Carry Acts with state lands and trying to resolve
15 all these applications to go to denial because some of the
16 basins were so over-appropriated and they had no way to get
17 water rights so we would tell state lands they couldn't get a
18 water right and they'd cancel a bunch of them through BLM.

19 But that's where my history goes. That's a
20 little sidebar. Anyhow, I've gone through 1912, 1975 and my
21 filing in 2013.

22 HEARING OFFICER JOSEPH-TAYLOR: Plenty of chairs,
23 folks.

24 THE WITNESS: Okay. Going into the further
25 references on this property we know that the pony express came

1 in at the end of this area in 1859 and it was actually a pony
 2 express station. The pony express was -- started construction
 3 in 1859 and basically occupied the property in 1859 and 1860.
 4 So we know that there was existing use out there,
 5 that they had livestock and there was other users on the
 6 subject property.
 7 In 1861 the telegraph came in and the neighbor to
 8 the north, which was Mr. Cox, became the telegraph operator.
 9 And the pony express station drifted away.
 10 So, from this standpoint, up through this period
 11 of time, we've had irrigation stock water and domestic use has
 12 been continued to the extent of what water was available. So
 13 whatever flowed out of those springs historically over the
 14 period of time was used.
 15 So, and I do have some proof of that. This is
 16 what is left of the springs when I was out there in January of
 17 this year. You see a little bulge under the tarp, that was a
 18 submersible pump I was taking water out of the springs for
 19 Milton Thompson's house. Okay.
 20 This is the area under slide 27 that was taken
 21 where you can see the same discharge within that area that
 22 flows out of the most southerly spring that flow down to the
 23 ponds that were out there.
 24 Now, you can tell that the spring discharged here
 25 above the pond level. Okay? That has been some issues in the

1 Now, one thing I want to bring up here is we refer to Diamond
 2 Springs and Diamond Springs is often referred to as the Taft
 3 Springs. I've noticed in later years when you go through the
 4 literature research you have Diamond Springs being talked
 5 about about the Diamond Springs Ranch, which is located on the
 6 Taft Ranch. And I know that's how Milton Thompson talks about
 7 it and I've seen it in some of the other references. But
 8 actually Diamond Springs was located one mile north of the
 9 Taft Springs. And that places it on the Thompson Ranch.
 10 Now, when I was out there in January and May I
 11 didn't see any remnants of that spring. By a memo that I'll
 12 introduce -- or I'll go through later, we have Jim Harrill
 13 talking about a field research that they did in 1982. The
 14 other remarks Jerry Brownfield, who was the head of the
 15 groundwater section at the time went out also at that point
 16 and he was looking for Diamond Springs.
 17 So, at that point in time in 1982 all that
 18 existed were some willows and a minor surface discharge. When
 19 we look back at the historical record by Sir Richard Burton
 20 and some other people that talked about it there was a big
 21 change on the flow from that period of time from what it was
 22 in 1982.
 23 So we go in here then to the vested right filing
 24 by Mr. Forman on the Cox Ranch. And let me see if I can find
 25 the plat number or the proof. I don't have an exhibit for

1 past and, in fact, the flow was so great you can see the
 2 ripples coming out of the discharge within the pond itself.
 3 Now, for reference, the building to the far right
 4 would have been the old pony express station. The building to
 5 the left I think is the residence where Milton Thompson lives
 6 now. And there's quite a bit of difference between this
 7 picture and what exists out there at the present time.
 8 So I basically described to you that there's some
 9 history associated with this property and it talks about the
 10 overland telegraph being tapped and ending the pony express.
 11 So we have Mr. Cox becomes an operator and his wife is being
 12 talked to, read messages, do that type of thing. And it
 13 basically comes from the same exhibit that I provided before,
 14 which was a three-page summary found on the internet.
 15 Okay. So now we're on the Cox Ranch. We finally
 16 moved on to that. The proof was filed January 30th, 1975 for
 17 Theodore and Olive Thompson. This again was done by
 18 Richard Forman and it was for 80.66 acres. And it basically
 19 says this is what we have on the property. And the survey is
 20 predicated upon field survey performed in November 1974.
 21 Again, the same issues apply, it's based upon what existed at
 22 the time and here -- and the jurat says the same thing as he
 23 did in 1974 that it's based upon the survey he did
 24 November 14th to November 18th of that year.
 25 So it's a snapshot of one existed in that window.

1 them, I apologize. So we have a -- that this map on the Cox
 2 Ranch was based upon the priority date of 1901, that's what he
 3 signed it at. Ignored priority date based upon actual vesting
 4 of use. Ignores pasture areas, for example. Ignores the 1879
 5 survey, the original settlement that was established on the
 6 property.
 7 Lists -- the map lists cultures as exist in 1974
 8 when it was hayed within the fenced areas. Actual diversion
 9 was plus or minus 1859. Based upon the Crofut analysis and
 10 some other historical research that was prepared.
 11 Again, the same thing is happening here. We go
 12 through the analysis that we've been doing for almost two
 13 years on the property. And based upon the historical
 14 documents, aerial pictures, oral histories, the records of
 15 Eureka County and the State Engineer we tabulated this acreage
 16 that's listed here. It's basically 272 acres of diversified
 17 pasture and 72.82 acres of hay which totals 344.89 acres.
 18 Cox Ranch illustrated in the 1879 survey and
 19 added stock use and domestic use.
 20 So under slide number 34 I exhibit the map that
 21 we drafted in support of V-002845, 2846 and 2847, which
 22 includes again discharges from Cox Canyon and Telegraph
 23 Canyon.
 24 Again, whatever water comes out of those springs
 25 based upon snow melt has historically been used on the

1 property, but it's not the primary use of water.
 2 And again, it's the same jurat that I discussed
 3 previously. We also looked at the patents on these
 4 properties. We have the patents that were filed in 1901 and
 5 1907, 1908 on the Cox Ranch. And we provided the patent
 6 numbers and we also provided the associated water rights with
 7 those patents.
 8 We have the -- moving on to the Willow Ranch the
 9 proof was originally filed February 25th, 2013, that group
 10 number is V-010368. And we also named Judd Canyon Creek and
 11 unnamed springs and seeps within the filing of the proof.
 12 This one's a little bit different because we have
 13 the Willow Field and in this case I used the fence boundary
 14 rather than the property under ownership. And it appears that
 15 someone got a little lost on their surveys out there because
 16 it doesn't follow what the patents are, even though everything
 17 shown within that fence line has been changed to incorporate
 18 the uses that I described in the jurat.
 19 So again, same jurat, I'm attesting to that. We
 20 have the patents that occurred in 1901 and 1902. And I have
 21 Cox in there because we have WF Cox and we have George Cox.
 22 And I believe WF Cox was on the Willow Ranch and George Cox
 23 was on the Cox Ranch.
 24 The place of use is 490.59 acres and we have
 25 segregated into these areas as far as what the various uses

1 research that I looked at, and I've listed it here and I don't
 2 know if we need to go through because I think we're getting
 3 close on time, but I had aerial photographs. Now, I've done a
 4 lot of aerial photograph work, I've done landsat imagery and
 5 I've done interpretation of infrared photographs. And I've
 6 been qualified in the State Engineer's Office to interpret
 7 those photographs.
 8 We did them on the Amargosa Valley case and I was
 9 allowed to come in with an expert at that. And anyhow, what I
 10 find is is that when you look at the aerial photographs you'll
 11 have dark areas and light areas. And when you look at the
 12 photographs it's a little hard to say well, here's a grain or
 13 a stick of alfalfa and here's a stick of grass and I think
 14 this is pasture and this is grazing or this is hay and
 15 grazing.
 16 What you have to do is kind of look at what the
 17 other data gives you support on and not rely solely on this.
 18 Now, when you look at the aerial contrasts you have to look
 19 between the photograph on where you know it's undisturbed and
 20 areas that you know it's disturbed.
 21 Generally, the wetter areas are not suitable for
 22 alfalfa. They may only be suitable for grazing cattle. They
 23 may not be suitable for cutting grass on or they may be based
 24 upon the ditching that exists in the area because you can
 25 identify ditching from the aerial photographs.

1 are. And we put the use in as prior to 1879.
 2 So, here's what we have, we have the filings on
 3 Thompson Ranch in 1912. It's only a portion of the patented
 4 lands that was done by Dewey in 1890. We have Horse Canyon
 5 that has limited discharge.
 6 Taft Springs themselves was the only thing
 7 indicated within the patented filings. And it's based upon
 8 field findings of the surveyor and I'm adding to this that it
 9 was only based upon illustrating the works of diversion and
 10 did not have any evidence of a cultural tabulation by the
 11 surveyor that was the matter of record.
 12 So, in 1975 we have the Richard Forman filing
 13 which is based upon existing conditions as he found in 1974,
 14 limited the fence areas only, does not illustrate lands and
 15 possession outside of fenced areas. And the purpose of the
 16 filing was to show pasture lands not shown in the original
 17 filing, only reference was to pasture and grain was expanded
 18 to an annual use, but the filing is not based upon historical
 19 research.
 20 Now, from time to time I will go through and show
 21 some charts that I've used that I haven't really gotten
 22 through yet and I may wait until later, but these charts are
 23 further down in the tabulation. I'll wait till then to go
 24 through these.
 25 What I've said is is we have all these -- the

1 So when you look on my map that I prepared in
 2 support of these applications in 2013, I was able to identify
 3 the ditches. And when I cross-referenced that with the work
 4 that was done by Richard Forman there's a lot of comparable
 5 data that says here's the ditches that were out there that we
 6 could find.
 7 So anyhow, when I look at those aerial
 8 photographs I'm accounting for the types of crop based upon
 9 what I'm seeing on the aerial photographs by contrasting those
 10 aerial photographs by looking at the areas which may be wetter
 11 or dryer and determine what the use is based upon the oldest
 12 person I could find to give me some historical data on it.
 13 Then I get into record research which I said
 14 relies on Eureka County, Battle Mountain Recorder's Office,
 15 assessor and archival records, office of the State Engineer,
 16 GLO records, maps and field notes. And I've listed here oral
 17 history, literature, historical records and interviews.
 18 Now, keep in mind the that the items that I've
 19 listed here does not limit it that I've spent a lot of time
 20 looking for oral histories. I've looked for the work that was
 21 done by Jackson son family owns the ranch and he talks in the
 22 precursor of his book about the bound full springs that
 23 existed on this property.
 24 So basically all the references we have as to the
 25 mountain water flowing out and the lush property that existed

1 at the time prior to the pumping that occurred. I did the
2 patent research and I looked at the USGS reports and most
3 importantly I did ground truthing without the ground truthing
4 everything I desire did was use live less in my mind. You
5 can't recall solely on the aerial photographs. You cannot
6 rely solely upon the 1879 survey without going out and trying
7 to find what was in those documents.

8 Now, the way I approach ground truthing is, you
9 know, I go out and look for features, physical features on the
10 land. And then if I find something I'll make a note of it and
11 plot the GPS coordinates. Then I know what that feature is,
12 I'll go back and see and compare it to what I have in my
13 notes.

14 I don't like the aspect of going out there and
15 saying well, I've got this ditch in 1879, I need to go track
16 it down. I would rather find it physically in the fields and
17 go back and see if it does depict what's there.

18 So I think I've exhausted slide 43. The other
19 thing we need to look at here is the timing in these
20 photographs. Now, when I went to DRI to try and get the
21 aerial photographs I went through everything I could find.
22 And all I could find in this area was 1950 with no date given.

23 I have 1953 with a composite of 1954, which is
24 similar type of -- in other words, they were put together
25 which was taken on September 29th, 1953. The only one I have

1 look for in this aerial photograph is you can blow it up at a
2 fairly high resolution by getting into it but not under these
3 photos because you have pixilation occurring.

4 So I was able to go through and pick out ditches,
5 historical features, evidence of working on the ground, for
6 example, and I was able to pick up haystacks. I didn't think
7 it was important at the time, otherwise I would have put it on
8 here, but I do reference it later in the exhibits.

9 So, if we look at the -- what occurred at this
10 time which is about 1950, we look at the precipitation chart,
11 you'll see that there's not any data in there.

12 We know from the early '50s that there was a
13 drought period that's been testified previously that between
14 this period of time where we have the lack of data, that that
15 was a drought period and it's probably likely that some of the
16 culture we're evidencing may be not based upon the best year
17 of record for what would be nice to show. So it is what it
18 is.

19 Moving on to slide number 46. This is
20 Exhibit 254, which is a 9/29/53 aerial. And again, this is a
21 composite of what we found on the Thompson Ranch and the Cox
22 Ranch. If you look at the -- this area within here, this
23 linear feature I believe is representative of the -- what was
24 found on the GLO plat in 1879 or pretty close to it. And then
25 we have a ditch going this way and then we have some ditching

1 that is truly representative of a discharge part of the season
2 is May 20th, 1967. And again, I have 1973 of September 27th.

3 Now, we worked together with some of the folks at
4 the Shipley Springs effort and, you know, they have -- they
5 have earlier photographs than I could find. And I looked at
6 the same databases that they had and I could not find them.
7 So, basically what I have is what I could find.

8 Now, there could be more out there, but it wasn't
9 that I was trying to be specific on what I found. What I
10 found is what you have.

11 Okay. Moving on to slide number 45. This is a
12 composite photo taken in 1950 of the spring discharge areas
13 which are basically the Thompson Ranch and the Cox Ranch.

14 So, that exhibit is a composite of these photos.
15 So, what we had to do is I had to take this work and fit it
16 into an AutoCAD program and find points that would match to be
17 able to come up with a graphical representation what was out
18 there.

19 Now, what I had available to me were some very
20 good high resolution photos that every time you make a copy of
21 it it steps down quality. So, what you have here is a step
22 down from what I have, but when I'm going through this thing
23 and you heard a lot of talk about haystacks, haystack corrals.

24 Well, at the time I know from after going out
25 there I found some of the haystack areas, but the things you

1 heading to the north of here.

2 HEARING OFFICER JOSEPH-TAYLOR: Got to be careful
3 saying "this here," "this way."

4 THE WITNESS: Oh, I'm sorry. Yeah. Within --
5 within I believe it's section 14 and the middle part of that I
6 would say in the westerly edge of that section there's a
7 linear ditch feature that shows a ditch.

8 Transecting that ditch from the east to the
9 southwest is what I believe is the old pony express road. And
10 further south of that is the ditch that follows a parallel
11 line that comes from other areas.

12 You'll find within this photograph on the
13 left-hand -- left-hand center of the exhibit where it says
14 Thompson Ranch you'll see some areas that are spring
15 discharges that are probably created from the spring discharge
16 associated with the Thompson Spring which is in the right-hand
17 edge of the easterly edge of this photo.

18 You'll also find the linear feature on the --
19 towards the middle of the photograph to the right of the
20 center portion that flows further to the north that follows
21 off the BLM land which pretty well follows the linear
22 relationship found in the 1879 survey map that we'll get to in
23 the future.

24 HEARING OFFICER JOSEPH-TAYLOR: You find yourself
25 at a breaking point for lunch?

1 THE WITNESS: That would be good.
 2 HEARING OFFICER JOSEPH-TAYLOR: I was thinking
 3 earlier are you at a good breaking point here, Mr. Thiel?
 4 THE WITNESS: I think so.
 5 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 6 Mr. Kolvet, how are you doing on time?
 7 MR. KOLVET: Doing great.
 8 HEARING OFFICER JOSEPH-TAYLOR: Can we take an
 9 hour and 15 minutes today as opposed to bringing me a bag of
 10 fruit?
 11 MR. KOLVET: I think we can.
 12 HEARING OFFICER JOSEPH-TAYLOR: Thank you. We'll
 13 be in recess till 1:15.
 14 (Lunch recess at 12:00.)
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 25

1 believe, show Rock Field on this map and Rock Field is not a
 2 part of this hearing.
 3 Going down through slide number 48, it's the 1967
 4 Cox and home ranch composite aerial. This photo you can see
 5 work occurring on the ranch where you can see fields being
 6 reestablished, ditches being put back in and water being
 7 diverted on the property. Like I said earlier, this is the
 8 only photo that was done early in the discharge season as I'll
 9 call it. And you can see evidence of springs and discharge in
 10 the Cox Ranch and the home ranch.
 11 Again, Exhibit -- or slide number 49, Exhibit 256
 12 I show Willow and Rock Field. Willow in this aerial shows
 13 some significant amount of discharge around the contour 5800
 14 interval, and that was used as one of the bases for the
 15 description that I have on water use on the property.
 16 Then we have the 1973 photo which unfortunately
 17 is labeled Exhibit 257, I think 257 is right, but it was
 18 labeled September 27th, 1967. So in actuality it's 257, 1973
 19 aerial. Same -- same format procedure with that.
 20 Going on to Willow, same type of procedure. You
 21 see a difference, but again, this was an aerial -- aerial
 22 taken in September of the year.
 23 Going to number 52, I think this is fairly
 24 important that we have the information from the GLO 1879
 25 survey plats and notes. The thing I want to reiterate here is

1 CARSON CITY, NEVADA, WEDNESDAY, NOVEMBER 20, 2013, 1:15 P.M.
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 3
 4 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 5 record. Please continue.
 6 BY MR. KOLVET:
 7 Q. Mr. Thiel, when we left off I think you were on
 8 plate 45, you started talking about plate 45?
 9 HEARING OFFICER JOSEPH-TAYLOR: No, we're past
 10 that.
 11 MR. KOLVET: 47. Sorry.
 12 THE WITNESS: What we're discussing before is the
 13 composite aerial photographs we put together as exhibits. And
 14 we have attachment aerials that were provided within that.
 15 That shows the base data that we went with. Because of the
 16 time I'm not going to spend a lot of time on this, the time
 17 constraints, I don't want to spend a lot of time on it.
 18 Other than this is part of the material I went
 19 through to see evidence of water flowing on the property and
 20 evidence of in culture or beneficial use that may have existed
 21 at the time including any work that was done on the property
 22 which you can see by referrals or equipment, for example, or
 23 ditching on the property. And all of these photos that I've
 24 gone through thus far have been representative of this.
 25 On slide number 47, which is Exhibit 254, I

1 that the map itself is the record document. The field notes
 2 and the survey notes tell you how you got there on the map.
 3 Generally when we're doing surveying or whatever in the field
 4 we use the map and not necessarily the notes unless there's
 5 some issue on re-establishing a corner or whatever.
 6 This photo taken here shows the -- on the
 7 right-hand side of the photo just to the back end of the wagon
 8 you'll see the old house that's out there which is part of the
 9 pony express station. And you'll see the haystack on the
 10 wagon in this area with a team of horses taken from the
 11 Thompson Ranch.
 12 What's important to note here is that the --
 13 there's hay bales on the wagon. During the ground truthing
 14 that we did at the time we found I think it was a called Price
 15 Simpson baler that existed with remnants from it. And it was
 16 actually patented in 1863, but we know it was used in that
 17 time frame and when the hay storage yards that was onsite.
 18 And I was able to find that equipment that was
 19 left over and the remnants of it.
 20 Moving on to slide number 53 we have Exhibit 248,
 21 which is the Cadastral survey map for 23 north, 54 east. And
 22 what I'm going to illustrate on this map is first of all,
 23 this -- the reason that this map was done in the first place
 24 was because of the DLEs and patents and everything else that
 25 was going into the area. You had to do the survey before you

1 could go on in getting your land grant, whatever it was.
 2 Interesting about this is we see looking at the
 3 map, and I might have to stand up and look at it if I can.
 4 HEARING OFFICER JOSEPH-TAYLOR: Oh, of course.
 5 THE WITNESS: Okay. Within the map itself it
 6 describes a ditch. And I would say it starts somewhere in
 7 section 3, and I can't see it too well, and traverses the
 8 property to the southwest to section -- appears to be section
 9 17. And in the records we found that this was mentioned in
 10 the book -- or the water books within Eureka County that that
 11 such ditch was a certain dimension and went for about two
 12 miles in that general direction.
 13 If you look at the note or the record document in
 14 the Eureka County Recorder's Office that basically says the --
 15 that this was going to be commencing work in this time frame,
 16 whereas the survey map shows it existing.
 17 And I believe the top width of the ditch was four
 18 feet wide and the dimensions of the ditch was four feet wide
 19 on the top, three feet deep and two feet on the bottom. And
 20 the flow from the Taft Springs to -- down to section 17 at
 21 this point in time.
 22 Also of note here if you're looking at the
 23 southern portion of the plat you'll see this streamline coming
 24 down through that area which I believe is section 20 -- looks
 25 like section -- I'd say section 20, I can't tell for sure.

1 Taft house which is in section 3, you'll see a ditch that
 2 heads that direction which we refer to as the upper ditch and
 3 there's a diversion that comes off of that ditch that runs to
 4 the Cox property to the north.
 5 So what I found with this is this all well and
 6 good, but you can't rely on the paths on this with certainty
 7 of the evidence of culture. So what we had to do was go to
 8 the survey notes and then to the field notes to determine
 9 whether this was actually observed or whether it was just a
 10 sketch that was put in there.
 11 Sometimes you'll find these GLO plats are pretty
 12 inaccurate. You won't find that they're very supportive
 13 unless the survey notes support them or the field notes.
 14 So moving on to slide number 54. In order to get
 15 this in context, what I was able to do is to go in a plat, the
 16 existing place of use for Mr. Venturacci on this map. And
 17 what's telling about this is if you look at it you'll see the
 18 boundary coming around in a darker red which is -- it starts
 19 up in section -- well, these are actually lots in the northern
 20 part on the boundary between township 24 north and township 23
 21 north.
 22 And then you come down to section 5 which is the
 23 west -- I would say the easterly boundary and they head
 24 directly south to the northeast corner of section 8, then we
 25 have east and then drop down to section 9 which will be

1 But what I'm doing is looking in the west or east
 2 half of that GLO plot and there's a stream that comes down
 3 through there, they call it a creek, that was the original
 4 discharge from Horse Creek Canyon, which to me indicates that
 5 the priority was probably different on Horse Creek Canyon than
 6 it was from the priority associated with the Taft Springs.
 7 At some point this water was diverted to the
 8 north and commingled with the discharge from the springs and
 9 the discharge from the large green area that's shown on this
 10 map.
 11 Now, within the map itself you'll see that
 12 there's a boundary that surrounds the subject property which
 13 is called the home ranch within this document. And basically
 14 that green area depicts a meadow.
 15 Another feature within here is you'll see coming
 16 from the Taft house, which is in section 3, and it flows to
 17 the west and then flows up to the northwest and discharges off
 18 into township 24 north, 54 east.
 19 Off of that this Taft Creek as they called it,
 20 there's a diversion that comes around and goes back in. And
 21 basically that diversion if you look at the aerial photographs
 22 there's two arms that come out similar to the Shipley Ranch.
 23 And that diversion was able to be provided to irrigate that.
 24 And you have some other points that I think are
 25 of interest on this, this is right along going north of the

1 probably the center quarter corner. Then you head east and
 2 you follow this, you trace this line across this area.
 3 Now, for reference purposes I took the -- the map
 4 that we had submitted to the State Engineer's Office under
 5 second amended proof V-01115 and platted that in here just for
 6 reference associated with the GLO plats.
 7 So the thing that strikes me is if you look at
 8 the area of discharge from the Thompson Springs complex as
 9 we'll call it, you can see that the land where the discharge
 10 occurred was substantially larger in 1879 than the place of
 11 use for the subject land.
 12 From that we know that there was irrigation or
 13 there was discharge or there was some evidence of culture
 14 existing at this point in time.
 15 Moving to slide number 55 we have --
 16 HEARING OFFICER JOSEPH-TAYLOR: Mr. Thiel, can
 17 you go back a slide, please?
 18 THE WITNESS: Yes.
 19 HEARING OFFICER JOSEPH-TAYLOR: You said there's
 20 some evidence of culture from that point in time. What's your
 21 evidence of culture?
 22 THE WITNESS: Well, what we have is a map. When
 23 you first look at it you see this green area --
 24 HEARING OFFICER JOSEPH-TAYLOR: Right.
 25 THE WITNESS: -- that exists. Okay. When I look

1 at the map just by itself it doesn't tell me much until I move
 2 to the next slide that gets into the field notes. The field
 3 notes are telling because that green area could be whatever,
 4 no one knows what it is and without reference standing on the
 5 plat map itself isn't evidence that's sufficient for culture.
 6 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 7 THE WITNESS: What I was trying to relate is
 8 going to the next slide and leading into that.
 9 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 10 THE WITNESS: So what we have are the field notes
 11 from pages 146 to 150. And what we have here is we have
 12 survey notes and field notes that are talked about
 13 interactively. The survey notes are basically the cleaned up
 14 copy of the field notes. All right?
 15 So in the conclusion of both of these documents
 16 you'll find that the field notes may have more information or
 17 less information than the survey notes.
 18 So I'll make this to the survey notes. Now, this
 19 is very enjoyable to read, but for everybody here I prepared a
 20 summary, a cheat sheet, if you will, with regard to the
 21 Exhibit DB250, which is book 176, 1879 survey notes dated
 22 August 16th, 1879.
 23 Does everybody have that? Do you have a --
 24 MR. KOLVET: I handed that out earlier, that was
 25 the addition to Exhibit 250.

1 and runs north. So we have a spring identified within that
 2 area which is in 23 north, 53 east.
 3 So we're working our way further over towards the
 4 township we're in.
 5 So, again, you go the first few pages and it
 6 tells some other springs that are in the discharge area
 7 surrounding this property, which gives some merit to the map
 8 that I showed previously to the slide -- I'm having a hard
 9 time talking, shouldn't have had soup. Shows a slide with
 10 this area that's further to the west that indicates that there
 11 was a fairly large discharge area out there, which is more
 12 than just the Taft Springs.
 13 So, now we get into 23 north, 54 east, which is
 14 the middle of the second page. And it's begin August 22nd,
 15 1879, page 175. We're on page 175. So this is township 23
 16 north, range 54 east.
 17 So what we have are between sections 22 and 23
 18 which identifies on the left-hand column 26.30. And we have
 19 the creek is ten links wide and it runs southwest. Okay.
 20 Then what I'm getting to this will be so
 21 redundant to go through this whole thing, but as you go
 22 through this and it traces out where these points on the map
 23 it becomes evident that this was not just an arbitrary guy
 24 sitting on a hillside and tracing a map in. Yes, he traced it
 25 based upon survey data that he had.

1 HEARING OFFICER JOSEPH-TAYLOR: Oh, okay. We
 2 attached it to Exhibit 250. Okay.
 3 THE WITNESS: So I'm going to try and go through
 4 this quickly because I'm running out of time, but what I have
 5 is I've gone through here and kind of picked areas out where
 6 it talks about ditches, first rate meadows, second rate
 7 meadows. And what you'll find is is that you go across the
 8 bearing that the surveyor says he's tracking. So some will
 9 say a random bearing and most of them will say that they're
 10 going along with the 16th line or a section line. So
 11 obviously a lot of information can be missing, but there's a
 12 lot of information here that I think is very valuable.
 13 So, if you go down to -- and just for references
 14 I put on here that one chain is equal to 100 links or 66 feet
 15 and 1 link is equal to .66 feet.
 16 So what I'm going to do is rather than go through
 17 and try to direct where this is written I'm going to just go
 18 through my notes and say that, you know, for example, on the
 19 first page that I have is we have a boundary survey between
 20 sections 25 and 30 which is on page 125. In there on the
 21 left-hand side it will say 68. So let's go down to 125.
 22 Okay. So you look off to the left side of the
 23 margin and you'll see 68 and it says spring, 12 change -- 12
 24 change -- 12 chains, and I have a hard time figuring out
 25 whether this is west or north. And to me this is saying north

1 So you go through this and you'll find that
 2 further down sections -- it's basically sections 14, 15, 22
 3 and 23. And from that point Crofut's house bears north 47 and
 4 a quarter degrees west, 36 chains, 60 links distance.
 5 So he's identifying houses out there of the
 6 people that have possessory interest in the property.
 7 HEARING OFFICER JOSEPH-TAYLOR: For the court
 8 reporter, what was the name of that person?
 9 THE WITNESS: Crofut. It's C-R-O-F-U-T. Then
 10 between sections 2 and 3 you'll find that you have Taft's
 11 house, which from that point it bears south 22 degrees west,
 12 the southeast corner of Taft and blank desert land claim bears
 13 north three and a half degrees east, seven chains, ten links
 14 distance.
 15 So from there he's saying okay, we got desert
 16 land claim from Taft that bears in this direction to try and
 17 find out where that is. So he's doing a survey to identify
 18 where the desert land claim is. And he's doing that from
 19 here, so we know it wasn't just done arbitrarily, normally
 20 these surveys like I stated earlier were done to find out and
 21 allow entries within these townships.
 22 So one example is you'll have page 178 between
 23 sections 27 and 28. And again, if you look at the left-hand
 24 column it says 14 and you enter the meadow north of east and
 25 south of west.

1 So, basically you're entering the meadow
2 northeast and southwest. So, in some of these areas, so say
3 sagebrush/meadow, which means I went from sagebrush to meadow.
4 And some of these it says meadow/sagebrush. So based upon
5 whatever bearing that he's going or whatever direction he's
6 going, he's identifying what he's seeing.

7 And then in here he'll say well, this is first
8 class meadow or it's second class meadow. And rating the
9 difference between first and second class I would assume would
10 be based upon the quality of the meadow, the evidence of
11 culture that existed out there. The -- and that would be
12 dependent upon water within that area being there.

13 Again, going through here, you go between
14 sections 15 and 16, it says inter meadow -- inter meadow
15 northeast and southwest. And this is left-hand column 80,
16 sections 9, 10, 15 and 16 he observed meadow.

17 Go to the next section, page 184, he says well,
18 on sections 9 and 10 on this part of it where his distance I
19 measured was 59.80 chains. There's an irrigating ditch ten
20 links wide going to the southwest.

21 So it this goes through and tells you where he's
22 found irrigation ditches, where he's found springs. And what
23 I notice about going through this he found more springs than
24 just what was located on the Taft -- discharge with the Taft
25 Springs.

1 Continuing on, again, he finds another irrigation
2 ditch which is on sections 3 and 10. He set a temporary
3 quarter section corner at the left-hand side which is 40. And
4 at 40.8 he found irrigating ditch ten links wide flowing
5 southwest, which was 6.6 feet. That was the ditch width.

6 So again, you go through here and it says well,
7 meadow again. And then page 186 he says -- top rate -- well,
8 basically this says soil, but it's top rate soil, first rate
9 meadow. And that's sections 3 and 4 which is a random line.
10 Normally what he says he does, he takes off a bearing of
11 15 degrees northwest. Or he'll take off a bearing of
12 16 degrees, you know, southeast, whatever it is, whatever
13 random line he chooses, that's where he goes.

14 So, again, looking at page 28 -- 188 between
15 sections 28 and 29 it leaves the meadow northeast and
16 southwest. And on page 189 he calls it again first rate soil,
17 first rate meadow. And it goes on down further. In this
18 case, page 190 it says well, I entered the meadow east and
19 west and it's a first rate meadow and then sagebrush based
20 upon the bearings going.

21 And it keeps going this way through this whole
22 thing. And I don't know if it's necessary to do that for the
23 record, but he identifies Taft's Creek on page 194, which is
24 20 links wide running in the southwest and it's sandy and
25 level and it's first rate meadow.

1 He gets into page 195, that's north on the random
2 line between sections 4 and 5 hitting 16 degrees, 45 minutes
3 east. And he has Taft's Creek at this station and it's 20
4 links wide and it's running in this direction.

5 And then he gets further into these other parts,
6 he's at the corner comment of 4, 5, 8 and 9, the sandy soils,
7 level, first rate meadow.

8 So then he gets into 29, 30, 31 and 32, it's
9 sand, level soil, first rate meadow and it's sagebrush. So
10 now it's transitioning out from first rate meadow to
11 sagebrush. So you keep on going through these lines and
12 typically what you find is the map will correlate to what he's
13 got. And rather than belabor this and bore everybody to death
14 with his stationing, typically it says that area with the
15 green is either first or second rate meadow, anything out of
16 the green area is sagebrush.

17 And then his general description, he says the
18 subdivided portion of this township is level land, a large
19 portion of which is fine meadow and the balance covers --
20 covers with sagebrush and grass. It all can be irrigated from
21 creeks and springs in different parts.

22 The soil is all above average in that -- in the
23 meadow is very rich. Considerable hay is cut from the
24 meadowland and a portion under cultivation. Then a subdivided
25 portion which is to the east is mostly mountainous, unfit for

1 cultivation.

2 Unless I have some questions I'm going to move
3 away from this.

4 BY MR. KOLVET:

5 Q. Going back to your slide 54.

6 A. Yes.

7 Q. Is it my understanding from your testimony then
8 that the coloration that's on this map you put there?

9 A. No.

10 Q. That was originally put there; is that right?

11 A. Yes. Within the green area on the map and
12 unfortunately what happens is it looks more yellow on the map
13 that's on the projector, but what that indicates is that was
14 on the map and that's what I pulled off the BLM website when I
15 pulled the plat.

16 Q. And do those --

17 HEARING OFFICER JOSEPH-TAYLOR: Hold on,
18 Mr. Kolvet, I want to make sure I understand that. I thought,
19 Mr. Thiel, that you had taken the GLO map and then put the
20 culture on it yourself.

21 THE WITNESS: I'm going to back up one slide to
22 answer that question. Okay. Here on page 58 is Exhibit 248.
23 This is the map as pulled off of the government land office
24 site. So this map itself shows the extent of the meadow area
25 and area where grass was being grown; in other words, it was a

1 meadow. Okay. Working towards slide number 54.
 2 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 3 THE WITNESS: What we did was is take our proof
 4 map, the one I did and overlaid that onto the GLO plat that
 5 was blown up for illustrative purposes.
 6 HEARING OFFICER JOSEPH-TAYLOR: Okay. I
 7 understood it correctly, you added that to this map.
 8 THE WITNESS: I added the -- what I added is this
 9 portion in here.
 10 HEARING OFFICER JOSEPH-TAYLOR: That's what I
 11 understood.
 12 THE WITNESS: Yeah. And that's the place of use
 13 on what I filed for Mr. Venturacci.
 14 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 15 THE WITNESS: Okay.
 16 BY MR. KOLVET:
 17 Q. But just to go back to clarify for the record,
 18 the outlines of various cultural zones, for lack of a better
 19 word, the hashed green, the yellow and then the speckled
 20 white, where do those come from?
 21 A. Those come from -- those areas that I show on
 22 here and are referring to the side that looks like a whole
 23 bunch of pluses in it. That came from my review of what was
 24 on the site and my estimate of what culture existed on the
 25 property. Not during that time frame but ultimately what

1 rely on to come to the conclusion that certain areas at the
 2 green hash, the yellow and the plus sign?
 3 A. That was based on all the aerial maps I have and
 4 improvements made to that property since 1879. And it was
 5 based upon my interpretation of what I could find out from
 6 historical references and what I could find out by looking at
 7 the aerial photograph topography.
 8 Q. Ground truthing play a part?
 9 A. Big part.
 10 THE STATE ENGINEER: And if I may, Mr. Kolvet?
 11 MR. KOLVET: Sure.
 12 THE STATE ENGINEER: We just spent a lot of
 13 talking about field notes.
 14 THE WITNESS: Yes.
 15 THE STATE ENGINEER: And you talked about first
 16 class and second class growth, how did you incorporate those
 17 kinds of statements into your layer here?
 18 THE WITNESS: What --
 19 THE STATE ENGINEER: It was just one piece of the
 20 information?
 21 THE WITNESS: Here's how I interpreted that piece
 22 of data is I would assume where we had first class meadows is
 23 probably wetter than where we had second class meadows. And
 24 that's how I think is -- if I was out in the field at the time
 25 I probably would have rated that.

1 existed.
 2 So, basically what existed during this time
 3 frame --
 4 Q. This time frame being?
 5 A. 1879. In 1879 what existed was this meadow area
 6 and that was being extensively harvested. And unfortunately
 7 not shown on here is the portion that he refers to as being
 8 cultivated.
 9 HEARING OFFICER JOSEPH-TAYLOR: Is our record
 10 clear on this?
 11 BY MR. KOLVET:
 12 Q. So hashed green --
 13 HEARING OFFICER JOSEPH-TAYLOR: Hold on,
 14 Mr. Kolvet, because I'm getting heads shaking no. I -- I want
 15 to make sure I know this. Mr. Thiel, you added to the GLO map
 16 the green hashed section, the yellow section and the speckled
 17 section; is that correct?
 18 THE WITNESS: I did.
 19 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 20 BY MR. KOLVET:
 21 Q. And the basis for the additions that you made to
 22 this map were what?
 23 A. The basis for the additions was to outline the
 24 place of use of the claim V-001115.
 25 Q. Misunderstanding you. What information did you

1 So I knew from the standpoint if we had first
 2 class meadow that based upon the conditions that existed in
 3 1879 it may not be conducive to alfalfa, but it may be
 4 conducive to haying. Whereas second class meadow or vice
 5 versa; in other words, second class meadow might be good for
 6 haying, first class meadow may be good for pasture because it
 7 is so wet.
 8 So what I tried to do is take that information
 9 plus the other information I have and come up with some sort
 10 of correlation to pick what ground may be suitable for
 11 different types of crops and then reference to what was in
 12 being cultivated after 1905, for example.
 13 So what we have prior to 1905 is the information
 14 that existed that this is wild grass, meadow grass that was
 15 being grown based upon the Crofut history that it was a
 16 typical practice within this valley to plant Timothy and red
 17 top, fescue, for example, out in that area and some other
 18 grasses that they didn't have any success with and that they
 19 experimented with alfalfa in certain areas.
 20 So knowing that alfalfa does not grow well where
 21 there's high seasonal groundwater, I would assume where we
 22 have high seasonal groundwater that would not have been an
 23 appropriate use in that area.
 24 THE STATE ENGINEER: Thank you.
 25 ///

1 BY MR. KOLVET:
 2 Q. Sorry, go ahead.
 3 A. We just finished slide 55. And again, I
 4 condensed my presentation for time purposes. Then we get in
 5 the general description which is 23 north, 54 east. And this
 6 basically -- are the general description under the survey
 7 notes which is very similar to what was under the field notes.
 8 It says the southeast portion of this township is high
 9 sagebrush land that cannot be irrigated for any creeks or
 10 springs in the valley and the eastern portion is hilly and
 11 mountainous.
 12 So if you remember what I showed you under GLO
 13 plot, we had areas within township 23 north, 54 east, areas to
 14 the west that were sagebrush, more out in the flat.
 15 Areas to the east, the eastern portion is where
 16 it starts climbing up into the Diamond Mountains. Anything
 17 between that, the remainder is good agricultural land, well
 18 water and a considerable portion natural meadow. A part of
 19 this township is now occupied and under cultivation.
 20 Now we get into township 24 north, 54 east. And
 21 features on this plat that I have, if you look in the -- I
 22 would say in section 34 I believe it is on -- this would be in
 23 the southeast quarter of section 34, you'll see a -- in that
 24 area you'll see a creek coming up as they call it, but it's
 25 off a diversion ditch that went to the Cox Ranch and headed

1 very north portion of the Cox place there's a spring depicted
 2 with a flow line going to the north. And I really can't
 3 depict -- I think it's right here, which is the top of section
 4 34 which flows to the north in that area. And that's what
 5 they reference into spring discharge.
 6 But looking at the aerials and ground truthing in
 7 that I was able to find for example Birch Spring that was out
 8 there and other springs that were evident on the property and
 9 evidence of discharge within those areas that aren't on the
 10 1879 survey.
 11 So, anyhow, we go through the same issue -- same
 12 issue with Willow, we find on the Willow Field, which I think
 13 is section 22, and it shows a spring discharge which occurs
 14 right in this area which I'm looking at section 22. And
 15 there -- this would be in the northeast corner or -- east
 16 quarter of section 22. There's a spring discharge line that
 17 heads in a southwesterly direction and there's some green area
 18 around that, that would be the Willow Field area.
 19 Now, what I did when I did the ground truthing up
 20 there, I looked at what was onsite and I didn't find the
 21 remnants of that springs, but I found remnants of other
 22 springs and that's what I used in my survey basically to
 23 locate where those springs were.
 24 So the point is that on the Cox, the Willow and
 25 the Thompson Ranch to isolate the entire discharge to one or

1 north.
 2 And you'll see that this creek kind of follows
 3 the boundary and then discharges just north of the Cox Ranch
 4 in section -- it looks like -- I can't tell from the exhibits
 5 I have. But it looks like it discharges in the section just
 6 above section 34.
 7 THE STATE ENGINEER: 27.
 8 THE WITNESS: Thank you. So at that point we
 9 have a diversion that flows from this higher ditch that goes
 10 into Cox Ranch that diverts towards the east and flows north.
 11 And this is what they found.
 12 Now, you'll see a small outline and you can't see
 13 it very well in section 34, which is the Cox residence.
 14 Basically what we find in the -- the narrative regarding this
 15 mostly by Crofut is we know that around the Cox house they
 16 grew crops for transport to Eureka.
 17 In other words, it might be vegetables grown or a
 18 garden that was in that area or cultivated for that. The
 19 balance of the area was used for hay and what they describe
 20 within the field notes is they describe an area of spring
 21 discharge which is typical in that area and not isolated to
 22 one source.
 23 What is missing within this is what everybody
 24 refers to as Diamond Springs. For whatever reason it doesn't
 25 follow out or fall out on the township line except for the

1 two springs was impossible based upon the discharge along the
 2 5800-foot contour line that followed -- trended to the north
 3 and to the south along this boundary where the carb --
 4 basically where the carbonates are exposed to the eastern part
 5 of this township.
 6 So, if I was going define a point of discharge I
 7 probably have a hundred points along those lines and it says
 8 here's where it discharged. Then if I went west I'd probably
 9 have another hundred points that were out there which were
 10 seeps or minor springs.
 11 So from our purposes what we did is we came in
 12 and said these are the major sources on here, this is what we
 13 pulled up and this is what we had evidence of. So we said
 14 these are the springs we picked.
 15 And it's pretty typical that you can't pull every
 16 spring and seep, especially when you're doing the lookback
 17 scenario on this even though I could find evidence on the
 18 aerial photographs and in truthing.
 19 This is a detail of the same thing I did with
 20 regard to the Thompson Ranch on the Cox Ranch is I overlaid
 21 this blue crosshatching for the area of culture that I
 22 estimated on the Cox Ranch. What you'll see from a reference
 23 on this photo is south of section 34, which I believe which
 24 would be within the lots to the north of township 24 north, 54
 25 east. You'll find the overlay on the road that is illustrated

1 within there within section 34 there's an area that's
2 highlighted that basically follows this boundary which would
3 have been the garden map the Cox father, George or WF Cox or
4 William Cox grew at this time.

5 And other than that you don't find a major, major
6 spring other than what's located right along the -- this is
7 between sections 22 and 34 you'll see a spring discharge
8 heading to the north.

9 Now --
10 HEARING OFFICER JOSEPH-TAYLOR: I think you want
11 to say 27.

12 THE WITNESS: Is it 27?

13 THE STATE ENGINEER: Um-hum.

14 HEARING OFFICER JOSEPH-TAYLOR: And 34.

15 THE WITNESS: Yes, I'm sorry. Thank you for the
16 correction. Between 27 and 34.

17 What you'll -- what's dependent on this -- this
18 information is the time of the year that the survey is made.
19 On 23 north, 54 east, the survey was done in August. And this
20 time frame to the north the survey was done in October.

21 So it's pretty hard to identify features that
22 existed at the time based upon the climactic conditions that
23 may exist out there.

24 So, I have no doubt that there's some points of
25 the year or times of the year where you're getting discharge

1 from the spring areas where you normally won't get it towards
2 the -- any part of the year.

3 In other words, the discharge is being consumed
4 during the time when the plants are actually consuming water.
5 In the balance of the year when they're dormant you won't see
6 that as much but you should see some more runoff.

7 And the other feature which I don't think -- I
8 think I pointed out is this -- the edge of this meadow, the
9 edge of the meadow, there's a ditch that runs along the edge
10 of the meadow that goes into section 34. And that basically
11 is water discharged from the Taft Spring complex or the
12 Thompson Spring complex. This ditch that comes out which he
13 identifies as a creek flows to the northwest --

14 HEARING OFFICER JOSEPH-TAYLOR: Northeast?

15 THE WITNESS: -- across the -- northeast. Thank
16 you. Across the -- it has a northeast trend, flows due north
17 on the southeast portion of section 34, goes -- flows up north
18 on the northeast portion of section 34 and continues on to the
19 southeast corner of 27 and then heads off in a northwesterly
20 direction with an arrow of discharge.

21 So from that standpoint it does not show that
22 this is being a creek necessarily, it shows it as being
23 derived from a ditch that exists that goes from the upper Cox
24 ditch.

25 Moving on to slide number 60, this is what I told

1 you about here. This again is taking the GLO plot and pulling
2 up the -- blowing it up that shows the boundary of what's held
3 by Mr. Venturacci. And this shows the evidence of culture
4 that we overlaid by our proof map of what we found by the
5 aerial photographs and other evidence of where the property --
6 where the water was being used beneficially.

7 In section 22 in the northeast portion of that
8 section you'll see a spring discharge that flows to the
9 southwest. And at that point there's a dashed line coming
10 from the right hand of the photo going north and that's a road
11 that existed there at the time.

12 Oh, I might point out one other thing. This --
13 this squiggly line coming along the bottom portion of section
14 22 and flowing to the west in section 21 is the canyon
15 discharge in the channel that existed at the time of the
16 survey.

17 So what we have here is we have observed features
18 on the plats. We -- flow channels derive from spring flows
19 shown on survey notes and shown on the plats.

20 We have Diamond Springs which in all historical
21 reference to Diamond Springs is in the area of the Cox Ranch.
22 And we also have later references to being on the Taft Ranch.
23 So what we found is the modern documents they referred to
24 Diamond Springs as being on the Thompson property, Taft Ranch
25 and on the earlier references we find Diamond Springs on the

1 Cox Ranch. And that's further validated later for example on
2 Harrill's memo to file from 1982.

3 So we have locations of ditches and geographical
4 references. And again, this is one of the historical
5 references we need to refer to. Some of these names that were
6 on here I looked up their original information. This is more
7 or less a summary of what they did. And I did some research
8 as to the other information, but I felt that the survey or
9 this reference would be substantial enough.

10 With regard to 24 north, 54 east I more or less
11 summarized what was there. It doesn't go into great detail.
12 I think the time of year had some bearing on it and perhaps
13 the total limit extent of the water right hadn't been
14 discovered yet.

15 So I'm on page 63, which is the survey notes.
16 They're very short, I'm not going to spend a lot of time with
17 those, I'm going to go through those. You can read them
18 probably at your leisure, it's been offered.

19 So I'm going to switch quickly to slide number
20 65, which is the summary. And this is the describe --
21 transcribed general description. These are part of this
22 township as high rough mountains to the east with little
23 timber and no mines open. The western part is level and
24 covered with sagebrush and grass with considerable land also
25 for cultivation with numerous springs and small creeks.

1 Slide number 66 is the patent information. And
2 what I have on this map is -- it's a little hard to see, but
3 in purple I'll call it is the boundary of the 1912 claim of
4 vested right. And what I'm doing is I'm starting just north
5 of Taft Springs heading through the 40-acre subdivided portion
6 on the east portion. But anyhow, self-descriptive. The
7 boundary of the 1912 survey is shown on here. And if you
8 notice in the middle of it there's a green area that was owned
9 basically by Jacobson; in other words, he filed for the patent
10 on it, later received it in 1941 I think ultimately.

11 And you'll see other properties surrounding this
12 area. You'll see where the springs and ditching went through
13 that. This other property was acquired ultimately by -- not
14 necessarily by Toft but probably by Jacobson and then
15 ultimately by Thompson.

16 And in there I provided to the State the patents.
17 We have several patents that are provided within here that
18 basically go through what was patented. Generally to get
19 these patents you had to show water use associated with it or
20 at least ownership of the right to divert the water.

21 Again, I do the same thing for the Cox Ranch. We
22 find that there was -- William Cox that originally patented
23 the areas shown in blue, dark blue, which would be in section
24 34, would probably be the -- it appears to be the west half of
25 the northwest -- the east half of the northwest corner.

1 Then we have the portions by George Cox coming up
2 here that were patented at various times, 1907, 1908 and 1903,
3 I believe, 1901. And again, I've included the patents
4 associated with that.

5 Then Willow Field I do the same thing where again
6 we have the Cox family acquiring those ranches over different
7 periods of time. I provided the backup to those patents.
8 Primarily the water was beneficially used by parties that
9 were -- that had possessory interest and then continued to use
10 by the people that come up with patents. And that's generally
11 how it works.

12 This is a picture of the telegraph station, the
13 Cox house that was provided. The documentation I had that
14 this was a picture taken a long time ago. The only issue I
15 had with that is basically taken in the 1850s what was
16 described, but based upon the movement of the people in there,
17 there's no way that that could have been taken that far back.
18 Generally people didn't move much in these photos. So to me
19 it looks like it was taken at the turn of the century.

20 Then we have the tax records. This was a lot of
21 fun trying to go through. Basically this tax roll that you'll
22 see in here was not every tax record that exists within Eureka
23 County. Basically what happened was is that when
24 Mr. Venturacci went up there to pull the tax records per my
25 instructions, it took about 45 minutes to go through each page

1 to get the information. And at this point in time I wasn't
2 that concerned about pulling tax records but only a
3 representation of a sequence in time from 1887 forward about
4 every ten years. And that's what I asked him to pull.

5 So there are a lot more tax records that I didn't
6 provide into evidence, but basically it was arbitrarily how we
7 picked the time and what tax records I needed. So again,
8 these are snapshots.

9 So in 1887 it shows that George Taft had filed
10 for taxes and we had another gentleman by the name of Millett
11 that was also assessed based upon possessory interest.

12 Now, rather than strain everybody's eyes I'm
13 going to go to the next exhibit which is transcribed into
14 that. That is nonetheless easier to read.

15 So what I have is we have the same information
16 that's on the cursive written part of this, the tax records.
17 And we did the best we could to try and go through and
18 transcribe what was there.

19 I struggled a little while on trying to read what
20 possessory and I had about six different machinations for that
21 and I finally discovered it was possessory interest. So what
22 we have is the tax base for George W. Taft within these
23 certain portions.

24 Of interest here is he had personal property,
25 furniture with dollars added to it, 15 milk cows, 20 stead

1 cattle, two wagons, mowers, rakes, possessory interest and to
2 attract farming land situated on the east side of Diamond
3 Valley at Diamond Springs in Eureka County, State of Nevada
4 known as the Taft Ranch is described as follows. To unit
5 being the described property below.

6 So we go into all these areas and we have an
7 accumulation of acreage which is a possessory claimed
8 interest. And you go all the way through all these numbers
9 and you keep going down and you'll find Henry Millett on
10 there, which appears to have the same possessory interest and
11 it has a lot of the same claim to the property.

12 The only difference is is you'll find that if you
13 add up the numbers and look at the overlaying land that you
14 wind up with enough property of about 1120 acres that they had
15 possessory interest in.

16 What's interesting about this is George Taft paid
17 the taxes for Henry Millett. Then this period of time --
18 BY MR. KOLVET:

19 Q. Just so the record's clear, the first transcribed
20 tax records were for what year?

21 A. This is for 1887. Now, as you'll see a lot of
22 other names on the written tax records in Eureka County. And
23 when I go to the transcribed descriptions I left out the
24 parties that don't have any interest within 23 north, 54 east.

25 Then we have Nels Toft and this was in the taxes

1 that were probably assessed in 2000 -- I'm sorry, 1911. It
2 shows the taxes paid in November 29th, 1912. Previous column
3 is paid May 24th, 1913. So I have various assessments that
4 were provided within this.

5 So again we go through the personal property what
6 was out there. We have parcel improvements. We have fee
7 simple and, you know, to the property associated that's
8 described within this right-hand column which is a number of
9 acres of real estate.

10 And you go down to WF Cox. You have the same fee
11 simple and divide the land and the fee assessment associated
12 with that. And it continues on so forth where you came up.
13 You determine that they were actually working on improving
14 that land. And most of these, especially with the Cox
15 brothers, most of that land was held as a patent at that point
16 in time.

17 And by that time Nels Toft had probably received
18 at least the Dewey patent, some of the patents they didn't
19 receive until 1912 and later on that property, some in 1908.
20 So it would no longer be a possessory interest.

21 Jacobson and Nels Toft go through the same
22 iterations. But the main thing here is is if you look at
23 George Cox you'll find that he had 40 acres of grazing and
24 200 acres of grazing. And this would have be in the
25 property -- this would have been what I refer to as the Cox

1 Ranch.

2 Then you go into WF Cox, which is the Willow
3 Ranch and you'll find that he had 40 acres of hay and he had
4 280 acres of grazing, plus all the other cattle and all the
5 other interests.

6 And you keep going through the tax records. And
7 I don't want to belabor a lot this, but you'll find that the
8 descriptions keep going along, we go from farming to grazing
9 and definition of pasture. And you'll look at wild hay as
10 being part of this, for example.

11 Then by this period of time, which would have
12 been 1955, '56, this is when Thompson had the property. And
13 it goes in through the property that they were -- they had
14 meadow grazing and additional grazing. Then they have
15 descriptions associated with the amount of acreage within
16 their holdings.

17 The amount of cattle that they had on the
18 property, number of sheep and equipment they had to work on
19 the property. And again, this talks about at this point the
20 Cox Ranches and the -- we have the Cox, the Willow, the Rock
21 and the Mau Ranches were all consolidated I believe at this
22 point in time into one ownership.

23 So I've gone through that pretty fast. On slide
24 number 72 we talk about Henry Millett taxes paid by Nels Toft,
25 Nels Toft was overlapping the land interest in this area. The

1 total was about 1120 acres if you plot out the acreages.
2 Cox Ranch we had 240 acres grazing. Willow Ranch
3 we had 40 acres of hay, 280 acres of grazing. And it shows
4 each the interest associated with each. I've attached to this
5 exhibits for the Cox patent map which we already looked at and
6 also the Willow patent map. And if you compare those
7 descriptions I provided it's on the same properties in which
8 they had patents.

9 So, this I just left open based upon the
10 discussion I already provided for the various years on what
11 the comparisons were from historic to present. And it
12 basically shows interest associated with farming, interest
13 associated with cultivation that was occurring and how the
14 transition occurred through the process.

15 I already discussed slide 75. Now, impact of
16 pumping groundwater discharge. I was going to spend a lot of
17 time on this, but I could get bogged down in this forever.

18 My review of what's out there, we have a wealth
19 of information that's been provided through the USGS. The
20 State Engineer in past issues has already recognized that
21 there's issues occurring due to over-pumping in the valley.

22 We're asserting on behalf of the client that his
23 senior rights are being impacted by the pumping within the
24 basin. And I think that's been well discussed by Dwight Smith
25 and others as far as what's occurring within this basin.

1 So I'm going to skip through some of this stuff
2 because most of it's been discussed.

3 The issue that I had on all of this, if you look
4 at bulletin 35, for example, or look at recon report number 6,
5 there's various consumptive use measurements used in the
6 basin. If you look at bulletin 35 we have an ET of some areas
7 within non-meadow area where it's been estimated this is what
8 the ET is and there's harvest hay occurring in there or haying
9 occurring in there, different uses within there. And then you
10 have the meadow area described as a thousand acres which
11 assigned three-acre-feet per acre.

12 But looking at bulletin 35 it also gave a
13 consumptive use of 1.9, say an ET rate for alfalfa at
14 1.9-acre-feet per acre.

15 So, from the issue that I have getting into this,
16 the ET rates or the pumping diversion rates or whatever it is,
17 I don't think you can quantify by duty necessarily. I think
18 what you have to do is quantify the area of discharge by the
19 number of acres that existed out there. Like I told you, it's
20 very difficult to identify every seep, every spring and
21 everything that existed within that basin and use that to
22 correlate spring discharge to consumption within those
23 properties themselves.

24 So, for example, when I use this from Diamond
25 Valley and there's been a lot of discussion on this, we

1 probably were in the range of grass hay, for example, or low
 2 managed pasture grass and some alfalfa. So there's different
 3 duties ascribed to that part of it.
 4 Q. When you say "this," reference the exhibit number
 5 you're referring to, please, and the document?
 6 A. Yeah, I'm referring to Exhibit 261, which is
 7 the -- what we submitted from the ET website and that's
 8 basically the consumptive use associated with crop. The type
 9 of crop.
 10 And there's been a lot of discussion associated
 11 with that and I agree with it. The problem we have going into
 12 this if you look at Harrill's report he said there was
 13 basically 6500 acres of discharge in the northern part of the
 14 basin. If you take what we're requesting, what is on Shipley
 15 and you take all the other minor springs out there, it's
 16 pretty close to 6500 acres. Okay?
 17 So from that standpoint, we're going from a
 18 spring use that says our ET was X and now we're switching over
 19 to an underground diversion to replace those lost senior water
 20 rights. Those water rights that were impacted by June end
 21 users.
 22 So basically what I had to do is my evidence is
 23 based upon the discharge areas because number one, I don't
 24 have data in my mind that correlates anything on the Taft
 25 Springs. I have snapshots in time over long period of record

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1 that doesn't provide any insight to the total discharge within
 2 that area.
 3 So, I've seen a lot of reference to minor and
 4 major springs, but there's different -- USGS we're measuring
 5 those springs out there for different purposes than what we
 6 need here today.
 7 So, the '65 measurements that were done were a
 8 good idea of what existed from the discharge of the springs at
 9 that point in time.
 10 Same with the other periods of time that exist.
 11 I believe there's a -- a base flow of carbonate discharge
 12 within those springs. And I believe there's additional
 13 discharge based upon the alluvium discharge within that area.
 14 Mainly coming from the south part of the basin.
 15 What we have, and this is according to Harrill,
 16 is we have 12,000-acre-feet of recharge occurring in the south
 17 half of the basin. We have 1400-acre-feet of natural
 18 discharge in the southern part of the basin. We have
 19 12,000-acre-feet of recharge occurring in the north part of
 20 the basin. And hopefully I said 9,000-acre-feet, but that's
 21 what I meant to say if I didn't. And then we have an
 22 accountability that was the difference between the recon
 23 report number 6 and bulletin 35.
 24 When Eakin did his analysis he said well, I've
 25 got based upon the Maxey-Eakin method I have a discharge of

1 16,000-acre-feet, but I have a discharge of 23,000-acre-feet
 2 so there's an imbalance and it's got to be coming from
 3 somewhere. Well, it's got to be coming from Garden Valley.
 4 So that's got to be the makeup of where that air flow
 5 connection occurs.
 6 Now, what we have is we have all of the
 7 discharge, the predominant amount of recharge that is
 8 occurring is in the southern part of the valley. That goes to
 9 the northern part of the valley. So -- and basically if you
 10 look at the reports there was a segregation from the north
 11 half to the south half when they were going through the
 12 analysis with regard to these various reports.
 13 So, what we have if you buy into this
 14 9,000-acre-feet of inner flow from Garden Valley we have
 15 18,000-acre-feet of inner flow in the north and we have
 16 12,000-acre-feet of inner flow in the north that comes from
 17 the south.
 18 So from that standpoint at this point in time all
 19 of that recharge is being redirected to the southern part of
 20 the valley based upon the declines in the groundwater
 21 characteristics out there based upon over-pumping of that
 22 basin. So we reverse the gradient.
 23 Now, from our standpoint we've actually reduced
 24 the amount of acreage that we're asking for our permit. There
 25 was a lot more discharge that was occurring in other part of

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1 the basin. In the back of bulletin 35 we have a report that
 2 was based upon the data that existed in '75 and shows these
 3 green areas that are out there.
 4 Those green areas were already affected by
 5 pumping that was testified by Terry Katzer within that area.
 6 So again, we have a snapshot in time. We have plats of the
 7 groundwater contours that occurred in '47.
 8 Now, the question is based upon the various
 9 reports that we have within that bulletin 35 it shows an area
 10 that was plotted by Harrill that goes into an area on the east
 11 side of the basin that shows an area of high storativity and
 12 an area of high transmissivity that pretty well follows the
 13 fault line that I've indicated by the Camilleri report that I
 14 put in here to try and get some idea of what's occurring from
 15 a water resources standpoint of the basin.
 16 So what bulletin 35 said was we have higher
 17 transmissivity going on the horizontal than we do on the
 18 vertical, which is pretty typical. So what that means is you
 19 start pumping in the southern part of the valley, in order to
 20 retrieve that water it's going in a large amount of areas and
 21 it's spreading out horizontally.
 22 So what I basically did was say okay, and getting
 23 back to the topic is what we have is we have a certain amount
 24 of the spring discharge correlated to discharge from the
 25 southern part of the basin. We have a carbonate flow from the

1 deep circulating source that is a component of the discharge
2 to the Taft Springs and to that spring line along the 5800
3 contour. But if you look at the water chemistry not only do
4 we have a difference in temperature from normal gradient water
5 associated with carbonate, we also have a mixing of the
6 chemistry which indicates that there's an alluvium source up
7 close to the north that is being part of the spring complex
8 area.

9 So from that standpoint we're susceptible to the
10 whims of discharge that would affect that spring.

11 HEARING OFFICER JOSEPH-TAYLOR: The what?

12 THE WITNESS: Whims of discharge.

13 HEARING OFFICER JOSEPH-TAYLOR: Whims.

14 THE WITNESS: In other words, precipitation falls
15 on the mountains that occurs and discharges within this area.
16 Okay?

17 So the first thing I did is I'm a true believer
18 in saying let's look at what's occurring within the basin. So
19 what I wanted to do was look at what's happened with prior
20 precipitation and see how that impacts our spring discharge
21 area.

22 So I went through and plotted from -- this is
23 Town of Eureka, plotted the data that they had from 1888 to
24 2012, those gaps that you see within the chart which is on
25 page 78, and I do not have an exhibit number for this

1 unfortunately, but you'll see that there's gaps within the
2 purple areas along this graph.

3 This is where I didn't have the complete data set
4 or where there was missing data and I did not try to guess any
5 of this. But the wiggly line going from the left side of the
6 slide to the right side of the slide is a trend line. It's
7 nothing more than indicating the difference in precipitation
8 occurring over this period of time and it doesn't really show
9 you much other than this is the trend of what was occurring at
10 the time.

11 So from that slide from precipitation I added --
12 let's add our spring flow data. So I come in here, I have a
13 report that indicates spring flow I think in 1912 so I added
14 that. And then the blue line, the lighter blue line on the
15 bottom shows the relative discharges. So I'm going okay,
16 well, there is a lead in lag time associated with
17 precipitation with the spring discharges that did occur.

18 So I kind of get somewhat a correlation or a
19 trend that is occurring that's similar to the trend line for
20 precipitation.

21 Then I add pumping. Now, this -- the red area is
22 based upon taking the agricultural area times the
23 four-acre-feet per acre and coming up with a simplistic
24 diagram that shows here's what our pumping levels are based
25 upon that information.

1 So what I'm seeing from this standpoint, I come
2 in here and I have areas that we've had high yearly flows
3 based upon abnormal discharges. So I have a discharge or a
4 precipitation event that occurs in about '83, '84. And of
5 course I see the trend line coming up because it skews
6 everything to the upper part of the graph. So then I see a
7 response coming in the springs where the spring discharge
8 comes up and then you see the pumping level that's very high.
9 So we still continue up with some of this spring discharge
10 coming in from Thompson Springs to Taft Springs based upon the
11 point when that's occurring.

12 So what I have is I have the amount of acreage
13 that's being pumped drop down in the latter years and then I
14 see precipitation is still occurring, but as the precipitation
15 starts coming up within the right-hand side of the graph, this
16 spring continues to decline, which shows a correlation in my
17 mind to the effects of pumping on the springs.

18 In other words, we've continued to decline until
19 about 1991, '92 and basically the ending results associated
20 with spring discharge disappear.

21 So, what I've got to try to correlate and get
22 away from this, you know, 3.1 net irrigation or whatever the
23 factor used for the -- the amount of water pumped out of the
24 groundwater basin, I plotted the green line that shows that
25 even though our precipitation is going up, which is on the

1 right-hand side of the graph and it's kind of hidden within
2 those red lines, but if you look very closely you can find it,
3 we see that the spring line for the discharge within Thompson
4 Springs still disappears. So in my mind this correlates the
5 spring discharge disappearing even in relationship to
6 precipitation increasing and the predominant feature on this
7 is the amount of irrigation, the amount of property and
8 cultivation is increasing and basically we've exceeded the
9 limit of what's available in that basin, we're mining at that
10 point in time. And what we have left is nothing for the
11 senior water right holder.

12 So, one of the issues that I looked at is, you
13 know, I've attended seminars, I've attended classes on global
14 warming and I've looked at all these issues associated with
15 it. But from -- that's on the macro scale, I mean, long term
16 from what I've seen on the classes I've been to is that in the
17 future and this is forecasted by models, Eureka -- or Diamond
18 Valley is supposed to get warmer and wetter. So maybe that
19 will solve everything.

20 But from the initial scale there's been some talk
21 about the -- the precipitation affecting or there being some
22 sort of traumatic change in weather within the basin.

23 So even with increased precipitation and all this
24 being done, the springs have continued to decline. And from
25 my perspective, from a water rights perspective when you have

1 a senior water right holder, it doesn't matter if the weather
 2 declines or not. What matters is that the pumping has to
 3 cease that's affecting that discharge. We still have a senior
 4 water right holder. We are the senior water right holder.
 5 What happens is is that maybe if we have a
 6 dramatic climate change the only thing that's left to pump is
 7 Shipley and Taft Springs. But from a water rights standpoint
 8 and from the perspective of the senior water right holder
 9 that's what has to be satisfied first from a priority
 10 standpoint regardless of what's occurred on this other part of
 11 the basin. Is it fair? No. But that's what the water law
 12 calls for.
 13 Now, what we did is we looked at from a water
 14 resources standpoint the discharge line and the place of use
 15 of the Thompson holdings and -- or of the Venturacci holdings
 16 within this area. This dark line in the middle is based upon
 17 a lack of having a quality printer. So this green area shows
 18 a picture from 2006 of the discharge that was occurring within
 19 that area. By 2006 I'm pretty sure that was mostly
 20 phreatophytic plants that was occurring.
 21 I'll keep going down. And this a blowup on it.
 22 What I did was isolate what was shown in the Camilleri report
 23 of the Thoseberg (ph.) Fault that's been identified. It was a
 24 clipping that's within that area. Basically everything to the
 25 right-hand side of that purple boundary has been identified as

1 it's shown as higher transmissivities and higher storativity
 2 constants. And this is the plate I'm talking about, which
 3 came out of bulletin 35.
 4 So what's interesting about this is you see that
 5 the corresponding leakage within this area that basically says
 6 well, we have an area that may show a direct influence to
 7 those springs based upon pumping within the southern part of
 8 the valley.
 9 HEARING OFFICER JOSEPH-TAYLOR: Mr. Thiel, how do
 10 you reconcile that with your previous statement that the
 11 pumping just south of Thompson you think has more influence?
 12 THE WITNESS: Well, what you have is you have
 13 this area within here (indicating) that you have a range of
 14 storativity constants in this graphic that are probably in
 15 this area. So you're coming from an area of free charge, this
 16 is intercepting flow going to the north.
 17 I would think that from this standpoint that the
 18 closer the distance between the discharge and these areas that
 19 are shown in the upper center part of the photograph or the
 20 diagram, we're probably seeing the drawdowns related to
 21 discharge in this area. And I'm pointing to again the lighter
 22 shaded gray area than the effects that were occurring here
 23 because it would take longer for this to reach that portion.
 24 Okay.
 25 Then we've all seen this a few times, I've used

1 carbonate rock.
 2 In fact, Harrill in his report and even with
 3 Eakin in his report, normally you get the valley floor, the
 4 hydrologist that does that work will not include the lower
 5 elevations for recharge. They included this because of the
 6 carbonate exposures that occur on the valley floor in that
 7 area. So that was included as a recharge component.
 8 So again, what we look at is the generalized
 9 picture of the pumping within the southern part of the basin
 10 and the green area which is the area located at Thompson
 11 Springs.
 12 What you look at within that area, probably the
 13 most dramatic impact to those springs would have been of
 14 course the fields that are being pumped directly south of the
 15 ranch within that area and what the concentration development
 16 with the drawdowns occurring and the complex of center pivots
 17 towards the southern part, that exacerbated the problem. But
 18 I would think that the normal area of influence would be those
 19 portions closest to the Thompson Springs.
 20 Again, I put faulting on there just for whatever
 21 it's worth. If you notice that this happens to follow under
 22 the bulletin 35. We have this boundary which they identified
 23 as the Blokesberg Fault, they being Camarilli. And they have
 24 also the Basin Range Fault that more or less parallels this.
 25 This area just of the -- west of that is where

1 it a few times and it basically shows the effect of some of
 2 the pumping that's going on, I think this came from the 2006
 3 report.
 4 HEARING OFFICER JOSEPH-TAYLOR: All you said is
 5 "this," we don't know what you're identifying.
 6 THE WITNESS: What I'm identifying is an exhibit
 7 which is on page 90 of the slide and it's the joint exhibit
 8 under 292.
 9 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 10 THE WITNESS: Okay. And I'm going through this
 11 rapidly because I've got other stuff I want to talk about.
 12 I'll save some time for everybody else. This is the same
 13 graphic that I blew up with the correlation between the area
 14 towards the southern part of the basin to show what I believe
 15 has an impact directly impeding the flow out of Thompson
 16 Spring and I'm referring to slide number 91.
 17 HEARING OFFICER JOSEPH-TAYLOR: And let's find a
 18 breaking point here pretty quick and give everybody a chance
 19 to stretch their legs, including my court reporter, she's been
 20 going for an hour and 20 minutes.
 21 THE WITNESS: Okay. I'm fine.
 22 HEARING OFFICER JOSEPH-TAYLOR: No, find a good
 23 breaking point for you.
 24 THE WITNESS: Okay. Let me just speed through
 25 this because this shows nothing more on page 92 than the same

1 exhibit out of bulletin 35 that is referenced in this diagram.
 2 And again, the layer of exhibits. So what I have
 3 is what I talked to you about previously which is plate 2 on
 4 bulletin 35 which is the groundwater contour that existed when
 5 Harrill looked at this.
 6 BY MR. KOLVET:
 7 Q. And your reference is to slide 94?
 8 A. Yes, it is. Thank you. And this is referring to
 9 bulletin 35, plate 2, Exhibit Number 277. And it shows the
 10 groundwater contours within the area and there is a discharge
 11 as it existed in '65 after pumping had already potentially had
 12 impact of those springs. And as Mr. Katzer said it did have
 13 an impact to those springs.
 14 This is the same exhibit that I provided before
 15 which I believe is Exhibit Number 292 which would have been a
 16 depiction or a diagram of what existed in 1947. This comes
 17 out of the scientific investigation report of 2006-5249.
 18 That's a generalized flow path.
 19 The issue I've always had with this is towards
 20 the center part of the basin you see two dots out there and I
 21 can't read them of course from here. And those two points are
 22 very shallow wells with high TDS and high conductivity which
 23 is an indication of playa flows coming out of there. And I
 24 don't necessarily concur with the gradient that's been shown
 25 there after revealing Dwight Smith's gradient profile I more

1 Q. We begin on slide 97?
 2 A. Yes.
 3 Q. What is ground truthing to begin with?
 4 A. Well, ground truthing is site verification. And
 5 what that means is or implies you can look at all the aerial
 6 photographs you want and all the proofs you want and do all
 7 the paperwork necessary, but unless you get in the field and
 8 actually see the conditions and try to ascertain whether what
 9 you have reviewed as factual, I think it's required to go out
 10 and do the site visits to determine ultimately if what you've
 11 perceived is correct or what you find in the field.
 12 Q. When did you do the ground truthing on this case?
 13 A. I had two opportunities. I did one in January of
 14 2013, I did one in May of 2013. I also visited the site in
 15 '81 or '82, I can't remember what time frame, but it was
 16 during that period that I looked at the site to verify what I
 17 found at that entry.
 18 Q. What was the purpose of your '81, '82 visit?
 19 A. That was based upon the instructions given to me
 20 from Pete Morros to go investigate that site and obtain
 21 pumping records, anything I could in that area with regard to
 22 verifying what was on the satellite imagery. And I might
 23 point out that Terry Katzer was the person I was dealing with
 24 at USGS at the time in order to calibrate water use with what
 25 I'm visually referencing on the imagery.

1 or less concur with that from the standpoint I think that's
 2 more accurate than what we're shown here post pumping.
 3 Q. And again, that reference that you're just
 4 talking about is slide 95 of your slide?
 5 A. Slide 95, Exhibit 292. This comes from the --
 6 let's see, this comes from the scientific report number
 7 2006-5249. And this would be Exhibit 291, which shows the
 8 post pumping condition which shows the -- illustrates the
 9 reverse gradient.
 10 Again, this is under the philosophy that there's
 11 two sub-basins in the area in the north and the south. If
 12 that was truly the case I don't think our springs would have
 13 declined to the extent they have, but from that standpoint it
 14 shows reverse in gradient.
 15 Q. And that would be slide 96?
 16 A. Thank you. Slide 96. And I think this is a good
 17 breaking point.
 18 HEARING OFFICER JOSEPH-TAYLOR: Great. Let's be
 19 off the record for ten minutes.
 20 (Recess taken.)
 21 HEARING OFFICER JOSEPH-TAYLOR: Continue, please.
 22 BY MR. KOLVET:
 23 Q. Mr. Thiel, at the break we were just about to get
 24 into your ground truthing slide presentation; is that correct?
 25 A. That's correct.

1 Q. With that background why don't you proceed
 2 through your slide presentation?
 3 A. I will. I'm referring to on slide 97,
 4 Exhibit 236, which was taken January of 2013.
 5 Q. And Exhibit 236 contains several photographs; is
 6 that correct?
 7 A. Yes, it does.
 8 Q. Okay. Why don't you go through quickly the
 9 various photos in 236, please?
 10 A. I will. Unfortunately, there was snow out there
 11 so it was a little hard to see everything. The primary
 12 purpose of my site visit was to observe what was going on on
 13 the property, what type of shape the fields were in, if there
 14 were any, and to identify where the sources were, the old
 15 spring sources were.
 16 The major purpose of going out to the site was to
 17 identify section corners that I could use in the survey in
 18 preparation of the maps that I presented with regard to
 19 V-01115 and the subsequent applications that I filed with the
 20 office of the State Engineer for mitigation of water.
 21 Q. And the photos that are up on the slide, what are
 22 those?
 23 A. The photos were taken out during that period of
 24 time and what it references is a visual of the -- looking
 25 towards the southeast of what I refer to as the pony express

1 building. And in reality the only thing that's remnant of the
 2 pony express building is the north side of the building is
 3 what was original.
 4 Q. Okay. Where is that in relation to the property
 5 we're here about today?
 6 A. That is on the easterly edge of section 3,
 7 township 23 north, 20 -- or 54 east.
 8 Q. Is that on the Thompson Ranch, Cox Ranch, Willow
 9 Ranch?
 10 A. Thompson Ranch.
 11 Q. Thank you. The bottom photo on that page?
 12 A. Bottom photo is where the property owner had dug
 13 out the spring. And with reference to that I was able to get
 14 some information of a strata that existed around that open
 15 pit. And I was kind of surprised to see that area under the
 16 tarp. There is a submersible pump and heading off to the left
 17 side of the spring -- or the tarp is a poly line that runs to
 18 the house for use in the house.
 19 Q. That would be page 1 of Exhibit 236; is that
 20 correct?
 21 A. That's correct.
 22 Q. Go to page 2, what are we shown here?
 23 A. Page 2 are the survey monuments that I use as the
 24 basis for the survey. And that was taken up on the hillside
 25 to the east, which would have been 23 north, 55 east, I

1 a lot of rabbit brush and greasewood.
 2 Q. Page 5?
 3 A. That appears to be a duplicate on the next photo.
 4 Page 5 is transitioning more towards the west. The idea was
 5 to take the pictures from the north towards the south to get
 6 an overview of what's occurring out in that area.
 7 Q. Can -- page 6 is a continuance of that overview?
 8 A. It is. It keeps on going down.
 9 Q. Okay. Page 7, what is that?
 10 A. Page 7 is the monument that's out there
 11 memorializing the pony express station and describing the
 12 Diamond Springs station. And the memorial's from 1860 to
 13 1861. Obviously it was built later, but it was memorialized
 14 in that period of time.
 15 Q. And where is this located?
 16 A. This is located right across the house in which
 17 Milt Thompson lives in, it's across the road on the east side
 18 of the county road that goes parallel towards the north.
 19 Q. Next two pictures on page 8?
 20 A. This is my idea to get an idea of the geology
 21 surrounding the area and taking some pictures of looking
 22 towards the east.
 23 Q. Page 9?
 24 A. Page 9. It was intimated to me that the
 25 buildings behind the truck looking further into the picture

1 believe.
 2 Q. The next page, page 3?
 3 A. Page 3. This is a picture taken on the hillside.
 4 It was necessary to get up on the hill a little bit with a
 5 look towards the north and look at what's existing on that
 6 ground as it exists today or existed in that time.
 7 Q. There are some trees approximately in the middle
 8 of those two photographers, where are those located?
 9 A. Those are located at the ranch site itself around
 10 the buildings that were shown on the previous picture.
 11 Q. And that again would be the Thompson Ranch?
 12 A. Yes.
 13 Q. Next page?
 14 A. Next page looks like a duplicate of the first
 15 one.
 16 Q. Okay. Just another view of the overall ranch
 17 area?
 18 A. It was.
 19 Q. And the next one I'm assuming is another
 20 overview?
 21 A. Yes. What I tried to do within the third page I
 22 believe it is -- fourth page of the exhibit is my obvious
 23 intent was to link these pictures to get an overview of the
 24 ranch. Based upon what I've seen on the site you've got
 25 sagebrush in the foreground, off towards the northwest you see

1 was the remnant of what's left of the telegraph station. You
 2 could see the old telegraph poles that was in the foreground.
 3 Q. Would that have been on the Cox portion of the
 4 property?
 5 A. Actually, it was -- I think the building was
 6 moved from the Cox to here, this was on the northerly boundary
 7 of the Thompson Ranch.
 8 Q. What's the lower picture on there?
 9 A. The lower picture with the truck?
 10 Q. No, page 9?
 11 A. Page 9.
 12 Q. Page 9?
 13 A. That is a perforated well casing that was placed
 14 in the spring trying -- attempting to get water out of one of
 15 the spring discharges.
 16 Q. Where in relation to the main spring would that
 17 pipe have been put?
 18 A. This would be north of the main spring
 19 approximately 5 or 600 feet north.
 20 Q. Any evidence that it flowed water?
 21 A. None that I could find. I didn't see any water
 22 in the casing.
 23 Q. Page 10?
 24 A. Page 10. In the top photo looking at the
 25 right-hand side of the picture you can see that same casing,

1 which is in one of the spring discharge areas. And this would
 2 be the most northerly spring on the Thompson Ranch.
 3 The next photo is looking towards the southwest
 4 more which indicates the berm or the dike that was used as the
 5 impoundment structure for the pond that existed on the
 6 discharge of those springs.
 7 HEARING OFFICER JOSEPH-TAYLOR: Can you point
 8 that out with your laser for me, please?
 9 THE WITNESS: I sure will. This area in here
 10 which I'm pointing to there's a cottonwood tree standing in
 11 the center of the photo, off to the right of it you see a
 12 water trough. And just to the right of the water trough
 13 you'll see like a roadway going around on the right-hand side
 14 of the picture in the foreground and continuing off towards
 15 the southwest and going to the right-hand side of the tree.
 16 And the left-hand side of the tree where impoundment
 17 structures associated with the springs that were there. And
 18 you'll see that in future photos.
 19 Q. And the last picture in the series, page 11?
 20 A. Page 11, that shows a picture of the remnant of
 21 the -- what I refer to as the telegraph shack.
 22 Q. And are those the photos then that were taken
 23 during the January site visit?
 24 A. Yes.
 25 MR. TAGGART: And that was 236. I would offer

1 that was pretty well how I observed that area during my visit
 2 there in '81, '82, I don't remember exactly the date. But it
 3 shows the Thompson Ranch in the center part of the screen and
 4 I'll refer to on the screen itself.
 5 Q. Okay. Before we go past that let's just get
 6 clear what we're referring to, you're referring to slide
 7 numbers, those are parts of Exhibit 237, so this would be
 8 slide 3 of 237; is that right?
 9 A. That's correct. What I've depicted in the
 10 January photo was the branch headquarters, if you will, on the
 11 Thompson Ranch. Some of the trees that exist out in that area
 12 where shown in some of the photos I showed previously.
 13 And this is in the center of the photo looking
 14 west and you can see the spring discharge area and grass
 15 growing within that area. Everything surrounding I think
 16 above to the area between let's say the large discharge area
 17 on the right-hand -- right center of the photo to the left
 18 side of the photo, that was another area that appeared that he
 19 was trying to get into cultivation.
 20 THE STATE ENGINEER: Mr. Thiel, do you know what
 21 time of year that picture was taken?
 22 THE WITNESS: I don't exactly know. I probably
 23 have it referenced in another photo probably on the -- what I
 24 submitted with the proof.
 25 THE STATE ENGINEER: Thank you.

1 236 at this point.
 2 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 3 the offer of Exhibit 236?
 4 MS. PETERSON: No objection.
 5 HEARING OFFICER JOSEPH-TAYLOR: Thank you. It
 6 will be admitted.
 7 (Exhibit 236 admitted into evidence.)
 8 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet, while
 9 you're doing that you want to offer 247 and 261?
 10 MR. KOLVET: At some point I'm going to offer all
 11 of these in the series.
 12 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 13 MR. KOLVET: So everything from 221 forward.
 14 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 15 BY MR. KOLVET:
 16 Q. Can I go to 237, please, that's part of your
 17 ground truthing photographs?
 18 A. Yes. The first slide is identifying this series
 19 as ground truthing conducted May 2013. Going to slide 2 of
 20 that series of 94. Again, I'm showing the hay wagon in the
 21 foreground, that was about the turn of the century with the
 22 bales of haystack on it. I've already identified that
 23 previously.
 24 Number 3 on the bottom right of that slide
 25 indicates an overview that was taken from about 1982. And

1 THE WITNESS: But if nothing else I'm pretty sure
 2 it's mentioned in Milton's report that I included as an
 3 exhibit.
 4 THE STATE ENGINEER: Thank you.
 5 BY MR. KOLVET:
 6 Q. Let's go to slide 4.
 7 A. Slide 4 was taken in 1982 and this appears to be
 8 early 1982 at this time based upon what I discussed with
 9 Milton Thompson. There was extensive work being done on the
 10 ranch trying to increase production by leveling the property.
 11 What you will see is the areas of impoundment of
 12 those various structures. The upper pond which is to the
 13 right of the center of this photo shows the impoundment
 14 basically where I was at. The tree that was in the foreground
 15 where I said there was a dike built around it, you can see
 16 that -- the dam structure within that area.
 17 The rest of it shows the -- to the left-hand side
 18 of the picture shows the pony express station down to the
 19 south there. And it shows the major spring discharge in the
 20 left center side of the photo. And then -- then there's
 21 another impoundment that goes further west and you'll see a
 22 ditch going towards the north or the right-hand side of the
 23 photo and a ditch going towards the south on the left-hand
 24 side of the photo. And you'll see a series of other ditches
 25 coming off of this area including there's a ditch that used to

1 head or heads off this direction which is just to the left
 2 side of the pony express station heading towards the top of
 3 the picture on the left-hand side.
 4 HEARING OFFICER JOSEPH-TAYLOR: Mr. Thiel, is
 5 that -- can you kind of outline how far the proposed place or
 6 the place of use under the vested claim goes?
 7 THE WITNESS: It's got -- it's going to be
 8 difficult. The -- if you look north of the pond on the right
 9 side of the picture there's a line that goes across from the
 10 right middle heading towards the west makes a curve. That
 11 area in there I think is a separation of the property.
 12 It just so happens that some of this area that
 13 was cultivated I believe was BLM land. And between the Cox
 14 Ranch and the Thompson Ranch. And one thing you might see
 15 over in the -- if you trace down to the line on the right side
 16 of the photo you'll see a small discharge area that is
 17 occurring from some other springs within that portion.
 18 HEARING OFFICER JOSEPH-TAYLOR: ^{What I'm trying}
 19 to get is is there sub -- are you claiming sub-irrigated
 20 meadow in these vested right claims?
 21 THE WITNESS: Not really, because the way the
 22 general hydrology works within there, I mean, even Harrill in
 23 his report said the major discharge along the 5800 line that's
 24 in that area is the source of water that's occurring on this
 25 ranch.

1 property for consumption. Otherwise, we would have a meadow
 2 and this ranch would have extended far into the playa and the
 3 playa would have been a lot wetter.
 4 HEARING OFFICER JOSEPH-TAYLOR: So in your
 5 amended claims you're not putting sub-irrigated meadow?
 6 THE WITNESS: No, in my mind I'm not.
 7 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 8 THE WITNESS: I would think during the 1879
 9 process that the water was being diverted from the springs and
 10 this land was being developed prior to that and over a long
 11 period of time based upon the methods that they had back then
 12 until they finally got it to the stage it was, you know, in
 13 the 1900s, 1940s, maybe even later.
 14 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 15 THE WITNESS: Okay.
 16 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 17 BY MR. KOLVET:
 18 Q. Okay. Let's go to the next slide unless there's
 19 more questions about this one.
 20 HEARING OFFICER JOSEPH-TAYLOR: No.
 21 THE WITNESS: Yes, slide 5 is a panoramic view I
 22 took of the ranch in May. And what this is is what I tried to
 23 do in January, it's a series of composite photos that I've
 24 taken individually. I used a piece of software to put them
 25 all together.

1 So what happens is you'll find some hardpan in
 2 certain areas out here. So you'll have discharge that is
 3 subbing and then daylighting further in the ranch. And I
 4 don't necessarily believe based upon what I know of that area
 5 that you'll find new springs popping up from other sources. I
 6 think it's all derived from this complex that we talked about
 7 previously that it daylights because it hits hardpan and comes
 8 to the surface in forms of other springs or seeps.
 9 HEARING OFFICER JOSEPH-TAYLOR: ^{I'm trying to get}
 10 to a bigger question and you're qualified as an expert in
 11 Nevada water rights. Are you familiar with the Blue Lakes
 12 case?
 13 THE WITNESS: I am somewhat.
 14 HEARING OFFICER JOSEPH-TAYLOR: ^{And that case}
 15 said prior to that case, correct me if I'm wrong, you have a
 16 physical diversion for a vested right in Nevada.
 17 THE WITNESS: Correct.
 18 HEARING OFFICER JOSEPH-TAYLOR: ^{So to me that}
 19 says a sub-irrigated meadow without physical diversion doesn't
 20 qualify for a water right; would you agree with that?
 21 THE WITNESS: I would agree with that except
 22 through my field investigation I saw this whole meadow
 23 crosshatch with ditches that weren't recent, that were
 24 ancient, in my opinion. So from that aspect if there was a
 25 discharge it was diverted and routed to other areas of the

1 So this is the ranch as it existed in May of
 2 2013.
 3 Q. And are we basically looking towards the same
 4 area generally it looks like as slide 4?
 5 A. We are.
 6 Q. Just from different elevation?
 7 A. Yeah, I mean, it's different elevation. So it's
 8 nice to get a perspective of the layout of the property.
 9 Q. Okay. Slide 6?
 10 A. Slide 6 was a Google Earth underlayment of this
 11 photo with the place of use of the water rights overlaying the
 12 Google Earth image.
 13 On that you'll see a number of pins that range
 14 from one to 21. And what I did is I took a lot of photos on
 15 this property, but this is this first section of photos. And
 16 from here I -- I list in the next photo the GPS coordinates,
 17 but it identifies certain features I found as I left the
 18 spring discharge area and went west and south and then
 19 eventually north on the property.
 20 Q. And slide 7 identifies those photos and where
 21 they're taken?
 22 A. It does. And it gives you some identification of
 23 what was -- what I found on the site and plus the GPS
 24 coordinates of those areas.
 25 Q. Slide 8?

1 A. Slide 8 are points 1 through 5 of the upper
 2 springs pond area. Slide number 1.
 3 Q. You're getting mixed up here. Slide number 1,
 4 are you referring to --
 5 A. Well, what I was getting to is you have slides 1
 6 through 5.
 7 HEARING OFFICER JOSEPH-TAYLOR: Photographs,
 8 you're mixing --
 9 THE WITNESS: I'm sorry, it's photographs 1
 10 through 5, which illustrate the next series of slides where
 11 they were taken and in relation to the plan view, I was
 12 looking at the top from an airplane down on the property
 13 itself.
 14 BY MR. KOLVET:
 15 Q. Go to 9.
 16 A. 9 is the northerly reservoir. Up in this area in
 17 my review, for example, on -- I believe it was bulletin 35 it
 18 shows a tractor or a pump being set in this pond area that was
 19 out on the discharge in one of the springs on the north side
 20 of the property. This is the remnants of the concrete
 21 structure that exists.
 22 And what these two photos show is the area of the
 23 pond that was in that area from the spring discharge.
 24 Q. 10?
 25 A. 10 is another view looking back towards the

1 further I think to the west than the ponds that we're talking
 2 about after reviewing it.
 3 Slide 19 is a pond that was closer --
 4 Q. Slide 14?
 5 A. I'm sorry, slide 14 is a slide that was closer to
 6 the residences that shows part of the impoundment that was out
 7 onsite in 1967.
 8 Q. The trees in the upper right portion of that, are
 9 those the trees we see in some of the other photos --
 10 A. It is.
 11 Q. -- at this time?
 12 A. It is. It's from a different perspective; in
 13 other words, this is looking more towards the northwest, I
 14 believe. And in the -- in the back of the picture you're
 15 seeing those dots in the picture are cows grazing on the land.
 16 Q. The next slide, slide 15?
 17 A. The next slide is in the upper pond looking north
 18 towards the Cox Ranch. That's where they stuck a grader or a
 19 Cat in the side wall of the dam when he was trying to
 20 construct the pumping structure to pump water towards the
 21 north.
 22 Q. And then slide?
 23 A. This is a slide taken in 1982, it's just a
 24 different perspective of the north discharge of the spring in
 25 that area. There's a series of about four springs that goes

1 ranch. The slide on the photo on the left shows you or
 2 illustrates to you the -- the house on the left-hand side and
 3 the pony express station on the right-hand side. And that's
 4 towards the upper middle.
 5 The slide on the right-hand side illustrates a
 6 check dam that was shown previously and the photos referencing
 7 the historical view.
 8 Q. And that check dam was the main pond impoundment?
 9 A. Yes, it was.
 10 Q. Slide 11?
 11 A. Slide 11 is a picture of Milt Thompson pointing
 12 to another structure that was built. And off in the distance
 13 you'll see some either tamaris or willows, I couldn't tell at
 14 this point in time and I didn't investigate it very well. On
 15 an impoundment that occurred in that area where if you look on
 16 the left and right of the photos where a ditch ran that was
 17 due to that impoundment that spread the water levels there.
 18 The photo on the right is part of the impoundment
 19 that existed within that area.
 20 Q. Slide 12 is kind of setting us up for the next
 21 set of slides?
 22 A. It does.
 23 Q. Slide 13?
 24 A. Slide 13 was taken in 1946 and it's an area of
 25 one of the ponds that were out on the property. And this was

1 from the top of section 3, the north portion of Thompson's
 2 Ranch and heads south.
 3 So this would be like spring 1 or the first
 4 spring.
 5 Q. First spring to the north?
 6 A. Yes.
 7 Q. And again, that's that road that divides between
 8 the Cox property and the Thompson property?
 9 A. It is. And of importance I thought in this photo
 10 too, if you look just to the upper center of the photo there's
 11 a yellow speck just to the top of that. You'll see a spring
 12 discharge that heads north towards the Cox Ranch and the
 13 outflow of that spring.
 14 Q. That's the dark area to the north of that road?
 15 A. Yeah, the dark area to the north of the road to
 16 the right of the photo you'll see a green area which is
 17 representative of that spring discharge that occurred within
 18 the Cox boundary.
 19 Q. The next photo, slide 17?
 20 A. Slide 17 shows basically the most upper spring
 21 area that was shown in previous photographs of being wet. In
 22 the foreground where all the brush is is what's left of one of
 23 the remnant ponds, but just to the left of the cottonwood and
 24 center of the photo is where there was an impoundment
 25 structure. Towards the east which would be looking towards

1 the top of the photo, that was where the main lake or main
 2 spring discharge area was in that spring number 1.
 3 Q. And this photo was taken in 1992?
 4 A. It was.
 5 Q. Slide 18?
 6 A. Slide 18 is the same photograph I've included
 7 previously which was the abutment that basically held the area
 8 where the pump was that discharged water into the ditches.
 9 Q. Slide 19?
 10 A. Slide 19 is the illustrations on points 6 through
 11 7, which is the Taft Springs area, which is the lower
 12 reservoir. From my inspection of this and the history behind
 13 here this is one of the main spring discharge areas.
 14 Where it says 6, slide 6-7, with that yellow pin
 15 in the center.
 16 HEARING OFFICER JOSEPH-TAYLOR: Photograph 6-7?
 17 THE WITNESS: I'm sorry, photograph 6-7. To the
 18 right of photograph 6-7 that's labeled with the pin is the
 19 pony express station.
 20 BY MR. KOLVET:
 21 Q. Go to slide 20.
 22 A. On slide 20 this shows an area that was dug out
 23 within the spring area. And you've seen different
 24 perspectives of this in previous photos. And during this time
 25 you can see that they've improved the line coming out towards

1 Q. It's dry at this point?
 2 A. Yes.
 3 Q. Slide 25?
 4 A. Slide 25 is me in my field clothes. And --
 5 Q. I like those shorts.
 6 A. Thanks. That's in case I get lost they can find
 7 me. To the left side of my arm is some rock outcropping that
 8 existed that I thought were important to why that discharged
 9 from I would say the lower Taft Spring existed. What's
 10 interesting about this is the spring line trends to the
 11 north/south where this rock outcropping trends to the
 12 east/west.
 13 And to the left of the right photograph is where
 14 the main spring discharge area was. And -- and based upon the
 15 conversation with Milt Thompson there was a large opening
 16 within there that the water flowed out of.
 17 Q. Did you see any remnant of that?
 18 A. Just the rock.
 19 Q. Slide 26?
 20 A. This is a close-up of it. Like I said, I was
 21 interested with this and from this I wanted to see what was
 22 further east and west of this line. What I did was put in a
 23 piece of paper I was writing my notes in just to get some
 24 perspective of what I was seeing out in the field. Often
 25 photos it's hard to get a relationship to what you're

1 Milton's house, but this is all that's left of that main
 2 spring.
 3 Q. 21?
 4 A. 21, this is just a different view of the same
 5 area. Unfortunately, I wasn't -- I wanted to get a close-up
 6 on this because I think some of the soils outlined in this
 7 would be important for future discussion.
 8 Q. Slide 22, same area?
 9 A. Same area just looking at a different
 10 perspective, this is looking more west.
 11 Q. There was enough water for a dog to drink?
 12 A. Barely.
 13 Q. Slide 23 -- or yeah, slide 23?
 14 A. Slide 23 is in an area where Milton had discussed
 15 with me that it looked like another discharge area around the
 16 spring that was in the previous slide. It's just to the north
 17 of where the spring was actually located and discharged
 18 further on the abutment.
 19 Q. Slide 24?
 20 A. Slide 24 is an old spring box that was used where
 21 they pump water out of the spring by various methods to
 22 deliver it to the house and the outbuildings that were on the
 23 ranch.
 24 Q. In parentheses says it was dry?
 25 A. I'm sorry?

1 observing.
 2 Q. 27, besides your red shorts what are we looking
 3 at?
 4 A. Yeah, anyhow, this photo was looking back towards
 5 the east and this would be south of the pony express building
 6 towards the lower Taft Springs. And again, I asked the
 7 photographer not to take pictures of me, but somehow I was put
 8 in there, but it gives you a good perspective on the out
 9 dropping.
 10 Q. Slide 28?
 11 A. 28, the idea was to follow this further to the
 12 east and see what was occurring within this area. I see some
 13 different formations intruding in the area. I didn't spend
 14 the time to identify the material that's in there, but I
 15 notice the fractures were generally trending east and west.
 16 Q. There were springs located in this area?
 17 A. This was just above the spring discharge. What I
 18 mean above is it was vertically higher and to the east of the
 19 spring discharge.
 20 Q. Okay. 29?
 21 A. 29, this is further east. Again, this is looking
 22 towards the east with cracks or fissures, whatever you want to
 23 call it within the rock that was exposed further up.
 24 Q. Let's go to 30.
 25 A. 30, this .6-7 that we referenced earlier. And

1 this would have been the area of the lower pond of the main
 2 discharge of Taft Spring.
 3 Q. Okay. And again, why don't you just set up the
 4 next series of photos being the historic photos?
 5 A. Yes.
 6 Q. 32?
 7 A. Okay. So 32 is a slide that I've used previously
 8 that depicts the pond and the rock outcropping from the --
 9 what I perceive is the main discharge from Taft Springs. And
 10 it's in the same approximate area that I showed in the
 11 previous photos.
 12 Q. Where your red shorts were evident?
 13 A. Yes, and my dog.
 14 Q. And you've already commented on this?
 15 A. Yes, I have.
 16 HEARING OFFICER JOSEPH-TAYLOR: Nice dog.
 17 BY MR. KOLVET:
 18 Q. Okay. Go to 33.
 19 A. The 1992 photo?
 20 Q. '82.
 21 A. '82?
 22 Q. You skipped one.
 23 A. The '82 photo shows -- I'm trying to get a
 24 perspective on a lookback from what existed at the time. I'm
 25 trying to get snapshots of the decreasing flow of the springs.

1 remnants of the willows that were growing around that area.
 2 Q. Slide 37?
 3 A. 37 is a different perspective of the discharge
 4 area around the springs that occurred.
 5 Q. That was taken in 1971?
 6 A. It was.
 7 Q. 38?
 8 A. This was a photo looking in the same area in 1992
 9 which illustrates it as being dry.
 10 Q. 39?
 11 A. This is a photo looking approximately the same
 12 angle back in 1971.
 13 Q. Slide 40 illustrates points 8 through 10?
 14 A. That's correct.
 15 Q. And now we're moving further out into the
 16 discharge area?
 17 A. We are. I might point out that when you're
 18 driving around the property with the rabbit brush and
 19 greasewood out there it's a little hard to identify where you
 20 are in perspective.
 21 So by chance we were able to find the physical
 22 features on the ground within those areas, it wasn't
 23 necessarily by following the ditch. We were kind of
 24 traversing here from north to south.
 25 Q. Slide 41?

1 So what we're seeing in this photograph in 1982
 2 is the discharge flowing from where Mr. Thompson opened up a
 3 ditch to Craig water pond.
 4 Q. The next photo, 34?
 5 A. This is the photo looking back at approximately
 6 the same perspective in the foreground. It's completely dry
 7 with weeds growing in -- in the pond itself.
 8 Q. And this was taken ten years later in '92?
 9 A. Yes, it was.
 10 Q. And the next photograph, slide 35?
 11 A. This is the lower pond that was looking towards
 12 the northwest. I don't know if you could see it very well,
 13 but I'll try to indicate the portion of it. This photo that
 14 I'm circling which is in the upper right-hand side of the
 15 photo shows two girls standing there next to the pond. And it
 16 gives you an indication of the relative size of that pond.
 17 MS. PETERSON: Excuse me, I just have a question.
 18 Where was the 1920 photo from?
 19 THE WITNESS: It was provided through
 20 Milton Thompson.
 21 MS. PETERSON: Okay.
 22 BY MR. KOLVET:
 23 Q. Slide 36?
 24 A. This is about the -- looking back towards where
 25 that pond would have been. And in the foreground you see some

1 A. Slide 41 is the area showing the south diversion
 2 of the old original ditch. And what I mean by the old
 3 original ditch is what was there in 1879.
 4 Q. That's on both of these photos?
 5 A. Yes, it is. Looking on the point to the left I
 6 showed you where the tam whisker willows were located. And
 7 that's where there was a dam built, structure built that
 8 hopefully we've identified before. In the right-hand photo it
 9 shows the alignment of that ditch which starts to make the
 10 bend heading towards the south.
 11 Q. 42?
 12 A. 42 is a photo taken in 2013 which is the -- on
 13 that corner above the ditch on the right-hand side is a photo
 14 taken in August 1982 of Ralph Gamboa who was from the Elko
 15 office. In the immediate upper right of the picture is the
 16 truck that was assigned to him and he's trying to take a flow
 17 measurement of water going through the two culverts underneath
 18 his legs.
 19 Q. Slide 43?
 20 A. Slide 43 is the check dam and ditch that I've
 21 identified as the old ditch, the 1879 ditch. And that check
 22 dam has been there quite a while. I couldn't see any remnants
 23 of recent activity on it anyhow.
 24 Q. And the photo to the right shows the ditch again?
 25 A. It does.

1 Q. 44?
 2 A. 44 is another ditch that's located out there
 3 called a deep ditch, it's a fairly large ditch that conduit
 4 and water cross the property.
 5 Q. Which direction does this ditch run?
 6 A. This is heading towards the southeast at this
 7 point. And the right photo is a different perspective looking
 8 in a different direction, which should have been more towards
 9 the -- I believe the northeast.
 10 There's a remnant ditch on the upper right-hand
 11 corner that you can't see very well, right center. Again,
 12 you're losing perspective because of the photos.
 13 Q. Okay. 45?
 14 A. 45. I just so happened to find the old Parshall
 15 flume that existed on the property. According to Milton this
 16 is where most of the flow measurements were taken. And it's
 17 actually located quite a ways out from some of these
 18 diversions that we talked about.
 19 Q. Parshall for the record is P-A-R-S-H-A-L-L. 46?
 20 A. 46. Looking at the Parshall flume this is the
 21 water flow in 1983. In 1992 in the upper left-hand side of
 22 the photo, which is up towards the left of 1992 in the photo
 23 referenced on slide 46 you can see the Parshall flume that
 24 existed. The left-hand side shows the same Parshall flume at
 25 the discharge in 1983.

1 that there's still discharge occurring, although not to the
 2 benefit of the property.
 3 Q. Slide 51?
 4 A. Slide 51 is looking towards the west, which in
 5 this picture you'll see an area that's elevated which was a
 6 berm that was constructed some time ago.
 7 Q. Can you point to that on the photo, please?
 8 A. Yes, I will. In the center bottom of the photo
 9 running from left to right is a berm that's been built. And
 10 as you head further towards the center right of the photo and
 11 heading west towards the left again you'll see that berm
 12 that's been excavated. This would be further west of the
 13 springs, the spring discharge area.
 14 Q. Do you have an opinion as to the purpose of the
 15 berm?
 16 A. The purpose of that berm was to capture any water
 17 that was discharged and to be able to apply property to the
 18 west of the Thompson Ranch. It was more or less a control
 19 structure.
 20 Q. With respect to this photo there's some fence
 21 posts in the --
 22 A. That's correct.
 23 Q. -- left -- or right-hand side?
 24 A. They're on the right-hand side and there's
 25 fencing all through this property for to control the cattle

1 Q. 47?
 2 A. 47 is another picture of the Parshall flume and
 3 this is looking back towards the east. You can barely see a
 4 little bit of water that stops just before the Parshall flume.
 5 Q. 48?
 6 A. 48 is walking through the property. And I didn't
 7 take every picture of every fissure I saw, but there is
 8 cracking that has occurred within the earth out of that area
 9 which is indicative of ground subsidence.
 10 Q. 49?
 11 A. 49 is the same reference or index, if you will,
 12 looking further out on the property.
 13 Q. This is for points 11 through 18?
 14 A. I'm sorry?
 15 Q. For points 11 through 18?
 16 A. Yes.
 17 Q. Where on the property is this, to the south of
 18 the property did you say?
 19 A. It's south and west.
 20 Q. 50?
 21 A. What we're looking at in this area is -- found
 22 some of that wire grass that's out in the area. What I'm
 23 finding is that there is some groundwater discharge occurring
 24 and consumption occurring through the rabbit brush and some of
 25 the brushes you see in the foreground. So there is evidence

1 that were on it. But you can see the photos which is the
 2 right center of the photo which is in this area. And you'll
 3 see the fencing which is not very visual on the exhibit you
 4 have on the screen, but it's heading towards the west edge of
 5 the property.
 6 Q. Photograph 52?
 7 A. 52 we came across the edge of the hay area. In
 8 other words, we found an area that from the photographs that
 9 we had before where we said basically upon the phreatophytic
 10 discharge that's occurring that this area heading towards the
 11 south would have been more or less the area that may have been
 12 conducive to grazing, mainly because the elevation of the
 13 property and probably the extent of water that existed there
 14 at one time.
 15 Q. Did you in this area see any evidence of
 16 controlled structures?
 17 A. We did. I mean, we found them all through the
 18 property. I didn't take photographs of every single one. My
 19 purpose on this analysis was to see if there's ditching and
 20 evidence of diversion of the water occurring on the ranch.
 21 By this time I was feeling that my indication was
 22 based upon what I saw, I was pretty well satisfied that to see
 23 that the ditch structures around the property and the
 24 impoundments that were created that the water was diverted to
 25 areas of different use.

1 Q. Slide 53?
 2 A. Slide 53 is looking towards the south and the
 3 west, which again shows an area of what I perceive as
 4 discharge still occurring.
 5 Q. And that's due to what?
 6 A. Due to the type of plant that was in the -- in
 7 the photograph itself.
 8 Q. Again, was this an area that had been or appeared
 9 to have been irrigated or water used on in the past?
 10 A. It has, I mean, through this you'll find small
 11 ditches that were routed around through this property that
 12 diverted water. And the photo to the left in the right lower
 13 corner, you'll see a small ditch that goes out there in the
 14 berm that it intersects and the water was distributed to the
 15 left and the right of the photo.
 16 Q. 54?
 17 A. 54, this is looking back towards the -- the left
 18 slide is another continuation of the photos that were provided
 19 previously that shows generally the same direction that
 20 occurred looking towards the west. The right photograph is to
 21 give you a perspective of where we are and this is looking
 22 towards the ranch to the east.
 23 Q. 55?
 24 A. 55 is a ditch remnant that you can find on the
 25 property. Again, by perspective it's not showing up too well,

1 Q. 58?
 2 A. 58 is just a different perspective of a pulley
 3 system that was used on the press and the same photo. The
 4 photo on the right would have been the hub to a wooden wheel
 5 that helped drive the press.
 6 Q. 59?
 7 A. 59 is what the -- where I found the baling press,
 8 it's within the haystack area that's fenced off separately
 9 from the rest of the land. I've gone -- I've gone back and I
 10 didn't think it was essential at the time, but in some aerial
 11 photos you can see some remnants of the haystack areas in the
 12 fields.
 13 Q. 60?
 14 A. 60 is looking at the western area hay fields and
 15 where Milton is pointing to the right-hand side would have
 16 been in close proximity to where one of the haystack areas
 17 were. And this again, on the photo on the right on slide 60
 18 we're looking back towards the ranch to the east.
 19 Q. 61?
 20 A. 61. This is another ditch that exists and I
 21 believe was heading towards the -- I think it was looking
 22 towards the northeast if I recall correctly. The photo on the
 23 right shows remnants of the peat bog area that existed out
 24 there and you'll find this throughout the property in that
 25 westerly portion.

1 but it's a fairly deep ditch that runs I would say east and
 2 west. And then you have another ditch and impoundment that's
 3 in the foreground that help divert the water towards the south
 4 further on the bow (sic.).
 5 Q. 56?
 6 A. 56. That is a remnant of a baling machine that
 7 was built or that existed out on the property. You can see
 8 the patent was in 1863 and this was a -- I believe called a
 9 Price Simpson press that occurred on the site. The photo of
 10 the -- that I've showed previously of the team of horses with
 11 the baled hays on it -- baled hay on it in my opinion came
 12 from this baling press that was located in a hay impoundment
 13 area where there was hay storage on the property. We found
 14 about five hay storage areas that were surrounding the
 15 property in this area.
 16 Q. Where on the property is this?
 17 A. This would be in the southwest edge of the
 18 property.
 19 Q. The next slide is?
 20 A. Yeah, what this, this would be slide number 57.
 21 And what it indicates is is that there's -- all of those are
 22 the remnants of the baling press that existed on the site,
 23 it's all part of the operating machinery.
 24 Q. All in that same hay baler?
 25 A. Yes, I mean, they're relatively feet apart.

1 Q. What's significant about peat bogs?
 2 A. Well, peat bogs is where you have a high amount
 3 of organics and not much soil within it. And it's extremely
 4 wet area that develops because of saturated water on the
 5 ground.
 6 Q. 62?
 7 A. Again, another picture of the peat in that same
 8 area.
 9 Q. Okay. 63 is introducing the next series, I
 10 assume?
 11 A. Yes.
 12 Q. Historic photos?
 13 A. Yes. In some of the previous photos I showed you
 14 what the perspective was looking back towards the ranch to the
 15 east, and this is looking at the remnant of hay that was being
 16 grown by Milton Thompson in that time in 1983. And this I
 17 assume was taken in probably the early spring of '83.
 18 Q. You base that on what?
 19 A. Pardon me?
 20 Q. And you base that on what?
 21 A. Based upon the snow in the mountains and based
 22 upon the trees starting to come out.
 23 Q. 65?
 24 A. 65. This is kind of looking back at the same
 25 area in 2013. I tried to get some perspective looking back.

1 It just -- let me point out one thing on these photos. Like I
 2 said earlier, my perspective was not to identify what features
 3 I wanted to investigate ahead of time. The idea was to go out
 4 and see what the ground told me and then see how it correlated
 5 to the past as sorted photos that I already had in my box.
 6 So ideally what happens is I go out to do the
 7 ground truthing, I let the structures that I find say here's
 8 where I found it, then I relate it back to the evidence I've
 9 already created on the paper.

10 Q. 66?
 11 A. 66, this is an area on the westerly portion of
 12 the property. What I felt was interesting about this is
 13 Mr. Venturacci's been quite creative by taking some of the
 14 wire that existed on the property and reconstructing the
 15 fences. Along this fence line is some of the old wire that
 16 was first patented in 1863 and used at the time. And also
 17 there was some old fencing that became available in 1885 in
 18 that area that's along the fence line and that came from the
 19 property onsite.
 20 Now, it doesn't mean that the fence was built in
 21 1863 but the wire came from that era which would have been
 22 prior to 1900.

23 Q. 67?
 24 A. 67 is looking towards the west. What's
 25 interesting about this is you can see the continued -- it's

1 Q. Slide 70?
 2 A. Slide 70, here's the water that I was talking
 3 about -- the wire I was talking about. The upper wire would
 4 have been 1885, lower wire would have been somewhere around
 5 1863 or later. And you'll find this periodically around the
 6 entire property.
 7 Those little ovals within that wire on the top
 8 section of the photo.

9 HEARING OFFICER JOSEPH-TAYLOR: We can see it,
 10 Mr. Thiel.
 11 THE WITNESS: Okay. Those areas had little cedar
 12 stakes in them that separated the wire.
 13 BY MR. KOLVET:
 14 Q. Go to slide 71.
 15 A. Slide 71 is -- again, I have a photo looking --
 16 this is looking back I believe to the south somewhat from the
 17 basin. The photo on the right would be a perspective looking
 18 back towards Thompson Ranch.
 19 Q. And it's titled Hay Storage Area?
 20 A. Yeah, in other words, there's another hay storage
 21 area, this would have been looking towards -- what I'm --
 22 where I'm at is on the northerly boundary of the Thompson
 23 Ranch between Thompson and Cox. This is another hay storage
 24 area that I found that's barricaded off out there.
 25 And again, it shows depictions of the hay storage

1 flatter land and you can see it's relatively level and it's
 2 the extent of the discharge area from the detached springs
 3 complex.
 4 So this is looking towards the west and you can
 5 see remnants of -- of irrigation occurring out in that area.
 6 And in the foreground, you know, back looking towards me there
 7 would have been dikes that existed within that area where they
 8 impound water and controlled it for discharge to the west.

9 Q. 68?
 10 A. 68. This is what I indicated to you previously
 11 in that discussion I had with Mr. Kolvet. This indicates the
 12 west levy area. So what you have is a series of channels and
 13 ditches that head to the west that acted as a conduit water --
 14 conduit water.
 15 Water's impounded behind the levy area and you
 16 can see where the water was allowed to control flow out of the
 17 levy area towards the property to the west.
 18 So basically what happens is is that you irrigate
 19 property from the point of discharge. There's a tail water
 20 component of irrigation that occurs, that tail water was
 21 captured and redirected towards the property on the west.

22 Q. And slide 69?
 23 A. 69 is the index for the next series of photos.
 24 This would have been on the -- I believe on the northerly edge
 25 of the property towards the Cox Ranch.

1 area. The one on the right would have been another hay
 2 storage area that I believe was further to the east of the --
 3 this one indicated on the left-hand side.
 4 Q. And again, how do you determine they're hay
 5 storage areas?
 6 A. They're small areas that are fenced. And
 7 fortunately what gave me the perspective on this is that we
 8 had the baling press in the one area with the same type of
 9 feature laid out where hay storage occurred. And when I asked
 10 Mr. Thompson about it he said those were hay storage areas.

11 Q. Photo -- or slide 72?
 12 A. This is the north field which would have been one
 13 of the ditches that flow from -- that's shown on the 1879
 14 survey. This would be the southerly -- I'm sorry, the most
 15 easterly ditch going from south to north on the 1879 survey.
 16 Q. 73?
 17 A. 73 is the old ditch which is further I think
 18 towards the east that I believe shows the upper diversion
 19 ditch that went onto Cox Ranch.
 20 Q. 74?
 21 A. 74 is the boneyard that every ranch I've gone to
 22 seems to have with some of the old hay rakes and equipment
 23 that was out there onsite. I think some of the balers that
 24 are out there that are shown on the 1968 photo on the Cox
 25 Ranch are still laying out there.

1 Q. 75, more equipment?
 2 A. More equipment.
 3 Q. 76?
 4 A. 76 was a photo taken in 1968 that shows baling
 5 the hay on the Cox Ranch. What's important for a perspective
 6 here are the cottonwood trees, and I believe they're called
 7 black cottonwoods that are in the upper part of the picture
 8 that are quite prolific in growth. You can see hay that's
 9 been baled just below those pictures and you can see the
 10 extent of culture that's occurring on the right-hand side.
 11 Q. And this is grass hay?
 12 A. Yes.
 13 Q. 77?
 14 A. 77, slide 77 is a perspective taken along the
 15 roadway looking back towards the Cox Ranch. What I thought
 16 was interesting in the photo was the green area around the Cox
 17 Ranch and then you can see those same cottonwoods in the left
 18 center.
 19 Q. And this photo was from '68?
 20 A. Yes, it was.
 21 Q. Slide -- whatever it is, my eyes are giving out,
 22 78?
 23 A. 78. This is looking back from the same
 24 perspective on the Cox Ranch. The cottonwoods are still doing
 25 pretty well but the ground's been overtaken predominantly with

1 Q. And 83?
 2 A. 83 is the legend with the GPS coordinates as far
 3 as what we found.
 4 Q. And 84?
 5 A. 84 is remnants of the ditches from Thompson to
 6 Cox that's further out on the property. That's what's left of
 7 it.
 8 Q. And which direction are we --
 9 A. This would be looking towards -- one's looking --
 10 the right-hand photo is looking towards the southeast or
 11 towards -- more towards the south of where I'm standing. The
 12 photo on the left-hand side is looking towards the trending
 13 north.
 14 Q. 85?
 15 A. 85 is again a photo of 1870s ditch from Thompson
 16 and Cox. And this would be the 1879 ditch that was shown in
 17 the GLO plat.
 18 Q. 86?
 19 A. 86 is another ditch that existed. This is the
 20 one I talked about earlier, this should be the most easterly
 21 ditch. This again was looking south on the left photo and
 22 north on the right photo.
 23 Q. And this again was on the Cox property?
 24 A. It is.
 25 Q. 87?

1 sagebrush.
 2 Q. This is 14 years from the prior picture in 1982?
 3 A. Correct.
 4 Q. 79?
 5 A. 79 is looking at those same cottonwoods in the
 6 foreground on the Cox Ranch looking towards the northeast --
 7 I'm sorry, northwest.
 8 THE STATE ENGINEER: North.
 9 MR. KOLVET: Mrs. Taylor.
 10 HEARING OFFICER JOSEPH-TAYLOR: I did miss it,
 11 sorry, this is getting long. Let's get through it, Mr. Thiel.
 12 THE WITNESS: I'm trying.
 13 BY MR. KOLVET:
 14 Q. Number 80?
 15 A. Number 80 is a picture taken in 2013 which is
 16 looking towards the same cottonwood trees to the northwest.
 17 Q. 81?
 18 A. 81 is on the Cox Ranch looking in that area for
 19 ditches, evidence of culture, that type of thing. In the
 20 right-hand center of the photo is the remnants of the Cox
 21 house. To the right of it is where Birch Spring used to
 22 discharge.
 23 Q. 82? We've only got 12 more to go.
 24 A. 82 is the diagram for the photos that were taken
 25 on the ground truthing experience.

1 A. 87 is the part of the old springs discharge area.
 2 What I saw out here was a series of depressions in the ground
 3 and ditches leading there from where I was able to identify
 4 that these were spring discharge areas.
 5 Q. 88?
 6 A. 88 is the left-hand photos looking toward what
 7 was referred to as the Birch Spring discharge area. The photo
 8 on the right is looking back towards the Cox house and a
 9 remnant of one of the cottonwoods that were shown in the
 10 previous photos and the Cox house.
 11 Q. 89?
 12 A. 89 is the -- the same photo looking at the
 13 cultivation that exists in 1968 around the cottonwoods.
 14 Q. 90?
 15 A. 90 is the Birch Spring discharge area. And the
 16 outfall from that trends to the east. And I'm standing in a
 17 depression which would have been one of the spring discharge
 18 areas looking back towards Birch Springs.
 19 Q. 91?
 20 A. 91 is a different perspective of the 1968 photo.
 21 Q. 92?
 22 THE STATE ENGINEER: I'm sorry, Mr. Thiel, can
 23 you go back to 91?
 24 THE WITNESS: Yes.
 25 THE STATE ENGINEER: What is that in the green --

1 THE WITNESS: The green piece of pump?
 2 THE STATE ENGINEER: The pump; right.
 3 THE WITNESS: That is a swamp, if you will.
 4 THE STATE ENGINEER: That's a swamp. Thank you.
 5 THE WITNESS: It's -- the photo's been switched.
 6 My photo shopping isn't great.
 7 BY MR. KOLVET:
 8 Q. 92?
 9 A. 92 is -- previously I referenced that. This is
 10 the discharge from Birch Spring and there's a ditch that comes
 11 out that is flowing towards the west -- I'm sorry, towards the
 12 east. This is looking towards -- let me back up. This photo
 13 is a perspective looking east with the channel discharging to
 14 the west.
 15 Q. Okay. 93?
 16 A. 93 is looking back on the Willow Ranch. What I
 17 found out there was more of the same stuff, evidence of
 18 ditches and some spring depressions that occurred. By this
 19 time it's getting late in the day, I did an investigation on
 20 finding basically the same thing on all three ranches. And I
 21 didn't spend a lot of time on it other than satisfying myself
 22 that what I discovered was representative of what my
 23 investigation was.
 24 Q. And 94?
 25 A. 94 is within the Willow Spring area. There is

1 get these 1968 photos, who took them, how do we know they're
 2 '68? So I don't know how much weight they will be given, but
 3 he's on the ground fieldwork just trying to orient himself I
 4 have no problem.
 5 THE WITNESS: I could help on that if I may.
 6 HEARING OFFICER JOSEPH-TAYLOR: Nope.
 7 THE WITNESS: I'm sorry, I thought you were
 8 talking to me.
 9 THE STATE ENGINEER: Well.
 10 HEARING OFFICER JOSEPH-TAYLOR: I'm looking at
 11 the boss because he's getting ready to speak.
 12 THE STATE ENGINEER: Well, just in your expert
 13 report.
 14 THE WITNESS: Yes.
 15 THE STATE ENGINEER: Is there a discussion in the
 16 expert report about where you got some of these photos?
 17 THE WITNESS: There is. And in fact, it refers
 18 to the -- I'll refer to it as the malfeasance report that
 19 Milton Thompson did in 1993. And further photo references are
 20 provided in that report as well as my report as well where
 21 those photos came from.
 22 THE STATE ENGINEER: So you believe there's a
 23 link in what you've already submitted to these photos we've
 24 seen here, where you got them from?
 25 THE WITNESS: Yes, I do, obviously I wouldn't use

1 depressions out there which is more or less a reservoir.
 2 There's a spring discharge area in close proximity looking off
 3 towards the north more there's a serious of ditches I found on
 4 the property.
 5 I did not find the remnants of the spring that
 6 was shown on the 1879 map, but I didn't spend much time
 7 looking.
 8 MR. KOLVET: Thank you. I would move the
 9 admission of 237.
 10 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 11 MS. URE: Yes, I'm objecting on authentication
 12 grounds. That exhibit is entitled 2013 Ground -- Ground
 13 Truthing. And there's several photos in here from 1940s, '60s
 14 and '80s and we have no idea who took them or the date of the
 15 photos other than what we're told.
 16 HEARING OFFICER JOSEPH-TAYLOR: Response,
 17 Mr. Kolvet?
 18 MR. KOLVET: Yeah, the ground truthing has to
 19 have some point of reference in the photographs that was
 20 depicting prior years for those same areas gives him some
 21 perspective on his truthing of what he was doing, which is
 22 essential to that and it is part of the ground truth.
 23 MS. PETERSON: I join in the objection.
 24 HEARING OFFICER JOSEPH-TAYLOR: Yeah, I was
 25 having some problems as I went through it going where did you

1 them if I didn't figure there was a link. Those older photos,
 2 I wasn't around at that time to get them from Milton Thompson,
 3 but they were supplied to me through Daniel Venturacci who got
 4 them from Milt Thompson. And that book is part of the
 5 exhibits.
 6 HEARING OFFICER JOSEPH-TAYLOR: Go with your
 7 objection?
 8 MS. PETERSON: No.
 9 HEARING OFFICER JOSEPH-TAYLOR: Go ahead,
 10 Ms. Peterson.
 11 MS. PETERSON: So to get a photo into evidence
 12 you have to show that the person that took it has personal
 13 knowledge that it's an accurate and true depiction of the
 14 scene on the date of the photo. We have no knowledge of the
 15 dates of a lot of those photos or Mr. Thiel doesn't have
 16 information that is true and accurate depiction of the scene
 17 on that date and year. We only get a year. And he's getting
 18 that information from Mr. Thompson.
 19 I was going to -- oh, through Mr. Venturacci. I
 20 was going to object to Milton Thompson's report, the
 21 malfeasance report because --
 22 HEARING OFFICER JOSEPH-TAYLOR: Why?
 23 MS. PETERSON: There is an exception under the
 24 evidence rule for documents that are older than 20 years.
 25 HEARING OFFICER JOSEPH-TAYLOR: Well, first of

1 all, the rules of evidence don't apply in our hearing.
 2 MS. PETERSON: Well, I'm making my record.
 3 HEARING OFFICER JOSEPH-TAYLOR: Go ahead.
 4 MS. PETERSON: Because you wanted to know the
 5 basis of the objection.
 6 HEARING OFFICER JOSEPH-TAYLOR: Go ahead.
 7 MS. PETERSON: So I haven't objected to any of
 8 the diaries or anything like that because they could
 9 authenticate where they were coming from and they were older
 10 than 20 years old.
 11 Unfortunately, we're in 2013 and Mr. Thompson's
 12 malfeasance report I think is dated 1993 per your exhibit
 13 list, which puts us right at 20 years.
 14 THE WITNESS: If I can add something, most of
 15 these photos were used in the 1982 unit, if not all.
 16 MS. PETERSON: Some -- some of the photos were.
 17 Some of photos were. And actually we have an exhibit that has
 18 those.
 19 THE WITNESS: Um-hum.
 20 MS. PETERSON: So that's why we put them in
 21 because it is part of the State Engineer's file.
 22 THE WITNESS: Right. If I may add to that
 23 that's -- a lot of those photos Milt Thompson has --
 24 HEARING OFFICER JOSEPH-TAYLOR: When do you get
 25 to start arguing with the lawyer? You can stop right there.

1 record. Please continue, Mr. Kolvet.
 2 MR. KOLVET: In the interest of trying to save
 3 time, most of the information that he was going to testify to
 4 from his remainder of his PowerPoint has already -- it's
 5 either in evidence as part of the reports from USGS or prior
 6 testimony from other witnesses, but with that I would offer
 7 his PowerPoint which is whatever you said that was.
 8 THE STATE ENGINEER: 234. Oh, no.
 9 HEARING OFFICER JOSEPH-TAYLOR: 229. Any
 10 objection to the corrected PowerPoint, Exhibit 229?
 11 MS. PETERSON: Just our objection that we had
 12 before.
 13 HEARING OFFICER JOSEPH-TAYLOR: Okay. So noted.
 14 229 will be admitted.
 15 (Exhibit 229 admitted into evidence.)
 16 HEARING OFFICER JOSEPH-TAYLOR: And --
 17 MR. KOLVET: And with that housekeeping thing I
 18 think we've got 231 is already in.
 19 HEARING OFFICER JOSEPH-TAYLOR: Nope. Oh, yes,
 20 it is. Sorry.
 21 MR. KOLVET: The expert report from Mr. Thiel of
 22 232.
 23 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 24 232?
 25 MS. PETERSON: No.

1 THE WITNESS: She's looking at me.
 2 HEARING OFFICER JOSEPH-TAYLOR: I will stop you
 3 right there. I'm going to note your objection. I don't know
 4 how much weight will be given to those that are not
 5 authenticated. If you can tell they're kind of looking from
 6 the same perspective, was trying to orient himself, so I don't
 7 have that much problem with that, but there is a problem with
 8 authenticating where those photos came from.
 9 So noting your objection I'm going to admit
 10 Exhibit 237 and we will consider the weight we'll give those
 11 photos. Mr. Kolvet, how much more time do you have --
 12 MR. KOLVET: If I can have five minutes with this
 13 witness I think I'm about done.
 14 HEARING OFFICER JOSEPH-TAYLOR: Fantastic.
 15 Because we need a break.
 16 MR. KOLVET: Oh, you mean to break?
 17 HEARING OFFICER JOSEPH-TAYLOR: Oh, you want a
 18 five-minute break right now, I thought you meant five minutes
 19 you'll finish.
 20 MR. KOLVET: No, if I can just discuss something
 21 real briefly to him we can keep going.
 22 HEARING OFFICER JOSEPH-TAYLOR: Yes. Okay.
 23 We'll be in recess till 4:15.
 24 (Recess taken.)
 25 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the

1 HEARING OFFICER JOSEPH-TAYLOR: 232 will be
 2 admitted.
 3 (Exhibit 232 admitted into evidence.)
 4 MR. KOLVET: 233.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 6 Exhibit 233? This is in the record already.
 7 MR. KOLVET: It is.
 8 MS. PETERSON: No objection.
 9 HEARING OFFICER JOSEPH-TAYLOR: 233 will be
 10 admitted.
 11 (Exhibit 233 admitted into evidence.)
 12 MR. KOLVET: 234 was the original presentation, I
 13 think we've substituted 229 for that, so I will offer 234.
 14 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 15 MR. KOLVET: 235.
 16 MS. PETERSON: You think that's the malfeasance
 17 report?
 18 MR. KOLVET: It is.
 19 MS. PETERSON: So we would object to that.
 20 HEARING OFFICER JOSEPH-TAYLOR: I don't even know
 21 what it is, I haven't seen it, so.
 22 MR. KOLVET: It was part of Mr. Thiel's original
 23 report, it forms the basis of some of the opinions in that
 24 report. It was submitted to the State Engineer in whatever
 25 year it was.

1 MS. PETERSON: The malfeasance report?
 2 MR. KOLVET: Yes.
 3 MS. PETERSON: Okay. I haven't seen that.
 4 You're talking about part of the curtailment hearings?
 5 MR. KOLVET: Let me just look at 235.
 6 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 7 record.
 8 (Short off the record.)
 9 HEARING OFFICER JOSEPH-TAYLOR: So back on the
 10 record. Your objection is sustained. Exhibit 235 will not be
 11 admitted.
 12 MR. KOLVET: Although it makes interesting
 13 reading.
 14 HEARING OFFICER JOSEPH-TAYLOR: I bet it does.
 15 MR. KOLVET: 236 is admitted already. 237 is
 16 admitted. 238 was testified to, the patents for the Thompson
 17 Ranch, I'd offer those.
 18 HEARING OFFICER JOSEPH-TAYLOR: Let's do 239,
 19 240. Any objection to the patents?
 20 MS. PETERSON: No.
 21 HEARING OFFICER JOSEPH-TAYLOR: 238, 239 and 240
 22 will be admitted.
 23 (Exhibits 238, 239 and 240 admitted into
 24 evidence.)
 25 MS. URE: I have a quick comment. Before the

1 MR. KOLVET: They may be, I'm not sure.
 2 HEARING OFFICER JOSEPH-TAYLOR: Yes. Exhibit --
 3 I don't know about the -- I don't think the Camilleri,
 4 C-A-M-I-L-L-E-R-I, is. So any objection to 243?
 5 MS. PETERSON: No.
 6 HEARING OFFICER JOSEPH-TAYLOR: That will be
 7 admitted.
 8 (Exhibit 243 admitted into evidence.)
 9 HEARING OFFICER JOSEPH-TAYLOR: I'm going to
 10 do 244 because Exhibit 130 is only excerpts. Any objection to
 11 234?
 12 MS. PETERSON: No.
 13 HEARING OFFICER JOSEPH-TAYLOR: You know, I'm
 14 just going to admit them, Mr. Kolvet, because I don't know if
 15 the others are excerpts or not. So any objection to 245, 246
 16 and 247? You can take your time to look.
 17 MS. PETERSON: No.
 18 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 19 They'll be admitted.
 20 (Exhibits 245, 246 and 247 admitted
 21 into evidence.)
 22 MR. KOLVET: 248, 249 and 250 and 251 were
 23 testified to regarding the surveys.
 24 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 25 MS. PETERSON: No.

1 patents on their presentation there was a -- a mapping of
 2 where the patents were and I don't think that was in the
 3 actual exhibit. So if we can get that produced to us.
 4 Because the information on it I couldn't read off the screen.
 5 MR. KOLVET: It is a part of what you had there.
 6 If you can't read it I can get you a better --
 7 MS. URE: Do you have an electronic copy of it?
 8 MR. KOLVET: I can get you one.
 9 MS. URE: That would be great. Thank you.
 10 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 11 MR. KOLVET: 241 and 242 are the Eureka tax
 12 records.
 13 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 14 MS. PETERSON: No objection.
 15 HEARING OFFICER JOSEPH-TAYLOR: 241, 242 will be
 16 admitted.
 17 (Exhibits 241 and 242 admitted into
 18 evidence.)
 19 MR. KOLVET: 243, 244, 245, 246 and 247 are the
 20 historical documents referenced by Mr. Thiel that he relied on
 21 in forming some of his opinions about water use. We'd offer
 22 those.
 23 HEARING OFFICER JOSEPH-TAYLOR: I was thinking
 24 they're already in evidence.
 25 THE STATE ENGINEER: They are.

1 HEARING OFFICER JOSEPH-TAYLOR: 248 through 251
 2 will be admitted.
 3 (Exhibits 248, 249, 250, 251 admitted
 4 into evidence.)
 5 MR. KOLVET: And 252 is a topo of the Diamond
 6 Springs, I don't know if we had testimony on that
 7 specifically.
 8 HEARING OFFICER JOSEPH-TAYLOR: I didn't write
 9 the number down. Are you offering 252?
 10 MR. KOLVET: Yes.
 11 MS. PETERSON: No objection.
 12 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 252
 13 will be admitted.
 14 (Exhibit 252 admitted into evidence.)
 15 MR. KOLVET: And then the aerials, 253, 254, 255,
 16 256 and 257.
 17 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 18 253 through 257?
 19 MS. PETERSON: No.
 20 HEARING OFFICER JOSEPH-TAYLOR: They will be
 21 admitted.
 22 (Exhibits 253, 254, 255, 256 and 257
 23 admitted into evidence.)
 24 MR. KOLVET: 258 is the Bailey well logs, I
 25 believe. I think there's been testimony through this witness

1 about the Bailey well.
 2 HEARING OFFICER JOSEPH-TAYLOR: Oh, with
 3 Mr. Katzer and Mr. Smith?
 4 MR. KOLVET: Yes.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 6 258?
 7 MS. PETERSON: No.
 8 HEARING OFFICER JOSEPH-TAYLOR: 258 will be
 9 admitted.
 10 (Exhibit 258 admitted into evidence.)
 11 MR. KOLVET: Same with 259.
 12 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 13 259?
 14 MS. PETERSON: No.
 15 HEARING OFFICER JOSEPH-TAYLOR: It will be
 16 admitted.
 17 (Exhibit 259 admitted into evidence.)
 18 MR. KOLVET: 260 are flow measurements on
 19 Thompson Springs.
 20 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 21 MS. PETERSON: No.
 22 HEARING OFFICER JOSEPH-TAYLOR: 260 will be
 23 admitted.
 24 (Exhibit 260 admitted into evidence.)
 25 MR. KOLVET: 261 is the consumptive use that

1 HEARING OFFICER JOSEPH-TAYLOR: They will be
 2 admitted.
 3 (Exhibits 265 and 266 admitted into
 4 evidence.)
 5 MR. KOLVET: And I believe 263 -- or 264 was kind
 6 of discussed when Mr. Smith was testifying, so I don't need to
 7 offer it.
 8 HEARING OFFICER JOSEPH-TAYLOR: You don't need
 9 to?
 10 MR. KOLVET: I will, but I don't know that it's
 11 necessary.
 12 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 13 MR. KOLVET: If I duplicate what's already in the
 14 record.
 15 HEARING OFFICER JOSEPH-TAYLOR: I was just trying
 16 to make sure I heard what you said. So you're not offering
 17 264?
 18 MR. KOLVET: Right.
 19 HEARING OFFICER JOSEPH-TAYLOR: I'll put not
 20 admitted.
 21 MR. KOLVET: That's the EIS on the mountain.
 22 HEARING OFFICER JOSEPH-TAYLOR: Right.
 23 MR. KOLVET: With that just one final question
 24 for Mr. Thiel, I think that's all of my -- although we haven't
 25 talked about the joint exhibits for some of them.

1 Mr. Thiel used.
 2 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 3 MS. PETERSON: No.
 4 HEARING OFFICER JOSEPH-TAYLOR: 261 will be
 5 admitted.
 6 (Exhibit 261 admitted into evidence.)
 7 MR. KOLVET: And 262 is a rebuttal report
 8 prepared by Mr. Thiel to evidence presented by the Protestants
 9 all though he's not testified about it I would offer it I
 10 don't think he needs to repeat what he's already put in.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 12 MS. PETERSON: No objection.
 13 HEARING OFFICER JOSEPH-TAYLOR: 262 will be
 14 admitted.
 15 (Exhibit 262 admitted into evidence.)
 16 MR. KOLVET: And 266 I think is a list of
 17 rebuttal witnesses.
 18 HEARING OFFICER JOSEPH-TAYLOR: I want 265 also.
 19 Mr. Kolvet.
 20 MR. KOLVET: Oh, I skipped it.
 21 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 22 MR. KOLVET: Sorry.
 23 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 24 265, 266?
 25 MS. PETERSON: No.

1 HEARING OFFICER JOSEPH-TAYLOR: I noted that you
 2 discussed 278 at some point.
 3 MR. KOLVET: We did. I thought it was marked in.
 4 I'm sorry, 278.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 6 278?
 7 MS. PETERSON: No.
 8 HEARING OFFICER JOSEPH-TAYLOR: It will be
 9 admitted.
 10 (Exhibit 278 admitted into evidence.)
 11 MR. KOLVET: While I'm at it I ought to do I
 12 guess 288 and 289.
 13 HEARING OFFICER JOSEPH-TAYLOR: 289 is in. 288
 14 is not. Any objection to 288?
 15 MS. PETERSON: No.
 16 HEARING OFFICER JOSEPH-TAYLOR: Be admitted.
 17 (Exhibit 288 admitted into evidence.)
 18 MR. KOLVET: And 286 are the hearing transcripts
 19 related to order 1226. They're probably part of your records
 20 anyway, but I'll offer them.
 21 HEARING OFFICER JOSEPH-TAYLOR: I haven't heard
 22 anybody testify about them.
 23 MS. PETERSON: Yeah, we had offered that too so
 24 however you want to do that. We'd like it in as an exhibit
 25 also.

1 HEARING OFFICER JOSEPH-TAYLOR: Okay. 286 will
 2 be admitted.
 3 (Exhibit 286 admitted into evidence.)
 4 MR. KOLVET: And if I can be allowed to at least
 5 go back and review some of these others that I'm just not that
 6 familiar with, they may have been testified, but I'll reserve
 7 offering those if that's okay.
 8 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 9 MR. KOLVET: With that I think that's it, that
 10 completes the offer on the evidence. And then just one more
 11 question for Mr. Thiel.
 12 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 13 BY MR. KOLVET:
 14 Q. Based on all that you have reviewed and testified
 15 that you reviewed, what are your conclusions regarding the
 16 water use at the Thompson, Cox and Willow property, historical
 17 use?
 18 A. Yes. Based upon the research that I performed
 19 looking over the records that I could find that exist, certain
 20 that what I've developed is an accurate depiction on the best
 21 rate claims as well as the applications to change to comply
 22 with order 1226 as far as mitigation, I think what I had to do
 23 was look at the USGS reports that were available to get an
 24 indication what occurred within the basin from a water
 25 resources standpoint.

1 Q. It's 242.
 2 A. I have that.
 3 Q. And the first entry there is George W. Taft; do
 4 you see that?
 5 A. I do.
 6 Q. And if you go to the extreme right-hand side this
 7 is from the 1887 assessment role; is that correct?
 8 A. It is.
 9 Q. And if you look at the entries in the second bis
 10 column that lists all the personal property, it lists all of
 11 the real property that was assessed in that texture; is that
 12 correct?
 13 A. It does.
 14 Q. And the -- there's one line that has improvements
 15 and it's about in the middle of that. It says improvements,
 16 adobe house, stable and corrals; do you see that?
 17 A. I don't. I do, yes.
 18 Q. Do you see in that column any other entries of
 19 improvements on any of the other properties that are listed
 20 under that entry for Mr. Taft?
 21 A. I don't quite understand the question. What I
 22 find in this tax record is that there's improvements, which is
 23 an adobe house, stables and corrals in township 23, north 54
 24 east.
 25 HEARING OFFICER JOSEPH-TAYLOR: She asked you are

1 And then I had to back up and look at what
 2 existed under the 1879 survey which led me to all the other
 3 items to see whether I could corroborate or dismiss that
 4 aspect of it.
 5 Based upon my investigations the field truthing,
 6 the aerial photographs and everything else I did with respect
 7 to this hearing, I believe I developed a comprehensive
 8 analysis of what I believe is the historical use on the
 9 property.
 10 Q. And is that historical use reflected in the
 11 amended proofs -- vested claims that you filed and the vested
 12 claim you filed on the Willow property?
 13 A. It is.
 14 MR. KOLVET: That's all I have.
 15 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 16 Cross-examination? Start with you, Ms. Peterson?
 17 MS. PETERSON: Yeah.
 18 CROSS-EXAMINATION
 19 BY MS. PETERSON:
 20 Q. Thank you. Hi, Mr. Thiel, I'm here representing
 21 Eureka County.
 22 A. Hi, Ms. Peterson.
 23 Q. Could you turn to Exhibit 242, which is the
 24 transcribed exhibit records document?
 25 A. Would you -- what exhibit are you looking for?

1 there any other improvements.
 2 THE WITNESS: Other than what's listed in the
 3 upper part of that column, which is the basically the personal
 4 property, that's it.
 5 BY MS. PETERSON:
 6 Q. Those are the two -- those are the two entries
 7 that show improvement for the personal property; is that
 8 correct?
 9 A. Yes.
 10 Q. Okay. And then going down to the next -- the
 11 entry for Mr. Millett?
 12 A. Yes.
 13 Q. And you see over on the right-hand side, the
 14 extreme right-hand side that the taxes were paid by Nels Toft;
 15 do you see that?
 16 A. I do.
 17 Q. And then if you look to see what year that was?
 18 A. That would be -- actually it looks like
 19 November 5th, the year 1900 tax book.
 20 Q. Right.
 21 A. Which is that's when it was paid.
 22 Q. Okay.
 23 A. But I don't know whether that was -- the issue I
 24 had with reviewing this is I looked in the 1887 assessment but
 25 it's marked here on the November 5th, 1900 tax year.

1 Q. Right. So we don't really know if it's an 1887
 2 or a 1900 entry; is that right?
 3 A. That's correct.
 4 Q. And then would you look at the improvements that
 5 Mr. Millett had, there's personal property at the top; is that
 6 correct?
 7 A. That's correct.
 8 Q. And it does say a possessory interest in and to
 9 attract a farming and grazing land; correct?
 10 A. Correct.
 11 Q. And then there's other improvements listed down
 12 on the properties; you see that?
 13 A. I do.
 14 Q. All right. And again, the house stable, corrals
 15 and then other frame house at the very end of the page; is
 16 that correct?
 17 A. Yes.
 18 Q. And then going to the next page of your exhibit
 19 from Nels Toft.
 20 A. Yes.
 21 Q. And when were those taxes paid, again, looking at
 22 the extreme right-hand side for that entry?
 23 A. It appears that they were paid May 24th, 1913 and
 24 there was some other payments made November 29th, 1912.
 25 Q. And again, you don't know if these are 1887 or if

1 correct?
 2 A. Well -- oh, you're looking at Burnell's top on
 3 page 2 I guess it is. Yes, I see that.
 4 Q. And then again, there is listed at the end his
 5 improvements are horses, stables, corrals?
 6 A. Correct.
 7 Q. And then pretty much the same information for the
 8 last entry on that page?
 9 A. Yes.
 10 Q. And then going to the third page of that
 11 document, what -- what tax record -- what assessment record
 12 year would this be?
 13 A. That appears to be 1918.
 14 Q. And then if you look at the entry for Mr.
 15 Jacobson and Mr. Toft; do you see that?
 16 A. Yes.
 17 Q. There's reference there to actually the acreage
 18 that's with hay, 80 acres grazing and 15 -- 1584 acres
 19 grazing; do you see that?
 20 A. I do.
 21 HEARING OFFICER JOSEPH-TAYLOR: He said yes.
 22 BY MS. PETERSON:
 23 Q. And would you agree that that would be the first
 24 notation in the assessment records showing actual use on the
 25 land?

1 these are 1912 tax -- 1912, 1913 tax records; is that correct?
 2 A. Yes, except they were in the 1887 tax book.
 3 Q. I thought you said you didn't know whether these
 4 were in the 1887 tax book or --
 5 A. I'm sorry, these were actually -- the upper two
 6 on the first two we reviewed came out of the 1887 tax book.
 7 If you look at the -- in other words, the first two should
 8 come out the 1887 tax book.
 9 Q. On the first page?
 10 A. Yes.
 11 Q. And then what -- where are these from on the
 12 second page?
 13 A. That would be from later tax books, I believe.
 14 Q. Subsequent to 18 --
 15 A. About ten years' separation, more or less.
 16 Q. Okay. And I keep on saying tax book, but they
 17 were the assessor's records?
 18 A. That's correct.
 19 Q. Okay. So if I keep on saying tax we all
 20 understand that it's the assessor's records?
 21 A. That's correct.
 22 Q. Thank you. And then looking at the improvements
 23 that are listed there for Mr. Toft?
 24 A. Yes.
 25 Q. You see the personal property at the top;

1 A. Not necessarily. I mean, the aspect is that as
 2 you go further in time the tax records get more detailed. I
 3 mean, that's how I would characterize it.
 4 Q. Do you know if there were -- in the 1887
 5 assessment records do you know if there was a policy of them
 6 not to include --
 7 A. Well, I wouldn't know that.
 8 Q. You wouldn't know that. And then --
 9 HEARING OFFICER JOSEPH-TAYLOR: Finish your
 10 question. Not to include?
 11 MS. PETERSON: That information.
 12 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 13 BY MS. PETERSON:
 14 Q. And then just summarizing your proofs --
 15 A. Yes.
 16 Q. -- of appropriation, you're claiming priorities
 17 of 1858, 1879, 1880 and I think 1901; is that correct?
 18 A. I'm -- I've lost you, I don't know what you're
 19 asking.
 20 Q. Your proofs of appropriation.
 21 A. Um-hum.
 22 Q. That have been filed, V-01114, 1115 and all the
 23 other numbers, the proofs of appropriation?
 24 A. Um-hum.
 25 Q. Do you know what I'm talking about?

1 A. I do.
 2 Q. I looked at all those and I see on the various
 3 proofs that you're claiming priorities of 1858, 1879, 1880 and
 4 1901; is that correct?
 5 A. I don't recall, I'm sorry. I know that the
 6 original diversion of the water first occurred in 1858,
 7 approximately.
 8 Q. For all your claims?
 9 A. No, from Taft Springs.
 10 Q. And you haven't included any tax assessment
 11 records from 1858-year; is that correct?
 12 A. No. I believe we went back as far as we could at
 13 the time.
 14 Q. Okay. So there's no records prior to 1887?
 15 A. Not that we could find.
 16 Q. And you did your ground truthing in 2013; is that
 17 correct?
 18 A. Yes.
 19 Q. And can you say in 2013 you knew that there was
 20 water put to beneficial use on the lands you're claiming in
 21 your proofs as of 1858, 1879, 1880 or 1901?
 22 A. Not relying solely on the ground truthing, no.
 23 Q. And then if you would look at Harrill,
 24 Exhibit 304?
 25 HEARING OFFICER JOSEPH-TAYLOR: H-A-R-R-I-L-L,

1 THE WITNESS: I need some steam. I have that.
 2 BY MS. PETERSON:
 3 Q. Did you read the first paragraph under natural
 4 groundwater yield?
 5 A. I found it.
 6 Q. And I think you testified that you read Harrill's
 7 report?
 8 A. I did.
 9 Q. And do you have any reason to dispute
 10 Mr. Harrill's observations in 1968 that only one-third of the
 11 total screened discharge is put to beneficial use in the north
 12 Diamond sub area?
 13 A. Well, I don't agree with it and obviously the
 14 work I was involved with I'd have to disagree with that. I
 15 don't necessarily agree with his estimation of what was put to
 16 beneficial use and what wasn't.
 17 HEARING OFFICER JOSEPH-TAYLOR: Are you done with
 18 that exhibit?
 19 MS. PETERSON: Yes. May I?
 20 HEARING OFFICER JOSEPH-TAYLOR: I'm not that
 21 formal, I don't care.
 22 MS. PETERSON: This is Exhibit 323.
 23 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 24 BY MS. PETERSON:
 25 Q. Mr. Thiel, I'm showing you what's been marked --

1 two Ls?
 2 TECHNICAL ASSISTANT: Yes.
 3 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 4 MR. KOLVET: Exhibit 304?
 5 HEARING OFFICER JOSEPH-TAYLOR: Um-hum.
 6 BY MS. PETERSON:
 7 Q. Do you have that in front of you?
 8 A. I'm working on it. I don't have a copy, I can't
 9 open a copy in front of me.
 10 MR. KOLVET: I have the exhibit.
 11 MS. PETERSON: Thank you, Mr. Kolvet.
 12 THE WITNESS: It do have that.
 13 MS. PETERSON: Thank you.
 14 BY MS. PETERSON:
 15 Q. Would you look at page 56 of that exhibit?
 16 HEARING OFFICER JOSEPH-TAYLOR: These are going
 17 to be big exhibits, it may be faster if we hand them to you.
 18 THE WITNESS: Yes.
 19 HEARING OFFICER JOSEPH-TAYLOR: Computers aren't
 20 always better.
 21 THE STATE ENGINEER: They are if you know how to
 22 use them.
 23 MS. URE: I have a clean copy.
 24 HEARING OFFICER JOSEPH-TAYLOR: I got it. Now,
 25 see how fast that was.

1 well, what's been submitted as Exhibit 323 in this document
 2 exchange.
 3 A. Yes.
 4 Q. Do you see that?
 5 A. I do.
 6 Q. And this was a letter -- well, this was a letter
 7 written by your boss Peter Morros at that time, the State
 8 Engineer?
 9 A. Yes.
 10 Q. To Mr. Thompson. Are you familiar with this
 11 letter?
 12 A. Somewhat.
 13 Q. And in the second paragraph there Mr. Morros is
 14 explaining to Mr. Thompson the results of the March 10, 1982
 15 field investigation?
 16 A. Yes.
 17 Q. Do you have any reason to dispute the field
 18 investigation summary and preliminary findings stated in this
 19 letter by Mr. Morros?
 20 A. Somewhat I do. In other words, it's an
 21 observation of what he found to be some of the issues in
 22 responding to Mr. Thompson's complaints.
 23 Q. And were you involved in any of this work,
 24 because I know you were involved at this time in the State
 25 Engineer's Office on this other matter?

1 A. I was involved. I do remember this letter and
 2 some of the work that I was required to do came out of the
 3 hearings that were done in March and August of 1982. I do
 4 recall this letter and reviewing it at that time and I have
 5 seen it since.
 6 Q. And Mr. Katzer testified yesterday about the
 7 letter that he wrote to Mr. Morros --
 8 A. Yes.
 9 Q. -- around this same time frame; do you recall
 10 that testimony?
 11 A. I do.
 12 Q. Do you dispute the findings or the observations
 13 that Mr. Katzer had in his letter to Mr. Morros on the same
 14 subject?
 15 A. Not really.
 16 Q. Were you at the curtailment hearings in 1982 in
 17 Eureka County?
 18 A. No, I wasn't invited. I did not go to the
 19 hearings.
 20 Q. Were you aware -- were you aware that at the
 21 hearings the Diamond Valley irrigators offered Mr. Thompson to
 22 drill -- to drill a well so that he could obtain water for his
 23 ranch?
 24 MR. KOLVET: I'm going to object, it's not
 25 relevant to what we're here about.

1 MS. PETERSON: Okay. It is a letter from Boundy
 2 and Forman dated October 21st, 1975 to the State Engineer
 3 regarding permit --
 4 HEARING OFFICER JOSEPH-TAYLOR: I don't think the
 5 court reporter is going to hear you.
 6 MS. PETERSON: Regarding permit 26794. An
 7 application made by Mr. Ted Thompson that was withdrawn.
 8 HEARING OFFICER JOSEPH-TAYLOR: Application
 9 number?
 10 MS. PETERSON: 26794.
 11 HEARING OFFICER JOSEPH-TAYLOR: So it's an
 12 official record of this office?
 13 MS. PETERSON: It is, but I think it should be an
 14 exhibit. And I --
 15 HEARING OFFICER JOSEPH-TAYLOR: Go ahead.
 16 MS. PETERSON: -- provide further copies.
 17 HEARING OFFICER JOSEPH-TAYLOR: State Engineer
 18 has a question while you look at that, Mr. Thiel.
 19 THE STATE ENGINEER: Ms. Peterson you brought up
 20 the fact that Mr. Thompson was offered a well back in 1982 by
 21 the State Engineer's Office. What do you make of that?
 22 MS. PETERSON: Of -- well -- let me just clarify.
 23 I have some information, the reason I'm hesitating with your
 24 question is that I have some information from people that will
 25 testify tomorrow that that well was offered by the irrigators,

1 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 2 MR. KOLVET: About what may or may not have been.
 3 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 4 Absolutely relevant.
 5 THE WITNESS: I -- I can respond to that. And
 6 basically reading through the transcript recently. It wasn't
 7 the irrigators that offered Mr. Thompson the wells, it was
 8 Mr. Morros that offered Thompson the well based upon use of
 9 the basin funds to drill him the well.
 10 BY MS. PETERSON:
 11 Q. And there was an offer even to pay for the
 12 electricity for that well?
 13 A. Not that I recall. And I know the reason why
 14 Mr. Thompson didn't take it, but.
 15 HEARING OFFICER JOSEPH-TAYLOR: That's not the
 16 question pending.
 17 BY MS. PETERSON:
 18 Q. But it's true that Mr. Thompson didn't take that
 19 offer; is that correct?
 20 A. That's correct.
 21 Q. And I am going to show you, I -- I just have one
 22 copy of this because I just found this, so I'll show it to you
 23 first.
 24 HEARING OFFICER JOSEPH-TAYLOR: Tell us what it
 25 is while he's looking at it.

1 not necessarily the State Engineer, so that's why I'm
 2 having -- you know, a little issue with your question.
 3 So he was offered a well by somebody.
 4 THE STATE ENGINEER: The transcript I read
 5 certainly seemed to indicate that it was the State Engineer's
 6 Office that offered, that's why I asked.
 7 MS. PETERSON: Okay. What do I make of that?
 8 THE STATE ENGINEER: Yes. What was the State
 9 Engineer's Office trying to do 30 years ago for Mr. Thompson's
 10 right?
 11 MS. PETERSON: I think trying to -- to let him
 12 use his water and maybe even go so far as to say make him
 13 whole.
 14 THE STATE ENGINEER: Okay. Thank you.
 15 HEARING OFFICER JOSEPH-TAYLOR: Ready, Mr. Thiel?
 16 THE WITNESS: Yes. To get back to the issue at
 17 hand, I have seen this before.
 18 BY MS. PETERSON:
 19 Q. And is it fair to say that that is a copy of an
 20 application and permit applied for by Mr. Ted Thompson, which
 21 is Mr. -- Mr. Milton Thompson's father in 1974 --
 22 A. Um-hum.
 23 Q. -- to the State Engineer's Office for a well on
 24 the Cox Ranch?
 25 A. It appears to be. I looked at the description of

1 it and it's on the Cox Ranch.
 2 Q. And he was granted a permit from the State
 3 Engineer for use on the Cox Ranch; is that correct?
 4 A. He was granted a permit, yes.
 5 Q. And that that permit was subsequently withdrawn
 6 because Mr. Thompson could not complete the work of
 7 improvement?
 8 A. I don't have any indication that on the -- what
 9 the offer to me. It was withdrawn by his -- by the person
 10 that did the application and the supporting map.
 11 Q. And I think the cover letter says because he
 12 couldn't file a proof of completion?
 13 A. He said he was unable to complete the proof of
 14 completion at this time.
 15 Q. And then if you look at the notes in the State
 16 Engineer's Office on the bottom of the second page of the
 17 permit?
 18 A. Yes.
 19 Q. What does that say?
 20 A. That says -- what part are you requesting? Are
 21 you -- with regard to the withdrawal?
 22 Q. Yeah, the little stamp?
 23 A. Well, one has nothing to do with the other.
 24 Basically what it says is that it was cancelled by Roland
 25 Westergard because of failure of the Applicant to comply with

1 26794.
 2 Is there going to be any objection to the
 3 admission of that, Mr. Kolvet?
 4 MR. KOLVET: Technically it's already in, so.
 5 HEARING OFFICER JOSEPH-TAYLOR: We can
 6 administratively notice it.
 7 MR. KOLVET: No objection.
 8 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Mac,
 9 will you get another copy made?
 10 (Exhibit 438 admitted into evidence.)
 11 BY MS. PETERSON:
 12 Q. Exhibit 233, if you could turn to that,
 13 Mr. Thiel?
 14 A. I have that.
 15 Q. And it's Exhibit 3 to your letter to the State
 16 Engineer, it's book 1 of the water locations.
 17 A. Yes.
 18 Q. Do you have that?
 19 A. I'm working hard to get there.
 20 Q. Okay.
 21 HEARING OFFICER JOSEPH-TAYLOR: 233?
 22 MS. PETERSON: Yes.
 23 HEARING OFFICER JOSEPH-TAYLOR: Stay on top of
 24 this. I got it, Mr. Thiel, I'm going to beat you to it.
 25 THE WITNESS: I think you will.

1 the provision of the permit.
 2 So the withdrawal -- if it was withdrawn it would
 3 say withdrawn and the date and the signature of the person in
 4 here. This indicates to me that the proof of completion
 5 wasn't completed therefore it was cancelled. Regardless, it's
 6 the same result.
 7 Q. Okay. That's fair. Thank you.
 8 MS. PETERSON: So I would like that marked as an
 9 exhibit.
 10 HEARING OFFICER JOSEPH-TAYLOR: Let's hold off
 11 right now and get some copies made a little later and do it.
 12 MS. PETERSON: Okay.
 13 HEARING OFFICER JOSEPH-TAYLOR: Let me put it on
 14 the exhibit list though, Ms. Peterson, so we don't forget it.
 15 MS. PETERSON: Okay.
 16 HEARING OFFICER JOSEPH-TAYLOR: Your exhibits.
 17 So -- so that is a copy of permit, what's the number,
 18 Mr. Thiel?
 19 THE WITNESS: It is permit 26794.
 20 HEARING OFFICER JOSEPH-TAYLOR: And I'm going to
 21 take those from you so we remember to get that. Thank you.
 22 So I've marked as Exhibit 438 a letter from Boundy,
 23 B-O-U-N-D-Y, and Forman, F-O-R-M-A-N, Inc. to the State
 24 Engineer dated October 21st, 1975, asking for the withdrawal
 25 of permit 26794 and a copy of the cancelled amended permit

1 HEARING OFFICER JOSEPH-TAYLOR: We're going to
 2 not lose time. Thank you.
 3 THE WITNESS: Thank you. I have that.
 4 BY MS. PETERSON:
 5 Q. You included these as part of the information to
 6 the State Engineer in your April 12, 1913 -- 2013 letter; is
 7 that correct?
 8 A. I did.
 9 Q. And what are those documents?
 10 A. What they are is they're excerpts from the
 11 so-called water book filed in the county recorder's office
 12 within Eureka County.
 13 Q. And do you know why they were recorded in Eureka
 14 County? And do you know the -- do you know why they were
 15 recorded in Eureka County?
 16 A. I do.
 17 Q. Why?
 18 A. Basically the legislature adopted chapter 100 in
 19 1866 that said the intent of the legislation was to create a
 20 method for the legislature to check or to track water filings
 21 throughout the state.
 22 Under that provision any water user had to file
 23 with the county basically their intent to construct ditches.
 24 Legislature figured at that time that when they knew that
 25 ditches were being constructed there had to be water there.

1 And at the time it was the intent of the parties to say what
 2 property they intended to irrigate.
 3 Q. And do you happen to have the folders for your
 4 vested claims 01114 and 01115?
 5 MR. KOLVET: The folders?
 6 HEARING OFFICER JOSEPH-TAYLOR: Does he have
 7 what?
 8 BY MS. PETERSON:
 9 Q. The inside -- the inside cover of the State
 10 Engineer's folder for those vested claims?
 11 A. I do not.
 12 Q. I happen to have copies. You've probably looked
 13 at the complete files of your vested -- the vested claims or
 14 at least those two vested claims in this proceeding; correct?
 15 A. I did.
 16 Q. And are you familiar with -- I call them the
 17 cover pages, you probably call them something else that are in
 18 the State Engineer's files?
 19 A. Yes.
 20 Q. And do you see on each one of those files where
 21 the State Engineer's Office issued a certificate on those
 22 claims?
 23 A. I do and I will swear to that.
 24 Q. And are these the recorded copies of those
 25 certificates here in your Exhibit 233?

1 Q. These are different?
 2 A. I'm lost on the question, I'm sorry.
 3 HEARING OFFICER JOSEPH-TAYLOR: Let me try. Can
 4 I see what you're looking at Exhibit 232, Ms. Peterson?
 5 MR. KOLVET: 233.
 6 HEARING OFFICER JOSEPH-TAYLOR: 233. Thank you.
 7 I think we're talking about recordings in counties which are
 8 different than the certificates here.
 9 MR. KOLVET: That's -- I think you're correct.
 10 MS. PETERSON: I'm not sure about that.
 11 HEARING OFFICER JOSEPH-TAYLOR: Well, let's
 12 figure it out.
 13 MS. PETERSON: Oh, do you want a clean copy?
 14 HEARING OFFICER JOSEPH-TAYLOR: No. This is what
 15 she's looking at.
 16 MR. KOLVET: What are you showing her, what page
 17 of those?
 18 HEARING OFFICER JOSEPH-TAYLOR: What page are you
 19 on, Mr. Thiel, of your Exhibit 233?
 20 THE WITNESS: It appears to be 36.
 21 BY MS. PETERSON:
 22 Q. You have included pages, I think 36, 41, 69, 70
 23 and 71 and 72 in your exhibit.
 24 A. I'm sorry, with the commotion going on I didn't
 25 hear you.

1 A. No.
 2 Q. I think they may be.
 3 A. Well, the way you ask the question is this the
 4 recorded copy of the certificate and it's not.
 5 Q. Oh, I thought I said are the pages in Exhibit 233
 6 the recorded copies of those certificates that --
 7 HEARING OFFICER JOSEPH-TAYLOR: He's playing
 8 semantics with you. A copy of recorded.
 9 THE WITNESS: If you're saying that references a
 10 copy of a recorded certificate it does.
 11 BY MS. PETERSON:
 12 Q. In Exhibit 233?
 13 A. Yes.
 14 Q. And are those the certificates listed on those
 15 folders?
 16 A. They are, yes.
 17 Q. In your exhibit?
 18 A. In the exhibit I have in my hands, yes.
 19 HEARING OFFICER JOSEPH-TAYLOR: Okay. Okay.
 20 Hold it, hold it. I don't think you're understanding the
 21 question. What I'm hearing is is your -- does your
 22 Exhibit 232 contain a copy of the certificates referenced on
 23 the front of those vested right files.
 24 THE WITNESS: It does not.
 25 BY MS. PETERSON:

1 MR. KOLVET: Just --
 2 THE WITNESS: I'm sorry, the question was -- kind
 3 of having a conversation at the time.
 4 BY MS. PETERSON:
 5 Q. So --
 6 HEARING OFFICER JOSEPH-TAYLOR: Mr. Thiel, here
 7 is your Exhibit 233.
 8 THE WITNESS: Okay.
 9 HEARING OFFICER JOSEPH-TAYLOR: Here is page 11
 10 of your exhibit. It's up to you.
 11 MS. PETERSON: Thank you.
 12 BY MS. PETERSON:
 13 Q. Do you have in your Exhibit 233 page 69 of the
 14 water locators in Eureka County?
 15 A. I don't see a reference to page 69 anywhere on
 16 here. Let me look back.
 17 MR. KOLVET: Look at page 13 of your exhibit.
 18 THE WITNESS: I'm getting there. Well, this one
 19 I'm missing page 69. Oh, there it is, I found it. I have
 20 that, yes. What was your question at this point?
 21 BY MS. PETERSON:
 22 Q. Is that certificate 38 issued by the State
 23 Engineer on November 23rd, 1912, recorded December 11th, 1912,
 24 in book A, water locations, page 69 of the Eureka County
 25 records?

1 A. Finally we got there, yes.
 2 Q. Thank you, George. Are you -- are you -- I know
 3 you referenced chapter 100, are you aware of -- and I'm -- I'm
 4 not trying to ask you legal questions of what the law was in
 5 effect in 1912 regarding the State Engineer's issue --
 6 regarding proofs of appropriation filed with the State
 7 Engineer, the issues of certificates and the recording of
 8 those certificates and the county where the water was located?
 9 A. I am. The -- there was a statute change on
 10 March 1st, 1905 that anything after 1905 was considered an
 11 appropriation to be filed for a claim of vested right. After
 12 1905 up until March 22nd, 1913 that the method to in which the
 13 certificate of appropriation was recorded or filed was we had
 14 to submit supporting map, that type thing, go through the
 15 process, was investigated and the State Engineer would issue a
 16 certificate of appropriation.
 17 Q. And there was some changes in the law in 1908,
 18 are you familiar with those changes?
 19 A. There was two changes I was somewhat aware of.
 20 There was one in 1907, 1909 that I'm vaguely familiar with but
 21 not to a lot of detail. I'm not aware of one in 1908.
 22 Q. Okay. And I guess maybe I should just ask my
 23 question. I think this is an issue we should brief what the
 24 effect of -- what the law was in 1908, what the effects of the
 25 proofs that were filed and certificates that were issued by

1 Q. Yes, I'm sorry, Mr. Venturacci's application.
 2 And then your second amendment to proof V-01115 was filed on
 3 February 25th, 2013; is that correct?
 4 A. I don't recall. I mean, at this point I'm sure
 5 those dates are accurate, I'm not sure.
 6 Q. All right. And if your second amendment was
 7 filed after the date of your filing of your application 81825,
 8 would it relate back, the application to the claim that was on
 9 file at the time the application was filed?
 10 A. My recollection to give you a short answer to a
 11 long question, is the second amendment was in preparation for
 12 a while. I filed the applications to change. I don't know
 13 what sequence they came in. I know I filed the proofs and
 14 they languished for a while before there was a review done. I
 15 got basically some questions asked to make some corrections to
 16 it. I did that. And responded to those.
 17 So I don't know the sequence of dates or times,
 18 but I filed them at approximately the same time frame.
 19 Q. And then I know you had some issues with the
 20 jurors, I'm not going to belabor that too much, but are you
 21 aware of any time frame in the early statutes of the State
 22 Engineer's Office when the State Engineer's Office actually
 23 prepared the map that went with the proof of appropriation?
 24 A. I don't know. I don't know.
 25 Q. Is it possible the map that you were questioning

1 the State Engineer at that time and recorded with the county
 2 recorder's office?
 3 HEARING OFFICER JOSEPH-TAYLOR: I don't have a
 4 problem with that, Ms. Peterson. It's an issue that a lot of
 5 people don't seem to be fully understanding of, so let's make
 6 it a record in this proceeding.
 7 MS. PETERSON: Well, and I guess I'm offering
 8 this on behalf of Eureka County, because we did want to
 9 present all the information that we had to the State Engineer
 10 about the issue and what the status of those proofs actually
 11 might be at this point.
 12 They may -- those two proofs may be vested claims
 13 already. I guess that's what I'm trying to get at. Vested
 14 rights, not claims, vested rights.
 15 HEARING OFFICER JOSEPH-TAYLOR: You lost me when
 16 you said vested rights, I knew where were you going until you
 17 say that. So I'll put it on my list of things to talk about
 18 at the end of the hearing.
 19 MS. PETERSON: Okay.
 20 BY MS. PETERSON:
 21 Q. And then, Mr. Thiel, your application 81825.
 22 A. Yes.
 23 Q. That was filed on April 26, 2012?
 24 A. Yes, it wasn't my application, but it was filed
 25 for Mr. Venturacci.

1 that was prepared in 1912 was actually prepared by the State
 2 Engineer's Office?
 3 MR. KOLVET: Been asked and answered, he doesn't
 4 know.
 5 HEARING OFFICER JOSEPH-TAYLOR: No, she asked is
 6 it possible. Overruled.
 7 MR. KOLVET: Well, anything is possible.
 8 HEARING OFFICER JOSEPH-TAYLOR: Overruled,
 9 Mr. Kolvvet, let's not argue, let's get done.
 10 THE WITNESS: Can I have the question again?
 11 BY MS. PETERSON:
 12 Q. Is it possible that the map that you were
 13 questioning in -- that was prepared with the proof in 1912
 14 that didn't have the cultural map part of it, you were
 15 questioning it; do you recall that?
 16 A. I do.
 17 Q. Is it possible that that map could have been
 18 prepared by the State Engineer's Office under the statutory
 19 requirements at that time?
 20 A. I don't believe it was that way, but I can't say
 21 for sure.
 22 Q. Your jurat that you used in 2013.
 23 A. Yes.
 24 Q. Stated that you looked at records in the State
 25 Engineer's Office?

1 A. Yes.

2 Q. Did you look at Exhibit 339, and that's the field
3 notes from Paine relating to Taft in Horse Canyon prior --
4 prior to -- I guess signing your jurat or preparing your map?
5 A. I was aware of it. I did look at it.

6 Q. Do you have any information or evidence that the
7 information stated in Exhibit 339 that -- that Paine field
8 investigation was not accurate?
9 A. I don't think you can take that at face value for
10 the limit and extent of all the water rights on the ranch at
11 the time. It was based upon what the application was and what
12 it was for and what was issued thereafter.

13 There's an inaccuracy on the final certificate
14 that was issued that was part of that field investigation that
15 was done by the State Engineer that exists in comparison to
16 the application.

17 So I don't think you can take it at face value
18 and say that everything is there was based upon what was filed
19 at the time it was responded to.

20 Q. Do you know if there's any flowing shot holes in
21 the area around the Thompson Ranch, the Willow Ranch, the Cox
22 Ranch?
23 A. The only ones I would be familiar with is
24 anything around the Cox Ranch, the Willow or the Thompson.
25 And to my knowledge I didn't see any flowing wells out there

1 basically slated for alfalfa on my exhibit or on my map. The
2 area in yellow would have been the hay area. The aerial with
3 the crosses on it would have been pasture.

4 HEARING OFFICER JOSEPH-TAYLOR: *Would have been*
5 *what?*
6 THE WITNESS: Pasture.
7 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
8 BY MS. PETERSON:

9 Q. Were there any other areas that you put on your
10 map?
11 A. Not that I recall. In other words, you're asking
12 on my map that I filed in support of vested claims?
13 Q. Right.
14 A. Not that I recall. There would have been blank
15 areas which would have said that those areas weren't used for
16 establishing culture.
17 Q. And on page 57 of Exhibit 249.
18 A. Is that --
19 Q. Part of your field notes and they reference a
20 part of the township is now occupied and under cultivation; do
21 you recall that slide?
22 A. I do.
23 Q. Do you have any information from the field notes
24 or the surveyor's notes who was occupying what portion of the
25 township and what was under cultivation by whom?

1 at the time of my field investigation at all.

2 Q. Do you know if your client Daniel Venturacci uses
3 any flowing shot holes currently to water his livestock?
4 A. I know there are two wells on the property that
5 are taking water out of that area and use them for stock
6 water.
7 Q. Do you know if they're shot holes or?
8 A. I don't know.

9 Q. Do you remember slide 54 of Exhibit --
10 HEARING OFFICER JOSEPH-TAYLOR: 229?
11 BY MS. PETERSON:

12 Q. -- 229? We had a lot of discussion about it. It
13 was the slide that you overlaid your work over the GLO map and
14 there were -- there was green slashes on it and little plus --
15 I call them little plus signs and other marking that you put
16 on that map; do you recall that?
17 A. I do.
18 Q. What is the legend for like the green -- the
19 green area that, you know, what you put on?
20 A. What is the legend for what I put on?
21 Q. Yes.
22 A. There's nothing on this map for that.
23 Q. But what is -- so like what is the green slashed
24 area mean?
25 A. The green area was the area that was used for --

1 A. What I have is in the survey notes, it discusses
2 the -- what houses were found in the area. And on the general
3 plat it shows what houses were in the area.

4 Q. Right. But he -- he doesn't say in the field
5 notes that the Taft house had cultivation around it?
6 A. No, but the question was is there houses and they
7 were referenced as the Taft house or the Crofut house or the
8 Cox house.
9 Q. But you couldn't tell what cultivation was
10 associated with any properties based on surveyor's notes; is
11 that correct?
12 A. I don't remember -- in the surveyor's notes and
13 the summaries it says it was under extensive cultivation. So
14 did it depict cultivation areas? I'd be assuming to say that
15 the meadow area that he said that was being cultivated or
16 harvested for hay would have been the area of cultivation.
17 HEARING OFFICER JOSEPH-TAYLOR: *Listen to her*
18 *questions more carefully, Mr. Thiel. Could you tell what*
19 *house it was associated with?*
20 THE WITNESS: I'm sorry. No, I could not.
21 OFFICER JOSEPH-TAYLOR: I know you're getting
22 tired.
23 THE WITNESS: I am.
24 HEARING OFFICER JOSEPH-TAYLOR: Yeah. Just
25 listen real carefully. A lot easier said when you don't sit

1 in that chair.
 2 THE WITNESS: Sorry?
 3 HEARING OFFICER JOSEPH-TAYLOR: I said it's a lot
 4 easier said when you don't sit in that chair.
 5 BY MS. PETERSON:
 6 Q. You talked about possessory interests?
 7 A. Yes.
 8 Q. How did you correlate any possessory interests to
 9 the Thompson Ranch, the Cox Ranch or the Willow Ranch?
 10 A. Possessory interest is what was in the tax rolls
 11 that I researched on the assessor's records that identified
 12 the Cox, WF or George Cox or Taft or Millett on those records
 13 and it says possessory interest. The other documents that
 14 were involved with it would have been, for example, the Crofut
 15 history of who occupied where within his excerpts that he
 16 wrote in his oral -- or was transcribed from his oral history.
 17 So I would say it would get a good feel of who
 18 was out in that area and settled in that area.
 19 Q. And how do you -- how do you connect all the
 20 possessory interests into one -- one ranch or in this case
 21 three ranches?
 22 A. That's difficult in that aspect that if you
 23 looked at who applied for the patents in the area you'll see
 24 some of the patents -- patents applied for under a certain
 25 name and based upon a proceeding with the agency that was

1 A. Same to you.
 2 HEARING OFFICER JOSEPH-TAYLOR: You will make it
 3 short.
 4 BY MS. URE:
 5 Q. I will try. On your Exhibit 237, slide 67,
 6 it's --
 7 HEARING OFFICER JOSEPH-TAYLOR: I'm sorry.
 8 BY MS. URE:
 9 Q. I'm at Exhibit 237, slide 67. And --
 10 HEARING OFFICER JOSEPH-TAYLOR: We'll grab it for
 11 you, George.
 12 THE WITNESS: Thank you. I'm having problems
 13 here.
 14 HEARING OFFICER JOSEPH-TAYLOR: That's okay.
 15 Slide 67, Ms. Ure?
 16 MS. URE: Yes, ma'am.
 17 MR. KOLVET: I've actually got an extra copy if
 18 that would speed things up.
 19 HEARING OFFICER JOSEPH-TAYLOR: He's got one.
 20 These guys are on it, I'm watching their screens.
 21 BY MS. URE:
 22 Q. I believe here you testified that the wire on
 23 these fences is from 1863; is that correct?
 24 A. Some of the wire, yeah. It was patented in 1863.
 25 Q. And how do you know that the wire was from 1863

1 issuing the patent it would say Sorensen to Taft or to Toft by
 2 this action that occurred. In other words, the patent was
 3 assigned to Taft or Toft at the point in time.
 4 So I assumed that there was a possessory interest
 5 by others up there out on that property other than Taft, and
 6 that would have been indicated also with that 1912 map that
 7 was filed in support of V-01115.
 8 Q. And are all the documents in this record that
 9 would tie all the possessory interests together to show
 10 priority dates to the State Engineer?
 11 A. No.
 12 Q. Did you have any conversations with Tom Gallagher
 13 about these water rights?
 14 A. Tom Gallagher with Water Resources, no.
 15 MS. PETERSON: Thank you. I don't have any
 16 further questions.
 17 HEARING OFFICER JOSEPH-TAYLOR: What is the
 18 Tom Gallagher issue? Ms. Ure?
 19 MS. URE: Thank you.
 20 CROSS-EXAMINATION
 21 BY MS. URE:
 22 Q. Mr. Thiel, my name is Therese Ure and I'm
 23 representing Etcheverry Family Trust, Diamond Cattle Company
 24 and Mr. Benson. So good evening and I will try and make this
 25 short.

1 or patented?
 2 A. I was able to get on the website and trace the
 3 wire back to who patented what and then identified the wire in
 4 correspondence with what was on the internet from various
 5 sources.
 6 Q. So then it's your testimony that the wire was
 7 patented in 1863, but you do not know when it was installed;
 8 is that correct?
 9 A. I think I said that, yeah, that the wire -- I
 10 know when it was patented and when it was available on the
 11 market. I don't know when it was installed the first time.
 12 Q. Is it your understanding that in the -- in that
 13 era that wire was often reused, taken off of one claim and
 14 moved to another, given the price and the accessibility of
 15 obtaining it?
 16 A. That's possible. I know on the different ranches
 17 I worked with whatever is laying on the ground that fell off
 18 next to the fence is what we used.
 19 Q. Okay. On Exhibit 242.
 20 HEARING OFFICER JOSEPH-TAYLOR: Are you going to
 21 be going back to this one?
 22 MS. URE: No.
 23 HEARING OFFICER JOSEPH-TAYLOR: We're going to
 24 try and help you, Ms. Ure, with pulling exhibits.
 25 MS. URE: Thank you.

1 HEARING OFFICER JOSEPH-TAYLOR: You're welcome.
 2 BY MS. URE:
 3 Q. And then the third page of your transcription
 4 where it discusses Jacobson and Nels Toft; do you see where
 5 I'm looking?
 6 A. I'm there.
 7 Q. Do you know if all of the land that's listed
 8 under this entry is part of the Thompson Ranch or the Cox
 9 Ranch or the Willow Field?
 10 A. Well, I do from the description on the township
 11 and range. You look at the column where it says Mount Diablo
 12 basin radiant, look underneath that column -- column you get
 13 the section, the section number, township and range.
 14 Everything that was here is under the -- so the Thompson Ranch
 15 is what's called the home ranch, township 23 north, range 54
 16 east.
 17 Q. Are all the areas listed as part of the place of
 18 use on the Thompson Ranch?
 19 A. It appears that it is.
 20 HEARING OFFICER JOSEPH-TAYLOR: Excuse me, place
 21 of use under what?
 22 MS. URE: The vested claim file 1114, 1115 or the
 23 relating applications.
 24 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 25 THE WITNESS: I know section 3, 4 and 9 and 10

1 A. That's correct.
 2 Q. Now, the survey notes that go with that, are they
 3 in Exhibits 250 and perhaps in 251 as well, I'm just generally
 4 speaking?
 5 A. I think I have them in Exhibit 250.
 6 HEARING OFFICER JOSEPH-TAYLOR: You've got 251
 7 too, Mr. Thiel.
 8 BY MS. URE:
 9 Q. When you were testifying you mentioned that
 10 sometimes the maps are wrong and that you have to go back and
 11 look at the field notes; is that correct?
 12 A. The maps typically -- the context when they're
 13 saying they're wrong is that sometimes the extent of culture,
 14 whatever that may be shown on the map may be not completely
 15 accurate. So if you have questions about that I generally
 16 refer back to the field notes and see what the field notes
 17 provide to see what to contemplate the accuracy of that map.
 18 Q. Okay. And then when going through your
 19 transcription of Exhibit 250, you noted that several entries
 20 showed an irrigation ditch and then a later entry you said
 21 another irrigation ditch; is that correct?
 22 A. It could have been the same irrigation ditch.
 23 Q. Did you map the locations of those irrigation
 24 ditches with the GLO map?
 25 A. I did it generally, you know, sitting in the

1 are. I'm not sure about 15, I'd have to look at my original
 2 map.
 3 BY MS. URE:
 4 Q. Do we know which acres were assigned to Toft
 5 versus Jacobson?
 6 A. Not according to this you don't.
 7 Q. Okay. Going to -- I'm going to ask about 248,
 8 249, 250 and 251.
 9 HEARING OFFICER JOSEPH-TAYLOR: You get three
 10 choices so I'm just going to grab.
 11 THE WITNESS: Thank you.
 12 HEARING OFFICER JOSEPH-TAYLOR: You're welcome.
 13 THE WITNESS: I have those in front of me.
 14 MS. URE: Okay.
 15 BY MS. URE:
 16 Q. Okay. For 249, when you were talking about
 17 Exhibit 248 which is the map that relates to a portion of
 18 250 -- sorry, not 249, are you following me?
 19 A. No.
 20 Q. Okay. Sorry. I'm trying to hurry and I'm --
 21 HEARING OFFICER JOSEPH-TAYLOR: No, take a
 22 breath, take a breath, I don't want to do that to you.
 23 BY MS. URE:
 24 Q. Okay. So looking at 248. This is the GLO map
 25 relating to township 23 north, range 54 east; is that correct?

1 office I'd mark where those were on a map, but I don't have
 2 that in front of me. So sitting here I can't tell which was
 3 what.
 4 What you'll find is under the GLO plats the
 5 notice will support where the location of those ditches that
 6 are shown on the plat.
 7 Q. And then on Exhibit 248 how many irrigation
 8 ditches do you see?
 9 A. Approximately three.
 10 Q. And what are the locations of those irrigation
 11 ditches?
 12 A. I believe we have one on the -- I would say
 13 within the west half of section 3 there's several indicated.
 14 Q. Now, I -- the west half of section 3?
 15 A. Yes.
 16 Q. I see one squiggly line going through that, is
 17 that an irrigation ditch or is that Taft's Creek?
 18 A. That's not Taft's Creek, to me it was an
 19 irrigation ditch that was identified as a creek coming out of
 20 the ditch that had headed towards Cox that went to the north,
 21 that's identified on the next record.
 22 Q. Isn't that the line of the meadow, the boundary
 23 of meadow?
 24 A. Yes, which generally was the -- in order to get
 25 to the boundary of the meadows it was generally diverted in

1 those areas.
 2 Q. But you don't know for sure?
 3 A. Looking at the map I don't know for sure.
 4 Q. Now, I believe, and this is more of a
 5 clarification question, that when you were testifying as to
 6 this map you pointed to section 23 as a location of Horse
 7 Creek Canyon?
 8 A. Yes.
 9 Q. Is that correct or is it further north?
 10 A. I believe I'm correct on that, but I could be
 11 wrong, that's what I plotted originally.
 12 Q. On your application, your applications that go
 13 with the Thompson Ranch -- or on Venturacci's applications
 14 that go with Thompson Ranch is Horse Creek plotted in section
 15 23?
 16 A. I don't have any creek shown on my application
 17 filings.
 18 Q. How about in the vested claim filing?
 19 A. On 30114, I'm not certain. I don't have that in
 20 front of me.
 21 Q. Okay. I'm just confused because I have Horse
 22 Creek Canyon further north in section 10 -- or 11, so I was
 23 just confused as to the location.
 24 A. It wasn't up that far. I know the point of
 25 diversion was further over, but I think basically it came

1 this page is 166 and 177.
 2 A. I have that.
 3 Q. Okay. So the bottom half of that page do you see
 4 where it says the north boundaries, section 2 and 3?
 5 A. I do.
 6 Q. Is there any evidence in this entry of a stream
 7 or creek?
 8 A. This would be between sections 2 and 8.
 9 Q. 2 and 3?
 10 A. I'm sorry, 2 and 3. There's no reference to Taft
 11 Creek in that part.
 12 Q. Okay.
 13 A. But there would not be because there's no -- Taft
 14 Creek doesn't originate in that area.
 15 Q. Does it reference a canyon?
 16 A. Well, section 2 and 3 is the break between -- on
 17 the west side it would be the Taft Creek and Taft Springs
 18 originate on the east side is the mountain block. So going
 19 along sections 2 and 3 there would not be a crossing that way.
 20 Q. Turning to Exhibit 249.
 21 A. I have that.
 22 Q. Is the spring channel that's located in section
 23 14 and 15, is that part of the Willow Field?
 24 A. Between 14 and 15, is that part of what?
 25 Q. Is that one of the springs that feeds into Willow

1 into -- it could be -- I don't -- I can't answer that, I don't
 2 know.
 3 Q. Okay. If you look on Exhibit 254 at page 77 --
 4 oh, I think I have the wrong exhibit, sorry, don't grab that,
 5 I have the wrong one. I think I meant 250, sorry.
 6 And then go to -- so Exhibit 250, page 177. And
 7 I don't believe this was on your transcription -- or I guess
 8 it is never mind; are you there?
 9 A. I'm on page 177.
 10 Q. Is it your understanding that this page is the
 11 survey of the section line between sections 2 and what appears
 12 to be 3?
 13 A. You're on page 177?
 14 Q. Yes.
 15 A. And what part of the page are you on?
 16 Q. The bottom half.
 17 A. The bottom half would be north between sections
 18 28 and 29.
 19 Q. I have it as 2 and 8.
 20 A. Pardon me?
 21 Q. I have it as 2 and 8.
 22 A. Oh, probably the confusion here is these were
 23 renumbered. You see it stamped in as 188 and above it's
 24 written in as 177. So I'm perhaps on page 188.
 25 Q. So, the two numbers that I have on the top of

1 Field?
 2 A. Yes.
 3 Q. And where is --
 4 A. No, I'm sorry, it doesn't Willow Field is in
 5 section 22, I believe.
 6 Q. Okay. And so the -- the -- so if you go down to
 7 section 22, do you see evidence of a spring there?
 8 A. I do.
 9 Q. What is that spring called?
 10 A. I don't recall.
 11 Q. On the map in section 22 there's a line that
 12 squiggles from the west -- or from the east to the west that
 13 goes all the way across section 22 on the south half, what is
 14 that entitled on this map?
 15 A. I see in the north half of section 22 is the
 16 spring and the south half of section 22 is a channel, I can't
 17 read the first word.
 18 Q. Is it dry channel?
 19 A. It appears to be, that's what it is, dry channel.
 20 Q. Okay. If you go down to sections 27 and 31
 21 there's evidence of a creek running from the south to the
 22 north, is this a spring or a creek?
 23 A. I don't see anything coming from section 31.
 24 Q. Oh, I'm sorry, section 34 to 27?
 25 A. I don't believe that's a creek even though it's

1 labeled such.
 2 Q. Are there any fields depicted on this map?
 3 A. There's one area of cultivation in section 34
 4 around the Cox house.
 5 Q. Is there any other areas -- any other fields
 6 depicted on this map?
 7 A. There is not. The only thing you have is the
 8 remnants of the meadow area that's been described previously
 9 by accepting the westerly half of section 34.
 10 Q. Is the meadow a field?
 11 A. To the extent if it's cultivated and harvested
 12 and everything is done to it it's semantics, it could be a
 13 field, it could be an extent of culture.
 14 Q. Did the GLO field notes reference it as a field
 15 or a cultivated field?
 16 A. Not to my recollection, no.
 17 Q. In Exhibit 250 in the general description on page
 18 209.
 19 A. For clarification, is that 198 with 209 stamped
 20 below it?
 21 Q. Yes, are you there?
 22 A. I have that before me.
 23 Q. In that general description does it tell us which
 24 portions are under cultivation?
 25 A. Yes.

1 Q. Did you map the field notes to the GLO map?
 2 A. I went through all the field notes and mapped it
 3 on the GLO map, yes.
 4 Q. So the irrigation ditch that's referenced in the
 5 GLO match, isn't it true that that ditch is only one ditch?
 6 A. No, there's other methods of conveyance that are
 7 identified as creeks.
 8 Q. I'm asking you about a ditch?
 9 A. I know you're asking me about a ditch. But from
 10 that standpoint, there's more than one type of ditch. The one
 11 ditch that's described on there is pretty well depicted from
 12 1879 setting from Taft Springs to the southwest.
 13 MS. URE: I have no further questions.
 14 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 15 Ms. Ure. Any redirect?
 16 MR. KOLVET: No.
 17 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 18 Questions of staff? Deep sighs. Everyone's tired.
 19 MR. FELLING: I have a question.
 20 HEARING OFFICER JOSEPH-TAYLOR: Go right ahead.
 21 Mr. Felling.
 22 CROSS-EXAMINATION
 23 BY MR. FELLING:
 24 Q. Why -- why did Mr. Thompson accept the offer for
 25 the well in 1982?

1 Q. It does?
 2 A. Yes, it says that -- let me back up on that
 3 response. What it does say is that considerable hay is cut in
 4 a portion under cultivation. There's no physical description
 5 of whether cultivation is exactly occurring according to what
 6 the surveyor perceives as cultivation.
 7 Q. Okay. On the line above that -- or I guess the
 8 sentence above that, does it tell us that anything is
 9 currently being irrigated?
 10 A. It says it all can be irrigated from creeks and
 11 springs and different parts.
 12 Q. Okay. But it doesn't tell us that something
 13 already is being irrigated; is that correct?
 14 A. Not in the general description, no, but in the
 15 field notes it does.
 16 Q. In the field notes it describes what lands are
 17 being irrigated?
 18 A. I think you do because it says what ditches are
 19 out there and it says that all of that area is under
 20 considerable hay -- or considerable hay is being cut in that
 21 area. You typically don't have a ditch without harvesting a
 22 crop.
 23 Q. But isn't there only one irrigation ditch
 24 delineated at an irrigation ditch?
 25 A. I don't believe there is.

1 A. I've had a number of conversations and dealings
 2 with Mr. Thompson over the years. And primarily the reason he
 3 did accept it is he felt that the southern irrigators have
 4 impacted the springs. He wanted the springs restored. He
 5 didn't want the second best as we're talking about today as to
 6 put wells in lieu of the springs that existed. He wanted the
 7 springs returned to their original use.
 8 MR. FELLING: That's all.
 9 HEARING OFFICER JOSEPH-TAYLOR: Any?
 10 STATE ENGINEER: Similar question to what I asked
 11 Mr. Buschelman in regard to Shipley Spring. Do you believe as
 12 an expert in the Nevada water rights that doesn't abandonment
 13 play into this case?
 14 THE WITNESS: I believe it doesn't. And explain
 15 my response is that under provisions of NRS 233, if a spring
 16 has been impaired --
 17 HEARING OFFICER JOSEPH-TAYLOR: 233?
 18 THE STATE ENGINEER: 533.
 19 THE WITNESS: I'm sorry, 533. If a -- if a water
 20 right's been impaired how can you ever be subject to
 21 forfeiture of abandonment if it's basically been taken -- in
 22 other testimony we've seen in this -- coming up -- the -- in
 23 the January 23rd, 2013 hearing we heard a discussion from
 24 Mr. Bugenig saying basically everybody in the southern half of
 25 the basin is using geothermal water which is from -- he

1 identifies Thompson Spring and Shipley Springs as geothermal
 2 waters. He says everything east, west and south of the playa
 3 is being used by the irrigators to the southern part, it makes
 4 no difference on where the water comes from.
 5 So I think there's -- without any fact that there
 6 is not an impact occurring from the pumping of the southern
 7 part of the basin. When you have a yield in the southern part
 8 of 12,000-acre-feet and you have 18, 19,000-acre-feet to the
 9 northern part then what's occurring is reverse gradient --
 10 HEARING OFFICER JOSEPH-TAYLOR: *You're going way*
 11 beyond the question.
 12 THE WITNESS: I'm getting to it.
 13 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 14 THE WITNESS: Reverse gradient, they're taking
 15 the water, it's been impaired. And once the water rights have
 16 been impaired I don't believe it's subject to abandonment.
 17 And there's been no intent to abandon by anybody that's been
 18 out there.
 19 THE STATE ENGINEER: Thank you.
 20 HEARING OFFICER JOSEPH-TAYLOR: *So how about*
 21 *you've done -- Mr. Thompson did nothing for decades?*
 22 THE WITNESS: Oh, he's done everything he could.
 23 Mr. Thompson isn't a rich man and he's done everything he
 24 could. In 1992 he filed a protest against some proceedings
 25 with the State Engineer on another application that resulted

1 into actual production that some of those rights go back to
 2 the '60s. All it did was exacerbate the problem on what was
 3 occurring in the south.
 4 THE STATE ENGINEER: On all the properties we've
 5 been talking about, the Thompson Ranch, Cox Ranch, Willow
 6 Ranch are there groundwater rights associated with any of
 7 those places of use?
 8 THE WITNESS: Yes.
 9 THE STATE ENGINEER: Do you know when those
 10 groundwater rights were issued and for what manner of use?
 11 THE WITNESS: I know there was a stock water
 12 right that I requested a temporary application for on the home
 13 ranch as we call it, section 23 -- or township 23 north -- or
 14 range 54 east. And we were able to grow a well on that
 15 property for stock water use by using the temporary
 16 applications.
 17 As far as I know that's the only groundwater
 18 right available on that property.
 19 THE STATE ENGINEER: Thank you. In the fieldwork
 20 you did the ground truthing, et cetera, did you do any
 21 bathymetric surveys of any of the impounds just to get a feel
 22 for what you think they could actually store?
 23 THE WITNESS: I did not. And the reason I didn't
 24 do so is they've been disturbed over the years.
 25 THE STATE ENGINEER: And then I apologize, it's

1 in a forfeiture of one-half of the water rights and the
 2 approval to go forth with the other half. He's done basically
 3 everything he could.
 4 The hearings in -- I'm sorry, 1982 basically
 5 broke Mr. Thompson. And for him to pursue anything else
 6 legally he didn't have the resources to do so.
 7 HEARING OFFICER JOSEPH-TAYLOR: *Did he petition*
 8 *the State Engineer to regulate the basin?*
 9 THE WITNESS: He did in 1982. As far as I'm
 10 concerned he requested the State Engineer to curtail and
 11 regulate the basin and nothing came out of it other than well,
 12 let's continue to study it and move forward.
 13 HEARING OFFICER JOSEPH-TAYLOR: *Thank you. Any*
 14 *other questions?*
 15 THE STATE ENGINEER: I have some more.
 16 HEARING OFFICER JOSEPH-TAYLOR: *Oh, I'm sorry.*
 17 THE STATE ENGINEER: That's okay. That's fine.
 18 Part of your testimony discussed the pivots that
 19 were closest to Thompson Ranch and I think you -- I think your
 20 testimony was that these could have had some of the greatest
 21 impact on the springs because of the proximity.
 22 Do you know when those pivots went into
 23 cultivation when the water was used on?
 24 THE WITNESS: I looked at some of those
 25 applications that existed and without verifying when they went

1 late in the day, if you don't remember I understand.
 2 Did you ever make or do you have an opinion on
 3 how much flow rate came from the various spring complexes that
 4 are the subject of these three areas, historical? Did you
 5 ever say I think it was eight-second-feet, ten-second-feet for
 6 all three of those?
 7 THE WITNESS: Like I say, the problem I had was
 8 based upon the lack of data. I had to go back and say what
 9 was the area of the land that was being irrigated, for
 10 example. I had to look at the land surface area, I couldn't
 11 rely on the records that existed on some discharge.
 12 I know from our standpoint when we trade from the
 13 spring discharge to the groundwater I came up with an estimate
 14 for that, but trying to get a diversion rate that came out of
 15 all those sources, no. I had to look at the -- like I said,
 16 the physical land area where the discharge was occurring, the
 17 culture was being grown.
 18 THE STATE ENGINEER: Do you have an educated
 19 guess on what you think the total might have been flowing from
 20 those spring complex?
 21 THE WITNESS: Let me back this up. I think it
 22 was somewhat variable based upon the discharge occurring. So
 23 I would think within those areas we probably -- and it's a
 24 guess at this point, probably around cumulatively ten CFS,
 25 just as a way.

1 THE STATE ENGINEER: I understand. Thank you
2 very much.
3 HEARING OFFICER JOSEPH-TAYLOR: Any other
4 questions? Mr. Walmsley?
5 CROSS-EXAMINATION
6 BY MR. WALMSLEY:
7 Q. Earlier in your testimony -- going back to, let's
8 see, Exhibit 229, the GLO plat with the overlay of the acreage
9 on it --
10 A. Yes.
11 Q. -- of the different types of crops. Earlier in
12 the day you stated that alfalfa could only be grown on certain
13 soils and it wouldn't be able to be grown in the well
14 saturated soils that were more in the central part of the
15 discharge area; is that correct?
16 A. Yes. And alfalfa could be grown in saturated
17 soil conditions, but it wouldn't last very long.
18 Q. So --
19 A. In the old days. They refined alfalfa over the
20 years to where they do have certain types of alfalfa that grow
21 well in saturated soils.
22 Q. Well, since we're looking at this from a
23 historical point of view as a vested right, I would be asking
24 the question whether prior to 1905 they grew alfalfa in that
25 area?

1 acreage?
2 A. From my perspective looking at the soil survey
3 short of bananas we could grow almost any sort of crop out
4 there. What we have is areas that are suitable for
5 cultivation, a high level of organics within the soils. I
6 didn't see anything that would prohibit us from growing
7 grasses or growing alfalfa or any other crop associated with a
8 market product.
9 Q. So there -- there would be no difference in
10 the -- in the -- in some of the Sadler testimony they -- they
11 stated that there was a leaching requirement and -- and
12 hummocky ground and a lot of the higher ground did not support
13 grass but the lower ground did.
14 Is that consistent on the Thompson Ranch?
15 A. No, it's not. In other words, the soil types we
16 have spread across the ranch for -- we don't have the hummocky
17 ground, we don't have the channelization you saw on the
18 Shipley Ranch. It's comparing apples and oranges. With
19 regard to the Thompson Ranch I found different
20 characteristics. I didn't investigate the Sadler Ranch or
21 Shipley Springs or anything associated with it.
22 What I did investigate was what was on the
23 Thompson Ranch and based upon the soils research and the field
24 truthing data it looked like it was available to support
25 almost anything we wanted to grow. We, Mr. Venturacci would

1 A. Based upon the Crofut report or Crofut oral
2 history there was alfalfa growing in the area. The problem I
3 had with all the oral histories it didn't say I have 40 acres
4 within this township, range and section, it just said
5 generally these were the crops that were used in the area or
6 utilized as a matter of course by the irrigators in the
7 valley.
8 Q. So based on the oral history it would be true
9 that there wasn't any quantification?
10 A. That's correct.
11 Q. In all your research that you conducted, and I'm
12 still going along the lines of soil, on the Sadler Ranch they
13 relied on soil survey of Diamond Valley, which is Exhibit 605
14 under Sadler, did you use any of that information based on
15 soil science to determine crop type on the ground?
16 A. What I did was pull up the NRCS information on
17 the soil survey for the area and found from that soil survey
18 the soils were suitable for basically anything that we wanted
19 to grow. We don't have the same conditions of alkali or other
20 issues where you have to add more water to flush. I didn't
21 see any restrictions in the soils analysis that I looked at
22 that would prohibit any type of crop that we could grow under
23 an underground right.
24 Q. So, what you're saying is that any -- any type of
25 grass that they wanted to grow could be grown anywhere on the

1 want to grow.
2 Q. Okay.
3 MR. WALMSLEY: I do not believe I have any
4 further questions.
5 HEARING OFFICER JOSEPH-TAYLOR: Thank you very
6 much. You may be excused, Mr. Thiel.
7 THE WITNESS: Thank you.
8 HEARING OFFICER JOSEPH-TAYLOR: I'm not going to
9 try to check exhibits and things today. Let's do it when
10 we're fresh, I think everything is in. And I thank all of you
11 for pushing through today, Karen, Therese, I know that was a
12 tough time.
13 With that, we'll be in recess until --
14 Ms. Peterson and Ms. Ure, what time would you like to start
15 tomorrow?
16 MS. PETERSON: 9:00 a.m. would be great.
17 THE STATE ENGINEER: It would be great.
18 HEARING OFFICER JOSEPH-TAYLOR: We'll be in
19 recess until 9 o'clock tomorrow morning. Thank you, folks.
20 MR. KOLVET: I did have two other witnesses,
21 they're not really critical, but at some point I would like to
22 make an offer on it. One of them would have been
23 Daniel Venturacci, the owner of the property saying this is my
24 application and this is what I want.
25 The other is a Ned Robinson who's list as a

1 rebuttal witness to some of the abandonment issues that were
2 raising in this case. He is with a lending institution that
3 lent money on this property, foreclosed on it and took it
4 back. And then eventually sold to Mr. Venturacci.

5 And part of their collateral was the water rights
6 that are appurtenant to this property. So there was no -- I
7 mean, that goes to the abandonment issue. So that's what I
8 had. They will both be available first thing in the morning.

9 HEARING OFFICER JOSEPH-TAYLOR: She just took it
10 down. With that, we'll be in recess until 9 o'clock tomorrow
11 morning. Thanks, folks, I appreciate you going through.

(Proceedings concluded at 5:55 p.m.)

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1 STATE OF NEVADA)
2 CARSON CITY) ss.

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5 I, MICHEL DOTY LOOMIS, a Certified Court
6 Reporter, do hereby certify;

7 That on the 20th of November, 2013, in Carson
8 City, Nevada, I was present and took stenotype notes of the
9 hearing held before the Nevada Department of Conservation and
10 Natural Resources, Division of Water in the within entitled
11 matter, and thereafter transcribed the same into typewriting
12 as herein appears;

13 That the foregoing transcript, consisting of
14 pages 1 through 301 hereof, is a full, true and correct
15 transcription of my stenotype notes of said hearing.

16

17 Dated at Carson City, Nevada, this 13th day of
18 December, 2013.

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MICHEL LOOMIS, NV CCR #228

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In The Matter Of:

*Applications 81719, 81720, 81825, 82268, 82570, 82571,
82572 and 82573*

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2 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
3 DIVISION OF WATER RESOURCES
4 BEFORE SUSAN JOSEPH-TAYLOR, HEARING OFFICER
5
6
7 IN THE MATTER OF APPLICATIONS
8 81719, 81720, 81825, 82268,
8 82570, 82571, 82572 and 82573
9 _____/
10 TRANSCRIPT OF PROCEEDINGS
11 PUBLIC HEARING
12 VOLUME IV
13 THURSDAY, NOVEMBER 21, 2013
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1 APPEARANCES:
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3 Susan Joseph-Taylor, Deputy Administrator
4 Malcolm Wilson, Assistant Hearing Officer
5 Rick Felling, Chief Hydrologist
6 Kristen Geddes, Hearing Officer
7 Section of the Division of Water Resources
8 Steve Walmsley, Water Resource Specialist
9
10 For Sadler Ranch, LLC: Taggart & Taggart, Ltd.
11 By: Paul G. Taggart, Esq.
11 For Daniel Venturacci: Thorndal, Armstrong, Delk
12 Balkenbush & Eisinger
12 By: Brent Kolvet, Esq.
13 For Kenneth Benson,
14 Diamond Cattle Company
14 And Etcheverry Family
14 Limited Partnership: Schroeder Law Offices P.C.
15 By: Therese A. Ure, Esq.
16 For Diamond Natural
17 Resources Protection and
17 Conservation Association: Bob Burnham
18 For James Gallagher: James Gallagher
19 For Mark Moyle Farms: Mark Moyle
20 For Eureka County: Allison MacKenzie, et al.
21 By: Karen A. Peterson, Esq.
22 Also present: Theodore Beutel, Esq.
22 Chairman Ithurrealde
23 Vice Chairman Goicoechea
23 Dale Bugenig
24 Jake Tibbitts
25

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2 EXHIBIT NUMBER RECEIVED

3 322 906

4 325 and 338 1023

5 439 1024

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1 DIRECT EXAMINATION

2 By Mr. Kolvet:

3 Q. Would you state your name and spell your last

4 name for the record, please.

5 A. Jed Robinson, R-o-b-i-n-s-o-n.

6 Q. And Mr. Robinson, by whom are you employed?

7 A. Private Capital Group.

8 Q. And what is Private Capital Group?

9 A. Private Capital Group is a private lender and

10 loan services.

11 Q. And what is your position with the PCG? Is that

12 how it's referred to?

13 A. I'm a partner in PCG.

14 Q. Are you familiar with what we're talking about

15 here as the Thompson Ranch?

16 A. I am.

17 Q. How did you become involved in that?

18 A. It was, I believe, in the year 2007 or 2008 a guy

19 by the name of Allen Chamberlain approached us to obtain

20 financing to purchase the land.

21 Q. And who was he purchasing it from at that time?

22 A. Milton Thompson.

23 Q. And did you ultimately arrange with

24 Mr. Chamberlain to lend him money for the purchase of the

25 property?

1 THURSDAY, NOVEMBER 21, 2013, 9:00 A.M.

2 ---oOo---

3 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet and

4 Ms. Peterson, we had an off-the-record discussion last night

5 that Mr. Kolvet had a few short witnesses that he wanted to

6 put on and you agreed to that; is that correct?

7 MS. PETERSON: Three?

8 HEARING OFFICER JOSEPH-TAYLOR: No. A few. Two.

9 We gave him a half an hour.

10 MS. PETERSON: Yes, that was agreed to.

11 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

12 That's very accommodating of you.

13 Mr. Kolvet, call your first witness, please.

14 MR. KOLVET: Jed Robinson.

15 HEARING OFFICER JOSEPH-TAYLOR: Mr. Robinson,

16 please come forward and be sworn.

17 (The witness was sworn in)

18

19 JED ROBINSON

20 Called as a witness on behalf of the

21 Applicant, having been first duly sworn,

22 Was examined and testified as follows:

23 ///

24 ///

25 ///

1 A. We did.

2 Q. When was that, what year?

3 A. I believe it was 2008.

4 HEARING OFFICER JOSEPH-TAYLOR: 2000 what?

5 THE WITNESS: Eight.

6 Q. (By Mr. Kolvet) Prior to your lending the money

7 did you do any due diligence on the property?

8 A. We did.

9 Q. Did that include looking in to the status of

10 water rights on the property?

11 A. It did, yeah.

12 Q. What did you do in that regard?

13 A. There was a water rights engineer that was

14 working in conjunction with Mr. Chamberlain and us to go

15 through water rights. We had title searches done and we went

16 and inspected the property.

17 Q. And who was that engineer?

18 A. I don't recall the name.

19 Q. Did you ultimately then in the lending of money

20 also lend on the water rights?

21 A. We did, yes.

22 Q. And was that a consideration of yours before

23 lending the money to Mr. Chamberlain?

24 A. It was.

25 Q. Describe for the State Engineer how that was part

1 of the consideration.
 2 A. Well, we employed I believe two or three
 3 different realtors, as well as I think an appraisal was done,
 4 which considered the value of the ranch. We can only lend a
 5 certain value on the property so we have to consider what the
 6 value is and what our debt to ratio. And the value is the
 7 ranch and the value of the land would be highly determined on
 8 the value that would accompany the property.
 9 Q. And the water rights?
 10 A. And the water rights.
 11 HEARING OFFICER JOSEPH-TAYLOR: Don't talk over
 12 each other, please.
 13 MR. KOLVET: I didn't know that I did. I'm
 14 sorry.
 15 Q. (By Mr. Kolvet) So you did, in fact, lend money
 16 based on the water that you believed was available on that
 17 ranch?
 18 A. Yes.
 19 Q. And you did the investigation described to
 20 determine if there were water rights in your view on the
 21 ranch?
 22 A. Correct.
 23 Q. Did you meet at any point with the State
 24 Engineer's office about the water rights?
 25 A. Not prior to lending, but after we foreclosed on

1 date?
 2 A. Mr. Venturacci was leasing it prior to doing the
 3 financing for Allen Chamberlain. So he was leasing the
 4 property the entire time.
 5 MR. KOLVET: That's all I have.
 6 HEARING OFFICER JOSEPH-TAYLOR:
 7 Cross-examination.
 8 MS. PETERSON: Thank you.
 9 CROSS-EXAMINATION
 10 By Ms. Peterson:
 11 Q. Mr. Robinson, I'm Karen Peterson and I'm
 12 representing Eureka County. And why was -- did Private
 13 Capital Group foreclose on the ranch?
 14 A. Mr. Chamberlain did not make his payment and was
 15 in default.
 16 Q. And do you have any knowledge of any activities
 17 that Mr. Chamberlain took on the ranch with regard to the
 18 water while he owned the property?
 19 A. I'm not sure exactly what you're referring to.
 20 But his activities as far as we knew of the ranch is he was
 21 using the money that the ranch was to do some oil stuff that
 22 he was involved in and the water and the ranch was being used
 23 by Mr. Venturacci that he was leasing.
 24 Q. So Mr. Venturacci was leasing from
 25 Mr. Chamberlain?

1 the home.
 2 Q. When did you foreclose?
 3 A. In 2009 or 2010.
 4 Q. And at the time of foreclosure or after that you
 5 did meet with the State Engineer's office?
 6 A. Yes.
 7 Q. Who did you meet with?
 8 A. I met in a room with Mr. King and some other
 9 engineers and hydrologists were there and then Ken Haffe I
 10 believe was the other individual.
 11 Q. Based on the results of that meeting and your
 12 information obtained at that, did you engage a water rights
 13 engineer to proceed with applications for certain water?
 14 A. We did.
 15 Q. And is that what resulted in the filing of
 16 your -- or the permit 81825?
 17 A. Yes.
 18 Q. That was filed under the name of Daniel
 19 Venturacci; is that correct?
 20 A. Correct.
 21 Q. And what was the situation that caused his name
 22 to be on that?
 23 A. We had sold it to Mr. Venturacci during that time
 24 period.
 25 Q. Is Mr. Venturacci on the property as of that

1 A. Correct.
 2 Q. And did you -- Are you familiar with the deed
 3 from Mr. Thompson to Cedar Ranches, LLC, which was
 4 Mr. Chamberlain's limited liability company?
 5 A. I'm not sure what you're referring to. I may or
 6 may not.
 7 MS. PETERSON: Oh, okay. Could I show the
 8 witness it's Exhibit 322?
 9 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 10 THE WITNESS: Yes.
 11 Q. (By Ms. Peterson) And the first document in
 12 Exhibit 322 is a recorded copy of the grant, bargain and sale
 13 deed from Milton Thompson to Cedar Ranches, LLC. Do you see
 14 that?
 15 A. Uh-huh.
 16 Q. And then my understanding is that your group,
 17 Private Capital Group, then took an interest under a deed of
 18 trust because you lent the money to Mr. Chamberlain's LLC
 19 Cedar Ranches, LLC; is that correct?
 20 A. Yes, that's correct.
 21 Q. And that's the deed of trust that is the second
 22 document, recorded document in Exhibit 322?
 23 A. I'm sorry. I don't see the deed of trust.
 24 Q. Oh. So if you could look at Exhibit 322, the
 25 first two-page document is at the top there, the recording

1 information.
 2 A. Oh, yes, I see it. Thank you.
 3 Q. So do you have the document that's recorded as
 4 0211801?
 5 A. Yes.
 6 Q. And that's the deed of trust that your company
 7 had on the property; is that correct?
 8 A. Correct.
 9 Q. And do you see in the deed -- First, the grant,
 10 bargain and sale deed was recorded from Milton Thompson to
 11 Cedar Ranches, LLC; is that correct?
 12 A. Yes.
 13 Q. And then your deed of trust was recorded right
 14 after that as the next document on the property; is that
 15 correct?
 16 A. Yes.
 17 Q. And the deed of trust lists on Exhibit B the
 18 water rights that your company had securing the financial
 19 obligation to Mr. Chamberlain; is that correct?
 20 A. Yes.
 21 Q. And do you see -- you have Exhibit B in front of
 22 you --
 23 A. Yes, I do.
 24 Q. -- of that? And do you see there's a table in
 25 Exhibit B that lists all the water rights?

1 A. Yes.
 2 Q. And is Thompson Ranch, LLC your limited liability
 3 company?
 4 A. I believe that was the LLC that was set up for
 5 all of our investors.
 6 Q. And Exhibit B to that grant, bargain and sale
 7 deed --
 8 A. Yes.
 9 Q. -- is the water rights that were transferred to
 10 Mr. Venturacci?
 11 A. It appears to be, yes.
 12 Q. And the Exhibit B and the information contained
 13 on Exhibit B is the same as that last document that we went
 14 through?
 15 A. I can go through every line and tell you. But it
 16 appears to be the same, but I have to review it to see.
 17 MS. PETERSON: I don't have any further
 18 questions. And you can review it if you want to review that
 19 document. Please take your time. Oh, sorry. I did have one
 20 more question.
 21 HEARING OFFICER JOSEPH-TAYLOR: Go ahead.
 22 MS. PETERSON: How much value of the ranch was
 23 assigned to the water rights when you were lending to
 24 Mr. Chamberlain?
 25 THE WITNESS: All the value. It wouldn't be

1 A. Yes.
 2 Q. And I'm not sure -- We've been talking about the
 3 water rights so much that we're really familiar with all of
 4 them. But do you see the second column over on the table,
 5 the third listing down, it says V01114?
 6 A. I do.
 7 Q. And that what was encumbered or I guess what was
 8 included as part of the deed of trust was four acre-feet
 9 annually under that vested claim?
 10 A. Yes, I do see that.
 11 Q. And then do you see the next line down for
 12 V01115?
 13 A. Yes.
 14 Q. And again, the annual duty on that is four
 15 acre-feet that was encumbered?
 16 A. Uh-huh.
 17 Q. And then turning to the next document in this
 18 group, it's the document recorded as 218603?
 19 A. Okay.
 20 Q. Do you see that?
 21 A. Uh-huh.
 22 Q. And that's a deed from Thompson Ranch, LLC to
 23 Daniel S. Venturacci?
 24 A. Okay.
 25 Q. Is that what you see on the document?

1 worth anything without the water.
 2 MS. PETERSON: Okay. Thank you.
 3 HEARING OFFICER JOSEPH-TAYLOR: Ms. Ure.
 4 CROSS-EXAMINATION
 5 By Ms. Ure:
 6 Q. As far as the value assigned to the -- Oh, I'm
 7 sorry. My name is Therese Ure and I'm representing
 8 Etcheverry Family Limited Partnership, Diamond Cattle Company
 9 and Mr. Benson. Good morning.
 10 As far as the value assigned to the water rights,
 11 were particular values placed on a vested claim versus a
 12 certificated right?
 13 A. I don't believe so.
 14 HEARING OFFICER JOSEPH-TAYLOR: I couldn't hear
 15 your answer.
 16 THE WITNESS: I don't believe so.
 17 MS. URE: I have no further questions.
 18 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 19 Redirect? Any questions of staff?
 20 THE STATE ENGINEER: No.
 21 HEARING OFFICER JOSEPH-TAYLOR: Thank you. You
 22 may be excused, Mr. Robinson.
 23 MS. PETERSON: I'd move for the admission of
 24 Exhibit 322.
 25 HEARING OFFICER JOSEPH-TAYLOR: Any objection?

1 MR. KOLVET: No.
 2 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 322 will
 3 be admitted.
 4 MS. PETERSON: Thank you.
 5 HEARING OFFICER JOSEPH-TAYLOR: Next witness.
 6 MR. KOLVET: At this point I don't know that I
 7 need to call Mr. Venturacci. That would be my next witness.
 8 The information that he has about the ranch has already been
 9 testified to by Mr. Thiel, unless the State Engineer requires
 10 the applicant to actually say "I want the water."
 11 HEARING OFFICER JOSEPH-TAYLOR: All right.
 12 Ms. Peterson, are you going first or Ms. Ure?
 13 MS. URE: Ms. Peterson.
 14 MS. PETERSON: Our first witness is downstairs in
 15 the lobby.
 16 HEARING OFFICER JOSEPH-TAYLOR: Okay. Let's be
 17 off the record.
 18 (Recess was taken)
 19 HEARING OFFICER JOSEPH-TAYLOR: Next witness,
 20 Ms. Peterson. We're going to Eureka County's case, for the
 21 record.
 22 MS. URE: I have one comment I would like to put
 23 on the record that because Eureka County and my clients have
 24 been working together that we would like to adopt and
 25 incorporate the testimony that is presented on behalf of

1 last name, please.
 2 THE WITNESS: P-e-n-r-o-d.
 3 Q. (By Ms. Peterson) And is Milton Thompson your
 4 brother?
 5 A. He is.
 6 Q. Did you grow up on the Thompson Ranch?
 7 A. We grew up on the Thompson Ranch. We moved there
 8 in '46 and at that time I would have been just two.
 9 Q. And that's 1946; is that correct?
 10 A. Right.
 11 Q. And who are your parents?
 12 A. Theodore Milton Thompson and Olive Thompson.
 13 Q. And did your father go by Ted?
 14 A. He went by Ted.
 15 Q. And your parents I think you said bought the
 16 ranch in 1946?
 17 A. Right.
 18 Q. Your family moved there?
 19 A. Right.
 20 Q. And what did your family do there?
 21 A. They were in ranching. The main thing was
 22 running cattle. And dad did do -- they did farming too, but
 23 dad's thing was cattle and he loved his horses, which is a
 24 dirty name now.
 25 Q. And I have given you a couple maps in front of

1 Eureka County.
 2 HEARING OFFICER JOSEPH-TAYLOR: Thank you. I
 3 appreciate you being efficient.
 4 Ms. Peterson.
 5 MS. PETERSON: We would call Eileen Penrod.
 6 HEARING OFFICER JOSEPH-TAYLOR: Good morning,
 7 Ms. Penrod. You need to stand and be sworn in first, please.
 8 (The witness was sworn in)
 9 HEARING OFFICER JOSEPH-TAYLOR: Welcome to a
 10 water right hearing. Don't look so excited. We're nice.
 11
 12 EILEEN PENROD
 13 Called as a witness on behalf of the
 14 Protestants, having been first duly sworn,
 15 Was examined and testified as follows:
 16
 17 DIRECT EXAMINATION
 18 By Ms. Peterson:
 19 Q. Mrs. Penrod, would you please state your name for
 20 the record.
 21 A. It's Eileen Penrod.
 22 (The court reporter interrupts)
 23 THE WITNESS: It's E-i-l-e-e-n. Actually the
 24 first name is legally Vivian, but nobody knows me by that.
 25 HEARING OFFICER JOSEPH-TAYLOR: And spell your

1 you, they're in front of you. And one is entitled at the top
 2 1973 Cox and Home Ranch. Do you see that?
 3 A. I do.
 4 Q. And I would note for the record that that's
 5 Venturacci Exhibit 257, page 50, slide 50.
 6 HEARING OFFICER JOSEPH-TAYLOR: I think you've
 7 just confused it, Ms. Peterson. It's Exhibit 229, slide 50.
 8 THE WITNESS: No. 257.
 9 HEARING OFFICER JOSEPH-TAYLOR: Which references
 10 Exhibit 257.
 11 MS. PETERSON: Oh, okay. Thank you.
 12 HEARING OFFICER JOSEPH-TAYLOR: Let me make sure
 13 I got that right. Yeah.
 14 Q. (By Ms. Peterson) And do you have that map in
 15 front of you?
 16 A. I do.
 17 Q. And I'm going to ask you -- Well, does that map
 18 look familiar?
 19 A. Yes, it does. The outline is a little different
 20 than I remember the deeded property. But I mean, just
 21 thinking of fence wise. But yes, it's definitely familiar,
 22 yes.
 23 Q. And when you're talking about the line, you're
 24 talking about the red lines on the map?
 25 A. Yes. And I'm talking about where it's showing

1 that the Home Ranch is actually tied in to the Cox. And I
 2 don't ever remember the two properties joining. But maybe
 3 they did join. I always thought there was a piece of BLM
 4 property in between the two.
 5 Q. So I'm going to ask you on the map that you have
 6 in front of you, and we've given you a Sharpie, to label on
 7 that map the location, the general location of your home, you
 8 know, the Home Ranch.
 9 A. Okay. Let's see. So the pond would be --
 10 Q. Do you want to label the pond first?
 11 A. Yeah. Now, see, to me on this map it looks like
 12 the two water bodies --
 13 Q. Okay.
 14 A. -- are one.
 15 Q. Okay.
 16 A. And there's a pasture in between those two water
 17 bodies.
 18 Q. All right. Do you want -- What are the two water
 19 bodies?
 20 A. We always called it the large pond, the main
 21 pond, and the small pond.
 22 Q. Okay. Could you label with A the large pond?
 23 A. Okay.
 24 Q. Could you label with B the little pond?
 25 A. With what?

1 some tules on the property?
 2 A. Yes. And the tules would be all in the area
 3 coming from the two ponds.
 4 Q. Could you label that D?
 5 A. Label that what, D?
 6 Q. D.
 7 HEARING OFFICER JOSEPH-TAYLOR: What are we
 8 labeling as D?
 9 MS. PETERSON: The tules.
 10 HEARING OFFICER JOSEPH-TAYLOR: The State
 11 Engineer is wondering if we want to put this up on the screen
 12 and have her do it with a laser pointer also for everybody.
 13 MR. KOLVET: The problem is that we're having
 14 difficulty -- I'm having difficulty following what she's
 15 describing. She's pointing to points on a piece of paper.
 16 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 17 record.
 18 (Discussion was held off the record)
 19 HEARING OFFICER JOSEPH-TAYLOR: So Mr. Felling,
 20 you've pulled up Exhibit 240?
 21 THE STATE ENGINEER: 234.
 22 HEARING OFFICER JOSEPH-TAYLOR: 234. Thank you,
 23 Mr. King. And that is slide 50? Yes, I can see that it is.
 24 Ms. Penrod, we're now going to turn you back over to
 25 Ms. Peterson. And let's first put where the -- or have

1 Q. B, the letter B.
 2 A. I put small. Okay.
 3 Q. And there was some pasture in between the two
 4 ponds?
 5 A. Yes.
 6 Q. Could you label that with a C.
 7 A. Yeah. See, to me, this map is -- I can show them
 8 to you on my cell phone.
 9 HEARING OFFICER JOSEPH-TAYLOR: We have a board
 10 behind that screen she can draw on.
 11 THE WITNESS: Well, I don't know.
 12 MS. PETERSON: That's true. We can do that.
 13 HEARING OFFICER JOSEPH-TAYLOR: Would that work
 14 better for you?
 15 MS. PETERSON: Sure.
 16 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 17 record.
 18 (Discussion was held off the record)
 19 HEARING OFFICER JOSEPH-TAYLOR: She wants to try
 20 to do it on there. This scale is so small. And it looks
 21 like, just for the record, that the aerial is extra dark
 22 there that was brought together.
 23 THE WITNESS: The aerial, I guess the extra dark
 24 would be the water.
 25 Q. (By Ms. Peterson) Okay. And then were there

1 Mr. Felling or you show us where the large pond is, please.
 2 Rick, she wants the laser pointer. Is he pointing to where
 3 you drew the large pond?
 4 THE WITNESS: Yes. Yeah. I guess it would be in
 5 that area.
 6 HEARING OFFICER JOSEPH-TAYLOR: It looks like
 7 there's a white roof just to the right of that.
 8 THE WITNESS: The large pond right above the
 9 large pond is the shop that's been there for ever. It's a
 10 rock shop. It's not going anywhere. It's solid rock. So I
 11 would guess it would be where he pointed, that white -- I
 12 would guess that's the -- right there I think would be the
 13 shop. The pond is right below there, the large pond.
 14 HEARING OFFICER JOSEPH-TAYLOR: Where Mr. Felling
 15 is pointing?
 16 THE WITNESS: Yes.
 17 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 18 THE WITNESS: And there was always -- It was warm
 19 water. It never froze. It is cold, but it was warm, but it
 20 never froze. And the small pond then -- I'm just kind of
 21 guessing. But the small pond --
 22 MR. FELLING: Would you like to try the laser to
 23 point?
 24 THE WITNESS: Yeah. I won't point it at anybody.
 25 I think -- Look at me shake. The small pond -- Let me see

1 where I marked as Exhibit C.
 2 MS. PETERSON: C was the pasture. So the --
 3 THE WITNESS: I know. I'm trying to see.
 4 MS. PETERSON: Just generally is fine.
 5 THE WITNESS: Well, okay. So that X is where the
 6 shop is; right? Okay. So the small pond would be over in
 7 this area.
 8 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 9 THE WITNESS: Does that -- And then, see, I'm not
 10 really seeing a pasture area. But the pasture area --
 11 because to me this part down here would be the tules, I
 12 guess.
 13 Q. (By Ms. Peterson) You know what, we're going to
 14 ask you, Ms. Penrod, don't look at the features on that map.
 15 A. Okay.
 16 Q. Just use that map to describe what was on --
 17 A. Okay. I'm going to go right here as the pasture
 18 area, okay, between the two ponds.
 19 Q. Okay.
 20 A. There was in fact we always had a horse pasture.
 21 This would be tules. This would be tules. And it would run
 22 down in here as the main body of water.
 23 HEARING OFFICER JOSEPH-TAYLOR: Okay. For the
 24 record, she has described to the west of the large pond a
 25 V-shaped area pointing to the east and is describing it as

1 that's -- the animals were confined in that area because
 2 there would have been -- this I guess would be the levy. Is
 3 this what I had marked as the small pond, I guess. So there
 4 would have been a levy and there would have been a fence
 5 across that levy and they could not get out of that pasture
 6 area. The same on both ponds. There was a fence that
 7 prevented them from going out. And on those levies was a
 8 head gate where the water was controlled. In the small pond
 9 there was a head gate where you could -- it would come down
 10 here, the main slough. There was another ditch going out
 11 this area that kind of ran somewhere down -- I mean, to me
 12 this map -- but somewhere down in to here in to the fields.
 13 And that actually went clear on down and in to the water to
 14 be diverted that way down in to the lower part of the Cox
 15 field for haying. Because there was so much -- there was too
 16 much water so you had to dry the south side out.
 17 So anyway, that water from the small pond, the
 18 big pond there was no way to get the water -- Well, yeah,
 19 there was too. Down here there was also a levy at the end of
 20 the tule area, which I assume is this. And there was a ditch
 21 that ran down and in to there. So this also had a way of
 22 shutting water down so it didn't run out in to both fields
 23 and flood the field area because they had to be dried out for
 24 hay.
 25 Q. And --

1 tules; correct?
 2 THE WITNESS: Yes. And this area I guess since
 3 this is water, that would have been the pasture area in
 4 between the two ponds, which we usually always had a rangle
 5 horse or something in there. And that was good pasture.
 6 HEARING OFFICER JOSEPH-TAYLOR: So at the base of
 7 the V pointing to the east you say is pasture?
 8 THE WITNESS: Yes. That's what -- So that's what
 9 I have marked as C; right?
 10 HEARING OFFICER JOSEPH-TAYLOR: Correct.
 11 THE WITNESS: Okay.
 12 MS. PETERSON: And then --
 13 MR. KOLVET: Before we go anymore, I just would
 14 like to put in context the time frame we're talking about
 15 with this. Because I do understand that she did not reside
 16 on the ranch past a certain date.
 17 THE WITNESS: I was there until '63. But I went
 18 back to the ranch very regularly until mom died. And dad
 19 died in '73. Mom died in '75. After that I quit.
 20 Q. (By Ms. Peterson) And the features that you were
 21 describing were on the property when your family purchased
 22 the property?
 23 A. Right. And they were there -- they were there
 24 all the time I was there, because there was always tules and
 25 there was always the pasture area in between. Because

1 A. Yeah.
 2 Q. Sorry.
 3 A. That's okay.
 4 Q. Could you write on your map in front of you with
 5 the letter E the -- I think you said the meadow area.
 6 A. See, didn't I put that for D? Oh, you mean the
 7 meadow area for the main meadow area?
 8 Q. Yes, the main meadow area.
 9 A. Of the ranch. Okay.
 10 HEARING OFFICER JOSEPH-TAYLOR: What was D?
 11 MS. PETERSON: D was the tules.
 12 THE WITNESS: I would say it would be this coming
 13 down through here on both areas. And a lot of this white,
 14 when you see the water that would be the slough areas because
 15 we hayed the slough areas where the water was. And this
 16 white part --
 17 MR. FELLING: I changed the scale of that
 18 photograph, ma'am.
 19 THE WITNESS: Okay. The white part would be
 20 areas that was just rabbit brush and really not good farm
 21 area anyway. So do you want me to label that as D?
 22 MS. PETERSON: E would be the main meadow, E as
 23 in Edward.
 24 THE WITNESS: So the south and the north meadows?
 25 Q. (By Ms. Peterson) Sure. The south meadows,

1 could you put an E and then a dash S.
 2 A. A dash F?
 3 Q. S.
 4 HEARING OFFICER JOSEPH-TAYLOR: S as in south.
 5 THE WITNESS: Oh, I see. And then E. Okay.
 6 Q. (By Ms. Peterson) And then could you explain
 7 that with the laser pointer on the map on the screen?
 8 A. Okay.
 9 Q. The north meadow and the south meadow.
 10 A. Again, I am assuming that -- I'm thinking I'm
 11 getting this right. This is where the cutoff would be here.
 12 So your meadow, your south meadow would be coming down this
 13 area, which it goes quite a bit further out here. And the
 14 north area the same way. Yeah, if you can -- In fact, you
 15 see where the area, the meadow area runs all the way down to
 16 the end of the red line where -- on the north side and on the
 17 south side both, the water ran out the west end of the
 18 meadow.
 19 Now, the north side always seemed to have more
 20 water than the south side down lower. Because I don't
 21 remember ever cutting hay in the lower south meadow. But we
 22 always did on the northwest corner.
 23 Q. And then turning to the extreme southern edge of
 24 the property.
 25 A. Okay.

1 I remember it as a child. Because this new road that they've
 2 put in I don't know where it is. It's off of the property
 3 line. But this road always branched, this road going here
 4 went to the McKinney Ranch. This road came down and it went
 5 straight across. It never angled out this way. It went
 6 straight, straight across the valley. I mean, it was
 7 perpendicular straight.
 8 Q. Okay.
 9 A. And then not far from that -- This is why I'm
 10 saying to me this looks more like where I would remember the
 11 road being. I don't know what this line is. And there was
 12 the Old Pony Express route, which was a little bit north of
 13 that area.
 14 Q. Okay. And then were there springs from the
 15 canyon behind the house?
 16 A. Not from the canyon, no.
 17 Q. Okay.
 18 A. No. The only -- There was water that came in to
 19 this field from what we call Horse Canyon. And it ran in, I
 20 don't know, probably about here. And it was never really an
 21 area that we ever farmed. I remember dad had -- they plowed
 22 this up and planted up in here closer to the ranch. In fact,
 23 I think Dan has his trailer setting on an area, that where
 24 Dan's trailer is sitting at one time used to be a nice meadow
 25 area. And then eventually below that -- See, this is just

1 Q. Do you see that on the map?
 2 A. Are you talking about here in spring southern?
 3 Q. Yes, down that way.
 4 A. Okay, yeah.
 5 Q. Was there any -- any activity down at that end of
 6 the ranch?
 7 A. No. And see there, this to me, the red marks
 8 just don't seem to coincide with what I remember. Because
 9 the seismograph roads used to come down and it went straight
 10 across. Maybe it was here. And there was a cattle guard on
 11 both sides of that.
 12 Q. Okay.
 13 A. And really all this was, was mainly always just
 14 rabbit brush. The cattle always watered up in the pond area,
 15 or horses. I don't -- Yeah. Would water up in the pond
 16 because this is all one area. We did do --
 17 Q. And just for the record maybe just before you get
 18 to that thought. You're looking at the extreme southern end
 19 of what's noted on that map as the Thompson Ranch and there's
 20 a square box that drops down and the number ten is in the
 21 lower left corner of the end of that box; is that correct?
 22 A. Right, right, right.
 23 Q. Go ahead.
 24 A. And the reason, because to me this looks like the
 25 road that goes across the valley. But the road -- I mean, as

1 so -- I mean, I'm talking about way down here, but I'm
 2 thinking way up here.
 3 Q. Okay.
 4 A. But the cow barn and everything was right in
 5 there and the corrals. And there was an area just below the
 6 log barn that is there and to the south where they
 7 eventually -- dad I remember it was plowed up and it was
 8 planted. But I don't ever remember us sprinkling or watering
 9 that area.
 10 Q. Okay. And then directing your attention to the
 11 northern part of the property, was there any alfalfa ever
 12 planted?
 13 A. Yes. Okay. This to me -- Okay. I think -- I
 14 think this would be what they called the boneyard or Milton
 15 has a whole bunch of junk in there. But see, I'm not sure if
 16 this is it or -- I mean, to me this is where the property
 17 lines differ. To me, this would go straight up. But anyway,
 18 up in here was always too rocky so that was never farmed.
 19 But down below, it was plowed up and it was actually alfalfa
 20 planted in there and we had hand-move sprinklers. And water
 21 was pumped from a little pond up to that area.
 22 Q. And could you with the letter F on the map in
 23 front of you put that little area where alfalfa was planted,
 24 just generally.
 25 A. Okay.

1 Q. And to your recollection what year was that when
2 that alfalfa was planted?
3 A. Well, it was when I was haying, mowing hay, I
4 remember it was there. And so I would say it was in the
5 sixties, late fifties and sixties in there, yeah.
6 Q. Did your family actually have to prepare the
7 ground --
8 A. Yes.
9 Q. -- to plant alfalfa?
10 A. In fact, dad, they even had a leveler. There's a
11 large leveler there that they used to smooth some of it.
12 Because they also had put down below there at one time I
13 remember was playa and there was other fields in there down
14 below that. And I can't remember really what. And we had a
15 garden area kind of out in there. I remember that.
16 Q. A little south of the alfalfa area?
17 A. Yeah. The alfalfa area -- The garden area was
18 before the alfalfa.
19 Q. Okay.
20 A. So, yeah.
21 Q. And then I wanted to direct your attention to the
22 Cox Ranch.
23 A. Okay. Here we go. So this is where -- To me,
24 this field has never been -- this always came straight. And
25 there was always -- Well, there's a BLM fence dividing the

1 pond. In fact, me and my sisters -- or my sister, we did
2 chores. We always did the milk cows and we would swim the
3 milk cows across that pond because there was kind of a narrow
4 area in it. And we did it as fun. And after we were done
5 with them, we would swim them back a couple of times and we
6 would let them go, but yeah.
7 Q. And just so the record is clear, the reason that
8 you had to pump it is because it was uphill?
9 A. Yeah. And it was on a hill. There was no way to
10 get water up to that area except by a pump and that's where
11 the sprinkler, the system was replaced.
12 Q. And then now getting up to the Cox Ranch.
13 A. Okay.
14 Q. There was a house at the Cox Ranch; is that
15 correct?
16 A. Right. There was a house at the Cox. There's
17 also the old telegraph station still sits at the Cox. The
18 only thing, I think it's still standing, is one end of the
19 rock building. And that was the original telegraph station.
20 The other thing I think that is still there is their old
21 cellar, underground cellar that's covered with dirt. But
22 there was a, let's see, where are we at here? There would
23 have been -- The house area would have been kind of in this
24 area. And then right down in here there's a large, maybe --
25 there was -- I'm sure the well -- I'm not sure, but I mean, I

1 mountain area from the flat in there.
2 Q. And then just directing again your attention just
3 to get some information quickly on the record for the State
4 Engineer, did you have a well at your house, at the home?
5 A. Yes, there was a well. And that would have been
6 below -- Let's see, the large pond. It would have been above
7 the large pond and below -- it was right below what is the
8 bunk house or -- Yeah, it was in that area in -- Yeah. And
9 there was a small fish pond there that is rocked in. We
10 always called it the fish pond. And it was a small area.
11 And yeah, there was a lot of water that continuously ran out
12 of that from underneath the well house. There was a
13 continuous stream of water ran out there all the time even
14 though there was the well house. The well house was -- it
15 was concrete and I remember having to crawl back in, I don't
16 know, and probably flip a switch or something. But the
17 water -- I could always look down in it but also outside the
18 water was constantly running.
19 Q. And then just before we get to the Cox Ranch,
20 sorry, directing your attention to the alfalfa field, how did
21 you get the water to the alfalfa field?
22 A. We pumped it from the small pond. It was pumped.
23 There was probably a diesel pump in the corner of the small
24 pond and we pumped it. And there was also -- See, that water
25 was dammed up and that was kind of -- that was a fairly deep

1 know they had flowing water in there. My sister Rita and
2 George Brown lived there for a few years. And grown in that
3 there was two nice bunches of trees. And under the area
4 where the house was in here there was asparagus that came up
5 every year and there was rhubarb in this area.
6 But then there was also -- See, this field, if I
7 remember, there's a -- I guess this would be the main field.
8 There's a fence in here somewhere. In fact, there always was
9 water also through this other area that when we mowed it --
10 In fact, I even remember getting stuck in there one time.
11 You had to go around those areas that were kind of boggy, I
12 guess. And there was good hay in this area. This area also
13 though was -- See, this just doesn't look right. But there's
14 a -- This was divided -- Like the meadow part was up here,
15 but there was a fence dividing the sage brush part from here.
16 And like up in this area is the corrals that come out here, a
17 fence would come down and it kind of went over this way, I
18 guess. But there was always -- There was water mainly in the
19 middle of it. But the main spring was up here where the well
20 and stuff, and it was very good water.
21 Q. And then let's just stop right there. So could
22 you put on the map, the big map you have in front of you,
23 with the letter F the area where you said there was water
24 on --
25 HEARING OFFICER JOSEPH-TAYLOR: We've already

1 used F.
 2 MS. PETERSON: What?
 3 HEARING OFFICER JOSEPH-TAYLOR: F was the
 4 alfalfa.
 5 MS. PETERSON: Oh, okay. Sorry. G then.
 6 THE WITNESS: Oh, yeah. G. Where the well is?
 7 MS. PETERSON: No. Where the water was on the
 8 southern end of the Cox Ranch that you said where the hay
 9 was.
 10 HEARING OFFICER JOSEPH-TAYLOR: Ms. Penrod, I
 11 need you to try to wait until she finishes talking. The
 12 court reporter is struggling to get you guys.
 13 THE WITNESS: Okay. So G. And that's going to
 14 be where the point of the well -- Okay.
 15 Q. (By Ms. Peterson) Was there any irrigation on
 16 the Cox Ranch?
 17 A. No. Well, yes. In the spring, water ran in
 18 there from Telegraph Canyon, Road Canyon, and it could be
 19 diverted. It would come -- It would come in right by the
 20 corral area or it could be diverted and come in more down
 21 halfway in the field in those culverts. You'll see the
 22 culverts that are still in the county road there. And so you
 23 would flood irrigate, just in the spring though during runoff
 24 time.
 25 And then this area here, there was no water in

1 like -- and then this is the sagebrush, it's not proportioned
 2 right. Because this area, you go in there and then you would
 3 be in the hay field part, yeah. So this is not quite right
 4 to scale. But yes, there was springs in there.
 5 Q. And just to make this easier, I'm going to ask
 6 you some questions and then just ask you to respond to the
 7 question that I'm asking, okay. Because I think we're
 8 talking over each other and it's hard for the court reporter.
 9 When you were talking about the spring area --
 10 When you were talking about the spring area, you were talking
 11 about an area that was under or near the label Cox Ranch
 12 that's on the map; is that correct?
 13 A. Right. The spring within -- the natural flowing,
 14 God given springs that were on the ranch, there was one here
 15 and there was some in this area. But there was more of them
 16 in the area that we hayed. And what I'm saying somewhere
 17 there's a fence in there dividing like when you come down
 18 from the corral, yeah.
 19 Q. And the area that you were pointing to for a
 20 spring in the northern portion of the Cox Ranch was the area
 21 close to the number 27 that's shown on the map; is that
 22 correct?
 23 A. Well, yeah. But that's the north -- that would
 24 be the west north corner of the Cox, yes, yes.
 25 Q. Thank you. And then turning to the willow, do

1 this lower part of the field, which is -- was basically
 2 sagebrush. And out in here there was some meadow grass. But
 3 over here in this corner -- In fact, let's say that little
 4 white spot right there would be the -- I'm shaking -- would
 5 be the spring. There was a spring that the cattle watered on
 6 the outside of the fence as well as the inside of this field.
 7 But there was also water -- This is just --
 8 Q. Just --
 9 A. There's also springs. There was little like
 10 meadow -- It was actually pretty good meadow area up in here.
 11 But in the corner, which I'm assuming, this is not
 12 apportioned right. But I'm just going to go like this is the
 13 corner of the Cox place. Outside here would be BLM property.
 14 There was a large lot of water area right here. We would
 15 always hold cattle and separate and you could open this gate
 16 and they would come in here. And right in that area would be
 17 green meadow type area. And there was some water in there,
 18 not a lot of water but they could water in that area.
 19 Q. And so there were wet spots there?
 20 A. Wet, yes, yes.
 21 Q. And you're talking the label Cox Ranch?
 22 A. Cox Ranch and --
 23 Q. And wait, wait, wait.
 24 A. I'm talking this is -- You know what, see, if I
 25 draw a line across there though then to me there needs to be

1 you have another page in front of you?
 2 A. Yes.
 3 MR. KOLVET: Slide 49.
 4 Q. (By Ms. Peterson) Do you see that, Mrs. Penrod?
 5 A. Yes. And I never really noticed this map. But
 6 this -- I never paid attention to the borders here. But as I
 7 remember, this field was always a square field. There was
 8 no -- Like this is showing -- I do not remember this part
 9 here. I mean, I don't know where that's coming from. So I'm
 10 just going to assume -- I'm going to bring these out here and
 11 square these off because that field was not shaped that way.
 12 It was a square field.
 13 Q. Okay.
 14 A. And so the water of this field would have been up
 15 in this area. There was several springs up here in this part
 16 of the field.
 17 Q. And you're talking about?
 18 A. Inside the field.
 19 Q. Inside the red?
 20 A. Yes, yes. And that -- We hayed. And there again
 21 it was, you mowed around those areas and left areas that
 22 were -- where you couldn't mow because they were too wet.
 23 Q. And you're talking about the southeastern portion
 24 of the lower boxed area depicted as the willow field on the
 25 exhibit; is that correct?

1 A. Right, right, right. So it would have been -- In
 2 fact, if we could just cut this off and use as one box, yeah.
 3 So it would be, yes, it would be the southwest area, yes.
 4 Q. Any other activity?
 5 A. Well --
 6 Q. Excuse me. Any other activity on the willow
 7 field?
 8 A. Yes. My dad -- We dry farmed that. This was
 9 plowed up and that was dry farmed. And then outside of this
 10 was a large spring.
 11 Q. And you're talking about the northern portion
 12 outside the red?
 13 A. The north end in the center basically of the
 14 field, yes.
 15 Q. Do you remember any shot holes near the Willow
 16 Field Ranch, the Cox Ranch or the Home Ranch?
 17 A. Are you talking seismograph?
 18 Q. Seismograph?
 19 A. Yes. Okay. Out in this area, out kind of down
 20 the center it would be between the rock field and the willow
 21 was a row of seismograph wells. And there was at least
 22 probably -- So it would have been more probably kind of right
 23 down in this area. And there was a main, one of the main
 24 places was right here. The cattle watered there a lot. And
 25 then on out was another -- there were two -- And it seems

1 A. Right.
 2 Q. -- on the slide on the western portion of that
 3 area in between rock field and willow field?
 4 A. Not the -- Yeah, it would be the western, yes,
 5 yes.
 6 Q. And then you also described some shot holes that
 7 were even further west off the slide; is that correct?
 8 A. Right. They were out -- I just know they ran
 9 straight out towards the alkali.
 10 Q. And what was the time frame that those shot holes
 11 were put in?
 12 A. You know, I am not sure. But I'm sure it was in
 13 the fifties because they were there a long time. I mean, I
 14 can always remember riding those. I don't remember them not
 15 being there.
 16 Q. And then going back to the Thompson Ranch slide,
 17 slide 50.
 18 A. Yes. Okay.
 19 Q. Excuse me.
 20 A. This --
 21 HEARING OFFICER JOSEPH-TAYLOR: Whoa, whoa, whoa.
 22 Ms. Penrod, hold on. Let her ask a question.
 23 Q. (By Ms. Peterson) Were there shot holes around
 24 the Thompson Ranch property?
 25 A. Yes. Okay. I'm going to get my land marks here

1 like there was three, but I don't ever really remember a lot
 2 on the out. But those two were main, they were main water
 3 holes. Because otherwise those cattle had to go all the way
 4 to that Cox Spring behind the ranch. So when those
 5 seismograph wells were left open, it really made the range
 6 more beneficial for cattle.
 7 And then there was one on the Home Ranch -- Oh.
 8 Q. Go ahead. Well, wait, wait, wait, wait. Sorry.
 9 A. Are you ready?
 10 Q. No. The area that you were describing on page
 11 49 --
 12 A. Yes.
 13 Q. -- was basically a line toward the center between
 14 what's depicted --
 15 A. I would say -- If I remember right, the
 16 seismograph road went out more closer to the rock field than
 17 it was the willow. But it was right in this area. And those
 18 seismographs were straight out.
 19 Q. And you're pointing to basically a line going
 20 from the east part of the slide to the west part of the slide
 21 kind of in the middle between rock field and willow field?
 22 A. Yeah. But the wells were -- didn't -- they
 23 weren't up here. They were out in the flat part.
 24 Q. And you're talking about that area between rock
 25 field and willow field --

1 because this, I would say this borderline should be here,
 2 this area in between the BLM. Okay. Right here at the west
 3 north corner was a large hole that the cattle watered a lot
 4 at. This area was all meadow. There was a lot of cattle in
 5 here.
 6 Over there is a large hole where the cattle loved
 7 to -- I mean, they could lay there. I mean, there was lots
 8 of cattle. But there was water right here.
 9 And then straight out from there -- This is
 10 between the two fields again, so it was coming straight out
 11 here. And then it went on out further west, I think there
 12 was at least two more on out.
 13 Q. And you are talking about the area between the
 14 Cox Ranch depicted on the map and the Thompson Ranch and
 15 moving straight out west off the slide; is that correct?
 16 A. Right, right. In fact, that area appears that
 17 Dan has some water, water tank, so some kind of tanks. I
 18 don't know if they're water tanks but they're tanks sitting
 19 out in that area a little further to the north than where I
 20 remember the water hole being. But it was in that area, yes.
 21 Q. And then directing your attention off the slides,
 22 you left the property in 1963 because you graduated from high
 23 school; is that correct?
 24 A. Right, yeah.
 25 Q. And then you, I think, previously testified that

1 you frequently visited the ranch after 1963 until your
 2 parents died; is that correct?
 3 A. Right.
 4 Q. And to your knowledge, did your parents have any
 5 concerns about water level declines prior to the time that
 6 they died?
 7 A. I personally don't remember hearing that. I just
 8 remember my mom in the early seventies her big concern was
 9 the wild horses because they were cutting her AUMs for two
 10 pounds for every horse. And mom was very stressed over that.
 11 I don't remember ever really speaking of water. But I was
 12 down there to ride. I mean, we never -- Yeah.
 13 MS. PETERSON: Okay. Just one minute. I don't
 14 have any further questions.
 15 HEARING OFFICER JOSEPH-TAYLOR:
 16 Cross-examination, Mr. Kolvet.
 17 MR. KOLVET: If I may just have a moment.
 18 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 19 CROSS-EXAMINATION
 20 By Mr. Kolvet:
 21 Q. Good morning, ma'am.
 22 A. Good morning.
 23 Q. My name is Brent Kolvet. I represent
 24 Mr. Venturacci in this proceeding. And I just have a few
 25 questions of you. When you were growing up on the property,

1 A. Right, right.
 2 Q. And there were control devices like head gates
 3 and culverts to move that water where it needed to go?
 4 A. Right, right. And there were ditches that went
 5 down through the field that also moved the water. There was
 6 ditches that ran, I remember, on the south side kind of down
 7 from the slough area where it came out of the tules. It ran
 8 quite a ways down in to the field. Now, I would imagine
 9 they're still there.
 10 Q. And the ditches you recall also went north in to
 11 the Cox property to some extent?
 12 A. There was one ditch that would -- that flowed out
 13 the north corner or -- yes, out the north corner. And it
 14 kind of -- it would have hit the lower part of the Cox field,
 15 which would have been the sagebrush part of the ranch, if I
 16 remember -- of that.
 17 Q. Did you do any irrigating yourself?
 18 A. No.
 19 Q. You just did the cutting of the hay?
 20 A. Yes.
 21 Q. Now, on that map there's the red line which you
 22 have a little problem with. It's not exactly how you recall
 23 it; is that right?
 24 A. I don't recall. No, because I don't ever
 25 remember the two ranches ever touching as far as deeded

1 you mentioned that you did some haying; is that correct?
 2 A. Yes. I ran the mower.
 3 Q. So you cut the hay?
 4 A. Yes.
 5 Q. And on the slide that's up there on the screen
 6 right now, and I'm not going to ask to you do any pointing,
 7 just in general, just going to generally ask you some
 8 questions. You mentioned earlier that there were what you
 9 referred to as the north meadow and the south meadow; is that
 10 right?
 11 A. Correct, yes.
 12 Q. In the north meadow on this particular slide,
 13 again for the record slide 50 of Exhibit 234 -- You don't
 14 need to worry about that. That's me dealing with it.
 15 A. I'm just checking.
 16 Q. You don't trust me. With respect to the meadow
 17 to the north, you said there was a lot of water in that area?
 18 A. There -- I think we put up more hay on the north
 19 side than we did the south side. Now, I don't know anything
 20 about the acreage or anything. I just remember it seemed
 21 like I mowed further down in the field than on the south
 22 side.
 23 Q. And the water got there, as you said, from the
 24 main source, which was the two big, the big pond and the
 25 little pond?

1 property, I guess. But maybe they just didn't have all the
 2 deeded property fenced. I don't know.
 3 Q. Now, to the west of the red line there appears to
 4 be meadow areas. Do you recall those?
 5 A. There was meadow. That -- All that area out
 6 below the red line north was -- well, quite a large area,
 7 probably that --
 8 HEARING OFFICER JOSEPH-TAYLOR: Ms. Penrod, take
 9 your pointer because I don't know which red line you're
 10 talking about, please.
 11 MR. KOLVET: See, I didn't make you do it. She
 12 did.
 13 THE WITNESS: I'm talking about this line right
 14 in here, which I -- to me this needs to come square. But
 15 anyway, there was, out in this area there was meadow grass
 16 growing.
 17 HEARING OFFICER JOSEPH-TAYLOR: Off the north.
 18 THE WITNESS: And there was some meadow grass out
 19 in this area that grew too.
 20 Q. (By Mr. Kolvet) And just so the record is clear
 21 about the areas, you don't have to respond. The witness is
 22 pointing to an area that is a small, box-like indentation in
 23 the property line to the north as well as above the red line
 24 on the north delineation of the Thompson Ranch and also to
 25 the west of the red line, which shows the western border of

1 the Thompson Ranch on the slide?
 2 Now, in those areas that you just were describing
 3 did you also mow hay?
 4 A. No, not on the outside of the field, but on the
 5 inside we went pretty much all the way to the west north
 6 corner, yes. And then where it would flow over like this
 7 probably there would have been a slough in here that I cut
 8 hay. In fact, I know there was, yes, because I got my mower.
 9 Q. And on the south meadow portion you also cut hay
 10 there?
 11 A. Yes.
 12 Q. And that was every year?
 13 A. Yes.
 14 HEARING OFFICER JOSEPH-TAYLOR: I want to inject
 15 here. Because I heard you say you cut no hay on the south
 16 meadow.
 17 THE WITNESS: No. We cut hay on the south meadow
 18 but not as much as on the north meadow. But no, there was
 19 hay cut on the south meadow. But my mind recollects that
 20 there wasn't as much cut on the south side.
 21 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 22 THE WITNESS: But I think the north side is a
 23 larger area too, but I don't know.
 24 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 25 Q. (By Mr. Kolvet) And you already said you don't

1 Cox place.
 2 MR. KOLVET: That's all I have.
 3 HEARING OFFICER JOSEPH-TAYLOR: Redirect?
 4 MS. PETERSON: Yes. Just briefly.
 5 REDIRECT EXAMINATION
 6 By Ms. Peterson:
 7 Q. Mrs. Penrod, the hay at the Cox Ranch, was that
 8 meadow hay or grass hay?
 9 A. That was grass hay. But it wasn't a -- it was a
 10 better quality of grass hay than if I remember right we put
 11 up at the Home Ranch. It had more -- It had more -- better
 12 grasses. I don't know. That doesn't sound good. But it
 13 wasn't as much of the real wiry wild hay stuff, I guess. It
 14 was a better quality of hay I would guess. In my mind I
 15 remember it that way.
 16 Q. Thank you. And the pond area that you referenced
 17 on the Cox Ranch, that was actually from the well; is that
 18 correct?
 19 A. That was in the well area, yes, yes. And I
 20 honestly don't know where the well -- I know where the
 21 well -- but to actually have a well house there, there was
 22 none. But it had to have been there because they had a house
 23 in there and people living there. So I don't actually know
 24 where, but it had been in that area, yes.
 25 MS. PETERSON: I don't have any more questions.

1 know acreage --
 2 A. No, I don't know nothing about acreage.
 3 Q. And on the Cox Ranch did you also cut hay?
 4 A. Yes, yes.
 5 Q. Every year did you cut hay?
 6 A. Yes, every year that I was there we put hay up,
 7 yes, and every year that I cut hay, yeah.
 8 Q. And you also testified earlier that there were
 9 several springs on the Cox Ranch?
 10 A. Right. And they were kind of more in the center
 11 of the hay field. In fact, yeah, I -- they were quite a bit
 12 of water in there, yeah. The main water though was up where
 13 the well area -- in fact, there was an actual pond of water
 14 in that area.
 15 Q. And was that pond regulated too? I mean, were
 16 there head gates?
 17 A. No, no, no. It was not that big. It's maybe the
 18 size of this room if it was that big. No. Maybe half the
 19 size of this room.
 20 Q. But water was used from that area to the --
 21 A. Well --
 22 HEARING OFFICER JOSEPH-TAYLOR: Ms. Penrod,
 23 you've got to let him finish the question.
 24 MR. KOLVET: To raise the hay; is that correct?
 25 THE WITNESS: We didn't do any irrigating at the

1 And thank you very much, Mrs. Penrod. Thank you. But you
 2 will maybe have some questions from the State Engineer or --
 3 HEARING OFFICER JOSEPH-TAYLOR: Recross?
 4 MR. KOLVET: No.
 5 HEARING OFFICER JOSEPH-TAYLOR: Questions of
 6 staff?
 7 THE STATE ENGINEER: I have some questions.
 8 HEARING OFFICER JOSEPH-TAYLOR: Go ahead.
 9 THE STATE ENGINEER: Good morning, Ms. Penrod.
 10 HEARING OFFICER JOSEPH-TAYLOR: Do you know who
 11 this is, Ms. Penrod? This is the State Engineer, Jason King.
 12 THE WITNESS: Oh, hi.
 13 THE STATE ENGINEER: Nice to meet you.
 14 EXAMINATION
 15 By The State Engineer:
 16 Q. If you can remember these, do you remember as you
 17 were growing up on the ranch, do you remember whether or not
 18 the springs were highly variable in flow in terms of from
 19 year to year depending on what happened over the winter? If
 20 it was a really good snow winter, do you remember if you
 21 had --
 22 A. Not the actual pond water, no. Because see,
 23 there really wasn't any runoff water that ever went in the
 24 pond area. Those were all individual springs. There was no
 25 runoff, actual runoff. Because the only two canyons that

1 would provide runoff would have been Horse Canyon and the
 2 Telegraph Canyon. Telegraph's waters mostly went to the Cox
 3 place. It could be diverted in to what I said was put in to
 4 the alfalfa well area, but that water mainly went to the Cox
 5 place. It did not come to the Home Ranch. So no.
 6 Q. So I understand your testimony on the flows that
 7 may have come out of the canyons. But the springs
 8 themselves, do you remember any reduction in flow as a result
 9 of if it was a heavy winter or a dry winter?
 10 A. No, I do not. I always remember lots of water at
 11 the ranch.
 12 Q. Thank you. Do you have any idea of how many head
 13 of cattle may have been run out on any one of the ranches?
 14 A. I have no idea. I don't know what the permit was
 15 for. But I know at one time dad ran the full, whatever the
 16 BLM was allowed they ran it. And I honestly don't know.
 17 Q. Thank you. You had talked about there was a well
 18 at the house on the ranch that you grew up on.
 19 A. Right.
 20 Q. Can you tell me exactly what that well was used
 21 for? Was it just domestic purposes or was it used elsewhere?
 22 A. It was domestic. It provided the house. I mean,
 23 it provided everything. There was water to the cow barn.
 24 There was water to the horse -- to all the -- in fact water
 25 was inside the cow barn because we washed out the cow barn

1 whole in 1982, a question was asked of a witness as to why
 2 did that witness believe that your brother didn't take that
 3 offer. And the response was because he wanted the spring, he
 4 wanted that free flowing water, did not want the groundwater.
 5 Can you corroborate that?
 6 A. I have no idea what my brother thought or did or
 7 anything. I mean, my brother really kind of ostracized us
 8 and we -- Yeah. I mean, I don't know why he did not allow a
 9 well to be drilled or whatever.
 10 Q. Thank you. And one last question. You've talked
 11 about the seismograph holes, the shot holes?
 12 A. Right.
 13 Q. Do you have any recollection of whether or not
 14 there was a reduction in spring flow after those shot holes
 15 were blasted?
 16 A. Well, when I was there I don't remember that.
 17 And even -- And I specifically remember the north end there
 18 was another area of those wells. I mean, clear down below
 19 the, say, four, more like five-mile area there was wells.
 20 Now, that was very beneficial and they flowed -- I mean,
 21 there was -- that allowed the cattle to feed in the north end
 22 of the valley because -- And we -- There were two windmills
 23 down there. There was one at the four mile, which we never
 24 ever -- I can't remember in my later years using those
 25 windmills. I vaguely remember when I was smaller them using

1 after milking. And then there wasn't actually water in the
 2 horse barn as I remember. But there was water in the corral.
 3 There was water every where, I mean, to the corrals to the
 4 north of the ranch or to north of the house there was water.
 5 There was the chicken house that sat there and the corrals.
 6 There was always water in there. And they were all pumped
 7 from the pump house because it was all uphill so it had to be
 8 pumped.
 9 Q. Thank you. You already had been asked a question
 10 similar to the one I'm about to ask you, so excuse me if I'm
 11 asking this again. Part of the contention in this hearing is
 12 whether or not pumping in the southern part of Diamond Valley
 13 by the irrigators and all the pivots impact the springs that
 14 we're talking about here. Do you remember, and of course you
 15 can talk about your knowledge since then, but do you remember
 16 during those time periods where that was understood by your
 17 parents, by you, by your brother that all of that pumping is
 18 drying up our spring?
 19 A. I do remember that, yes, yes.
 20 Q. There was some testimony yesterday, and I don't
 21 believe you were here yesterday?
 22 A. No, I was not.
 23 Q. There was some testimony about the fact that the
 24 State Engineer's office offered your brother the opportunity
 25 perhaps to drill a supplemental groundwater well to make him

1 the windmills. But then once the seismograph wells come in,
 2 they were no longer needed. But there was one at -- in
 3 the -- below the four mile, what we call four mile and
 4 there's one below Davis, which -- The windmills are still
 5 there.
 6 Q. Thank you very much.
 7 A. But we didn't use them because of the flowing
 8 wells, the seismograph.
 9 THE STATE ENGINEER: Thank you very much.
 10 HEARING OFFICER JOSEPH-TAYLOR: Mr. Felling,
 11 questions?
 12 EXAMINATION
 13 By Mr. Felling:
 14 Q. Ms. Penrod, my name is Rick Felling and I work
 15 here. I just have a couple of questions. Do you recall how
 16 many tons of hay you were able to put up on either of the
 17 ranches?
 18 A. I don't know tonnage. I was a kid. I could have
 19 cared less about tonnage. Yeah. I mean, I -- That's not --
 20 I'm not being smart. I'm sorry. But no, I don't know.
 21 Q. So even if you don't know how many tons, do you
 22 know if it varied much from year to year?
 23 A. Well, it was becoming less as I remember it my
 24 last years that I mowed hay, yes. And I think especially on
 25 the south side it seemed because we weren't haying it way

1 down like they had during the beginning. But -- So I would
 2 say yes to that.
 3 MR. FELLING: All right. Thank you. No more
 4 questions.
 5 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 6 Mr. Walmsley?
 7 EXAMINATION
 8 By Mr. Walmsley:
 9 Q. Good morning, Ms. Penrod. My name is Steve
 10 Walmsley and I also work for the State Engineer. You said
 11 that up on the Cox Ranch you cut a better quality grass in
 12 general; is that correct?
 13 A. I believe it was, yes, yes.
 14 Q. And then you also stated I believe when you were
 15 in cross-examination that the grass harvested on the southern
 16 field you described it as a wire grass?
 17 A. Well, it was just a typical -- What do I want to
 18 say? A typical wild hay or grass hay, yeah. And that's
 19 about all there was. There wasn't any clover or much of
 20 anything growing in it. It was just that as I remember.
 21 That's what I'm thinking, yes.
 22 Q. I'm sorry. Do you recall if the hay harvested,
 23 the grass you call wild grass on the southern end of the
 24 property, did it have sharp like pointy tips on it?
 25 A. Yes, they were pointy tips. And then when it

1 Q. Wild?
 2 A. Wild grass. I think that's what they called it,
 3 just wild grass.
 4 Q. And was that also the pointy tips?
 5 A. Yeah, right, right.
 6 Q. Okay. And I think just last general question.
 7 You stated in the center part of the Home Ranch due west of
 8 the springs in the dark area in the photograph, you stated
 9 that the light-colored areas were primarily rabbit brush?
 10 A. Well, see, I don't know what -- I mean, I'm just
 11 assuming the dark area is the areas that the -- I'm assuming
 12 this, that that's where the water was flowing. And so those
 13 other areas, some of them -- I mean, they're just land out in
 14 that area that really -- I mean, it had wild grass on it.
 15 Probably more like salt grass and rabbit brush. And I'm just
 16 assuming that's what those areas are. Because there is in
 17 those low fields in that area there was some alkali ground
 18 because it's got white in it. So -- And I just know that the
 19 water does wash this away because in the north end those
 20 seismographs there was lots -- there was grass that grew in
 21 those areas clear out in the alkali and even way out in
 22 the -- there's no land any have anywhere but I'm sure you'd
 23 have a large patch of grass because there was a seismograph
 24 well that had been flowing.
 25 MR. WALMSLEY: Okay. Thank you. One last

1 matured it was like a seed or something on the top of it once
 2 that it reached maturity, if I remember right.
 3 Q. Were the --
 4 A. Like a wild grass or I think it has a seed or
 5 something on the top of it. Not all of it but a lot of it
 6 does. Am I right or wrong, guys?
 7 Q. No. I'm just --
 8 A. I kind of remember something on some of the ends
 9 of some of it, yes, which probably would have been a seed.
 10 Q. Yeah. I'm just asking of your recollection of it
 11 for us to be able to formulate an idea of the grass type and
 12 the nutritional value of the grass. And it's obvious that if
 13 you cut and baled it that it did have nutritional value for
 14 the cattle.
 15 A. That's all they had, so we used it.
 16 Q. I'm sure you used what you had.
 17 A. Right.
 18 Q. And then if I go up to the northwest corner of
 19 the Home Ranch where there's a little notch out of the ranch,
 20 it would be further described as, I believe, within the
 21 northwest quarter of the northwest quarter of Section 4 of
 22 Township 23 north, Range 54 east or where the pointer is,
 23 generally in that area was the grass type that you harvested
 24 up there the same?
 25 A. That was also wild grass, yes.

1 question. You stated that in a lot of those whiter areas
 2 that you had rabbit brush and salt grass. Did the livestock
 3 eat any of this plant material?
 4 A. Well, livestock -- rabbit brush is basically
 5 hazardous weed, I guess. Nothing eats rabbit brush. But
 6 they will eat -- I think they eat salt grass to a certain
 7 extent. I mean, they do eat that.
 8 MR. WALMSLEY: Oh, okay. Well, I don't believe I
 9 have any further questions. Thank you very much Ms. Penrod.
 10 HEARING OFFICER JOSEPH-TAYLOR: Ms. Penrod, we
 11 really appreciate you coming in and helping us with this.
 12 Thank you. You may be excused.
 13 Let's be in recess for about five minutes. We'll
 14 be off the record.
 15 (Recess was taken)
 16 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson,
 17 please continue.
 18 MS. PETERSON: Yes. Eureka County would call
 19 Wilfred Bailey.
 20 HEARING OFFICER JOSEPH-TAYLOR: W-i-l-f-r-e-d?
 21 MS. PETERSON: Yes.
 22 HEARING OFFICER JOSEPH-TAYLOR: B-a-i-l-e-y?
 23 MS. PETERSON: B-a-i-l-e-y. And we have a
 24 similar map. And we never got that in the electronic
 25 version.

1 HEARING OFFICER JOSEPH-TAYLOR: Welcome,
2 Mr. Bailey. I'm going to let the court reporter swear you in
3 while we're -- while Ms. Peterson is getting ready.
4 (The witness was sworn in)

5
6 WILFRED BAILEY
7 Called as a witness on behalf of the
8 Protestant, having been first duly sworn,
9 Was examined and testified as follows:

10
11 DIRECT EXAMINATION

12 By Ms. Peterson:

13 Q. Mr. Bailey, could you please state your name for
14 the record.

15 A. My name is Wilfred Bailey. And almost everybody
16 knows me by Wids Bailey.

17 Q. And could you please spell Wids for the court
18 reporter?

19 A. Well, it's spelled different ways, but W-i-d-s, I
20 guess.

21 Q. Thank you. Do you live in Diamond Valley?

22 A. Yes.

23 Q. How long have you lived in Diamond Valley?

24 A. I've been there all my life except when I was in
25 the service. I was in the service for two years. But I

1 spent my whole life in Diamond Valley.

2 Q. And you were born in 1930?

3 A. Yes, uh-huh.

4 Q. And do you live on the Bailey Ranch?

5 A. No. We would -- there was five of us born and
6 raised -- Well, I was born in Elko. But we were raised on
7 the ranch. But then in 1948 my folks moved to Pine Valley
8 and I -- actually my younger brother and I lived on the ranch
9 in '48. Nobody had lived on that old ranch right now for
10 probably 35 years. Because we moved up in the farming area.
11 But we go down there every single day, sometimes four or five
12 times a day for hauling cattle. But we've always been around
13 there some place, you know.

14 Q. Yes. And is the Bailey Ranch the first ranch
15 south of the Sadler Ranch?

16 A. Going south. Yeah, going south it's the first
17 ranch next to the end.

18 Q. And did you know Reinhold Sadler and Floyd
19 Sadler?

20 A. Yes, I did.

21 Q. And do you call Reinhold Sadler Reiny?

22 A. Yes, I knew him as Reiny.

23 Q. And do you know Floyd Sadler as Tiny?

24 A. Yes. And their nickname for each other, Reiny's
25 name, Tiny would call his have him Merv. And Reiny would

1 call Tiny Shrimp. He was not a small man though.
2 Q. And so if you are referring in your testimony to
3 Reiny you are referring to Reinhold Sadler; is that correct?
4 A. That's true.

5 Q. And if you are referring in your testimony to
6 Tiny, you are referring to Floyd Sadler?

7 A. Yes, that's right.

8 Q. And when did Reiny and Tiny Sadler own the Sadler
9 Ranch?

10 A. As far as I know in my lifetime they were there
11 all my life. Reiny went -- spent his whole life right there.
12 Tiny was away at school for a while. He graduated -- He was
13 an engineer.

14 Q. Did -- Was there a time when Reiny and Tiny
15 actually owned the ranch?

16 A. They had a lawsuit that went on for 18 years, so
17 I'm told. And at the end of that 18 years, the way I
18 understood, they lost the lawsuit. But the way they
19 described it to me, Tiny always told me that losing that
20 lawsuit did not hurt us. What hurt us was all them years of
21 fighting that lawsuit. And once it was -- they bought the
22 ranch, literally bought the ranch after that, after the
23 lawsuit.

24 And leading up to the lawsuit they was down to a
25 hundred head of cattle and no bulls. And the year of the

1 lawsuit they did not put up their own hay. They hired that
2 down in -- Riggins and Marshall baled that with an old
3 three-man baler. And they were pretty -- let things kind of
4 slide during them years because they didn't even know whether
5 they were going to own the ranch or not until after the
6 settlement was made.

7 And then them two guys they got along really good
8 and their wives got along really good and they did tremendous
9 amount of work once it was theirs. They went to work and the
10 family worked together and you can accomplish big things when
11 your family will all pull together and work. They did a
12 wonderful job.

13 THE STATE ENGINEER: Mr. Bailey, can I ask you
14 what time frame this was. When was the end of this 18-year
15 period?

16 THE WITNESS: We was talking about that. That
17 would have been in -- You're talking about the lawsuit now?

18 THE STATE ENGINEER: Just when maybe the end of
19 that 18-year period was and when they took over.

20 THE WITNESS: I'm going to say that was in '49,
21 '49 or '50. It was right there, I'm sure of that. Because
22 Joanne was staying at the ranch, at our old ranch at the time
23 and that's when that was --

24 THE STATE ENGINEER: Thank you.

25 THE WITNESS: -- right in that area.

1 Q. (By Ms. Peterson) And you're talking about 1949
 2 or 1950; is that correct?
 3 A. That's correct, yes.
 4 Q. And after Reiny and Tiny started -- after they
 5 owned the ranch did you help them on the ranch?
 6 A. No. No, I did not. I did a lot of riding for
 7 them and worked a lot of cattle. But the actually manual
 8 working the ranch, no, I did none.
 9 Q. Were you familiar with what they did on the
 10 ranch?
 11 A. Absolutely.
 12 Q. And what did they do on the ranch?
 13 A. Okay. Once that lawsuit was settled then they
 14 started developing that land that was close to the spring.
 15 Prior to that, I'm not sure -- You see, when they -- when
 16 they started working that ground and putting that in to
 17 alfalfa -- Now, you can't raise alfalfa on the side of the
 18 ranch by flood irrigating unless you change your water every
 19 12 hours. Because if you do, the water is too warm and you
 20 lose your stand of alfalfa.
 21 So Sadlers, once that lawsuit was over, they
 22 started developing all of that upper ground there and putting
 23 it in. It didn't happen overnight and I would be scared to
 24 say how long it happened, how long they worked on putting it
 25 in to alfalfa. But the ground was fairly uneven and they

1 Jim Bunch was his name for many years.
 2 And Tiny, his job after the 30 days of that --
 3 after the first 30 days, his job was to milk the cows for one
 4 thing. And then they had the Indian Camp that they developed
 5 the water on. And he -- that was his to irrigate. That was
 6 his job to irrigate that and to catch gophers. The gophers
 7 are a big problem and the little crap that they used in his
 8 time you would be lucky if you got 20 percent in your traps
 9 because the traps, the way they were made. Nowadays the
 10 traps, the one we use now I'm going to say is about 80
 11 percent. He would have been very thankful for them. Now,
 12 they didn't have a big gopher problem on the Big Shipley
 13 Springs. There was gophers in there but they could handle
 14 them with that big flood water pretty easy. But on the
 15 Indian Camp that's a different story. You had to fight them
 16 gophers full time. It was job security.
 17 Q. And was there other water used on the Sadler
 18 property by Reiny and Tiny?
 19 A. Besides the Big Shipley Spring?
 20 Q. Well, I'll get to that in a minute, all right.
 21 They had fields, to your knowledge, known as the Taft Fields;
 22 is that correct?
 23 A. The Taft Field was right on the south side, which
 24 is right below the alfalfa field. It was the Taft and the
 25 lower Taft was below that. And the Taft Field was a very

1 didn't have the -- You've got to realize we didn't have four
 2 wheel drive tractors and all of that in them days. But they
 3 did have a tractor and they had a marker on it. And I
 4 think -- A corrugator or marker, whatever you want to call
 5 it. And in order to irrigate that ground, they had marked
 6 ground as they was going to irrigate. Every single year it
 7 would take them 30 days from the time they started that water
 8 to the -- before they could get back to it. It would take 30
 9 days to do that. And they would mark every day they run
 10 their corrugates and it would take three men and a lot of
 11 shovel work to get all of them corrugates to run even. And
 12 them corrugates didn't run -- it wasn't a long run because
 13 you only had 12 hours to get over that piece of ground.
 14 Because otherwise you was going to cook the ground. So you
 15 had to change that water every 12 hours whether it was cool
 16 kept or not. You was tied to that place. There was no --
 17 You didn't -- That went on because they had that down to a
 18 science and it took exactly 30 days from the time they
 19 started in them corrugates until they could come back to
 20 them.
 21 Now, once they was over one time then Reiny could
 22 handle the irrigating by himself. He was very good at it and
 23 nobody in the world could change his water for him either.
 24 But he was tied to that all summer long. I mean, he didn't
 25 have no days off. And then they always had one hired hand,

1 productive field. They always fertilized their ground and
 2 they fertilized the alfalfa after it was established. They
 3 did a very good job. They were very good farmers for their
 4 day. For their day they was very good.
 5 And they had -- That warm water seemed to have
 6 more bug problems than maybe cold water. I don't know
 7 whether that's true or not but I always kind of thought it
 8 was. And so they would have the airplane come in and spray
 9 their field for aphids and weavels is the main ones they was
 10 after. It was actually -- The weavel would actually turn the
 11 alfalfa white on top when they got really bad.
 12 And when they first were -- In the time that they
 13 was there I know they outlawed it later, but they used that
 14 DDT on it. And the airplane would come in from the north and
 15 it would make a straight run, which would include the Indian
 16 Camp in this run. And they'd spray. But there was a lot of
 17 places along these. They would spray both ways. And Tiny
 18 always told me that that was about 200 acres that they paid
 19 the airplane, sprayed about 200 acres, which included the 40
 20 acres at the Indian Camp.
 21 Q. And that was on the alfalfa?
 22 A. That was on the alfalfa. You also -- You do have
 23 some grass in the alfalfa too. But it was very productive
 24 hay. It was very good. When they -- As they redone that
 25 upper ground and put that in, every time they would plant a

1 new field, they would plant that big ole yellow clover in it
2 and it was only good for actually -- they plant one year and
3 you wouldn't get much out of it. But then the next year you
4 would get this huge growth and then it would never come back
5 again. But it made lots and lots of hay for the one-shot
6 deal and then the stems were pretty big. But it made lots of
7 hay, yes.

8 Q. And are you familiar with Johns Field?

9 A. Yes, I am.

10 Q. And what happened on Johns Field while the Sadler
11 brothers had that ranch?

12 A. Okay. The Sadlers when they were there, they
13 would run water in to the Johns Field for three months,
14 winter months. In a sense, you had to go some place with
15 your water so you dumped it in to the Johns Field. And it
16 took three months. And there was a dike around -- it was not
17 man made. It was natural made some way or another. I don't
18 know how. And that water would -- it would fill up that huge
19 area in there. The grass that did grow in there was this
20 very low grade -- they called it goose grass. That's the way
21 they described it.

22 But you see, after the lawsuit was over and after
23 they started irrigating at this upper ground, at the Johns
24 Field, you could not get any more water. There was never
25 enough water to ever put any more water in to the Johns Field

1 after they developed this upper ground with their alfalfa.
2 So the Johns Field got the water the three months and no more
3 water in it. So it was kind of a waste. I'm going to call
4 it kind of a waste of water. But it was a necessary waste
5 because you had to go some place with your water. The ducks
6 and the geese and the snipes, it was an oasis for them.

7 Now, if you come over on the other side of the
8 ranch and you go down to -- they turn the water out of here
9 after three months and they come over on the other side of
10 the ranch and they run the water down to what you call the
11 blow field, they way they describe it now they call it the
12 blow field anyway and they run in to the duck pond. And it
13 took 30 days for that water to fill up that duck pond. The
14 duck pond was outside of the fenced area. However, they tell
15 me they still owned the ground. But that duck pond held lots
16 of water. And its only value was stock water out of that.
17 But it did have a lot of ducks and geese and snipe. It was
18 really an oasis for them.

19 But like I said, it took 30 days to fill that up.
20 So that took care of four months of water right there. And
21 then they would start irrigating the meadow.

22 Now, when they started irrigating alfalfa, they
23 didn't want to start too early on it. They would like to
24 have started early but they couldn't start too early because
25 that warm water would warm the ground up and the alfalfa

1 would come right up. And in doing so, it was unbearable with
2 a hard frost would freeze it off and it would never be used
3 to it again. So they had to be pretty careful and kind of
4 outguess the weather when they started that. They could
5 irrigate pretty late in the fall with it but not too late
6 because they brought the cattle in there. And you would run
7 it all up with them so you had to dry out, you know, then.

8 So to describe the meadow hay, it's kind of a
9 fairly low class hay. And whether somebody tested it or not,
10 I don't know whether they did. But I'll give you a good
11 example. When Sadler weaned in the spring of the year --
12 They wintered a lot of cows and calves in the wintertime.
13 And then they would ween in the springs and then they would
14 weigh them calves. And they would run them calves up on the
15 crusted weed and then they would come down to the blow field
16 with them and then eventually they would come -- They spent a
17 little time in the Johns Field. But once it started drying
18 up, they didn't do good in the Johns Field. They had a
19 seismograph well there that they used for stock water because
20 there wouldn't be any water left there by the time these
21 weaners got there.

22 So anyway, I'll say this, they had 250 head as a
23 normal that they had summer on this area. And then as they
24 hayed this area, they would bring the cattle up on to this
25 hay ground that they had already cut and then run the water

1 back on. They had good pasture and then they would end up on
2 the alfalfa too. And it never did bloat them. And them
3 calves never did gain over 200 -- 165 pounds on this season.
4 They never put anymore than 165.

5 And I did the same thing at the old ranch one
6 time. I put my weaners up in the crescent weed and then run
7 them down and I didn't hay the meadow that year and I weighed
8 the calves. And we sprayed them calves for bugs and we would
9 bring them in to the corral there and spray them to keep the
10 flies out because you had a lot of gnats and mosquitoes and
11 horseflies and everything and you would run them cattle to
12 death if you left them out without spraying them. And I put
13 on 165 pounds. I didn't beat theirs at all.

14 But right after that, I took the same weaners and
15 I sent them to Ruby Valley and put them on feed over there
16 and they gained 250 pounds. So that's why I'm telling you
17 this low grade feed.

18 Now, Sadlers made that work for them really good.
19 Because, see, they had the alfalfa that they supplemented.
20 And the way they used it, they used the alfalfa for the
21 protein and then your wild hay more or less for the filler,
22 however you want to put it. They got some good out of it,
23 I'm sure. But it was kind of a low grass, low grade grass.
24 There's no question about that. So that's how they did
25 theirs.

1 And prior to that, before that, you used to be
 2 able to buy that 43 percent protein meal -- pallets and meal
 3 and you pick it up in, off the railroad there and it would
 4 come in the box cars and there was a really good buy on, I
 5 say what we had to pay for it. But it worked good on the
 6 lower type feed that I'm talking about before you had
 7 alfalfa. Like Sadlers used alfalfa. You could use that.
 8 And Sadler -- Thompsons used it. We used it. Sadlers bought
 9 a lot of that off -- come in on the railroad and it was 43
 10 percent protein, and cattle really utilized all of that feed
 11 that they didn't do very good on without it, you know.
 12 So what I'm saying in order for that to be
 13 utilized, you need some kind of protein with it. And your
 14 alfalfa is very good protein.
 15 Q. Mr. Bailey, did -- do you have any recollection
 16 of how many bales of hay the Sadlers put up?
 17 A. Yes, I do.
 18 Q. Okay. And what's that?
 19 A. After they -- They had two little balers. And
 20 they had one year that was a really good year. And see, we
 21 used to go down to the pond and take our bath every night and
 22 talk with the guys that worked there and stuff. And so they
 23 was pushing really hard to get 50,000 bales this one
 24 particular year. And they made their 50,000 bales. But you
 25 got to realize with 33 bales to the ton and these bale

1 there was a lot of water that year?
 2 A. Well, there was a lot of help with the rain is
 3 what I'm trying to say. It was a good wet spring and good
 4 wet year. And water goes much further and faster than it
 5 will on the dry year.
 6 Q. And you already testified that there was 200
 7 acres of alfalfa?
 8 A. That's correct, yes.
 9 Q. And what was the most that you ever saw -- What
 10 was the most you ever saw -- How much acreage was the most
 11 you ever saw used on the ranch?
 12 A. Total?
 13 Q. Total.
 14 A. Okay. I'm claiming that -- I'm claiming there
 15 was 200 acres of alfalfa. Now, I'm talking about hay ground
 16 that you can cut, harvest. And I'm going to say there were
 17 250 acres of meadow cuttable hay. That's what I claim. Now,
 18 there's going to be a lot of other claims saying different.
 19 But that's what I believe. And if you read -- Well, I'll get
 20 in to that later, so I won't say any more on that right now.
 21 Q. Okay. And so you're saying the most acreage you
 22 ever saw of meadow was 250 acres; is that correct?
 23 A. Of meadow hay.
 24 Q. Yes.
 25 A. Now, that don't include the Johns Field because

1 buckers that we talked to, one of them was a relation to me.
 2 So if you put 33 bales in to 50,000 bales, you're going to
 3 get 1500 ton. And that was the maximum that I ever recall
 4 anybody ever putting up on the Sadler, and that was in the
 5 peak year. And that was one of their peak years. Now, they
 6 might have come close to that other times. But nobody but
 7 Sadlers could have even come close to that because nobody
 8 tended the water like Reiny did, you know, twice a day. And
 9 so they were the only ones that could raise alfalfa that I
 10 ever knew of. After they sold out, there was no more alfalfa
 11 raised on the Sadler Ranch.
 12 THE STATE ENGINEER: Can you tell me what year
 13 that peak year may have been?
 14 THE WITNESS: It probably was about five years
 15 after they -- after they would -- after they bought -- bought
 16 the place, I want to say.
 17 THE STATE ENGINEER: So mid 1950s?
 18 THE WITNESS: Yeah, I want to say that.
 19 Q. (By Ms. Peterson) And why was that a peak year?
 20 A. Well, it was a good year and Sadlers had all of
 21 this upper ground developed by that time. And on a good year
 22 your water goes further. And I always claimed that you look
 23 like a genius on them good years. You look like an idiot on
 24 them dry years.
 25 Q. So are you saying it was a good year because

1 they never cut the Johns Field. After they developed this
 2 upper ground now, they didn't have the water to put in that
 3 Johns Field to keep that grass a coming. And it dried up.
 4 So I -- Prior to that -- We're talking about after that.
 5 Prior to that before they spent all of this time irrigating
 6 this upper ground they probably got some more water in that
 7 Johns Field, but not after that lawsuit they didn't get it.
 8 Q. And did Tiny and Reiny have a well?
 9 A. Say that again.
 10 Q. Did Tiny and Reiny have a well?
 11 A. A well?
 12 Q. Yes.
 13 A. A domestic well?
 14 Q. A well on the property.
 15 A. They had the flowing well. They both had
 16 domestic wells at the house. Each one of them had, yes, on
 17 that too. But they -- Are you talking about additional water
 18 besides the hot spring?
 19 Q. Yes.
 20 A. Okay. And you got to go to the Indian Camp was
 21 irrigated that ground and they developed that water on the
 22 Indian Camp with a trench that they had dug. And the Sadlers
 23 didn't have a backhoe. They didn't ever own a tractor with a
 24 bucket on it all the years they were there. But they did
 25 have a crawler, a little John Deere crawler. And they had a

1 little scoop and the scoop would go down and fill up and then
2 they would go down the trench and bring it around and it had
3 a backwards dump on it. So the hired man worked there all
4 summer one time just trip after trip after trip, you know.
5 But they ended up with enough water to irrigate this 40
6 acres. And so it was well worth the time.

7 Later on, not while they were there but later on
8 we'll talk about that because they lost that water through
9 seismographic.

10 Q. Why don't you talk about that right now?

11 A. Okay. I'll talk about it right now. When
12 Sadlers was there it was -- You see, Sadlers sold out to
13 Loudys. And then Loudys sold out to Sokul. And then
14 Sokul -- Russell bought it from Sokul. And then Sokul leased
15 it for a couple years to Weatherly. And then Lundahls bought
16 it from Russell. Okay.

17 If you go back to the time that the seismograph
18 dug the hole, this 40 acres that they were irrigating, that
19 was the time when Russell was just buying the place. Now,
20 Sokul, they lost -- they lost that water on the Indian Camp
21 when Sokul was there. And then they had a lawsuit over
22 losing that water and it took that amount of time. And when
23 they did settle on it, when they did settle the lawsuit, I'm
24 going to say, I guess you would say settle it, the
25 seismograph paid, I understood 30 and then somebody said it

1 was 35,000.

2 MR. TAGGART: Objection. Objection. He's now
3 going to testify about something the best evidence which is a
4 settlement I'm not aware of and obviously he's testifying
5 about something that's outside the courtroom so it's hearsay.
6 If there is some settlement, we should see the document and
7 if he's going to testify --

8 THE WITNESS: It was never documented.

9 HEARING OFFICER JOSEPH-TAYLOR: Hold it,
10 Mr. Bailey. I've got to work with the lawyers.

11 THE WITNESS: Okay.

12 MR. TAGGART: He's going to testify about what he
13 learned from an out-of-court source and I have no way to
14 assess the veracity of that source or what that information
15 is. And so if there is a settlement agreement, that would be
16 the appropriate evidence to bring forward. Otherwise, this
17 is just clear -- it's hearsay. And I know we don't have
18 technical rules of evidence in this proceeding, but I think
19 to maintain the due process requirements we have to be able
20 to understand the veracity of what this is that he's going to
21 talk about and we don't have that information. So I'm not
22 aware of where he's going. But he's obviously going to talk
23 about something that's out of court and it's from a written
24 document that we don't have.

25 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson.

1 MS. PETERSON: The issue of the loss of the
2 Indian Camp water is directly at issue in this proceeding
3 because the Sadlers have contended that they don't have any
4 water now in Indian Camp. And this is an explanation as to
5 why they don't have any water in Indian Camp based upon this
6 witness' personal knowledge.

7 MR. TAGGART: Well, and if I may, if this witness
8 testified in 1982 about why the water doesn't flow there
9 anymore, I don't have any problem talking about that. It's
10 the settlement after it that I have an issue with. So all of
11 that has been discussed in prior hearings on the reason why.
12 It's the other information that is what our objection focuses
13 on.

14 MS. PETERSON: Yeah. We're not trying to offer
15 the evidence to show the exact dollar amount of a settlement.
16 That's not why we're trying to present the evidence. We're
17 trying to present the evidence to show why there was a loss
18 in Indian Camp Springs and it should be determined by how the
19 panel interprets and weighs the evidence.

20 MR. TAGGART: But none of us know whether there
21 was a lawsuit. That's the point. We don't have any
22 documentation about a lawsuit. In fact, I think if the State
23 Engineer's concern is why did the spring stop flowing, that's
24 fine. I don't have any problems with that. It's this
25 outside lawsuit that I don't have any information about.

1 HEARING OFFICER JOSEPH-TAYLOR: And you know,
2 Mr. Taggart, the rules of evidence don't apply. We do allow
3 hearsay evidence if there's no corroborating evidence. And I
4 don't think the price of settlement of the lawsuit is really
5 what's relevant. It's his recollection of why the water went
6 away. So I'm going to overrule your objection and allow him
7 to answer, if you can even remember the question. I can't.
8 Would you ask the question again, please.

9 THE WITNESS: Okay. When the --

10 HEARING OFFICER JOSEPH-TAYLOR: Hold on. Hold
11 on. Let me get your lawyer back on track.

12 Q. (By Ms. Peterson) Mr. Bailey, we were talking
13 about the Indian Camp Spring. And do you have knowledge as
14 to why there was a loss of water at the Indian Camp Spring?

15 A. Yeah. Because when the seismograph dug this well
16 down actually below, a little bit below where the 40 acres
17 was irrigated, it rerouted this water. They got a big gush
18 of water coming out of this hole. And they lost the water
19 that was coming out of this trench. So they made him go in
20 and plug the hole. He mended the hole up, but the water --

21 Q. Excuse me. The seismograph hole?

22 A. The seismograph one, yeah, they plugged that
23 hole.

24 Q. Okay.

25 A. And when they plugged the hole, the water never

1 did come back to the trench. They rerouted that water. And
 2 I understood there was a lawsuit.
 3 HEARING OFFICER JOSEPH-TAYLOR: *And I don't care*
 4 about that, Mr. Bailey. And so that's Mr. Taggart's
 5 objection so why don't you just stop right there.
 6 THE WITNESS: All right. That's fine. But that
 7 doesn't bring no hay back.
 8 Q. (By Ms. Peterson) And did the -- did the company
 9 that drilled the seismograph well agree to drill a new well
 10 to -- for the Indian Camp?
 11 A. They agreed to give them the money to drill the
 12 new well. And my understanding is they -- See, Russell was
 13 just buying the place.
 14 MR. TAGGART: Objection. That's not the question
 15 that's asked --
 16 HEARING OFFICER JOSEPH-TAYLOR: *Mr. Taggart, I'm*
 17 not going to play lawyer rules with a witness like this. I'm
 18 going to let Mr. Bailey testify, so I would appreciate it if
 19 you would let him.
 20 MR. TAGGART: I am letting him testify. I have
 21 not objected. And this is something that's important. I
 22 think we made it through that, the last part fine.
 23 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 24 Ms. Peterson.
 25 Q. (By Ms. Peterson) Did Mr. Russell ever drill the

1 Q. And Mr. Bailey, just getting back to that well,
 2 was it connected to the Hot Springs?
 3 A. How do you mean that? I'm not sure how --
 4 Q. What did they do with that well?
 5 A. They ended up doing nothing with it.
 6 Q. Okay.
 7 A. It just flowed in -- It just flooded the water
 8 out there and it was a stock water and it made quite a bit of
 9 grass in the swampy area there. But it didn't have anything
 10 to do with the hot pond. It was just an additional swampy
 11 area that was out there and it's still there.
 12 Q. Okay. And you indicated that that well was -- in
 13 your testimony you stated that it was south of the Hot
 14 Springs. Do you think it might have been north of the Hot
 15 Springs?
 16 A. It was north of the Hot Springs, north of the Hot
 17 Springs.
 18 Q. Okay. Thank you.
 19 A. The Indian Camp is south of the Hot Springs.
 20 Q. Yes. Now, you said that the Sadlers sold to
 21 Loudy; is that correct?
 22 A. That's correct.
 23 Q. And did Loudy put in any improvements on the
 24 property?
 25 A. On the Sadler Ranch?

1 well?
 2 A. No, he did not.
 3 Q. Are you aware of a -- Were you aware of a flowing
 4 well near the Sadler Ranch property?
 5 A. Yes.
 6 Q. And could you please tell us about that well.
 7 A. Okay. Sadler brought in a well rig and had a
 8 well rig come in and they drilled an irrigation well. It
 9 would have been south of the Shipley Hot Springs. And they
 10 drilled this well and it was a flowing well. And it probably
 11 flowed three or 400 gallons a minute full time. And it made
 12 quite a marshy area right below it there. It ran 24-7 year
 13 round. And they did put a pump in just to check how much
 14 that would pump. And it was 960 gallons or something that it
 15 would pump.
 16 But they found out once they drilled that
 17 irrigation well that they did not own that property. So they
 18 had to file on that property on the unintentional trespass
 19 act, and that took a lot of years. And they did get the
 20 property. But in the meantime, Tiny Sadler would have passed
 21 away and nothing was ever done about it. You know, once Tiny
 22 was gone, why, then not really much took place after that
 23 until they sold out. They was -- Reiny himself health was
 24 bad and his wife's health was bad and Tiny was gone so it was
 25 time to sell out.

1 Q. Yes.
 2 A. New ground and stuff, no, no, they did not. And
 3 they lost what alfalfa was there because nobody changed that
 4 water religiously like the Sadlers did. However, there was
 5 grass grown there. And nobody ever run the marks after
 6 Sadlers left there, those corrugates, whatever you want to
 7 call them, that was never done again. It's never been done
 8 to this day. They do run the water out there wherever it may
 9 go, but it was never done like Sadlers did it.
 10 Q. And after Loudy left, I think you said he sold to
 11 Sokul; is that right?
 12 A. That's right. That's correct.
 13 Q. And did Sokul put in any improvements?
 14 A. On the property, no. He put -- Now, Sadler did
 15 put a big building in there, but you weren't talking about
 16 that.
 17 Q. Yeah. Thanks for focusing me. Yeah. I'm
 18 talking about agricultural improvements.
 19 A. No, no, no.
 20 Q. And how about Weatherly? Yeah, Weatherly, did he
 21 put any in?
 22 A. See, Russell bought the Brown place.
 23 Q. And the Brown place is the ranch north of the
 24 Sadler Ranch?
 25 A. That's correct, yes.

1 Q. Okay. What did Weatherly do?
 2 A. For improvement? They didn't do any improvement
 3 on the Sadler Ranch.
 4 Q. Okay.
 5 A. The Brown place, George Brown drilled two wells
 6 on the Brown place when he had it. And then Russell is the
 7 one that bought the Brown place. And then Lundahl bought the
 8 whole outfit. But when -- So what's the question again?
 9 Q. I guess did any of the owners after Loudy put in
 10 any kind of agricultural improvements to the Sadler Ranch?
 11 A. Nobody did, no.
 12 Q. Okay. And do you know why Loudy sold the
 13 property?
 14 A. Yes, I do.
 15 Q. And why did Loudy sell the ranch?
 16 A. Loudy -- When the big pump was -- When George
 17 Brown started pumping this big pump, big ten-inch pump, they
 18 claim it run 2500, I even heard 3,000. But it don't matter.
 19 Loudy said the summer that George Brown run that big pump it
 20 took a hit on their pond and that's when they said they
 21 decided to sell out because they could see the handwriting on
 22 the wall. They were going to lose the main part of their Hot
 23 Springs.
 24 And both Ethel and Xavier passed away about a
 25 year ago last June. We stopped in and talked to Bill and I

1 A. We're going to go up to Romano? And then all of
 2 those wells that Casey Florio put in?
 3 Q. Those are the wells?
 4 A. Yeah. There was probably ten of them. Some of
 5 them run more than others. And it made about a 50-acre
 6 meadow on the ranch from waste water off of these flowing
 7 wells. They didn't last -- They didn't flow -- Some of them
 8 lasted longer than others. Another one, I don't know, could
 9 have rushed out on the bottom. I don't know. It was an
 10 artesian type deal and they were flowing. And it was
 11 actually a waste of water that made that 50 acres of meadow
 12 there. And it flowed down -- The waste water off of that
 13 flowed down towards the Johns Field. But it flowed actually
 14 right out in to the alkali, the waste water from the 50 acres
 15 out in there.
 16 Q. Did you notice any changes in your spring based
 17 on the Romano artesian flowing?
 18 A. No, we didn't. We never thought there was a --
 19 We didn't think that it did reduce it then.
 20 Q. And you're familiar with the -- Are there
 21 seismograph holes in the area of the Sadler Ranch?
 22 A. Yes.
 23 Q. And are any of the holes still flowing?
 24 A. Yes, they are.
 25 Q. And do you know about how many there are?

1 don't April Loudy and they were in Salmon, Idaho and we
 2 talked about this. And he said yes, that it took a big hit
 3 on that pond, that's when we decided to move out of there.
 4 They weren't saying that real loud when they put the place up
 5 for sale because you don't run out and say we're losing our
 6 water so I'm selling out to you. But that's what they told
 7 us. And we never talked to him before this or after this.
 8 But that could be verified. That's what they told me.
 9 Q. And do you have any knowledge of what the flow
 10 was at Shipley Hot Spring?
 11 A. You know, that -- many, many different -- There
 12 was a weir put in there. The Weatherlys had a weir put in
 13 there. But the rest of the -- all of these other
 14 measurements and whatever you want to call them, I'm going to
 15 have to say they were guesses. Tiny always told me they
 16 always treated it at 3200 gallons a minute. That's what I
 17 always understood them -- for Tiny to tell me. That's a lot
 18 of water. But that's what I always understood. There was
 19 other estimates and guesses and all of that made. But that's
 20 the one I believe right there and that's what I'm testifying
 21 about.
 22 Q. Were you aware of the Romano artesian flowing
 23 wells?
 24 A. The Romano?
 25 Q. Romano. Sorry.

1 A. I seen a map of them not very long ago. And it
 2 showed them spots out in the alkali that was all seismograph
 3 wells. And to my knowledge, every one of them is still
 4 running some water. And the cows go out there and drink it.
 5 And it raises tules out on those seismograph wells, yes.
 6 Q. And are there any below the Brown Ranch?
 7 A. Yes. That's where they are. Yes, uh-huh.
 8 HEARING OFFICER JOSEPH-TAYLOR: Below meaning
 9 east or south? Below meaning east or south of the Brown
 10 Ranch?
 11 THE WITNESS: Okay. It would be north and east.
 12 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 13 Q. (By Ms. Peterson) Did you attend the 1982
 14 curtailment hearings held by the State Engineer in Eureka
 15 County?
 16 A. Yes, I did.
 17 Q. And do you remember what happened at the
 18 curtailment hearings?
 19 A. Yes, I do.
 20 Q. And what do you remember?
 21 A. The State Engineer offered to drill a well for
 22 Milton Thompson, drill the well and set him up, the way I
 23 understood it, and set it up. And he flat turned it down.
 24 Q. And your -- Are you aware in this proceeding that
 25 the Sadler Ranch current owners are contending that about

1 1,600 acres was used on the Sadler Ranch for various
 2 irrigation purposes? Are you aware of that?
 3 A. I'm aware that's what they claim. But I'm still
 4 claiming there were 250 acres of wild hay, hay, made hay out
 5 of. And that's all I'm aware of. Not counting the Johns
 6 Field now because there was no more hay raised in the Johns
 7 Field after they started irrigating this upper ground.
 8 Q. And in your experience would it be possible to
 9 put 1,600 acres of land in to various irrigation purposes on
 10 the Sadler Ranch?
 11 MR. TAGGART: Objection. He didn't operate.
 12 HEARING OFFICER JOSEPH-TAYLOR: I need to hear
 13 your -- Hold on, Mr. Bailey.
 14 MR. TAGGART: He didn't operate the ranch. I
 15 understand he was by the ranch but he never operated the
 16 ranch. She's asking if in his experience you could operate
 17 the ranch. He never operated the ranch so he doesn't have
 18 that experience.
 19 MS. PETERSON: But he's had experience operating
 20 his own ranch and he's been, I guess, a rancher and a farmer
 21 all of his life, since 1930. So I think he can relay based
 22 on his experience and what he knows whether he thinks it's
 23 possible.
 24 HEARING OFFICER JOSEPH-TAYLOR: I agree.
 25 Overruled. The question I believe was --

1 A. On the Home Ranch that she is talking about, my
 2 grandparents come in there in the early day. We have proof
 3 that they was in there in 1875. We're pretty near sure in
 4 our own family that they was in there in the sixties. And
 5 there's been six generations on that old ranch. So that's
 6 the question?
 7 Q. Yes, that's the question.
 8 A. And we do have prior use of the pond prior to
 9 1800 in the vested right. We did have a vested right.
 10 Q. And you had a spring on your property, the Bailey
 11 Spring?
 12 A. Yes, we did have a spring.
 13 Q. And the Bailey Spring went dry?
 14 A. It went dry. It took 25 years to dry that spring
 15 up after the electricity come in.
 16 Q. And then your -- you were granted groundwater
 17 rights from the State Engineer; is that correct?
 18 A. Yes. He allowed us to drill a well?
 19 Q. Yes.
 20 A. That's true. He did, yes.
 21 Q. And you're not the paperwork guy that keeps track
 22 of all the paperwork associated with your water rights, are
 23 you?
 24 A. No, I'm not, no.
 25 Q. Your son and daughter-in-law do that; is that

1 MS. PETERSON: Do you -- Could we ask you to read
 2 it?
 3 (The question was read back)
 4 THE WITNESS: And my question was are you talking
 5 flood irrigating?
 6 Q. (By Ms. Peterson) Yeah, flood irrigating.
 7 A. No, you could not do that.
 8 Q. And then directing your attention to the Thompson
 9 Ranch on the other side of the valley, are you aware of that
 10 ranch?
 11 A. Yes.
 12 Q. And are you familiar with that ranch?
 13 A. I'm not going to say I'm familiar with irrigation
 14 and that end of it, no, I am not. No.
 15 Q. But living in Diamond Valley did you observe what
 16 was happening on that ranch?
 17 A. Yes.
 18 Q. And after Ted Thompson died --
 19 A. Yes.
 20 Q. -- did you observe any activity on that ranch,
 21 any irrigation activity on that ranch?
 22 A. I never seen any action.
 23 Q. And then the last thing I'm going to ask you
 24 about was your rights that you hold on the Bailey Ranch. Did
 25 your -- Who first put that water to use on your ranch?

1 correct?
 2 A. That's correct. I'm retired myself. I don't
 3 have -- The old ranch might still be in our name but it's in
 4 a trust. So I actually don't have anything -- no say on the
 5 old ranch anymore at all.
 6 And I want to say this, when I acquired the old
 7 ranch from -- after my dad had passed away in '48 and my
 8 mother never turned the ranch over to me until in to the
 9 sixties, I think it was. And I never, at any time did I ever
 10 figure I would actually own the ranch. I figured I had the
 11 use of the ranch and I had the right to pick out somebody in
 12 our family to turn it over to. But to actually own it to
 13 sell it, I never ever thought that. I had it to use and to
 14 take care of. And I wanted my folks to be real -- I'm sorry.
 15 HEARING OFFICER JOSEPH-TAYLOR: That's okay,
 16 Mr. Bailey. That's okay. You wanted your folks to be proud
 17 of you?
 18 THE WITNESS: I wanted my folks to be proud of
 19 the way we took care of it. I'm sorry.
 20 HEARING OFFICER JOSEPH-TAYLOR: That is okay.
 21 This is emotional and family ranches have a lot tied to them.
 22 Now you got me crying.
 23 THE WITNESS: And I figure we done that.
 24 HEARING OFFICER JOSEPH-TAYLOR: Good.
 25 THE WITNESS: So I can pass away figuring I done

1 what I was supposed to do.
 2 MS. PETERSON: Can I just take one minute?
 3 HEARING OFFICER JOSEPH-TAYLOR: Uh-huh.
 4 MS. PETERSON: I don't have any further questions
 5 at this time.
 6 HEARING OFFICER JOSEPH-TAYLOR: Thank you. I
 7 know you're sharing witnesses. Ms. Ure, did you have any
 8 questions or was Ms. Peterson doing all the examination?
 9 MS. URE: She was doing the examination.
 10 HEARING OFFICER JOSEPH-TAYLOR:
 11 Cross-examination, Mr. Taggart?
 12 CROSS-EXAMINATION
 13 By Mr. Taggart:
 14 Q. Mr. Bailey, good morning. My name is Paul
 15 Taggart. I represent Sadler Ranch. I have some questions
 16 for you. I'm wondering if you would rather take a break and
 17 have lunch first.
 18 A. No. I'm fine. Go ahead.
 19 Q. I think it will go longer than five minutes, so
 20 I'll start now and you let me know.
 21 HEARING OFFICER JOSEPH-TAYLOR: That's okay.
 22 Q. (By Mr. Taggart) First thing, Mr. Bailey, when
 23 was the last time you were on the Sadler Ranch?
 24 A. What do you mean? You mean --
 25 Q. Physically walking on the ranch, moving around.

1 Q. Okay. Do you remember asking him a question
 2 about whether an application -- about whether if you filed an
 3 application for a new well whether it would be granted?
 4 A. Did I ask him at that time?
 5 Q. Do you remember asking that?
 6 A. Okay. I'm not understanding your question.
 7 Q. Do you remember in 1982 asking Pete Morros if you
 8 filed for a new well would it be granted?
 9 A. Did I ask him that question?
 10 Q. Yeah.
 11 A. I never asked him that question.
 12 Q. Okay. Well, I don't want to test your memory but
 13 let me just -- Just a second. Okay. There's an exhibit
 14 that's Exhibit Number 315 which is the transcript from the
 15 May 24th 1982 hearing. And at page 133 --
 16 HEARING OFFICER JOSEPH-TAYLOR: Page what,
 17 Mr. Taggart?
 18 MR. TAGGART: 133.
 19 MS. URE: Susan, may I?
 20 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 21 Q. (By Mr. Taggart) And on that page at line 12 --
 22 Can you hear me? Sir? I'm going to read you what this
 23 transcript said.
 24 A. Okay. Do that.
 25 Q. And again, I don't remember what I did yesterday.

1 When was the last time you visited the Sadler Ranch?
 2 A. Well, I haven't -- I stopped in there recently,
 3 I'm pretty sure. I've been on the main property right there.
 4 We drove the cows by there about two weeks ago. And I'm sure
 5 I stepped on the property at that time. I got out and shut a
 6 gate or two to come by with the cows.
 7 Q. Okay. You mentioned earlier that there was some
 8 seismograph holes. Do you remember that?
 9 A. Yes.
 10 Q. And that they're north and east of the Brown
 11 Ranch?
 12 A. That's correct.
 13 Q. When was the last time you saw those holes?
 14 A. Well, every time you drive down that road they're
 15 visible to you right out on the alkali right there. If you
 16 know where to look you can't help but see them. You might
 17 have to realize you're looking -- you would have to put a
 18 glass on if you didn't really know what you was looking at so
 19 you could identify it from the road, but yeah.
 20 Q. Now, back in 1982 there was a hearing. Do you
 21 remember that? And you were at the hearing; right?
 22 A. That's correct.
 23 Q. And Pete Morros was the State Engineer; right?
 24 A. Yeah. I was thinking it was Townsy but they
 25 corrected me on that and said that's who it was.

1 Well, I do remember what I did yesterday. But I won't
 2 remember this in a year. So this isn't a memory test, okay.
 3 But back in 1982 this transcript says Mr. Bailey, that's you,
 4 if I was to apply for an application to drill a new well on
 5 the ranch down there, would I have a good chance of getting
 6 it or am I in the water basin? Does that help you remember
 7 at all?
 8 A. It makes sense, but I can't recall saying that.
 9 But if you've got it wrote down there, I'm not going to
 10 dispute that I asked that. I don't recall doing it. But it
 11 was a good question.
 12 Q. And there was a question about how much of the
 13 Diamond Valley was covered with the designation.
 14 A. Yeah. I heard that line chain different times.
 15 Q. And then Mr. Morros said, I can't predetermine
 16 action on any application we might make. You mean, would it
 17 be subject to denial on the basis of being in the groundwater
 18 basin and you say yes. And he says under the present status
 19 of the basin as far as the orders that have been issued by
 20 the State Engineer. Yes, absolutely. And then you said, I
 21 would be denied? And he said if it was in the designated
 22 portion of the basin, yes.
 23 Now, you did end up getting a water right to
 24 replace your spring; right?
 25 A. That's correct.

1 Q. And you had not filed a protest against the
 2 applications by Sadler Ranch; right?
 3 A. No, I have not.
 4 Q. Do you think Sadler Ranch should get a water
 5 right like you have to replace the spring?
 6 A. I think Sadler should have the right to do that,
 7 but I don't think they ought to have -- for all that wasted
 8 water I don't believe that they should be awarded that.
 9 Q. Okay. But if the State Engineer makes a
 10 determination of what the proper amount of water is that was
 11 used historically on the Sadler Ranch and that's the amount
 12 that he grants in the mitigation right then you think that's
 13 the right thing to do to grant a mitigation right, just like
 14 you have?
 15 A. I think they should have the right to drill their
 16 well, but I don't think they should be awarded for all the
 17 water that was wasted. That's the way I got to say it.
 18 Q. I understand. Now, we talked about Johns Field.
 19 A. Yes.
 20 HEARING OFFICER JOSEPH-TAYLOR: I don't think you
 21 need to yell at him. He can hear.
 22 Q. (By Mr. Taggart) We talked about Johns Field.
 23 Was there a time in your lifetime that water was put on that
 24 field?
 25 A. Yes. I stated that Sadler run that water down

1 then that other duck pond to fill that up. So that's four
 2 months out of the year.
 3 Q. Did they ever cut hay in the Johns field?
 4 A. Not in my time.
 5 Q. Do you know or have you ever seen an old hay
 6 corral?
 7 A. Yes, I have. They're originally -- There was hay
 8 cut there. But I'm not sure what took place up above it.
 9 Because --
 10 Q. Now when you say up above it, are you talking
 11 about, sometimes we call that the Eccles Field or the Romano
 12 Field. What do you call it?
 13 A. Well, I never heard of the Romano Field until
 14 this last couple of weeks. Nobody ever referred to a field
 15 in Sadler Ranch as a Romano Field. It was either the Taft or
 16 the Low Taft or the Johns Field in the meadow. That's all
 17 I -- And then the Blow Field, of course.
 18 Q. Let me see if we can make sure we're talking
 19 about the same thing.
 20 A. Right. Get on the same page.
 21 Q. There was a time when there was a dispute
 22 between, is it Romano, is that how you say it or Romano?
 23 A. Romano is the way I say it.
 24 Q. Okay. There was a time when there was a dispute
 25 between Romano and Sadler and that goes back to the 1910s,

1 there for three months out of the year.
 2 Q. Right.
 3 A. In the winter months. They had to go some place
 4 with it.
 5 Q. Okay. And in 1950 or something like that is when
 6 the litigation ended that you talked about?
 7 A. I don't understand what you mean about the
 8 litigation. What are we saying?
 9 Q. You talked about litigation that the brothers had
 10 for many years.
 11 A. Oh, you mean the lawsuit?
 12 Q. Right, the lawsuit.
 13 A. Okay. Yeah. What about it?
 14 Q. Okay. After the lawsuit --
 15 A. After the lawsuit.
 16 Q. -- is it your testimony that they stopped using
 17 water at Johns Field?
 18 A. I -- That's correct. What I'm saying is when
 19 they put that 200 acres in of alfalfa, water -- there was
 20 never enough water to reach the Johns Field again during the
 21 summer months, no.
 22 Q. What about in the winter months?
 23 A. Well, the winter months, when Sadler was there,
 24 yeah, they run that down there three, two months out of the
 25 year, which is true. And then it took a month over here and

1 twenties. And they were having a dispute over this piece of
 2 land, which is east of the south meadow and west of Johns
 3 Field along that arm of where water moves from Shipley
 4 Spring?
 5 A. I think it's the same piece of ground that I
 6 refer to as the lower Taft.
 7 Q. The lower Taft, okay. Then let's call it that.
 8 HEARING OFFICER JOSEPH-TAYLOR: Do you want the
 9 witness to have this?
 10 MR. TAGGART: It's okay.
 11 Q. (By Mr. Taggart) So -- Now I've got to remember
 12 where I was.
 13 So on Johns Field you recall there being hay
 14 corrals there. And do you believe that hay was cut down
 15 there at one time?
 16 A. Yeah, I do. But I'm saying if hay was cut down
 17 there at one time, they weren't utilizing that water up here
 18 like they did later.
 19 Q. Okay.
 20 A. That's what I'm saying.
 21 Q. So at one time maybe there was more acreage being
 22 used on the ranch in your opinion. But once they changed --
 23 A. Not cuttable acreage.
 24 Q. Excuse me, sir. Yeah. At one time is it
 25 possible that they used more acreage on the ranch but then

1 when they changed the types of crops they wanted to use you
 2 think that less acreage could have been irrigated once they
 3 changed the crops?
 4 A. I'm saying that there's not enough water in that
 5 pond to irrigate that 200 acres and still put water in Johns
 6 Field is what I'm saying. It never was done.
 7 Q. In the summertime?
 8 A. In the summertime, that's correct.
 9 Q. But were cows grazed in Johns Field?
 10 A. They did put these 250 calves in there for a
 11 short period of time. But that didn't have no more water.
 12 And when it dried up, there wasn't much there. They could
 13 not leave them there very long because there wasn't that --
 14 they did have that artesian that they used for stock water
 15 and it run in to a big tule patch that was right at the head
 16 of the Johns Field. It's been gone for a lot of years now.
 17 But there was a huge tule patch there at one time.
 18 Q. Now, in the lower Taft Field, do you remember
 19 there being ditches through there?
 20 A. Ditches right through it?
 21 Q. Yes.
 22 A. I don't think so. Loudy -- Loudys run that ditch
 23 to bypass the lower Taft and to put water in to the Johns
 24 field.
 25 Q. So do you remember there being ditches on each

1 Q. Is that what you remember?
 2 A. Yes.
 3 Q. Do you remember whether cattle grazed in the
 4 lower Taft Field?
 5 A. Oh, yeah. Yes, they did. After they cut it
 6 that's where Sadlers would gather the cattle coming out of
 7 the north end and they would always dump them right --
 8 because the way the fences were set up and you coming in from
 9 the north they would dump them right in to the lower Taft
 10 that had already been hayed and they got the water down there
 11 to get some regrowth. A productive field.
 12 Q. But when you say they brought them in from the
 13 north, the cattle, from the north meadow?
 14 A. No, no, no. From the range, up -- the BLM.
 15 Q. So when they brought them in for the winter?
 16 A. When they brought them in for the winter, yeah,
 17 when they were done on the ranch. They always come in to
 18 that lower Taft, kind of the way the fencing would show up
 19 there. They would say -- didn't get quite a round to riding
 20 quick enough. They would throw those gates open and those
 21 cows would come home and go right in to that field. Not all
 22 of them, but a lot of them would. And then you would push
 23 them in there later. But, you know, as soon as you got
 24 around to it.
 25 Q. Now, this lower Taft field that we're talking

1 side of the lower Taft Field?
 2 A. On the north side?
 3 Q. Well, let's -- What about on the north side?
 4 A. Well, no. That would be on that high ground.
 5 Yeah --
 6 Q. What about on the south side?
 7 A. I remember water running down through the sloughs
 8 there, yes. That's how that water got -- It would go through
 9 them sloughs and then it would end up in to the Johns Field.
 10 It could do that if you had enough water --
 11 Q. Uh-huh.
 12 A. -- to do that. And that's what -- that's what
 13 the Sadlers did. They would run that water down through
 14 there in the wintertime and then it would go out in to the
 15 Johns field and it was huge acreage out there.
 16 Q. In this lower Taft Field, do you remember there
 17 being dams or dirt built up in to areas to stop water from
 18 going from one place to the next?
 19 A. No.
 20 Q. Do you remember higher ground and lower ground
 21 out there?
 22 A. Absolutely, yes.
 23 Q. And the lower grounds where water would pass
 24 through?
 25 A. Yes.

1 about, it has this high and low ground?
 2 A. Yes, it does.
 3 Q. And they cut hay there; right?
 4 A. They cut hay in the sloughs.
 5 Q. Is that part of the acres you're talking about
 6 when you say there was only 200 or 250 acres?
 7 A. That would include them sloughs, yes, it would.
 8 Yes.
 9 Q. And so hay was cut all the way from the upper
 10 Taft Field?
 11 A. Yeah. But not very wide in the lower Taft but
 12 there was hay cut down absolutely, yes.
 13 Q. From the upper Taft Field all the way down to
 14 Johns field?
 15 A. The upper Taft would have lots of hay. It was a
 16 very productive field.
 17 Q. But all the way from the upper Taft Field down to
 18 Johns Field they cut hay?
 19 A. That's correct.
 20 Q. Now, one time --
 21 A. And the meadow.
 22 Q. The meadow -- Where was the meadow?
 23 A. Well, if you take the Sadler house and go
 24 straight east, it's that big meadow right out there. It used
 25 to have a big tule patch in it also. But it's not there

1 anymore because they graze it in the summertime. And one of
 2 them the tules start to grow, why, the cattle like to pluck
 3 them off and so it killed the tule patch off. But it hasn't
 4 been gone very many years.
 5 Q. Okay. Now, you said that --
 6 A. But you don't cut them tules for hay.
 7 Q. I understand that.
 8 A. Okay.
 9 MR. TAGGART: Could the witness have Exhibit 617,
 10 please?
 11 HEARING OFFICER JOSEPH-TAYLOR: I think that's
 12 the one I'm looking at. Yes. Do you want the whole book?
 13 MR. TAGGART: And I want to ask him to look at
 14 page 52.
 15 Q. (By Mr. Taggart) Now, Mr. Bailey, you don't
 16 remember them cutting hay in the Johns Field after 1950 or
 17 so; is that right?
 18 A. That's correct.
 19 Q. Okay. And what's in front of you there is what's
 20 been marked as Exhibit 617. I hope you're looking at page
 21 52.
 22 A. Yes.
 23 Q. And that's an aerial photograph of the ranch on
 24 September 27th 1973. And there's an arrow that points to an
 25 area in the box from that arrow that says, area appears to

1 that. But it's funny now, you know, but they actually
 2 believed that.
 3 Q. Did they get more than one cutting up at --
 4 A. They cut it twice. They cut it twice. You
 5 actually get more tonnage cutting it twice than you do three
 6 times because you've got all of that non on the third. So
 7 tonnage wise you'll cut more hay cutting it twice than you
 8 will three times.
 9 Q. Could they grow crops longer than you because
 10 they have that warmer water?
 11 A. Compared to up in the valley?
 12 Q. Well, just compared to your ranch right there
 13 south they have the warmer water, did that allow them to go
 14 later in the season or start earlier in the season?
 15 A. I don't think it was -- Like I stated earlier, if
 16 they started irrigating too early, which was a trial and
 17 error deal and nobody can outguess the weather, I don't care
 18 who you are, it would bring -- that warm water would bring
 19 that alfalfa up immediately and it would get froze. As a
 20 rule, it would get froze. And of course it will come back.
 21 But it takes time for it to come back. So you lose all of
 22 that. You're better off waiting -- Reiny told me himself a
 23 lot of times, several times. He says, I wish I could wait
 24 till June and then I could irrigate this whole thing in one
 25 day. He says I'd make a lot more hay.

1 have been hayed. Do you see that?
 2 A. I see that, what it says here, yes.
 3 Q. Okay. And do you notice how the ground shows
 4 some very -- the ground shows a different coloration. It
 5 looks to me like somebody cut hay there. Does that look to
 6 you like somebody cut hay there?
 7 A. I could not say that one way or another. It
 8 looks like gray ground to me.
 9 Q. Okay. You don't see that it's different colors
 10 in one place versus the other?
 11 A. Well, I see the light color out in the middle of
 12 it, out in the middle of this picture here.
 13 Q. All right. And would it surprise you if somebody
 14 was cutting hay in September of a year like 1973? I mean,
 15 you said they put the water out there in the wintertime.
 16 A. That's right.
 17 Q. And if they did that and they cut the hay, it
 18 would be in the spring?
 19 A. Summer you might say, yeah. Sadlers never ever
 20 started haying until after the 4th of July. They made the
 21 statement one time -- It's kind of funny now. But old timers
 22 didn't think like we do now. They made a statement one time
 23 to me that if you cut alfalfa before it blooms, the cows
 24 won't eat it. And nobody wants to wait until it blooms
 25 nowadays. They want to cut it. But they really believed

1 Q. I just recall in your testimony you were talking
 2 about that the warm water in the later season might have been
 3 a benefit, but maybe I just didn't hear that right. I
 4 thought I heard you say that you could go longer because of
 5 the warm water later in the season but maybe I didn't hear
 6 your testimony correctly on that.
 7 A. You mean, I don't know whether that -- Because of
 8 the hot water you would think they wouldn't freeze out as
 9 quick as I would up there, is that what you're saying?
 10 Q. I'm just asking you.
 11 A. Well, I never ever thought of it that way. But
 12 you can only irrigate a small piece of ground at a time
 13 compared to the whole 200 acres. So you might save one
 14 little piece from freezing out because you had that hot water
 15 on it. But how about all the rest of it sitting there. It's
 16 pretty dead.
 17 Q. When irrigation happened up there in the meadow
 18 in the upper Taft field, would any of that water make it down
 19 in to the lower Taft field?
 20 A. Oh, yeah. Yes, it did.
 21 Q. And would any -- And so would any water when they
 22 were irrigating the lower Taft Field would any of that water
 23 make it down in to Johns Field?
 24 A. No, not after they started taking care of the 200
 25 acres up here, it never made it to the Johns Field. That's

1 what I'm saying.
 2 Q. Okay. I have heard you say that. When we were
 3 asking you about what happened to your spring, you said
 4 something about a number of years after electricity came. Do
 5 you remember that?
 6 A. Yeah.
 7 Q. What did you mean by that?
 8 A. There was a lot, including us, a lot of us pumped
 9 with diesel up in the farming area. And that wasn't enough
 10 water being pumped that it affected anybody to my knowledge
 11 because them diesels break down and different facts. But
 12 once electricity came in and them pumps don't stop, that's
 13 when they started depleting that water.
 14 Q. What year do you think that was?
 15 A. What are you talking about? Do you mean when it
 16 did deplete it or when it --
 17 Q. Do you have an idea of how much your spring
 18 flowed when it was flowing at full?
 19 A. You know, it's just a guess, okay. There was
 20 around close to 800 gallons coming out of the pond but there
 21 was about 300 gallons raised in the ditch below the pond.
 22 And we always guessed at around 1100 gallons. That's at the
 23 peak now. I mean, it never varied for all of my lifetime
 24 until we started irrigating up in the valley.
 25 HEARING OFFICER JOSEPH-TAYLOR: Mr. Bailey, do

1 1100 gallons. That is a guess. There was never ever a weir
 2 or anything put in. It was just a guess.
 3 Q. Some folks have made estimates. This guy
 4 Harrill, do you remember Mr. Harrill from that 1982 hearing?
 5 No?
 6 A. No. I'm sorry.
 7 Q. He was from the USGS and he made some
 8 measurements and -- You don't recall that?
 9 A. I don't remember anything about it, no.
 10 Q. Okay. Do you know how many -- Oh, well, sorry.
 11 When did the spring flow start to decline?
 12 A. At what date, you mean?
 13 Q. Ballpark.
 14 A. It took 25 years for it to deplete -- for it to
 15 completely dry up that spring.
 16 Q. And you saw it?
 17 A. It was a gradual. It was a gradual deal, yes.
 18 Q. Over a 25-year period starting when electricity
 19 came in?
 20 A. Now that's right.
 21 Q. Correct.
 22 A. That's right.
 23 Q. 1982 during that hearing was your -- the spring
 24 was still flowing?
 25 A. In '82 I'm going to say yes.

1 you remember when electricity came to the valley?
 2 THE WITNESS: Absolutely. I was blessed.
 3 HEARING OFFICER JOSEPH-TAYLOR: What year was
 4 that? What year was that?
 5 THE WITNESS: I'd have to ask my wife.
 6 HEARING OFFICER JOSEPH-TAYLOR: Do you got a
 7 guess, a range?
 8 THE WITNESS: In the seventies, wasn't it? Some
 9 of them guys back there, they ought to know.
 10 HEARING OFFICER JOSEPH-TAYLOR: Well, you're the
 11 witness. Thank you, Mr. Bailey.
 12 Q. (By Mr. Taggart) That's all right. So how many
 13 gallons did you say you thought was flowing out of it when it
 14 was doing well, the spring?
 15 A. The spring or the total?
 16 Q. What's the difference?
 17 A. Well, because I said 300 gallons about raising
 18 the ditch below the spring.
 19 Q. And so did it pick up water from many
 20 different --
 21 A. No. It raised. Water raised up. In the ditch
 22 there was several places where water raised up.
 23 Q. Okay.
 24 A. Just like it did in the pond where it raised up
 25 in to the pond. And the total flow we guessed was around

1 Q. Were there springs south of you already dry?
 2 A. See, the Romanos started drying up first because
 3 it's closer to the pump -- to the farm, you know. And then
 4 Sulphur started first before the Romano, that part of the
 5 Romano. But it's the first one that took a hit. And then
 6 out in the middle of the valley, why, there was a spring
 7 dried off of that, I call it the Thompson Road. And there
 8 was a pretty good spring right in that area that started
 9 taking a hit on that too. It had a fair amount of water that
 10 they -- There was a little house there at one time and they
 11 claimed it burned down. I don't ever recall it.
 12 Q. Well, do you know of something called Tule Dam
 13 Spring? Have you ever heard of that? No?
 14 A. No, I don't.
 15 Q. But you talked about Sulphur Spring?
 16 A. Are you talking about the Romano on Tule Dam?
 17 There is a Tule Dam, but I'm surprised you would know that.
 18 Q. Well, do you remember when it went dry?
 19 A. You mean to put a date on it? I remember it
 20 drying up, I sure do.
 21 Q. Well, why did it dry up in your opinion?
 22 A. Because we was pumping that water up there.
 23 Q. Pumping water where?
 24 A. Up in the farming area.
 25 Q. Down in the south part of the valley?

1 A. Yeah.
 2 Q. And do you think that's why Sulphur Spring dried
 3 up?
 4 A. Yes.
 5 Q. Do you think that's why the Romano wells stopped
 6 flowing?
 7 A. I'm not sure of that. Because them wells were
 8 there a long time and they could deteriorate. Them wells
 9 could have rusted in the bottom. And so I'm guessing
 10 after -- They can only last so long. So I'm not going to say
 11 why some of them dried up or not.
 12 Q. What about your spring, why did it dry up?
 13 A. Because of the pumping up in the valley. I was
 14 part of it.
 15 Q. You have a ranch down there too?
 16 A. A farm, you mean?
 17 Q. A farm.
 18 A. We had a couple of them.
 19 Q. All right. Do you think the pumping down south
 20 has caused an impact to Shipley Spring?
 21 A. No, I don't.
 22 Q. Really?
 23 A. I don't.
 24 Q. So it could impact Bailey Spring but not Shipley
 25 Spring?

1 get on the jackass and ride him on home.
 2 MR. KOLVET: Let's see you follow that one up
 3 with a question.
 4 Q. (By Mr. Taggart) So the Sadler brothers, they
 5 never intended to give up any water rights; right?
 6 A. What do you mean by that?
 7 Q. Well, you've been living out here for a long
 8 time. Do you ever know anybody who was willing to give up
 9 their water rights for nothing?
 10 A. I never knew anybody that silly.
 11 Q. Do you understand that Eureka County is arguing
 12 that there's been an abandonment, that there were people who
 13 owned Sadler Ranch that intended to give that water up
 14 forever. Do you understand that that's what they're saying?
 15 A. I don't understand what you're saying. What do
 16 you mean give the water up?
 17 Q. Well, there's -- You know what forfeiture is,
 18 don't you?
 19 A. Yeah, when you forfeit something you give it
 20 away.
 21 Q. Well, down in the southern part of the valley
 22 where your farm is, are you familiar with how some people got
 23 their water it's forfeited in the corners?
 24 A. If they forfeited the corners but not the
 25 circles?

1 A. That's what I'm saying.
 2 Q. Okay.
 3 A. Why am I saying that?
 4 Q. Well, your lawyer might ask you that question but
 5 I haven't asked you that.
 6 A. Okay.
 7 HEARING OFFICER JOSEPH-TAYLOR: Do you need a
 8 break, Mr. Bailey, or are you doing okay? Do you need a
 9 break, sir? Are you doing okay?
 10 THE WITNESS: No, I'm fine.
 11 Q. (By Mr. Taggart) What year is the first time you
 12 can remember seeing irrigation on the Sadler Ranch? I'm not
 13 asking for an exact date. I just want to kind of understand
 14 how far back your memory can go. Is it the mid forties, late
 15 forties?
 16 A. Well, I was born in '30 and I'm sure that I was
 17 swimming down there. See, they had a CCC camp at Sadlers.
 18 And I believe, I'm very bad with dates, but I'm guessing it
 19 went out probably in 1936, I'm guessing that's when that went
 20 out. And Sadlers had -- See, the school was at the Sadler
 21 Ranch at that time. And I would ride an old jackass, a
 22 little jackass down to the school, the first grade, and they
 23 would let me out at noon and I would come back through the
 24 CCC camp and I'd stop there and that little jackass would
 25 buck off through there. It was four of them guys. And I'd

1 Q. Right.
 2 A. They could have done that. They sold them the
 3 water right off of them corners.
 4 Q. But do you understand that Eureka County is
 5 asking you these questions because they're arguing that
 6 Sadler Ranch, some of the owners that had it before gave up
 7 the water rights and decided they didn't want it anymore? Do
 8 you think that ever happened?
 9 A. No.
 10 Q. When -- You said that they had 50,000 bales?
 11 A. That's right.
 12 Q. Wow. How many people did it take that year to be
 13 able to do that much work? Was it the same group of guys or
 14 was there a lot of people out there?
 15 A. There was two hired hands. The rest of them --
 16 Well, Tiny did all the cutting. Nobody ever cut beside him.
 17 And then they had two small balers. But Reiny did probably
 18 85 percent of the baling himself. And then the hired hand
 19 did the bale bucking. They had a -- At the time I'm
 20 referring to, they had -- Lundahl made a bale collector I
 21 want to call it. They never had a harrow bed or anything
 22 like that. But they had kind of an iron cage I want to
 23 describe it as and it was made by Lundahl, the Lundahls that
 24 ended up buying it. And they made this. It was pulled with
 25 a tractor and you would pull this cage, on-wheel cage by

1 on -- in to a bale and it would go, hydraulically it would
2 raise the bale, pick it up in the field and raise it up this
3 ramp and then somebody would physically grab it off the ramp
4 and set it in to this cage. And you would make your own
5 stack in this cage. And so when it was full, you had a full
6 cage of hay. And then it had the hydraulics set up to where
7 you could back up to the stack and push this off. And that's
8 how they brought the bales in. Now, like I said, it was 33
9 bales to the ton on these little bales that we're talking
10 about.

11 Q. So that's 1500 tons?

12 A. That was 1500 tons.

13 Q. Now, they couldn't have gotten that much hay from
14 just 450 acres; right?

15 A. Yes, they did.

16 Q. They did?

17 A. That isn't a lot of hay.

18 Q. Okay.

19 A. Do you realize this year alone -- What do you
20 think the average good circle would put up in the valley?

21 Q. Well, sir, I really enjoy when witnesses ask me
22 questions because I get to say that I don't have to answer
23 your question.

24 So how much did it cost to put the well in after
25 you filed your application and got the new well? Do you

1 Q. Is it still a flowing well?

2 A. If you let it sit there long enough. It don't
3 flow immediately when you shut the -- When you shut the pump
4 off are you talking about?

5 Q. Uh-huh.

6 A. No, it don't.

7 Q. So it doesn't come back the way it used to when
8 you shut the well off?

9 A. No, it don't.

10 Q. Do you have a meter on the well?

11 A. Yes. It pumps right at 900 under pressure.

12 Q. Now, before you got the new well you flood
13 irrigated at your ranch; right?

14 A. Uh-huh.

15 Q. And now you can grow alfalfa on the ranch; right?

16 A. We planted the alfalfa and grass, but the alfalfa
17 is pretty well gone. We're pretty much in grass right now.

18 Q. Is it a better crop now under the center pivot
19 than you had when you were flood irrigating?

20 A. By far. Grass does better now. In comparison to
21 alfalfa, you get more ton age with grass. I'm not going to
22 say the general rules, but I'm going to say we cut a little
23 more tonnage with the grass.

24 HEARING OFFICER JOSEPH-TAYLOR: Mr. Taggart, how
25 is this helping us make our decision?

1 remember how much the well and the pivot and all of that
2 cost?

3 A. The well was somewhere right around 30,000. And
4 I'm going to say maybe the pivot was fairly close to that.
5 That probably would include the panel but I think it would,
6 right. And then it cost -- I think that would have to bring
7 the power in underground. We did our own trenching. And we
8 set our own pump and everything. We got a pump setting rig.
9 So we never had a well test pumped or anything like that. We
10 just had the well drilled and we are -- I went to Twin Falls
11 and told them how much water I wanted to pump and guessed at
12 the depth and everything because we hadn't tested it but it
13 was a flowing well. When they drilled the well it was a
14 flowing well.

15 Q. Now, has it drawn down in water level since then?

16 A. Yeah. It has depleted some. I've got no clue
17 how far. Not very far. Because the pump that we put in,
18 both pumps you drip oil on them for lubrication. But this
19 here you couldn't do that because of the flowing well. So
20 you use water for -- in place of oil. But in order to do
21 that, you have to put it down in ten-foot lengths and then
22 you have to put what you call a spider every ten feet to hold
23 that -- hold that rod so you, you know, hold it in place and
24 then water lubricated is what it amounts to. It's very
25 successful. We've never had a problem with it.

1 MR. TAGGART: Do you really want me to tell you
2 that?

3 HEARING OFFICER JOSEPH-TAYLOR: Yeah. How does
4 what is pumped in his well and his pivot make this helpful?

5 MR. TAGGART: Well, one, just getting water
6 doesn't make us whole.

7 Two, that it costs a lot of money. Even if we
8 get a water right, we're going to spend a lot of money we
9 shouldn't have to spend because other people caused the
10 decline of our spring.

11 Three, there's been drawdown at his well which
12 indicates that there's still drawdown occurring in the area
13 since he put his well in.

14 Four, that the fact that he has a center pivot
15 now and he can grow better crops than he could grow before
16 means that he wasn't cut to some amount of duty that existed
17 prior to 1905.

18 HEARING OFFICER JOSEPH-TAYLOR: Okay. And how
19 much longer are you going to have? We've got to give people
20 a break here.

21 MR. TAGGART: I don't have any more questions. I
22 appreciate you answering my questions, Mr. Bailey.

23 THE WITNESS: You're welcome.

24 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
25 Mr. Taggart.

1 Mr. Kolvet, I didn't really hear much that he
 2 knew about Thompson. Do you have any questions?
 3 MR. KOLVET: No. I think the witness' testimony
 4 applies equally to our side as the other side. So I'll pass.
 5 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 6 Much redirect, Ms. Peterson?
 7 MS. PETERSON: I have a few.
 8 HEARING OFFICER JOSEPH-TAYLOR: What's a few, a
 9 half hour or --
 10 MS. PETERSON: I don't think it would take a half
 11 an hour. Are you thinking about breaking for lunch?
 12 HEARING OFFICER JOSEPH-TAYLOR: I am. I'd like
 13 to finish Mr. Bailey, but the court reporter has been going a
 14 couple hours now and Mr. Bailey has been sitting here quite a
 15 while.
 16 MS. PETERSON: I wonder if --
 17 HEARING OFFICER JOSEPH-TAYLOR: Mr. Bailey, do
 18 you want a lunch break or do you want to try and finish up
 19 here?
 20 THE WITNESS: It's up to you. I can go either
 21 way.
 22 HEARING OFFICER JOSEPH-TAYLOR: Redirect.
 23 MS. PETERSON: Thank you.
 24 ///
 25 ///

1 fields.
 2 Q. (By Ms. Peterson) Do you see that?
 3 A. Yes.
 4 Q. Do you see depicted on that map Romano Field and
 5 Johns Field?
 6 A. Yes, I do.
 7 Q. And when you were in your testimony referring to
 8 the Johns Field --
 9 A. Yes.
 10 Q. -- your understanding of the Johns Field was that
 11 it was both the Romano Field and the Johns Field as depicted
 12 in this map; is that correct?
 13 A. Yeah. I never heard this field referred to as
 14 Romano Field. It was always the lower Taft. I never heard
 15 that until the last couple of weeks, I guess.
 16 Q. You also had some testimony about the Loudys?
 17 A. Yes.
 18 Q. Did the Loudys have equipment to build ditches?
 19 A. They come in with a grader.
 20 Q. And how about the Sadlers, did the Sadlers have
 21 any equipment to build ditches?
 22 A. Yeah. They had that little crawler and they had
 23 a V-ditcher.
 24 Q. And do you understand in this proceeding that the
 25 Sadler Ranch, the new Sadler Ranch owners are claiming that

1 REDIRECT EXAMINATION
 2 By Ms. Peterson:
 3 Q. Mr. Bailey, there were some questions about your
 4 permit that you have, you know, for your new -- your well?
 5 A. Yes.
 6 Q. Are there restrictions on your permit that your
 7 water has to stay on your property?
 8 A. That's the way I understood it, yes.
 9 Q. And do you know the -- And just tell me if you
 10 don't know. Do you know the priority of your groundwater
 11 permit?
 12 A. No.
 13 Q. You testified in response to a question from
 14 Mr. Taggart that you did not think that the pumping in the
 15 south portion of Diamond Valley affected Shipley Hot Springs?
 16 A. That's what I said, yes.
 17 Q. And can you explain why?
 18 A. Yes. Because the water at the ranch is ice cold
 19 and the water at the Shipley Hot Spring is, I won't call it
 20 hot but I'll call it pretty darn warm. And that's why I'm
 21 saying that. It's different water.
 22 Q. I did want to show you an exhibit. It's from
 23 the -- It's from Exhibit 617 and it's slide six. Do you see
 24 that?
 25 HEARING OFFICER JOSEPH-TAYLOR: It's a map of the

1 they have a vested claim of the right to use water, meaning
 2 pre-1905, for approximately 1600 acres with a priority date
 3 of 1879?
 4 A. When Loudy bought the ranch from Sadlers, when
 5 they bought the ranch from Sadlers and they looked in to the
 6 water right that Shipley Spring had never been filed on. So
 7 they got -- It shook them up pretty bad because they come
 8 from Colorado for water for the name of the game as it is
 9 here now. But when they discovered that Shipley Spring had
 10 never been filed on, then they got a hold of -- Reiny was
 11 still living at that time. He was in Elko. And they got a
 12 hold of him and they had him, what they are calling a
 13 deposition.
 14 And I read the deposition. I had never read it
 15 before. But I read it within the last week or so and I agree
 16 with everything that was in that deposition. He never put
 17 any acreage on his testimony. He never stated any certain
 18 acreage on his testimony.
 19 Q. You're taking about Reiny?
 20 A. I'm talking about Reiny in his testimony. It's
 21 on file in Carson City, I presume.
 22 Q. Yes. And then just one other question. Is the
 23 water at the Brown well warm?
 24 A. Yes.
 25 MS. PETERSON: Okay. That's all I have.

1 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 2 Re-cross, Mr. Taggart?
 3 MR. TAGGART: Nothing.
 4 HEARING OFFICER JOSEPH-TAYLOR: Any questions of
 5 staff? Mr. Felling.
 6 EXAMINATION
 7 By Mr. Felling:
 8 Q. Mr. Bailey, good afternoon. My name is Rick
 9 Felling and I work here and I just have a couple of easy
 10 questions, I think.
 11 We were talking earlier in this hearing about the
 12 spring flows at Sadler and other locations and how they may
 13 have changed over the years. In your recollection for Big
 14 Shipley and your spring, how did those flows change, say, up
 15 until about from your earlier recollection up until about the
 16 mid-1960's?
 17 A. Okay. You're asking me -- Do you mean how much
 18 you could irrigate with it or -- And what kind of change are
 19 you thinking?
 20 Q. I'm asking you if there was a change in the total
 21 flow of the springs prior to the mid-1960's.
 22 A. I don't think -- Before that you're talking
 23 about?
 24 Q. Yes.
 25 A. No. They were pretty consistent.

1 would come back, see. But it never run because we had it
 2 dammed off. And you can darn near stop any spring if you put
 3 a dam around and raise it high enough because of the way the
 4 water stopped the flow.
 5 MR. FELLING: Thank you. No more questions.
 6 EXAMINATION
 7 By The State Engineer:
 8 Q. Just a couple, Mr. Bailey. Do you remember the
 9 lawsuit that came to some kind of a conclusion in the late
 10 forties, 1950s?
 11 A. Yes.
 12 Q. And I think your testimony was perhaps about five
 13 years later the Sadler brothers had done a good job in
 14 advancing the ranch or the farm and put in some alfalfa;
 15 correct?
 16 A. That's correct.
 17 Q. Prior to 1950 -- Prior to 1950 -- Prior to even
 18 1950 did you spend much time on the Sadler Ranch? Do you
 19 have first-hand knowledge of the lay of the land?
 20 A. Well, I always went down there with Brandon Gabbs
 21 and that sort of stuff, yes, and I would have drove cows
 22 through there and worked cows in the field. I always helped
 23 him work the cows because I was usually riding a colt and I
 24 wanted him to get experience and I wanted him to be around
 25 them cows.

1 Q. Okay. Do you recall what year your spring went
 2 dry?
 3 A. Well, we put -- Let's see, we put that pivot
 4 in -- I got associated with the fire in '99. We had that
 5 pivot established either the year before -- it would be '98
 6 or '97, one of the two, it went dry at that time. It was dry
 7 at that time. It went dry. It got down to the point of
 8 where the pond was probably running about, I'll throw it out
 9 there, say, two or 300 gallons. But you couldn't do anything
 10 with it because if you got 30 below zero and you had to water
 11 them cows, it would freeze over and you was out of water. I
 12 mean, you couldn't do it. It was actually worthless to you.
 13 But we put the dam in to the point to where it
 14 wouldn't run anymore because it was running out in to the
 15 pivot and it was just making a mess. So we dammed the water
 16 up and it will stop flowing at a certain height, you know.
 17 So we just dammed it off to where we couldn't use it anymore.
 18 Q. Would there be any flow from it today if it
 19 weren't dammed up?
 20 A. No. They don't raise there no more. It's dry
 21 there right now.
 22 Q. So did it dry shortly after you put in your
 23 irrigation well?
 24 A. It took a while because it always dried it up
 25 when you was pumping, but then when you quit pumping, why, it

1 Q. You understand we're trying to recreate the best
 2 we can, you know, the irrigation workings on the ranch that
 3 have been there since pre-1900.
 4 A. Right.
 5 Q. It's been represented to us that there were
 6 multiple ditches, check dams, things of that nature across
 7 all of Sadler Ranch. Is that your recollection?
 8 A. Okay. You take that 200 acres of irrigated
 9 alfalfa, okay.
 10 Q. Yes.
 11 A. Okay. Now, you had to -- in order to cut like
 12 the upper Taft, they hayed -- they had to go some place with
 13 that water when they was fixing to cut that upper Taft.
 14 Because the water from the alfalfa would go in to the upper
 15 Taft when they was irrigating that portion of the alfalfa.
 16 So they had to have a ditch to keep that water out of that
 17 field for a short period of time.
 18 However, the way Sadlers had it worked out, they
 19 was irrigating over here when they was cutting here. But
 20 they had it down to a science but nobody else ever figured
 21 that out.
 22 Q. Okay. Thank you. And then my second question is
 23 do you have any kind of an estimate of how much cattle was
 24 run on the Sadler Ranch? And if so, what time periods? Was
 25 it year round? Was it just winter?

1 A. Okay. At one time if you go back quite a ways
2 there was no fences. Okay. And then the BLM come in in the
3 early forties and started making their rules, okay. So
4 Sadlers run all of their cattle north, and I'm talking on the
5 BLM now that they run their cattle north. And when there was
6 no fences down there, why, they would -- that mountain down
7 there on the map they call it Bailey Mountain, they would run
8 in Garcia Flat and Bailey Mountain, in that area. And then
9 they would have got quite a few cattle over in to Jake and
10 Jake would have got some over on our side and the same way on
11 the Thompson Ranch or Jake's cattle would go up on the
12 Thompson.

13 And Sadlers would have been running, after the
14 lawsuit now, after the lawsuit, see, they was down to a
15 hundred head of cattle at the time of the lawsuit. And after
16 the lawsuit and they got the finance and they went up and
17 they bought 350 mother cows. And they added that to the
18 hundred that they had and then they saved their heifers, what
19 they could for, you know, two or three years to build it up.
20 And they got it up to around 600 mother cows.

21 Q. That's after the lawsuit. What about before the
22 lawsuit? Do you have any knowledge of -- You said they were
23 down to a hundred at the end of the lawsuit. Do you know
24 what their peak was at all? If you don't know, that's fine.
25 A. Now, see, there's the difference between when

1 where it was standing because that's where the foxtail and
2 stuff would take over kind of where the water was pretty
3 still, you know.

4 Q. Okay. So that would be more in the areas we
5 would call a slough?

6 A. Yes. That's true, yes.

7 Q. And as a farmer in Diamond Valley, and if you
8 were growing grass hay on a quarter section pivot, how many
9 tons of hay would that produce in a growing season?

10 A. Are you talking about well fertilized?

11 Q. Yeah, well fertilized, pivot irrigation in the
12 south end of the valley.

13 A. In the south end of the valley?

14 Q. Yeah, where all the farms are.

15 A. Are you talking about Timothy?

16 Q. Timothy would be a good example.

17 A. There's a lot of Timothy raised there, yes. How
18 many tons?

19 Q. Yes.

20 A. It does vary. It depends on how old your stand
21 is and how well you're taking care of a young stand of
22 Timothy. Naturally the longer it sits there, the more
23 tonnage you're going to get. And the weather has a lot of
24 factor in that and a lot of times you want to cut it before
25 you can because you're not going to cut it if you see a storm

1 them fences come in --

2 Q. Okay.

3 A. Once a fence line was established they couldn't
4 run as many cattle as they did prior to that. They run more
5 cattle when there was no fencing than they did after the
6 fence line was put in.

7 THE STATE ENGINEER: Thank you.

8 HEARING OFFICER JOSEPH-TAYLOR: Any other
9 questions?

10 EXAMINATION

11 By Mr. Walmsley:

12 Q. Mr. Bailey, I'm Steve Walmsley and I also work
13 for Mr. King. The grass that was harvested and you call it
14 the upper Taft Field, is that the same field that's directly
15 to the east of Shipley Spring?

16 A. Wouldn't it be more to the -- the -- Oh, the
17 Shipley Springs?

18 Q. Right.

19 A. Oh, yeah.

20 Q. And what type of grass was cut on that field?

21 A. What I refer to as flat grass. And there was
22 some foxtail I want to say and what I refer to as meadow
23 grass, which is partly that spear you're talking about, you
24 know, around the edges, I would say. Wherever the water
25 flowed you got a little better type of grass than you did

1 coming in. And if it delays you a week you're going to get
2 quite a bit heavier cutting. But you would be more happier
3 if you cut it at a little lesser stage because it would make
4 a little better hay out of it. The head go in to their
5 second stage on Timothy. They'll come out and they'll have
6 the first stage and then they'll have a second stage. And
7 you'll want to cut it on that first stage if you can because
8 it makes better hay. But sometimes you can't do it because
9 the weather delays it. But usually there's two crops with
10 Timothy and your first crop is always your best crop.

11 There's two varieties that are pretty commonly used and one
12 of them is better on the second cutting than the other one.
13 But the other one is better to put more first crop off.

14 And you can get close to four tons to the acre.

15 If everything is done right, you can get pretty close to four
16 tons an acre on that one cutting. And you get around two ton
17 on the second cutting, maybe a little more than that. It
18 depends on, kind of when you got it cut and how quickly you
19 got it off and whatever.

20 MR. WALMSLEY: Thank you. You know what, I think
21 that answers my question. I don't have any further
22 questions. Thank you very much.

23 HEARING OFFICER JOSEPH-TAYLOR: Mr. Bailey, we
24 really appreciate your time. Thank you for coming in. And
25 you may be excused.

1 THE WITNESS: You're welcome.
 2 HEARING OFFICER JOSEPH-TAYLOR: Thank you. I
 3 know that was a long stretch. We'll be in recess to 2:15.
 4 (Lunch recess was taken)
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1 sworn in yet?
 2 THE WITNESS: No. Just sworn at.
 3 MS. PETERSON: We didn't admit what we just
 4 marked.
 5 HEARING OFFICER JOSEPH-TAYLOR: We have to be on
 6 the record to do that. That's why we're on the record.
 7 MS. PETERSON: I thought you were going right to
 8 my witness.
 9 HEARING OFFICER JOSEPH-TAYLOR: I'll let you take
 10 care of moving your exhibits. So let's go ahead and get you
 11 sworn in.
 12 (The witness was sworn in)
 13 HEARING OFFICER JOSEPH-TAYLOR: Call your next
 14 witness please, Ms. Peterson, and take care of any
 15 housekeeping on the record that we need to do.
 16 MS. PETERSON: I'd move for the admission of
 17 Exhibit 439.
 18 HEARING OFFICER JOSEPH-TAYLOR: For the record
 19 that's the 1973 Cox Ranch map that Ms. Penrod drew on;
 20 correct?
 21 MS. PETERSON: Yes.
 22 MR. KOLVET: No objection.
 23 HEARING OFFICER JOSEPH-TAYLOR: Thank you. It
 24 will be admitted.
 25 ///

1 THURSDAY, NOVEMBER 21, 2013, 2:14 P.M.
 2 ---oOo---
 3 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson,
 4 call your next witness, please.
 5 MS. PETERSON: JJ Goicoechea.
 6 HEARING OFFICER JOSEPH-TAYLOR: And I want to
 7 take care of a little housekeeping. I'd like to move Exhibit
 8 325 in to the record. That's your initial witness and
 9 exhibit list, Ms. Peterson.
 10 MS. PETERSON: Okay. Thank you.
 11 HEARING OFFICER JOSEPH-TAYLOR: And I would also
 12 like to move Exhibit 338. That was your rebuttal witnesses
 13 and exhibits.
 14 MS. PETERSON: Thank you.
 15 HEARING OFFICER JOSEPH-TAYLOR: They will both be
 16 admitted.
 17 Mr. Goicoechea, please stand and be sworn.
 18 MS. PETERSON: While we're doing the
 19 housekeeping, did we admit 340? That's the copy of the
 20 application and the permit yesterday. You were going to make
 21 copies for us because I only had that one copy.
 22 HEARING OFFICER JOSEPH-TAYLOR: 340? Let's be
 23 off the record.
 24 (Discussion was held off the record)
 25 HEARING OFFICER JOSEPH-TAYLOR: Did I get you

1 JJ GOICOECHEA
 2 Called as a witness on behalf of the
 3 Protestant, having been first duly sworn,
 4 Was examined and testified as follows:
 5
 6 DIRECT EXAMINATION
 7 By Ms. Peterson:
 8 Q. Mr. Goicoechea, could you please state your name
 9 for the record.
 10 A. JJ Goicoechea or Julian Goicoechea.
 11 (The court reporter interrupts)
 12 THE WITNESS: G-o-i-c-o-e-c-h-e-a.
 13 HEARING OFFICER JOSEPH-TAYLOR: I never spell it
 14 right.
 15 THE WITNESS: Just common spelling.
 16 Q. (By Ms. Peterson) Are you the chairman of the
 17 Eureka County commissioners?
 18 A. Yes, ma'am.
 19 Q. When did you officially take office?
 20 A. Officially sworn in January 2nd of this year,
 21 2013.
 22 Q. And prior to being sworn in as a county
 23 commissioner were you on the county NEPA committee?
 24 A. Yeah. I was on the county NEPA committee for the
 25 Mount Hope Project of Eureka Moly.

1 HEARING OFFICER JOSEPH-TAYLOR: For the court
 2 reporter, NEPA.
 3 THE WITNESS: Yeah, NEPA.
 4 Q. (By Ms. Peterson) Could you please give the
 5 State Engineer a brief history of your educational
 6 background?
 7 A. Sure. Well, I was born and raised in Eureka,
 8 Nevada, farming and ranching there in Diamond Valley,
 9 Huntington Valley and Newark Valley now. I attended
 10 University of Nevada, Reno and subsequently went to Colorado
 11 State University and got my doctorate in veterinary medicine.
 12 Came back home and the rest has been in the school of hard
 13 knocks.
 14 Q. And could you tell the State Engineer why Eureka
 15 County filed a protest to these applications that are at
 16 issue in this proceeding?
 17 A. Sure. What protest in particular? Because there
 18 are, for the record some of these were filed before I was on
 19 the board and before I was the chair, so I just want to make
 20 sure I am talking about the right ones.
 21 Q. Right. So why don't we start with the ones that
 22 you signed.
 23 A. Sure.
 24 Q. And if you can identify those protests.
 25 A. I can do that for you. The first one would be

1 for Taft Spring. And this was actually asking for 6,545.44
 2 acre-feet. And number 82573, which was for the Willow Ranch.
 3 All of those for the reasons that I stated on the first
 4 protest.
 5 Q. And then did you sign any of the Sadler protests?
 6 A. No, ma'am.
 7 Q. Does the county feel a certain process should be
 8 in place with regard to vested rights or claims of vested
 9 rights?
 10 A. Claims of vested rights, yes, absolutely. Again,
 11 I wasn't on the board but I think a lot of this was aired in
 12 some proceedings on the Mount Hope project in the Kobeh
 13 Valley. There were a lot of vested claims out there. They
 14 may be small claims but they are very important to those
 15 individuals who hold those vested claims. We would really
 16 like to see a process where we can have a call for proofs or
 17 a call for who has claims on these waters. But I am not a
 18 fan of a piecemeal approach to trying to address these issues
 19 especially in a basin like Diamond Valley. We have a lot of
 20 problems there and I don't think that's a surprise to
 21 anybody.
 22 So what I would like to see is a call for claims
 23 to go out. Obviously those that have been impacted can show
 24 that, maybe we can come to some kind of a short term bridge
 25 deal with them in the interim and then we need to actively

1 Application Number 82571. That's the first one I come to.
 2 They might be out of order and I apologize. That was for
 3 Daniel Venturacci. And the request was made that this be
 4 denied. This was from water at the Cox Ranch.
 5 And reason that we moved -- that we recommended
 6 that this be denied and that the board accepted that and
 7 approved this was we had reached out to Daniel early on --
 8 earlier in this year. And when I say we, myself as the
 9 chairman and natural resource manager in an attempt to see if
 10 could maybe find a solution to all of this so we didn't have
 11 to be here today on this matter. And we were kind of working
 12 through that. And these subsequent applications came in for
 13 additional water beyond the application that we were talking
 14 to him about.
 15 We felt that there was just too many questions at
 16 that point. How much water, we were still concerned about
 17 the amount of water that he requested at Taft Springs, which
 18 is another application that the county had protested. And
 19 there were not enough answers for us to feel comfortable.
 20 There was a lot of claims out there on vested waters in
 21 Diamond Valley and Eureka County, so we felt it was best to
 22 just put the brakes on and try to get something on the record
 23 as to where we were going and what we wanted to do.
 24 You'll find that that explanation will hold true
 25 for 82570, which is also for the Cox Ranch, 82572, which was

1 start managing our groundwater. All of this needs to come
 2 together sooner rather than later.
 3 Q. And does Eureka County hold claims of vested
 4 rights to surface waters in Diamond Valley?
 5 A. Does Eureka County?
 6 Q. Yes.
 7 A. In the diamond flow system, yes. They are not in
 8 the valley but they are in that basin.
 9 Q. And does Eureka County hold groundwater rights in
 10 Diamond Valley?
 11 A. Yes, Eureka County does.
 12 Q. And if there's any kind of adjudication process
 13 is Eureka County agreeable that its claims to vested rights
 14 be adjudicated in any such process; is that correct?
 15 A. Yes.
 16 Q. You've also heard in this proceeding that the
 17 contention that Eureka County's position in this case is
 18 inconsistent with its position that it took in the Kobeh
 19 Valley case. Do you recall that?
 20 A. Yes, I did hear that.
 21 Q. And do you believe that's true?
 22 A. No, I don't. I don't. I think I kind of alluded
 23 to it in the last question or a couple of questions ago. Our
 24 stance is the same. We believe in vested claims and
 25 definitely in vested rights. We just want to see the process

1 followed through so we're sure everyone has a seat at the
2 table and everyone has the opportunity to present their
3 claims and to present proof of those claims.

4 In Kobeh Valley we were dealing with a situation,
5 when I say we I mean the county, was dealing with a situation
6 that that basin hasn't been fully appropriated yet. And I
7 believe the county felt, and I personally as the chairman of
8 this current board feel that that was an opportunity to get
9 ahead of it and to make sure that any vested claims out there
10 were fully brought forward before we ended up in a situation
11 like we are in Diamond Valley with an over appropriation and
12 impacts to those vested claims. So that was the stance in
13 Kobeh. Here in Diamond we definitely want vested claims to
14 be taken care of. And the question is obviously of date and
15 of duty and of who else is out there.

16 In my mind it is awfully difficult to assign a
17 duty and a date when we don't have all the pieces of the
18 puzzle yet. And so that is where we're at today. They're
19 different time frames because we're in different periods
20 within the appropriation process of the basins. But it's the
21 same basic principle.

22 Q. So I'm going to change subjects on you now and
23 get away from the county business and ask just if you can
24 give a brief history of your experience in the ranching
25 business for the State Engineer.

1 A. Sure. As I mentioned, I was born and raised
2 right there in Eureka and went to school there. My earliest
3 memories were actually of farming in Diamond Valley. And for
4 the record, let me say that I'm a rancher. I'm not a farmer.
5 I have to put up hay. It's kind of one of those necessary
6 evils. But when I was a little kid we were farmers and we
7 actually flooded ground. And by little, I mean three, four,
8 five years old my earliest memories. We had flood ground on
9 Frontier Street in Diamond Valley. And I can remember
10 starting in those siphon tubes and pushing it down those
11 checks. We put up some grain and some alfalfa.

12 Thankfully for me because I did not enjoy
13 farming, my dad and grandfather sold that farm and we moved
14 to Huntington Valley to a ranch there in 1978 and we went
15 more in to running cows.

16 We returned to Diamond Valley every year in the
17 fall and we wintered our cows. We rented from a lot of the
18 farmers that were there at the time. We bought hay and we
19 fed the hay and then we would return them back home, and I
20 might add, trailing past the Thompson Ranch twice a year.
21 And we did that until we leased the Maginni Ranch immediately
22 south of the Thompson Ranch in 1987 or '88. I think it was
23 '87. Then we bought that ranch the next year and we stayed
24 there until 1994, again, same process back and forth,
25 wintering in Diamond, leaving some cows there for the summer

1 and most of them went back to Huntington. At that time we
2 did farm the farm ground that was there at Maginni's, at the
3 Maginni place.

4 Sold that in '94, went to Newark Valley and we
5 are there now and we've before there for the last 20 years
6 almost. We put up a lot of wild hay when the years are
7 right. And we have some vested waters there that we do
8 irrigate with as well as some certificated water that we do
9 pump and we put up hay there as well for our cows.

10 HEARING OFFICER JOSEPH-TAYLOR: Do you want to
11 spell Maginni for the court reporter?

12 THE WITNESS: I'll do my best. It might be
13 wrong. M-a-g-i-n-n-i, I believe. I think that's right.

14 Q. (By Ms. Peterson) How much ground do you have
15 right now, private ground?

16 A. Private property the family ranch has a little
17 over 3,000 acres in Newark Valley and we have 400 acres in
18 Sestanovich Canyon, which is actually in Huntington Valley.
19 And then we have, my wife and I have just a couple of small
20 acreages in Diamond Valley. They're not farm ground.
21 They're residence. And we have a veterinary clinic on that
22 as well.

23 Q. And do you have grazing allotments also?

24 A. We do have grazing allotments. We have BLM and
25 forest service allotments. We operate both the Elko and Ely

1 district. So we run between Elko County and White Pine
2 County. We no longer have -- We have some grazing rights in
3 Eureka County but they are administered by the White Pine
4 district?

5 Q. So are you familiar with flood irrigating?

6 A. Yes. I guess flood irrigating, Ms. Peterson,
7 would be -- When I was really young we flooded some alfalfa
8 ground. I'm not comfortable to talk about that. I don't
9 remember any of that. Flood irrigating of meadows, meadow
10 hay, runoff water, spring waters out of farms, et cetera,
11 yes, I am comfortable with that, pulling ditches and making
12 checks and walking a long ways with a shovel and wet shoes.

13 Q. And could you just explain the process a little
14 bit.

15 A. Sure. Newark Valley, like most of the basins and
16 valleys in Nevada, we're seeing a decline in water flow.
17 We're seeing a decline in groundwater and we know this
18 because we can't push this water nearly as far as we could 20
19 years ago. By push water, we would take the creek water, put
20 it down the ditch, put a dam in it, spread it out and we
21 could send that for a half mile across those meadows down in
22 to the next check and continue to do that. The goal was to
23 keep as much on your good ground as you could and in some of
24 your better sloughs and to not let it run out on to the BLM
25 was always our goal. And there were some big sloughs and

1 some big impoundments, kind of natural impoundments there in
 2 the Newark Valley where we are now.
 3 When we were at Maginni's, we would fight that
 4 creek in the spring of the year and we would really run and
 5 do the best we could to spread that water over those native
 6 hay meadows. We didn't hay those. We used them exclusively
 7 for pasture. But it was very difficult to get that water to
 8 spread there in the nineties just because that water was so
 9 intermittent, it was just runoff water.
 10 Q. And do you notice a change -- Well, do you have
 11 springs on your private ground and on your BLM ground?
 12 A. We do, we have springs on both private and BLM.
 13 And a lot of our -- a good percentage of the irrigation
 14 waters that we use where my wife and I have a house at the
 15 ranch, it comes off of Robison Creek and Mile Creek, which we
 16 have vested claims on. And those have been in forever and
 17 they have some cement pipe on them. And those springs are
 18 about 7,000 feet -- 6500 to 7,000 feet in elevation. And
 19 over the last two years they have dropped substantially. And
 20 we're not losing a lot because there's concrete pipe that
 21 goes up to those and was put in for a long time.
 22 We're not measuring them with a weir or anything
 23 like that. But they come up through a bubbler and that
 24 screens out the sediments and they go back down and go in to
 25 the central irrigation system. We put a small pivot down

1 there. There's nothing within ten or 15 miles of us at all
 2 for groundwater pumping.
 3 Q. And next I'm going to turn your attention to
 4 pinion juniper. And have you been involved in work involving
 5 pinion junipers?
 6 A. Yeah. One of my other roles I guess I was
 7 fortunate enough to get very actively involved in the sage
 8 grouse issue in the State of Nevada in the last few years.
 9 And we've really started focusing our concentration on pinion
 10 juniper. Well, as a result of that, there have been a lot of
 11 studies done. Let me back up. Pinion juniper is a problem
 12 for the sage grouse because of nesting and its kind of
 13 fragment habitat. They won't use that if there's too many
 14 pinion juniper there.
 15 But as a result of that, we have participated in
 16 a lot of studies, we University of Nevada and some of us on
 17 the ground, and we found that these trees are drinking a
 18 tremendous amount of water. University of Nevada, Reno
 19 actually did some reports where these trees were consuming 60
 20 gallons of water a day in some of these water sheds and
 21 that's significant.
 22 So we, my dad and I, cleared 80 acres at Muchacho
 23 Springs on the back side of the Diamond, we took all the
 24 pinion juniper off of that. That is private property and we
 25 have the water rights there. And we did that last winter.

1 there.
 2 In good years, that bubbler will overflow and
 3 you'll use it to water your orchards, your road house, your
 4 saddle horse will have a little bit of water. But in the
 5 last few years, we've had to actually divert some water away
 6 from the alfalfa field to pivot in order to keep the orchard
 7 alive because there was no extra water coming down those
 8 pipelines.
 9 In this last year I guess what really got my
 10 attention is up on the Rubys on our forest allotments, we had
 11 to take half the number of cattle to our forest allotments
 12 that we were permitted for. It wasn't because of forage. We
 13 didn't have any water. And those springs are even at a
 14 higher elevation, 8,000 feet a couple of them. We've been
 15 there since 1978. I've spent a lot of time there and I've
 16 never seen a couple of those springs dry. And they were dry.
 17 So there's a lot of things. You know, if you
 18 want to call it climate change, you want to call it --
 19 whatever you want to call it, we are in a pattern where we're
 20 seeing this and it's affecting us all.
 21 Q. And is there any groundwater pumping in
 22 Huntington Valley?
 23 A. Very, very little. Huntington Valley is on the
 24 head waters of the south fork of the Humboldt, so that is the
 25 Humboldt River basin. So there's just a couple down towards

1 And we were in there the other day doing some fencing and
 2 getting ready to do some seeding and those springs have come
 3 up substantially. The water is actually starting to flow
 4 down the creek. And we're going have to spread it where
 5 there isn't any old meadows anymore. They were all choked
 6 out by the pinion juniper because it's starting to go off the
 7 property. In other words, you couldn't find those creeks a
 8 couple of years ago.
 9 So we've done that and we're also doing the same
 10 thing on the property that I mentioned at Sestanovich Creek.
 11 We're going up in there and we're starting to open up some of
 12 that pinion juniper.
 13 I can't underestimate the difference we're seeing
 14 in these water sheds and how these springs are starting to
 15 rebound. And we kind of all took it for granted. We were
 16 raised there. And you don't notice it. And I have some
 17 friends who used to run cows. I can't believe they came back
 18 after 30 years. They ran some cows with us for a while.
 19 They came back a couple summers ago and said, how do you even
 20 ride through here, it's so thick with trees. We don't notice
 21 it and I think that's a lot of what we're seeing around the
 22 Eureka area. Some of the areas had those trees stripped and
 23 they were gone for a 50-mile radius. So I think we're
 24 inadvertently having an impact on the ecosystem on our water
 25 because of that as well.

1 There's going to be argument that they're
 2 naturally there or they're not. They are an invasive species
 3 in my mind.
 4 Q. And then I'm going to direct your attention to
 5 trespass.
 6 A. Okay.
 7 Q. You've heard some testimony in the proceeding
 8 about trespassing on federal ground. Do you recall that?
 9 A. Yes.
 10 Q. And are you aware of whether the BLM charges
 11 people with trespass if they're using the BLM land without a
 12 permit?
 13 A. Yeah. And obviously recently the BLM has
 14 tightened down substantially on that. But I do have
 15 historical knowledge because of my family on trespass. The
 16 Green Meadows area in Newark Valley when my grandfather and
 17 his dad, my great grandpa Pete, bought the home ranch in
 18 1937, they were like everybody. It was tough years trying to
 19 make a living. And they had actually spread some water to
 20 the outside to the south of the home ranch on to what is
 21 called Green Meadows and there was kind of some natural
 22 meadows there and some springs. They hayed that and they
 23 hayed it for a couple of years. Well, then they got caught
 24 and they were charged \$17.50 per ton for the hay that they
 25 had put up on Green Meadows. My grandpa said the hay was in

1 of hay produced on the Sadler Ranch when Floyd Slagowski was
 2 there?
 3 MR. TAGGART: I'm going to object based on
 4 hearsay. Mr. Slagowski is not here. Apparently he's alive
 5 and he's more than capable of being here to provide this
 6 testimony, so we object.
 7 HEARING OFFICER JOSEPH-TAYLOR: I don't have a
 8 problem with this one because it goes to some real serious
 9 questions at issue here.
 10 Do you want to respond, Ms. Peterson?
 11 MS. PETERSON: Yes. I don't know why the
 12 applicants did not bring Mr. Slagowski down here, because he
 13 is available. But they used his information from the memoirs
 14 as evidence and I'm entitled to comment and rebut and impeach
 15 that evidence.
 16 MR. TAGGART: And my response is that we have an
 17 ancient document that came from a museum. We found it. We
 18 cited to it. And they could have brought Mr. Slagowski.
 19 They had it on our direct exchange. They could have put him
 20 on the witness list to have him come and testify if he wanted
 21 to rebut what he said in his memoirs. And for them to now
 22 come in and try to offer through hearsay something about what
 23 he said when he could have come to make that statement and
 24 have an opportunity to have him come, we think that's
 25 inappropriate.

1 no way worth \$17.50 a ton. But they paid it because it beat
 2 the alternative of not being able to run your cattle outside.
 3 They subsequently bought a ranch across the
 4 valley that the two joined so they didn't have to do that
 5 anymore. But he told us often about that. And that was in
 6 1939.
 7 Q. And are you aware if there is any prohibition in
 8 the code of federal regulations for trespassing today?
 9 A. There is. And I can't cite it, but there is.
 10 There are CFR on trespassing today.
 11 Q. The State Engineer asked some questions about
 12 tonnage produced on the Sadler Ranch prior to the Sadler
 13 brothers owning that property. Do you recall that question?
 14 A. Yeah. From this morning, I believe, yes.
 15 Q. And do you know Floyd Slagowski?
 16 A. Yes, I know Floyd Slagowski.
 17 Q. And he was one of the people mentioned in the
 18 Eureka memories and there was historical information from him
 19 presented by the applicants. Do you recall that?
 20 A. Yes.
 21 Q. And how do you know Floyd Slagowski?
 22 A. Floyd is my wife's grandfather. So I know Floyd
 23 quite well. We spend quite a bit of time BSing I guess you
 24 would say.
 25 Q. And what was the maximum ton -- tonnage per year

1 Q. (By Ms. Peterson) I can ask Mr. Goicoechea, how
 2 old is Mr. Slagowski?
 3 A. He'll be 98 in April.
 4 Q. I'm sorry.
 5 A. No. That's it.
 6 Q. And does he travel outside of Eureka?
 7 A. Floyd doesn't travel much out of Pine Valley
 8 right now. He recently broke his hip this summer. He stays
 9 pretty much on the ranch right now. He lost his wife a year
 10 and a half or so ago. He stays home and stays on the ranch
 11 with the boys.
 12 HEARING OFFICER JOSEPH-TAYLOR: Stop, stop. I'm
 13 going to overrule the objection. But I don't know how much
 14 weight we're going to give this testimony.
 15 MR. TAGGART: And just for the record, we did try
 16 to contact Mr. Slagowski and he did not return our phone
 17 calls.
 18 HEARING OFFICER JOSEPH-TAYLOR: Okay. You can
 19 answer the question.
 20 Q. (By Ms. Peterson) What was the --
 21 A. Could you repeat the question?
 22 Q. -- maximum amount of tonnage from the --
 23 A. Sure. In talking with Floyd, I just asked when
 24 he worked there, he said he was there from 1937 to 1940. My
 25 questions started around was it horses and tractors, both.

1 It was all horses, all horse equipment. They bought a little
 2 tractor in 1940 and he cussed it because it was too small to
 3 do any good. He said they had 800 cows and they put up eight
 4 to 900 ton of hay every year for those four years that he was
 5 there.
 6 Q. Was there any alfalfa put up?
 7 A. Actually there was. Floyd said there was a few
 8 small patches of alfalfa around the dam, nothing real big.
 9 Nothing real greatly cultivated but a few small patches.
 10 When I asked him the size of the patches, oh, a few acres,
 11 you know, maybe ten or 20. He really didn't know. And he
 12 said that those were put up more for the milk cows in his
 13 recollection.
 14 Q. And was there pasture in the meadows?
 15 MR. TAGGART: I'm just going to object again.
 16 This is -- I don't have the opportunity to question this
 17 person. If I was told this was going to happen, we would
 18 have tried to get out there and find him and ask him these
 19 questions. But I have no way of knowing whether this person
 20 said the things that are being stated. And we have his
 21 written statement, his memoirs in the record.
 22 HEARING OFFICER JOSEPH-TAYLOR: So noted.
 23 THE WITNESS: Yeah. There was a lot of grass in
 24 the meadows and they grazed a lot of it. They did hay the
 25 Johns, the Taft and the Meadow Fields. I'm kind of a

1 A. From a rancher's standpoint and a veterinarian I
 2 do. I'm not a botanist by any stretch of the imagination.
 3 But yeah, we were always just kind of taught sedges have to
 4 keep their feet wet. They're more tubular and hollow. They
 5 grow in places that generally don't dry out that much. And
 6 when we're haying our fields at home and when we were kids
 7 doing it, you cut a few of those sedges but they're not the
 8 highest nutritional value. And if you want to get stuck just
 9 keep trying to cut those sedges because you were going to
 10 find out why their feet were wet. They tended to grow in
 11 this marshier, swampier areas around some of these holes that
 12 come up.
 13 Q. And you've been here for the power point
 14 presentation -- Well, you've been here since Tuesday; is that
 15 correct?
 16 A. Yes, ma'am.
 17 Q. And you heard some of the power or seen some of
 18 the power point photos about the location of ditches, dams,
 19 hay stacks on the Sadler Ranch; is that correct?
 20 A. Yes.
 21 Q. And in your experience does the location of
 22 ditches or do the locations of ditches, dams and hay stacks
 23 infer an annual use of water?
 24 A. I can tell you based upon my experience on our
 25 old home ranch and going by the -- and on our ranches, we

1 historian so I asked how and why. And we've had
 2 conversations about this Sadler Ranch for the last decade,
 3 Floyd and I. And the interesting thing was I want to know
 4 how they did it with those teams. Because they would always
 5 do the Johns Field last because it had to dry out. And I
 6 think this goes along with what Mr. Bailey said this morning,
 7 they send the water down there in the winter and they would
 8 farm everything else, if you will, spread some water, take
 9 care of the meadow and take care of what he called the Taft.
 10 And I think that kind of goes along with what Mr. Bailey
 11 said as well. But he didn't really know the Romano Field and
 12 those things. They called them the Taft. And then as that
 13 dried out, the Johns Field, they would hay that.
 14 Q. (By Ms. Peterson) And then I'm going to direct
 15 your attention to sedges. Did you hear some questions to one
 16 of the witnesses from the State Engineer's panel about
 17 sedges?
 18 A. I did a couple of days ago. I think it was on
 19 survey actually and the crews and if they were trained to
 20 differentiate between sedges and grasses. And then I think
 21 this morning there was some questioning about some pointed
 22 grasses and things like that that may have been getting at
 23 the same thing.
 24 Q. And do you know the difference between sedges and
 25 grasses?

1 have a lot of ditches and we have a lot of dikes and
 2 diversions. We don't use them all every year. And some of
 3 them, I'll be honest with you, I don't know why they're
 4 there. I haven't figured out yet who put them in and why.
 5 A lot of these ranches, as witnessed this morning
 6 when Mr. Bailey was talking about who owned them and who
 7 bought them, everybody has a little different idea on how to
 8 get the best bang for your buck and the best bang for your
 9 water. So somebody may, as Tiny and Reiny did, put some
 10 alfalfa in and some ditches that go that way. Somebody might
 11 say, I can't do this alfalfa, I'm not going to change my
 12 water every 12 hours if it's hot water. I'm not going to
 13 change my water period and just send it down the sloughs.
 14 When it comes time to hay, they'll take a ditch and cut it
 15 out the brush and turn it loose. So yeah, we have a lot of
 16 ditches. There's a lot of these ranches that I've been on as
 17 a veterinarian and also helping do cow work on mule crops,
 18 which is every where.
 19 We have a lot of dams, some of them to push
 20 water, but the majority of them we call crossings rather than
 21 dams. And in the spring of the year it's a nightmare to try
 22 to move cows and calves, pairs, across a lot of these. You
 23 have to remember these guys were in during the year, they
 24 were feeding hay. If you got the right spring and the ground
 25 started thawing out and you have a lot of water in there, I

1 don't know how many of you have tried to move a couple
 2 hundred head of baby calves through even water that deep, it
 3 doesn't happen. They don't go.
 4 So a lot of these are built for crossing. You
 5 can cross your cattle. You can cross your equipment. You
 6 can cross your cavvys. Cavvy is a horse's -- Excuse me.
 7 Horse herd. Because it was easier than taking them through
 8 these water puddles. And did that answer your question? I
 9 can't remember everything. I'm sorry.
 10 Q. Thank you. Did you have any other comments that
 11 you wanted to present to the State Engineer other than what
 12 we talked about?
 13 A. One thing that I really noticed on both the
 14 Sadler and on Daniel Venturacci's piece over there, we've put
 15 a lot of emphasis on where hay corrals are, et cetera. And
 16 in the case of the Sadler, I noticed this big void, I believe
 17 it was the Johns, I just remember looking at this map and it
 18 really struck me. There's hay corrals around these edges.
 19 We're now claiming that we used all of this acreage and a lot
 20 of it was used for haying. And we've heard testimony to but
 21 there aren't any stack yards there.
 22 And when I talked to Grandpa Slagowski, it was
 23 all horses all the way up to the forties. They didn't move
 24 that hay. They put it up very close to where they had to
 25 store it, so there's no stack yards there.

1 The other thing is in a lot of corners and a lot
 2 of fences we see some stack yards. Makes sense. You're
 3 going to put them there. If you have some hay there, you
 4 only have to build three sides or two sides. But I think we
 5 also maybe overlooked another use for these. They're traps.
 6 They're branding traps. They're cattle traps. We have a lot
 7 of --
 8 MR. TAGGART: I'm going to object to the
 9 independent individual -- I totally appreciate all the
 10 history and experience he has on his own ranch, but he's
 11 never -- but I don't know that he's walked on Sadler Ranch.
 12 He's given a lot of testimony about how things happen on
 13 Sadler Ranch. He doesn't know. He's not an expert. He
 14 knows how he did it on his own property. I have no problem
 15 with him testifying about how things worked on his own
 16 property. But he wasn't there in 1905. He doesn't know why
 17 those are there. He's speculating on everything that he's
 18 asked with respect to Sadler Ranch. He hasn't been offered
 19 as an expert. He has no foundation.
 20 MS. PETERSON: He's not being -- He's not being
 21 offered as an expert. He's being offered based on his own
 22 experience on the ground in Eureka County. And he is doing
 23 the exact same thing that the owners of Sadler Ranch did when
 24 they presented their testimony explaining what they thought
 25 happened on the ground pre-1905. And he's just explaining

1 how ranches are operated. And they may be different than --
 2 One person may see something that's different than another
 3 person sees by looking at the same thing. That's what he's
 4 being offered for.
 5 HEARING OFFICER JOSEPH-TAYLOR: That's how I was
 6 taking it. Objection is overruled.
 7 Hay stacks.
 8 THE WITNESS: Hay stacks, yes, ma'am. They're
 9 there. They're also used for other things. I have been on
 10 the Sadler Ranch as a veterinarian. In fact, I was there a
 11 year ago as a veterinarian when there were leased cattle
 12 there.
 13 In the case of Mr. Venturacci's operation, I
 14 spent a lot of time there with Milton Thompson when I was
 15 growing up and I helped him regularly. And we did use a lot
 16 of these corner traps to brand his calves. I always liked
 17 going there because Milton didn't ride much or rope much so I
 18 got to do a lot of it. I got to spend a lot of time there.
 19 So I do have some knowledge of these ranches and perhaps some
 20 other uses for these. I'm not saying that maybe originally
 21 there weren't some stack yards. But over time they've been
 22 used for other things or perhaps they were built there in
 23 some of these brushy high ground spots in the first place for
 24 something else.
 25 Q. (By Ms. Peterson) And I forgot to ask you with

1 regard to Mr. Slagowski, how many tons per acre of meadows
 2 were there when Mr. Slagowski was working at the Sadler
 3 Ranch?
 4 A. You know, Floyd really didn't give me -- he
 5 couldn't really get a good estimate of the number of acres.
 6 MR. TAGGART: Same objection. If he couldn't
 7 even good a good estimate and it's hearsay, then this is
 8 improper testimony.
 9 HEARING OFFICER JOSEPH-TAYLOR: So noted. And
 10 the State Engineer wants to hear it.
 11 THE WITNESS: He couldn't give me an estimate on
 12 the number of acres that they were farming. But Floyd
 13 obviously has done a lot of ranching since and he knows what
 14 wild hay looks like. He said they cut a lot of hay that was
 15 a ton to the acre and they cut some that was three ton to the
 16 acre. It depended on where they were and where that water
 17 was. If it was in some of that better ground, they would get
 18 three tons. If it was on some of that marginal ground, they
 19 would be lucky to get a ton to the acre.
 20 MS. PETERSON: And -- I don't have any further
 21 questions.
 22 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 23 Cross-examination.
 24 ///
 25 ///

1 CROSS-EXAMINATION
 2 By Mr. Taggart:
 3 Q. Good afternoon, Mr. Goicoechea.
 4 A. Good afternoon, Mr. Taggart.
 5 Q. My name is Paul Taggart. I represent Sadler
 6 Ranch. You heard Wids Bailey testify; right?
 7 A. Uh-huh.
 8 Q. How many acres of alfalfa did he say was out
 9 there?
 10 A. At the Sadler?
 11 Q. Right.
 12 A. 200 in the time of Reiny and Tiny.
 13 Q. And so Floyd says there was less than that?
 14 A. And this was before them, yes, sir.
 15 Q. How long did you know that you were going to
 16 testify about conversations you had with Floyd? Did you know
 17 that before your attorney submitted the evidence in this
 18 case?
 19 A. No.
 20 Q. You hadn't -- You said earlier you talked to him
 21 for ten years about this?
 22 A. I have. Absolutely. We talk all the time about
 23 historic -- He's written numerous books, including The Pine
 24 Valley Puzzle.
 25 Q. So when was the first time you thought you would

1 A. I would agree with that.
 2 Q. And the other question I have for you is do you
 3 recall when the county commission authorized the protest
 4 ground in this case involving abandonment to be included in
 5 the protest?
 6 A. The abandonment that you are discussing was at
 7 the previous board. And no, those protests were authorized
 8 before I came on the board. I don't have those dates in
 9 front of me.
 10 Q. And let me just put the document in front of me.
 11 Now, today you're testifying on behalf of Eureka County;
 12 right?
 13 A. Yes, sir.
 14 Q. Now, the Eureka County commission did authorize
 15 the filing of a protest against the Sadler Ranch
 16 applications; right?
 17 A. Yes. Three applications, I believe.
 18 Q. And are you familiar with why those protests were
 19 filed?
 20 A. Yes.
 21 MR. TAGGART: Could we have the witness --
 22 Could we show him Exhibit 196, please?
 23 HEARING OFFICER JOSEPH-TAYLOR: What exhibit,
 24 Mr. Taggart?
 25 MR. TAGGART: 196.

1 be talking about conversations with Floyd at this hearing?
 2 A. When I heard you enter in to testimony in to the
 3 record his excerpts from the book Eureka Memories.
 4 Q. Now, as a county commissioner you'd like to solve
 5 this problem; right?
 6 A. Absolutely.
 7 Q. Wouldn't you agree it's unusual for a county to
 8 be seeking abandonment of water rights in its own county?
 9 A. Yes.
 10 Q. And are you familiar with the county master plan?
 11 A. Yes.
 12 Q. And the county master plan has significant
 13 discussions in it, does it not, that involve the importance
 14 of private ownership of water rights in the State of Nevada?
 15 A. It does.
 16 Q. It talks about protecting private water rights
 17 from the state and from the federal government?
 18 A. It does.
 19 Q. And Eureka County has had a long history in
 20 protecting private property rights of farmers and ranchers in
 21 Eureka County; right?
 22 A. Yes.
 23 Q. And so wouldn't you agree with me that it's
 24 unusual for the county to take a position of trying to seek
 25 abandonment of water rights within -- from its citizens?

1 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Do
 2 you have it, Mr. Goicoechea, or do we need to get it for you?
 3 Here we go.
 4 THE WITNESS: I don't have it. Thank you.
 5 Q. (By Mr. Taggart) Do you have that, sir?
 6 A. Yes.
 7 Q. Now, I want you to look at what's been
 8 highlighted there on May 21st 2012, Eureka County board of
 9 commissioners. These are minutes; right?
 10 A. Yes, sir.
 11 Q. And --
 12 THE STATE ENGINEER: What page? I'm sorry,
 13 Mr. Taggart?
 14 MR. TAGGART: The first page of the exhibit.
 15 THE STATE ENGINEER: I apologize.
 16 Q. (By Mr. Taggart) Is it true that Eureka County
 17 was asked by the Diamond Natural Resources Protection
 18 Conservation Association to file the protest against the
 19 Shipley Hot Springs applications in order to investigate
 20 specific issues, specifically whether the flow rate requested
 21 was six CFS and whether the manner and place of use was
 22 limited to agriculture at the existing place of use? Do the
 23 minutes indicate that?
 24 A. These minutes indicate that there was public
 25 comment received from members of DNRPCA about the amount of

1 water and manner of use and they asked that it be considered.
 2 There was no action taken under this -- under this public
 3 comment.
 4 Q. Now, if you turn to the second page there was
 5 also a highlighted section that says recent water filings
 6 affecting Eureka County. Do you see that?
 7 A. Yes.
 8 Q. And at the end of that paragraph it says
 9 Mr. Frazer would still like to meet with the interested
 10 parties. Do you see that?
 11 A. Yes, I do.
 12 Q. You've never met with Mr. Frazer to discuss the
 13 protest that Eureka County has against these applications,
 14 have you?
 15 A. No, I have not heard from Mr. Frazer.
 16 Q. Mr. Frazer requested meetings with you, you don't
 17 recall that?
 18 A. No, he did not request a meeting with me.
 19 Q. All right. Then when the Eureka board voted to
 20 file the protest, the intent of the protest was for all
 21 interested parties to be informed and to make sure proper
 22 information is in front of the State Engineer when making his
 23 decision. Can you see that from these minutes. It looks
 24 like the first sentence, last paragraph.
 25 A. Yes, sir.

1 Q. And then the commissioners also restated their
 2 intent that they were only taking action to clarify the facts
 3 and were in no way challenging a valid or a vested water
 4 right. Do you see that?
 5 A. Yes, sir.
 6 Q. And then when the commissioners voted to file the
 7 protest, in that motion they indicated that they were in no
 8 way challenging someone's vested or valid right; is that
 9 true?
 10 A. In no way challenging someone's vested or valid
 11 right, yes, sir.
 12 Q. Okay. Do you agree that Eureka County has had an
 13 opportunity to present information at this hearing and to
 14 clarify facts for the State Engineer?
 15 A. We are having that opportunity now, yes.
 16 Q. So then Eureka County since it has had the
 17 opportunity to do what the protest was filed for, would
 18 Eureka County agree that they would not need to appeal the
 19 State Engineer's decision regardless of what it is since
 20 they've had an opportunity to present the information they
 21 wanted to present?
 22 A. No. I think what you're missing here, the county
 23 has had the county's opportunity to express our concerns.
 24 And one of those main concerns is anyone with a claim needs
 25 to be present and have that opportunity to be present before

1 a claim becomes a right. And that has not occurred yet. And
 2 that is what we're trying to get out here. We want --
 3 Q. Would you object to granting of a water right as
 4 long as it was subject to an adjudication in the future?
 5 A. What is the future? I would prefer --
 6 Q. Well, let me restate it. Let's assume that
 7 adjudication of these rights started immediately, a formal
 8 adjudication through the statutory process. But in the
 9 meantime until the adjudication was complete a mitigation
 10 right was awarded so that water could be used at the Sadler
 11 Ranch during the time of that formal adjudication process and
 12 then whatever that formal adjudication process indicates what
 13 the nature of the vested claims are would take effect. Would
 14 you object to that?
 15 MS. PETERSON: I'm actually going to just
 16 interject here that is you or your client making a settlement
 17 offer to us?
 18 MR. TAGGART: I'm asking a question.
 19 MS. PETERSON: Well, if it's in the nature of a
 20 settlement offer, I mean, I would object, because settlement
 21 discussions are privileged and confidential.
 22 MR. TAGGART: I'm asking a question. He said
 23 that -- Excuse me.
 24 HEARING OFFICER JOSEPH-TAYLOR: I was telling him
 25 not to talk.

1 MR. TAGGART: I'm confused by the objection. I
 2 listened to the testimony and there was an indication that --
 3 in the evidence that the county does not contest the vested
 4 claim. And I'm trying to understand what the county would be
 5 willing to -- what the county thinks the State Engineer
 6 should do here.
 7 MS. PETERSON: That's a different question, which
 8 is appropriate.
 9 MR. TAGGART: Okay. Well --
 10 HEARING OFFICER JOSEPH-TAYLOR: So withdraw your
 11 former question and ask a new question.
 12 THE WITNESS: It's a good thing I already forgot
 13 it.
 14 HEARING OFFICER JOSEPH-TAYLOR: So did I.
 15 MR. TAGGART: Well, would you object if the State
 16 Engineer initiated a formal adjudication and during that
 17 formal adjudication awarded a water right to Sadler Ranch in
 18 an amount determined through this proceeding so that Sadler
 19 Ranch can have water rights that they could use during the
 20 pendency of that formal adjudication?
 21 HEARING OFFICER JOSEPH-TAYLOR: Now hold on. Are
 22 you asking him personally or as a representative of the
 23 county?
 24 THE WITNESS: Thank you.
 25 MR. TAGGART: I understand, sir, that you're one

1 member of the county commission and that you cannot -- I
2 think in your county you need two. So I'm asking for your
3 view as a county commissioner.

4 THE WITNESS: I just want to say that for the
5 record that I am one member of that board. Yes, I am here
6 today as a chairman of that board, but I am in no way
7 speaking on behalf of the board.

8 With that said, I am still confused about how we
9 get a right when the process has not been completely gone
10 through yet. That -- I very personally don't like the way we
11 have intermixed rights and claims for so long on vested. And
12 this is an attempt, I feel, to do the exact same thing. I
13 want to see a call for proofs at the very minimum for vested
14 claims. Let's see who else is out there. We still have this
15 question of duty. It is not my job, and I am not an
16 engineer, I'm not a hydrologist, to figure out the duty.
17 We're presenting some information that hopefully will help
18 along those lines.

19 The date of priority is a question for me. So at
20 this point I can't say yes, that I would be willing. There's
21 still too many variables for me to personally be comfortable
22 with saying yes.

23 Q. (By Mr. Taggart) Okay. Who prepared the protest
24 for the county?

25 A. What happens is the board will discuss it and if

1 they want to have a protest, legal counsel and personnel will
2 prepare the points of the protest. Myself as the chairman, I
3 have seen them, the ones that I have signed since I've been
4 on the board. I've seen them. The other board members have
5 as well. And if there's any points of contention in there,
6 those are brought to legal counsel within the county. Also
7 retain legal counsel before those are finalized.

8 Q. Well, in the minutes I just read you there's no
9 discussion of challenging these water rights for abandonment,
10 for instance. So where is the authority provided for Eureka
11 County to challenge these rights based on the abandonment?
12 Do you know if a board decision was made authorizing that to
13 be included in the protest?

14 A. I can't say explicitly if the previous board
15 authorized that or not. I do know that there are some
16 discussions and I've had these discussions in regards to
17 duty. And at the point that someone is claiming 20, 25 cubic
18 feet, ten, 15, and we know, we physically know they could
19 have never been put to use on that property, I tend to lean
20 toward some of that had to be abandoned because there's no
21 way you could put it to all to beneficial use.

22 Q. Can you make that decision by yourself on behalf
23 of the county?

24 A. No, I cannot. I said we, including myself, have
25 had those conversations.

1 Q. And I just read to you the motion that was passed
2 by the county to file the protest in this case. And they
3 indicated that the intent of the protest was for information
4 gathering and for facts to be put in front of the State
5 Engineer. I find nothing in there that indicates that the
6 county would take the position of seeking abandonment of
7 private property rights within Eureka County, which would be
8 inconsistent with its master plan. So I'm asking you if you
9 know of any authority that the board provided for that to be
10 included in the protest?

11 A. Again, no. I was not on this board and I am not
12 aware of that.

13 Q. In your protest, and I think you had some copies
14 of that, I think you were looking at ones that you had
15 actually signed. But one I'd like you to look at is State
16 Engineer Exhibit Number 32?

17 A. What --

18 Q. State Engineer Exhibit 32.

19 A. Sure. What application is that?

20 Q. 82268?

21 A. Got it. 82268; correct? This is going to be the
22 same.

23 HEARING OFFICER JOSEPH-TAYLOR: It's a copy.

24 It's the protest -- It's Eureka County's protest to that.

25 THE WITNESS: Okay. 82268; correct?

1 MR. TAGGART: Right.

2 THE WITNESS: Okay.

3 Q. (By Mr. Taggart) Okay. So you don't know
4 whether these protests are reviewed by the commission prior
5 to being filed?

6 A. I do know that at least in the case of the
7 chairman that he did have a look at these because he told me
8 that --

9 Q. All right.

10 A. -- before I was on the board.

11 Q. Well, the first protest ground indicates that
12 Eureka County affirms support for valid vested water rights
13 and a doctrine of prior appropriation as established by state
14 law. And we both agree with that, we talked about that
15 before; right?

16 A. Yes, sir.

17 Q. This protest does not challenge the existence of
18 vested water rights on Big Shipley Spring complex?

19 A. Sure.

20 Q. Right?

21 A. Uh-huh.

22 Q. So doesn't that mean that Eureka County is not
23 challenging whether a right exists in this proceeding or
24 you're just challenging the quantity of it?

25 A. Sure. When I read it I don't believe that

1 they're challenging that there is a valid -- And again, I'm
 2 going to use the word claim. I don't like right because it
 3 hasn't been established yet. But yes, they're not arguing
 4 that.
 5 Q. And I appreciate that distinction. I'll try to
 6 do that myself because I understand the difference. So you
 7 would agree then that there is evidence that water was put to
 8 beneficial use at the Sadler Ranch prior to the 1905?
 9 A. Yes. Well, I think we've seen evidence to that
 10 before 1905.
 11 Q. And you would agree that Shipley Spring was the
 12 source of that water?
 13 A. The main source, yes, sir.
 14 Q. Earlier when I was asking you a question you were
 15 saying that the -- Well, I guess let me ask it this way. Is
 16 there a broader constituent-based concern that you have that
 17 the water users who have filed protests in this case are an
 18 interest group of important water users in southern Diamond
 19 Valley and it's important -- it's an important county policy
 20 position to maintain that economic base and is that a reason
 21 why Eureka County is pursuing this case?
 22 A. It is a reason why. You're exactly right, to
 23 maintain an economically stable agricultural base there. And
 24 we heard this morning of multi-generational ranches. And we
 25 now have multi-generational farmers. We have a downturn in

1 county agree that if a junior water right owner uses water
 2 and there's a senior water right owner and they're using
 3 water from the same source that the junior right should be
 4 cut off?
 5 A. That's a decision for the state water engineer to
 6 make.
 7 Q. So you have no position on whether that --
 8 A. There's so many variables there.
 9 Q. Even though the county's master plan says that
 10 they support the concept of first in time first in right?
 11 A. We absolutely do. And we have a lot of science
 12 to wade through. Like you say, same source. A lot of our
 13 master plan was written on, again, I believe vested claims
 14 and surface water. And we're in the process of working
 15 through that.
 16 Q. Now, you're aware that and I think you were on a
 17 subcommittee involving Kobeh Valley?
 18 A. I was appointed to the NEPA committee to review
 19 the EIS document for that project. My -- I guess my area on
 20 that was livestock and agriculture.
 21 Q. In what's been marked as Exhibit 308 it's a
 22 ruling from the State Engineer in that case and it indicates
 23 that Eureka County filed protest in that General Moly case to
 24 protect impacts to existing rights or to prohibit impacts to
 25 existing rights. Do you recall that?

1 mining. I don't think it's a surprise to anyone. There was
 2 a recent layoff in Eureka. We need a stable base, whatever
 3 that base is, and agriculture has proved to be that base
 4 throughout the years. And we need to figure out a way to
 5 make all aspects of agriculture remain as a stable base for
 6 Eureka County.
 7 Q. Well, hasn't Eureka County essentially picked one
 8 group of irrigators over another group of irrigators in
 9 Diamond Valley?
 10 A. No.
 11 Q. Did you see a danger in the county throwing its
 12 weight behind one group of constituents against another group
 13 of constituents?
 14 A. No. And I don't think it's behind one group of
 15 constituents either. Again, it's to make sure that everyone
 16 has an opportunity, the same as in the Kobeh Valley. Let's
 17 make sure everyone, what they claim can come to the table.
 18 Q. Now, we talked about how the county supports the
 19 concept of prior appropriation and the county supports the
 20 concept of first in time first in right; right?
 21 A. Uh-huh.
 22 Q. And you're familiar with the county's master
 23 plan?
 24 A. Yes, sir.
 25 Q. Do you as a county commissioner on behalf of the

1 A. I'm sorry. I need to look at that.
 2 Q. 308.
 3 A. 308.
 4 Q. Go to page five.
 5 A. I'm still looking for 308. There's a lot of
 6 pages.
 7 MS. URE: Mr. Goicoechea, those are labeled one
 8 but you can consider one being 301.
 9 THE WITNESS: 301?
 10 MS. URE: Yes.
 11 THE WITNESS: Ruling 6127?
 12 MR. TAGGART: Yes. Okay. And just go to page
 13 five of that.
 14 THE WITNESS: Page five. Yes, sir.
 15 Q. (By Mr. Taggart) And on that page it shows what
 16 the grounds were that Eureka County filed its protest. Do
 17 you see that?
 18 A. Are you speaking where it says perennial yield
 19 impact or existing?
 20 Q. Yeah. And yeah, the second bullet is what I
 21 wanted to point out. You may have already indicated that
 22 part of the protest was the concern for impacts to existing
 23 rights; right?
 24 A. Yes, sir.
 25 Q. And then there's an Exhibit Number 295. I'll

1 show you a copy of that.
 2 A. Thank you.
 3 Q. This is a brief that was filed on behalf of
 4 Eureka County in a case called Eureka County versus the State
 5 of Nevada.
 6 HEARING OFFICER JOSEPH-TAYLOR: 295?
 7 MS. PETERSON: Yes, 295.
 8 HEARING OFFICER JOSEPH-TAYLOR: That's
 9 Etcheverry's. 296 is Eureka County's, at least on my exhibit
 10 list.
 11 MR. TAGGART: Oh, okay. Let me change those in
 12 my binder then. So that's 296?
 13 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 14 MR. TAGGART: Okay. For the record then I'm
 15 going to ask about Exhibit 296.
 16 HEARING OFFICER JOSEPH-TAYLOR: Hold on,
 17 Mr. Taggart. Let me make sure I didn't mess up the exhibits.
 18 MR. TAGGART: I think you're right. You had
 19 corrected that.
 20 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 21 record.
 22 (Discussion was held off the record)
 23 HEARING OFFICER JOSEPH-TAYLOR: Actually it's my
 24 mistake. Exhibit 295 we do have marked as Eureka County's
 25 brief and 296 is Etcheverry. My apologies. Sorry. My job

1 trying to do here is protect unadjudicated claims for vested
 2 water rights?
 3 A. Yes.
 4 Q. So you've been to Sadler Ranch?
 5 A. Yeah, I've been to Sadler Ranch several times
 6 over the last 12, 13 years.
 7 Q. Have you been throughout the ranch or have you
 8 been to the main headquarters area?
 9 A. I haven't been throughout the ranch since Joel
 10 Carlson went there when he was working for Lundahls. That
 11 was the last time I went to ranch and looked around.
 12 Q. So you don't have personal knowledge of how the
 13 ranch is operated?
 14 A. Not in the last five or six years.
 15 Q. Do you have any personal knowledge of how the
 16 ranch was ever operated?
 17 A. Yeah. From then in my role as a veterinarian I
 18 was actually consulting with Lundahls, consulting with Joel
 19 Carlson, who was the ranch manager at the time and Ken Little
 20 as well. So I did have the opportunity to go down through
 21 there and see what it looked like, what they had, and to try
 22 to help them make some decisions on supplement for their
 23 cattle.
 24 Q. Does Jake Tibbitts work for the county?
 25 A. Uh-huh.

1 was to keep it straight.
 2 MR. TAGGART: That's okay.
 3 Q. (By Mr. Taggart) On page seven of this document,
 4 which was filed in the Seventh Judicial District Court for
 5 the State of Nevada is the heading, and I understand this is
 6 a brief filed by Eureka County. I wanted you to look at it.
 7 This is the cover. And then I'm going to ask you about
 8 what's on page seven.
 9 A. Okay. Excuse me.
 10 Q. All right. And on that page seven Eureka County
 11 was arguing that the State Engineer acted arbitrarily and
 12 capriciously by ignoring NRS 533.370 sub 2.
 13 A. Mr. Taggart, can you tell me where you are on
 14 this page?
 15 Q. There's a heading.
 16 A. B, is that what you're under?
 17 Q. Yes. 533.370 sub 2, which prohibits him from
 18 granting water right applications that impact existing
 19 rights. Do you see that?
 20 A. Yes, sir.
 21 Q. Now, are you aware that some of the water rights
 22 that Eureka County was seeking to protect are actually
 23 unadjudicated vested claims for water rights?
 24 A. Yes.
 25 Q. And that's exactly what the State Engineer is

1 Q. Did he ever tell you that Doug Frazer wanted to
 2 set up a meeting with you?
 3 A. No, sir. Jake -- If I can back up. I know Jake
 4 Tibbitts had met with Doug Frazer, as well as Dale had met
 5 with Doug Frazer.
 6 Q. All right. Now, a little earlier we talked
 7 bought hay corrals and you had a view of what those could
 8 also be used for, right, and you called it a trap to put
 9 cattle in and then I guess to load them on trucks?
 10 A. No, sir. To brand them or to -- Sometimes when
 11 you're short of help, you kind of -- if you're going to work
 12 some pairs out or you're going to work some cattle and you're
 13 one and your wife or one and your dog, you want to have them
 14 in somewhere so you can kind of help get those cattle out or
 15 if you're going to brand, rather than taking them all the way
 16 up to a good set of corrals, you can throw them in a fence
 17 corner and do some branding right there.
 18 MR. TAGGART: Could you show the witness Exhibit
 19 617, please.
 20 HEARING OFFICER JOSEPH-TAYLOR: I thought you
 21 were going to say could you shut the witness up.
 22 THE WITNESS: Maybe that too. That's your job.
 23 HEARING OFFICER JOSEPH-TAYLOR: I was like, what
 24 did he say. I'm sorry, Mr. Taggart. What exhibit?
 25 MR. TAGGART: 617.

1 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 2 THE WITNESS: Thank you.
 3 MR. TAGGART: If you could turn in that to page
 4 51.
 5 THE WITNESS: 51.
 6 HEARING OFFICER JOSEPH-TAYLOR: They're real
 7 lightly-shown numbers on generally the bottom right or
 8 left-hand corner.
 9 THE WITNESS: Okay. 51, yes, sir.
 10 Q. (By Mr. Taggart) So this slide shows an aerial
 11 photograph in the upper right-hand side of the slide. It
 12 appears to me to be a hay stack from the air. Do you agree
 13 with that?
 14 A. Uh-huh.
 15 Q. Okay. And then there's a picture below that
 16 shows the current posts in the ground and it's been referred
 17 to as a hay corral.
 18 A. Sure.
 19 Q. Would you agree that that's probably a hay
 20 corral?
 21 A. This one most likely is a hay corral, yes, sir.
 22 Q. So would you agree if you can actually see hay in
 23 the area of one of these locations that they probably were
 24 hay corrals?
 25 A. Not within the area. If you see hay within it,

1 A. It could be spreading to the north. I know that
 2 there are some -- there's some evidence to that, yes. But I
 3 don't know that for a fact. I'm not a hydrologist.
 4 Q. Do you agree that springs in the southern part of
 5 Diamond Valley have gone dry?
 6 A. Springs in the southern part of Diamond Valley?
 7 Q. Well, let me say it this way. Are you familiar
 8 with the Pony Express Road?
 9 A. Yes. But that's in the northern part.
 10 Q. Well, let's say that I'm not from there. Okay.
 11 So you tell me what's there. There's a Pony Express Road.
 12 And let's just go directly north of that Pony Express Road.
 13 There's some ground there in between the Pony Express Road
 14 and the playa?
 15 A. Okay.
 16 Q. And there were springs out in there. Are you
 17 familiar with those?
 18 A. There was some springs and there's also some shot
 19 holes out there.
 20 Q. Would you agree that some springs in that area
 21 have gone dry?
 22 A. They could have. I'm not familiar with it
 23 enough.
 24 Q. What about Sulphur Spring and Tule Dam Spring, do
 25 you agree that those have gone dry?

1 it is serving as a hay corral at that time.
 2 Q. All right. Do you agree that the flow at Shipley
 3 Hot Springs declined?
 4 A. Do I agree? Again, in the last ten years, 13
 5 years actually, is the most time I've spend there. I was not
 6 back there this year. But based on what I heard yesterday
 7 and today, yeah, I can say that. I haven't spent a lot of
 8 time measuring it.
 9 Q. Okay. Do you agree that the pumping in the
 10 southern part of Diamond Valley is greater than the perennial
 11 yield of Diamond Valley?
 12 A. Yeah. That's documented.
 13 Q. And do you agree that pumping has caused water
 14 levels in Diamond Valley to decline up to a hundred feet in
 15 some places?
 16 A. Based upon some evidence we have seen, yes.
 17 Q. Now, what I mean by that is a hundred feet of
 18 drawdown.
 19 A. Sure. Based on some maps I've seen.
 20 Q. Okay. Do you agree that the cone of depression
 21 from that drawdown area -- And do you know what I mean when I
 22 say cone of depression?
 23 A. Yes, sir.
 24 Q. Do you agree that that cone of depression spreads
 25 to the north in Diamond Valley?

1 A. Yes, sir.
 2 Q. If the decline in flow at Shipley Spring was
 3 actually caused by pumping in the southern part of Diamond
 4 Valley, wouldn't you agree that that impact should be
 5 mitigated if there is a water right in there, I'm going to
 6 say a real water right, at Shipley Spring?
 7 A. If there is a real water right at Shipley Spring
 8 with a validated duty and we can show a decline in flow that
 9 we can prove is tied to the pumping in Diamond Valley, yes.
 10 I'll go -- Whether it's tied to the pumping or not, it
 11 declined for some reason. We need to figure out why it
 12 declined.
 13 Q. So I'm gathering that the main reason that
 14 there's been a protest filed is because there should be a
 15 formal adjudication first. Is that the main reason?
 16 A. The main reason, like I've said, we don't know
 17 who else is out there. You continue to say, you know, first
 18 in time, and I agree with that. Today these are two of the
 19 oldest that we know of, that we know of. We don't know what
 20 else may be out there. And for me, that is important. There
 21 may be some older vested claims out there. They may not be
 22 to this duty, but there are most likely some variable vested
 23 claims at least as old as these, although they may only be
 24 for stock water. But these need the same protection before
 25 we start drawing this basin down any further.

1 Q. So the injuries to the senior right holders
 2 should remain as an injury and the ranch should continue to
 3 decline with the lack of water because it takes years and
 4 years to do an adjudication so that small stock water rights
 5 can be protected. Is that your position?
 6 A. No, I did not say that. I said we need to
 7 initiate a call for proofs and we need to establish a duty.
 8 And at the same time, we need to start an active role in
 9 management of our groundwater pumping, use in the remainder
 10 of the basin.
 11 Q. So you say we need to establish a duty. I heard
 12 you say that.
 13 A. Duty for these vested claims.
 14 Q. And I've been accused of beating a dead horse
 15 many times, so I'm probably doing it again.
 16 MS. PETERSON: You are. I'll not for the record
 17 I think you are. And I've had -- There's been a filibuster
 18 every Tuesday, Wednesday and now Thursday on this -- on your
 19 direct case and on the cross-examination. So I'd like that
 20 noted for the record.
 21 MS. URE: I'll second that.
 22 HEARING OFFICER JOSEPH-TAYLOR: Is that an
 23 objection?
 24 MS. PETERSON: If we run out of time -- If we run
 25 out of time, it's not the protestants' fault.

1 A. Yes, sir.
 2 Q. And Eureka County did not file a protest against
 3 that application; right?
 4 A. I don't believe so. This was a long time ago.
 5 Q. But if that application had been filed today,
 6 Eureka County would protest it; right?
 7 A. Probably.
 8 Q. Now, has Eureka County adopted policies regarding
 9 water resource issues in its water master plan?
 10 A. Some, yes.
 11 Q. Has -- Would you consider over appropriation in
 12 Diamond Valley to be a priority issue for Eureka County?
 13 A. Yes.
 14 Q. Do you know if anywhere in the water master plan
 15 or in the master plan at all Eureka County has any mention in
 16 any location of the over appropriation in Diamond Valley?
 17 A. I can't say if it does or not.
 18 Q. This is a copy of the Eureka County master plan.
 19 HEARING OFFICER JOSEPH-TAYLOR: Mr. Taggart, how
 20 is this relevant to our decision making?
 21 MR. TAGGART: Well, the State Engineer has made
 22 an effort to come up with a solution to a major problem. And
 23 Eureka County is stopping that -- is trying to stop that from
 24 happening. I'm trying to point out that Eureka County
 25 continues to obstruct a solution and they haven't mentioned

1 HEARING OFFICER JOSEPH-TAYLOR: Then object asked
 2 and answered. Move along.
 3 MS. PETERSON: Outside the scope of direct.
 4 HEARING OFFICER JOSEPH-TAYLOR: I've lost the
 5 question now.
 6 MR. KOLVET: There wasn't a question yet.
 7 MR. TAGGART: He already answered it.
 8 HEARING OFFICER JOSEPH-TAYLOR: Next question,
 9 please.
 10 MR. TAGGART: One of the points that we talked
 11 about earlier but we didn't finish is, is it your view
 12 representing Eureka County that a priority of a statutory
 13 water right -- I'm sorry -- a pre-statutory water right,
 14 pre-1905 water right cannot be granted as a mitigation right
 15 or part of a mitigation right until an adjudication has taken
 16 place?
 17 THE WITNESS: Until it is a right, yes. Now, if
 18 we want to --
 19 HEARING OFFICER JOSEPH-TAYLOR: Mr. Goicoechea,
 20 your counsel is saying we need to move this along.
 21 THE WITNESS: Oh, sorry.
 22 HEARING OFFICER JOSEPH-TAYLOR: So I'm kind of
 23 confining your answer so we can.
 24 Q. (By Mr. Taggart) You're familiar with the
 25 replacement water right that was granted at the Bailey Ranch?

1 anywhere in their master plan any efforts in any way to
 2 address the over appropriation problem. The State Engineer
 3 went out to Eureka County in 2009 to ask for ideas and he was
 4 told that he would get them. Eureka County has not done
 5 anything. They haven't made any proposals officially in the
 6 documents that they've used to fund the future of the county.
 7 And I just want him to point out that they have not included
 8 anywhere in their water master plan any way to address the
 9 problems in Diamond Valley.
 10 HEARING OFFICER JOSEPH-TAYLOR: That's really
 11 argument and I don't think it helps our decision making, so I
 12 would ask you to move along, please.
 13 Q. (By Mr. Taggart) Would you support -- or I'm
 14 sorry. Would you object to the State Engineer granting a
 15 mitigation right in this case if it would avoid the need to
 16 issue a curtailment order in Diamond Valley?
 17 A. So you're asking if I would object to the
 18 granting of a mitigation right to avoid curtailment of
 19 pumping? Is that what you said?
 20 Q. Well, were you at the 2013 meeting in January in
 21 Eureka that the State Engineer came to?
 22 A. That was -- I believe that was the meeting where
 23 he came out with this new order that said what -- what rights
 24 would be granted?
 25 Q. Right.

1 A. Yes.
 2 Q. And there were four exceptions to an order and it
 3 was a meeting regarding that regulation; right?
 4 A. Yes, sir.
 5 Q. And at that meeting the State Engineer made a
 6 comment about how this is -- if a senior water right holder
 7 is going to claim objection that's a game changer; right?
 8 A. Uh-huh.
 9 Q. And he asked for suggestions. He wrote down
 10 these four exceptions. And so my question is, is would you
 11 object if he grants this so that he can avoid having to issue
 12 a curtailment order?
 13 A. I personally -- If a mitigation water right was
 14 granted on a temporary basis, and this is me personally, for
 15 an acceptable duty, I personally wouldn't have a problem with
 16 that. But I am not speaking for the board.
 17 Q. Would you accept whatever determination he makes
 18 on what that duty should be from this proceeding?
 19 A. That's his job and I would hope that he is
 20 receiving information and the panel is receiving information
 21 that helps them determine that. That's his job.
 22 Q. You didn't answer my question.
 23 A. Would I personally accept it? What's the number?
 24 Q. As a county commissioner would you accept his
 25 decision on the duty or would you wait to see what it is?

1 CROSS-EXAMINATION
 2 By Mr. Kolvet:
 3 Q. Mr. Goicoechea, as chairman of the county
 4 commission, have you had a chance to review the protest to
 5 the Daniel Venturacci application?
 6 A. Application? Which one, sir?
 7 Q. Well, there are several. Let me turn to Exhibit
 8 19, which is a reference to 81825.
 9 A. 81825?
 10 Q. Correct.
 11 A. Okay. Yes, sir.
 12 Q. In paragraph one of Exhibit 8 to that protest --
 13 A. Uh-huh.
 14 Q. -- the statement is that Eureka County affirms
 15 support for valid vested water rights in the doctrine of
 16 prior appropriation as established by law. These protests do
 17 not challenge the existence of vested water rights on Taft
 18 Springs.
 19 By that statement then does Eureka County concede
 20 that there are vested water rights?
 21 A. Again, I'll do the same thing I did with
 22 Mr. Taggart. Vested? There is a claim, a vested claim and
 23 it is valid.
 24 Q. The language in the protest refers to rights, not
 25 claims; is that correct?

1 HEARING OFFICER JOSEPH-TAYLOR: Sit down,
 2 Mr. Benson. Not happening.
 3 MS. PETERSON: I'm going to object to that,
 4 because that I think is -- he's trying to get him backed in
 5 to a corner so that we can't make a determination on whether
 6 we're going to appeal some kind of order that comes out of
 7 the State Engineer's office. And so I'm going to object to
 8 that.
 9 HEARING OFFICER JOSEPH-TAYLOR: I think you
 10 should object to that. Sustained. And you're getting far
 11 afield of direct, Mr. Taggart.
 12 MR. TAGGART: I really am at the end of my
 13 questions and so I have nothing further.
 14 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 15 Redirect. I know we have some questions up here.
 16 Ms. Peterson.
 17 MR. KOLVET: I haven't had any questioning yet
 18 and I do have some questions of this witness.
 19 HEARING OFFICER JOSEPH-TAYLOR: I want to take a
 20 break here. Let's be in recess for ten minutes.
 21 (Recess was taken)
 22 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet, did
 23 you have some questions?
 24 MR. KOLVET: I do. I promise not to be near as
 25 long.

1 A. That's what Exhibit A says, yes, sir.
 2 Q. And that is the language of your official protest
 3 in this -- Eureka County's official protest?
 4 A. Yes, sir.
 5 Q. So my question is do you contest that there are
 6 valid water rights associated with Taft Springs based on
 7 vested claims?
 8 A. Based on vested claims, no, sir.
 9 Q. I'm having trouble with the distinction but we'll
 10 go past that. Are you aware of any other claimed rights on
 11 Taft Springs from any other persons or entities?
 12 A. I am not aware, but I do not believe that has
 13 been -- a call for proofs have been called for either.
 14 Q. Are you aware --
 15 HEARING OFFICER JOSEPH-TAYLOR: I'm going to stop
 16 you a second, Mr. Kolvet. There has been a call for proofs
 17 in Diamond Valley, Mr. Goicoechea, and the State Engineer and
 18 I are going to make a record of it.
 19 THE STATE ENGINEER: On February 7th of 1983, I'm
 20 sure as a result of the '82 meetings that were held out in
 21 Diamond Valley, our office did call for proofs. And in that
 22 letter of February 7th we gave until February 10th of 1984 to
 23 file the proofs.
 24 THE WITNESS: Okay.
 25 THE STATE ENGINEER: After that date, evidently

1 there was a request for extension of time and it was extended
2 until February 10th of 1985.

3 THE WITNESS: Okay.

4 THE STATE ENGINEER: For which everyone should
5 file their proofs. I will tell you that between the time
6 frame of 1983 and '85 as a result of that call, approximately
7 four proofs were filed. 44 vested claims. I'll also tell
8 you that to date in all of Diamond Valley there's 117 proofs
9 that have been filed with our office since the beginning of
10 the State Engineer's office to current. So there was a call
11 for proofs. And again, the genesis of that call I'm sure was
12 the 1982 meeting.

13 We had a final cut-off date of 1985 and that's
14 where it sat.

15 THE WITNESS: Okay.

16 THE STATE ENGINEER: So I think that's important
17 to note.

18 THE WITNESS: Sure.

19 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

20 THE WITNESS: Thank you.

21 THE STATE ENGINEER: Let me add that if we were
22 to begin an adjudication, I believe we would call for proofs
23 again. I wouldn't say -- I will tell you right now we're not
24 going to rely on just the proofs that were filed through
25 '85. I believe we would reopen the filing date. Too much

1 protesting or challenging the existence of vested water
2 rights on Taft Springs that would reference a date of prior
3 to 1905, does it not?

4 A. Yes.

5 Q. So you would acknowledge that there was use put
6 to the water on the properties uncovered by the Venturacci
7 applications prior to 1905?

8 A. Yes.

9 Q. And again, it's just a matter of the amount of
10 water that was put to use and the duty associated with that;
11 correct? Is that a yes?

12 A. Yes, sir.

13 Q. So with respect to the action taken by the State
14 Engineer following these proceedings, he makes a
15 determination as to the duty and the amount of water
16 associated with these applications. Would Eureka have any
17 other have any further grounds to contest those
18 determinations?

19 MS. PETERSON: I am going to object to that
20 because I think that is getting in to an area of trying to
21 box this witness in to what the position of Eureka County
22 would be prior to them seeing any kind of determination by
23 the State Engineer so that they would try to argue that they
24 were estopped from appealing.

25 MR. KOLVET: I'm just following in -- And my

1 time has passed and we would give it some other extension of
2 time for which to file. But that has occurred.

3 THE WITNESS: Okay. Thank you.

4 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet.

5 MR. KOLVET: Thank you.

6 Q. (By Mr. Kolvet) With respect to the protest to
7 the applications that relate to the Cox Ranch, I will
8 represent to you that the language of Eureka County's protest
9 is essentially what I just read. And I believe you signed
10 some of those. That statement is consistent throughout all
11 the protests; is that correct?

12 A. Yes, sir.

13 Q. Let's assume for sake of the next question that
14 there have been no other proofs filed on any of the sources
15 claimed for the Venturacci applications. Would you then have
16 an objection to the State Engineer acting on the current
17 applications provided that a reasonable rate and the duty are
18 determined by him to be consistent with historical practices
19 on those properties?

20 A. I would not. But that would depend on the date
21 and if we're going to go through the entire process. Are we
22 going through it to put it away or are we doing it
23 temporarily? That would be a question I had.

24 Q. I'm kind of curious about the reference to the
25 date. Your protest assumes and states that you are not

1 response to that is I'm following the language of the protest
2 filed by Eureka County to its logical conclusion based on the
3 facts that have been established to this point.

4 HEARING OFFICER JOSEPH-TAYLOR: I'm not
5 comfortable for him speaking to the county without the rest
6 of the commissioners, Mr. Kolvet. So I'm going to sustain
7 her objection.

8 MR. KOLVET: The question begs an answer, but
9 whatever. I'll move forward.

10 Again, are you aware of any other claims having
11 been submitted that would affect the sources of the water
12 that have been applied for in the Venturacci application.

13 MS. PETERSON: Objection. Answered and answered.

14 HEARING OFFICER JOSEPH-TAYLOR: Sustained.

15 MR. KOLVET: I don't recall asking that.

16 HEARING OFFICER JOSEPH-TAYLOR: You did.

17 MR. KOLVET: Sorry.

18 Q. (By Mr. Kolvet) Do you know -- In your direct
19 testimony you talked about the fact that you have some
20 experience in Huntington Valley with respect to how water is
21 utilized?

22 A. Of how what?

23 Q. Water is utilized from a spring source to
24 irrigate property.

25 A. Yes, sir. Yes, sir.

1 Q. Are you, however, familiar with how the water was
 2 utilized on the Willow, Cox or Thompson home ranches as to
 3 how it was irrigated?
 4 A. Prior to the eighties when I was old enough to
 5 recollect, no. But from that time on, yes.
 6 Q. What particular years are you familiar with in
 7 the eighties?
 8 A. All through the eighties as I stated in I guess
 9 it was called direct, we trailed our cows past there every
 10 year from 1978 on. So anytime from 1982 on I can remember
 11 that there was absolutely no water being spread. And by
 12 spread, I mean with a shovel or with a ditch or with anything
 13 else, a rock, at Willow or Cox. It was naturally spreading,
 14 absolutely.
 15 There were some attempts made with a backhoe
 16 through the eighties by Milton to do some trenching and some
 17 digging. It was quite unsuccessful.
 18 Q. Is that because the water had no longer enough
 19 head on it to flow like it had in the past or do you know?
 20 A. Some of it was because of that. Some of it was
 21 because it was just dumping straight down the sloughs as
 22 well.
 23 Q. Prior to the eighties though, you have no
 24 knowledge of what work was done to irrigate any of the
 25 meadows or any other part of the property?

1 there. But I also knew that the telegraph ran past there to
 2 the Cox, things like that. I knew they did provide hay to a
 3 town at some point as well and that was in 1870s. Again,
 4 historical books and visiting with the individuals who owned
 5 the property at one point or another.
 6 Q. Have you ever read the book that Mr. Jacobson
 7 wrote?
 8 A. I've read it.
 9 Q. That would be this book, "There Ain't No Fences"
 10 by Mr. Jacobson?
 11 A. I believe that's the same book, yes, sir.
 12 Q. And in that he provides an account of the history
 13 of the ranch, does he not?
 14 A. Yeah. Not a complete account but an account that
 15 as I remember. It's been a while since I read it.
 16 Q. And he also sets forth in there the agricultural
 17 activities that took place on all of these ranches; is that
 18 correct?
 19 A. As I remember. I don't remember all of it. So
 20 I'm not going to say I do. But I remember him talking some
 21 about the Coxes and some about the Thompsons.
 22 Q. And in those accounts he describes how the
 23 property was irrigated, hayed and uses made of the property,
 24 doesn't he?
 25 A. Not extensively, no, but he does make reference.

1 A. I have no personal knowledge. Only historical
 2 accounts that were told to me, much of what we listened to
 3 today.
 4 HEARING OFFICER JOSEPH-TAYLOR: Mr. Goicoechea,
 5 make sure you let him finish his question. The court
 6 reporter has to get it.
 7 Q. (By Mr. Kolvet) You at some point in answer to a
 8 cross-examination question by Mr. Taggart indicated that
 9 these are two of the oldest rights in the valley. Were you
 10 referring to the Sadler Ranch and the Thompson Ranch?
 11 A. Yes, sir.
 12 Q. Are you familiar with the history of the Thompson
 13 Ranch beyond what you personally have knowledge of?
 14 A. Yes, sir. Somewhat familiar.
 15 Q. And what's the basis of that familiarity?
 16 A. Harold Jacobson, I visited with him on several
 17 occasions. He's quite an individual. He graduated from
 18 Eureka High School. So I've had the opportunity to talk to
 19 him personally about the ranch when he was there. I also --
 20 I visited a lot with Milton throughout the eighties, early
 21 nineties when we were neighbors there. So I got quite a
 22 perspective from him on what was done and what his dad had
 23 done and what he had done.
 24 And also, I knew it was a stage stop. Contrary
 25 to what was said yesterday, the Donner Party did not pass by

1 Q. And do you recall that in one passage of the book
 2 Mr. Jacobson mentions that his father began baling hay on
 3 that property?
 4 A. I do not remember that, no.
 5 Q. So you've had several discussions with
 6 Mr. Jacobson?
 7 A. Predominantly at the annual alumni where he was
 8 entertaining, should I say.
 9 Q. Mr. Jacobson was the former mayor of Carson City?
 10 A. Yes, sir.
 11 Q. And you talked to Milton Thompson as well?
 12 A. Uh-huh.
 13 Q. And he gave you a description of how his family
 14 operated the ranch; is that correct?
 15 A. Some description. Not complete, but yes.
 16 Q. And his family, according to some of the
 17 testimony, moved on to the property in about 1946; is that
 18 right?
 19 A. Yes, sir.
 20 Q. Do you disagree with the proposition that the
 21 Thompson Ranch, the Cox Ranch and the Willow Ranch were
 22 utilized for the grazing and cutting of hay during the time
 23 that you're aware of?
 24 MS. PETERSON: I think -- Objection. Let's put a
 25 time frame on what he's aware much.

1 Q. (By Mr. Kolvet) Well, what time frame are you
2 aware of?
3 A. I believe I already answered that and I said I
4 can personally attest to the mid-eighties on.
5 Q. Based on the discussions you've had with
6 Mr. Thompson and Mr. Jacobson, you have some idea what was
7 going on in the ranch prior to your time?
8 A. Uh-huh.
9 Q. Is that a yes?
10 A. Yes, it is.
11 Q. And during all of that time in the discussions
12 you've had with Mr. Thompson and Mr. Jacobson, the consistent
13 theme was that this was an operation which involved the
14 raising, irrigating and raising of hay crops on these
15 properties; is that right?
16 A. It involved the raising of cattle, the associated
17 management of lands needed for that. They weren't hay
18 farmers. Neither one of them ever claimed to be.
19 Q. But they did raise hay to take care of the crops,
20 I mean, the cattle that they do have on the property?
21 A. Yes, sir.
22 Q. Now, these hay corrals, I've never heard them
23 referred to that before.
24 A. Stack yards.
25 Q. Stack yards, exactly.

1 A. Well, often times there are temporary --
2 temporary permits granted for various uses. And I was just
3 throwing that out of would it be a temporary bridge-type
4 right. And I wouldn't want to call it a temporary permit as
5 we work through a process. That's what I was alluding to.
6 Q. And what does the, in your mind, the county gain
7 by requesting a full adjudication of the basin when it comes
8 to the rights associated with specific springs as in these
9 applications?
10 A. With all due respect and as much fun as it's
11 been, I don't want to do this every five or six years. I
12 don't want my kids to be doing this in 20 or 30 years.
13 Q. That does not pertain to the specific springs
14 like Taft Spring if this process going in to a determination
15 at the time of that right would you have to redo this every
16 five years?
17 A. My question would be who would be next? We
18 wouldn't have to do it for Taft Springs. But there will be
19 others.
20 Q. Well, that would be up to others to pursue.
21 A. Or we can initiate a process that we can solve
22 many of the problems that we are facing in that basin today.
23 HEARING OFFICER JOSEPH-TAYLOR: We're treading
24 the same ground, guys.
25 MR. KOLVET: This is my client, which is

1 HEARING OFFICER JOSEPH-TAYLOR: You're talking
2 over each other.
3 Q. (By Mr. Kolvet) Stack yards that you describe as
4 being sometimes used as branding pens, holding pens for
5 branding, sorting cattle?
6 A. Let me say that I did not say -- I said the
7 things that were identified on maps and figures may not have
8 been stack yards. I didn't say that stack yards were used
9 for that. There was an assumption that every fenced yard or
10 trap or lot was for hay. And I simply said that often times
11 there are traps and lots and yards built for other reasons.
12 Q. And you also testified that sometimes they serve
13 double duty, stack hay during part of the year and being used
14 for cattle, sorting and branding in other parts?
15 A. I said they could be.
16 Q. Could be. But you don't know? You don't know
17 how these particular stack yards or whatever they're referred
18 to were used, do you?
19 A. I don't think I know any more than anyone else
20 looking at the photos, no, sir.
21 Q. You also in response to a question from
22 Mr. Taggart about various solutions talked about temporary
23 permits being issued under these applications?
24 A. Yes, sir.
25 Q. What did you mean by temporary?

1 different than his. My questions pertain to my client only.
2 Q. (By Mr. Kolvet) With respect to the declines in
3 spring levels at the Thompson Ranch, Cox Ranch and Willow
4 Spring -- Willow Ranch, do you attribute those declines and
5 the loss of those springs to the pumping that is going on in
6 the valley?
7 A. Partially perhaps.
8 Q. Do you have other causes that you feel are part
9 of that?
10 A. Yes, sir. And I think I kind of alluded to
11 those. We're in extended periods of drought. We are in
12 climate change. I don't like to admit it anymore than the
13 next guy. We also have some impacts on our basin such as
14 pending juniper encroachment.
15 Q. Do you know the source of the springs that you
16 see these effects in as compared to the source of springs in
17 the Taft Springs, for example?
18 A. I'm not an expert in hydrology to speak to the
19 source.
20 Q. Do you recall any evidence being presented from
21 Jim Harrill or others saying that these particular springs
22 did not react to the types of climate issues that you're
23 referring to, that they're different kinds of springs because
24 they go deep and bring up warm water?
25 MS. PETERSON: Objection. I don't think there

1 was any direct testimony about Harrill or Mr. Goicoechea
2 reading any technical publication.

3 MR. KOLVET: You've offered him to support the
4 idea that seasonal climate changes have affected springs.
5 I'm asking him what he bases that on.

6 MS. PETERSON: He already testified it was based
7 on his personal experience. So I'll object then if that's
8 your question based on asked and answered.

9 MR. KOLVET: If you are asserting that he has no
10 knowledge, which would apply to Thompson Spring or the
11 springs on the Cox and Willow Ranches, I concur with that.

12 MS. PETERSON: I'm not going to acknowledge that.

13 HEARING OFFICER JOSEPH-TAYLOR: I don't think he
14 testified to what Harrill said. I'm going to sustain the
15 objection.

16 MR. KOLVET: He didn't testify to what Harrill
17 said. Just for the record, that was the point of the
18 question. I can ask it differently.

19 HEARING OFFICER JOSEPH-TAYLOR: Do it, please.

20 MR. KOLVET: Are you personally aware as to
21 whether the springs on the Taft Ranch, the Cox Ranch or the
22 Willow Ranch have a history of being affected by seasonal
23 difference or variations in precipitation or other things?

24 THE WITNESS: I have actually read some accounts
25 that were hypothesized in periods of --

1 HEARING OFFICER JOSEPH-TAYLOR: Mr. Goicoechea,
2 his question is are you personally aware of seasonal changes
3 on Taft Spring.

4 THE WITNESS: Have I personally witnessed that?

5 HEARING OFFICER JOSEPH-TAYLOR: That was his
6 question.

7 THE WITNESS: Well, I'll say yes because the --
8 Yes.

9 MR. KOLVET: What's the personal knowledge that
10 you have?

11 THE WITNESS: The wet years we had in the early
12 eighties. Milton was able to put some hay up there because
13 those springs were flowing water out again. And he had not
14 been able to prior to that, but we had some really good wet
15 winters and those springs flowed. And I saw that and I saw
16 him stack the head.

17 MR. KOLVET: That's all I have.

18 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
19 Redirect, Ms. Peterson.

20 MS. PETERSON: None.

21 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
22 Questions of staff? Mr. Felling, any questions? I can't see
23 you.

24 MR. FELLING: I don't have any.

25 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Any

1 questions, Mr. Walmsley?

2 MR. WALMSLEY: No.

3 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
4 Mr. King?

5 THE STATE ENGINEER: It's not a question. It may
6 be a question. But I guess it's almost testimony. Clearly
7 our office is frustrated with what's occurring in Diamond
8 Valley in terms of the over appropriation. And we have as
9 much culpability as anybody, if not more. The basin is over
10 appropriated. Water level is declining over a hundred feet.

11 We have 533.085, our water law says that vested claims shall
12 be protected. There's an adjudication process spelled out in
13 533. I'm hearing that the county thinks that the remedy for
14 protecting this vested claim is through the adjudication
15 process, which we all know is going to take a long time.

16 If I were to ask Mr. Goicoechea and perhaps some
17 of the other ranchers and farmers in this room, and take your
18 county commissioner hat off, whether or not you had a vested
19 claim and if it were conflicted with, would you still feel
20 like you needed to wait on the adjudication. I think the
21 answer might just be different.

22 Our office is struggling with 533.085, protecting
23 it. Let me also back up. Our office has been in the Diamond
24 Valley probably three times trying to find out how we can
25 work together to figure out this problem. And our office has

1 been told go away, we're all willing to share in this water
2 level decline. I said okay, that's fine. But the first time
3 we get someone asserting conflicts from a senior water right
4 holder, that's a game changer.

5 And we can talk about vested claims here right
6 now and what we all want to do. But a year from now if we
7 get a groundwater right holder from 1959 priority that
8 asserts damage, then what are we going to be talking about?
9 We can't talk about an adjudication. We're going to be
10 talking about cutting off water rights from a certain date.

11 So again, I don't have a true question other than
12 I think we're all on the same page in terms of we understand
13 there's a problem in Diamond Valley. We need to work
14 together. And this was our attempt, our office's attempt to
15 try to mitigate that problem with the least amount of pain
16 and then continue to work towards some solution that is
17 probably going to take many decades to fix.

18 You're in a tough position, Mr. Goicoechea, as a
19 commissioner and also as a water right holder with vested
20 claim. I would hope that we can come up with some solution
21 on this. When you were asking questions about temporary
22 rights, you brought it up. Mr. Kolvet asked about it. Every
23 permit that I know that we've issued that was a change of a
24 vested right, we have a permit term there that says this is
25 subject to any future adjudication on this source.

1 So that's the way our office has done it. We
 2 haven't done that a whole lot of times. But if we did do it,
 3 it would be subject to any future adjudication and whatever
 4 got kicked out at the other end of that decree, that would
 5 then become the right of that vested claim.
 6 That's it. I mean, that's what I have to say. I
 7 don't have a question.
 8 HEARING OFFICER JOSEPH-TAYLOR: I feel like our
 9 hand is being forced on facing regulation for critical
 10 management area. And sticking our head in the sand any
 11 longer is real problematic to me personally. And it's
 12 personal because I care about all of you farmers and all of
 13 you people and your property rights and your mortgages and
 14 everything else. But I don't believe we can kick this can in
 15 the road any longer. And I personally am trying to encourage
 16 the State Engineer to declare critical management area or
 17 regulate this basin. Because I don't know how we protect the
 18 vested right holders if we don't regulate the basin to get
 19 the replacement mitigation water. I think our backs are up
 20 against the wall, folks, and we need to recognize it and do
 21 something about it. My personal opinion.
 22 Mr. Goicoechea, you may be excused. Thank you
 23 for your time.
 24 Next witness, Ms. Peterson.
 25 MS. PETERSON: James Gallagher.

1 the west side of his pond for Shipley Springs?
 2 A. Every spring I --
 3 HEARING OFFICER JOSEPH-TAYLOR: Hold
 4 on, Mr. Gallagher.
 5 MR. KOLVET: Hold it. That's totally wrong.
 6 HEARING OFFICER JOSEPH-TAYLOR: I heard are you
 7 aware of -- Give me your question again, please.
 8 MS. PETERSON: Are you aware of any -- I don't
 9 know. Maybe we should see.
 10 MR. TAGGART: You said Shipley.
 11 MS. PETERSON: Oh, Shipley. I meant Thompson
 12 Spring. I'm sorry.
 13 HEARING OFFICER JOSEPH-TAYLOR: Are you aware
 14 of -- Just say your question again. Get your thought. I'm
 15 sorry.
 16 Q. (By Ms. Peterson) Are you aware of any
 17 activities by Mr. Milton Thompson in the 1980s regarding the
 18 size of the dike on the west side of his pond for Taft
 19 Springs?
 20 A. Every year in the spring to get away from the
 21 farm and whatever and to see what water is coming out of the
 22 canyons, and so I drive the length of the diamonds. And
 23 every year that I went by in the irrigating, there was fresh
 24 dirt on that dam that held the small pond. It continued to
 25 raise the bank.

1 HEARING OFFICER JOSEPH-TAYLOR: Mr. Gallagher,
 2 come forward please. Be sworn in first, please,
 3 Mr. Gallagher.
 4 (The witness was sworn in)
 5
 6 JAMES GALLAGHER
 7 Called as a witness on behalf of the
 8 Protestant, having been first duly sworn,
 9 Was examined and testified as follows:
 10
 11 DIRECT EXAMINATION
 12 By Ms. Peterson:
 13 Q. Mr. Gallagher, could you please state your name
 14 for the record?
 15 A. James Gallagher.
 16 Q. Do you live in Diamond Valley?
 17 A. I do.
 18 Q. How long have you lived in Diamond Valley?
 19 A. Since middle of '79.
 20 Q. And do you own property in Diamond Valley?
 21 A. I do.
 22 Q. Do you own water rights in Diamond Valley?
 23 A. I do.
 24 Q. Are you aware of any activities by Mr. Milton
 25 Thompson in the 1980s with regard to the size of the dike on

1 Q. And did you hear the testimony from Mr. Bailey
 2 this morning regarding issues when you dam up a spring and
 3 disbursing the flow?
 4 A. I did.
 5 Q. And do you agree with that testimony?
 6 A. I have to believe it's true, yes.
 7 Q. And do you know -- Have you traveled frequently
 8 through the years by the Sadler Ranch property?
 9 A. I do. I do drive that road some, yes.
 10 Q. And based on your observation, who was the last
 11 owner of the Sadler Ranch property that actively irrigated or
 12 farmed or ranched that property?
 13 A. As far as I'm concerned, Don Sokul was the last
 14 one to spread water.
 15 Q. And do you know when Mr. Sokul last owned the
 16 property?
 17 A. I think he left there some time around 1990.
 18 Q. And then you -- do you know Doug Frazer?
 19 A. I do.
 20 HEARING OFFICER JOSEPH-TAYLOR: Who?
 21 Q. (By Ms. Peterson) Doug Frazer. And is
 22 Mr. Frazer one of the owners of Sadler Ranch?
 23 A. I believe he is one of the owners, yes.
 24 Q. And prior to purchasing the ranch did he ever
 25 call you and ask you about the Shipley Hot Springs?

1 A. Yes. Four or five years in a row prior to them
 2 purchasing the ranch, he called and asked me what I knew
 3 about the spring and how much it was flowing. And he also
 4 said, well, if we buy the property -- I manage the Eureka
 5 Producers Co-op. He was asking if I would sell their hay for
 6 them too.
 7 Q. And did you give him any information about how
 8 the spring was flowing when he asked?
 9 A. I told him what I had heard the flows were and I
 10 told him in the range of 1500 to 2,000 gallons.
 11 MS. PETERSON: That's all the questions I have
 12 for this witness.
 13 HEARING OFFICER JOSEPH-TAYLOR:
 14 Cross-examination, Mr. Taggart.
 15 CROSS-EXAMINATION
 16 By Mr. Taggart:
 17 Q. Hello, Mr. Gallagher. My name is Paul Taggart.
 18 I represent Sadler Ranch.
 19 A. Yes.
 20 Q. You said you drove by the Sadler property how
 21 often?
 22 A. A couple times a year.
 23 Q. And in the nineties was the last time you
 24 remember somebody spreading water, was that your testimony?
 25 A. That's right. That's what I said.

1 HEARING OFFICER JOSEPH-TAYLOR: Yes, he does.
 2 Overruled.
 3 MS. PETERSON: I believe -- Okay. We're going to
 4 have a problem with this. I believe that you said that
 5 Eureka -- I believe that you said that this person would not
 6 be given an opportunity to present testimony during the
 7 direct portion of this hearing on his protest because he had
 8 not given you a sheet of paper that said he was going to do
 9 that.
 10 HEARING OFFICER JOSEPH-TAYLOR: He did not
 11 provide a witness list or an exhibit list, which indicated to
 12 us that he did not intend to present a case in chief.
 13 MS. PETERSON: And I did not ask him any
 14 information about his protest. And he was going to present
 15 information on his protest in public comment.
 16 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 17 MS. PETERSON: So that is why I'm objecting to
 18 him having to be subject to cross-examination being evidence
 19 before you when he hasn't been given an opportunity to
 20 present evidence on his own in support of his protest.
 21 MR. TAGGART: Well, he had an opportunity to
 22 present evidence on his own to support his protest.
 23 HEARING OFFICER JOSEPH-TAYLOR: I'm going to
 24 sustain the objection and move you along, Mr. Taggart.
 25 MR. TAGGART: Do you think a mitigation right

1 Q. Would you agree that there was less water coming
 2 from the spring in the nineties?
 3 A. I never measured the water. I never saw much
 4 change in the level of the pond.
 5 Q. But if there was less water, it would be harder
 6 to spread; right?
 7 A. That would be true.
 8 Q. Now, were you at the hearing in January?
 9 A. Yes.
 10 Q. And during that hearing you indicated that --
 11 MS. PETERSON: Objection. Outside the scope of
 12 direct.
 13 HEARING OFFICER JOSEPH-TAYLOR: She's right.
 14 MR. TAGGART: He's a -- I'm cross-examining a
 15 witness.
 16 HEARING OFFICER JOSEPH-TAYLOR: Yeah. But we
 17 tend to limit it to what came up on direct. Sustained.
 18 Q. (By Mr. Taggart) Okay. I'll ask -- Okay. I'll
 19 move on then. Isn't it true that your concern -- You filed a
 20 protest; right?
 21 A. I did.
 22 MS. PETERSON: Objection. Outside the scope of
 23 direct.
 24 MR. TAGGART: I don't have an opportunity to
 25 question a person who filed a protest?

1 should be granted as long as it is based upon the historic
 2 use at Sadler Ranch?
 3 MS. PETERSON: Objection. Outside the scope of
 4 direct.
 5 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 6 MR. TAGGART: Nothing further.
 7 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet.
 8 MR. KOLVET: Nothing. I'll pass.
 9 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 10 Redirect?
 11 MS. PETERSON: None.
 12 HEARING OFFICER JOSEPH-TAYLOR: Any questions of
 13 staff?
 14 Thank you, Mr. Gallagher. You may be excused.
 15 THE WITNESS: Thank you.
 16 MR. TAGGART: Can I make a statement for the
 17 record? I'm a little confused about the fact that that was a
 18 protestant and I wasn't able to ask him questions. He has
 19 not withdrawn his protest, that's correct?
 20 HEARING OFFICER JOSEPH-TAYLOR: Correct.
 21 MR. TAGGART: And he's now testified on behalf of
 22 Eureka County in support of Eureka County's protest, is that
 23 what just happened or was he testifying on behalf of his own
 24 protest?
 25 HEARING OFFICER JOSEPH-TAYLOR: He was testifying

1 on behalf of Eureka County.
 2 MR. TAGGART: So he still has not submitted any
 3 evidence to support his protest; is that true?
 4 HEARING OFFICER JOSEPH-TAYLOR: And he's not
 5 going to. It's public comment. I've already told him that.
 6 MR. TAGGART: Just for the record.
 7 MR. KOLVET: Just so I'm clear about the public
 8 comment part, because he hasn't to this point presented, and
 9 there are others like him who have not presented any evidence
 10 under the order of the State Engineer requiring people who
 11 want to present evidence to do so, the public comment portion
 12 is, as I understand it from past experience where somebody
 13 gets up and make a statement about the case before the State
 14 Engineer, but we do not have an opportunity at any point when
 15 a protestant does that to cross-examine them or examine their
 16 grounds for the protest.
 17 So what that process does is allow a protestant
 18 to make an unchallenged statement to the State Engineer and
 19 we can't question it. I think there's an issue with that.
 20 And so I'm just for the record going to object to the process
 21 of allowing a protestant to make a "public statement" because
 22 that --
 23 HEARING OFFICER JOSEPH-TAYLOR: I'll stop you
 24 right there, Mr. Kolvet. Because public comment is not
 25 testimony. I'm not sure why it even started in the State

1 THE STATE ENGINEER: I would like to make a
 2 statement. What Susan just -- Ms. Joseph-Taylor just spoke
 3 to in terms of public comment, I disagree with completely. I
 4 want you to understand that where Ms. Joseph-Taylor is coming
 5 from is she's a trained attorney and the legal background
 6 tells her that there is different levels of weight that you
 7 give to expert witnesses, the layperson, how much weight is
 8 given to public comment. That's where her comment came from,
 9 and I understand that.
 10 I want all of you to understand how important
 11 public comment is to me. Part of 533.370 requires us to take
 12 in to consideration public interest. And I think that public
 13 comment is an important part of that public interest aspect.
 14 And I'll leave it there. I just want to get it on the
 15 record.
 16 HEARING OFFICER JOSEPH-TAYLOR: And I will
 17 apologize to Mr. King. I was expressing my frustration at
 18 how murder-trial like these hearings have become. We want to
 19 hear what people have to say. I think the lawyers are
 20 steering us away from that process. I understand the
 21 lawyers. I understand making their cases. I apologize for
 22 expressing my frustration.
 23 Next witness, please.
 24 MS. PETERSON: Robert Burnham.
 25 HEARING OFFICER JOSEPH-TAYLOR: Please stand and

1 Engineer hearings. I don't know that we should really even
 2 be doing it, me personally.
 3 MR. KOLVET: And that's the reason for my --
 4 HEARING OFFICER JOSEPH-TAYLOR: Stop. It's a
 5 quasi-judicial proceeding. It's never relied on in the
 6 decision making. To be frank with you, I don't know if we
 7 should continue the process.
 8 MR. KOLVET: I'm just objecting to the process
 9 when it comes from a protestant on record in the state.
 10 HEARING OFFICER JOSEPH-TAYLOR: So noted. It's
 11 not testimony.
 12 MR. KOLVET: Thank you.
 13 MR. TAGGART: I'd also like to for the record
 14 request that Mr. Gallagher's protest be overruled for failure
 15 to present any information to support his protest.
 16 HEARING OFFICER JOSEPH-TAYLOR: We'll address
 17 that in the ruling, Mr. Taggart.
 18 Next witness, Mr. Peterson.
 19 MS. PETERSON: Robert Burnham.
 20 HEARING OFFICER JOSEPH-TAYLOR: Come forward,
 21 Mr. Burnham.
 22 We're going to be off the record for five
 23 minutes.
 24 (Recess was taken)
 25 HEARING OFFICER JOSEPH-TAYLOR: Mr. King.

1 be sworn, Mr. Burnham.
 2 (The witness was sworn in)
 3
 4 ROBERT BURNHAM
 5 Called as a witness on behalf of the
 6 Protestant, having been first duly sworn,
 7 Was examined and testified as follows:
 8
 9 DIRECT EXAMINATION
 10 By Ms. Peterson:
 11 Q. Could you please state your name for the record.
 12 A. Robert Burnham, usually called Bob.
 13 (The court reporter interrupts)
 14 THE WITNESS: B-u-r-n-h-a-m.
 15 Q. (By Ms. Peterson) Do you live in Diamond Valley?
 16 A. I do.
 17 Q. How long have you lived in Diamond Valley?
 18 A. I've lived there full time for 37 years. My
 19 family has owned ground there since the early sixties. I
 20 traveled down there a lot with my father as a boy probably
 21 from the time I was ten or 12. I worked there in the
 22 summer -- Well, pretty much all the summers of '73 and '75
 23 but I was going down there with him regularly, like I say,
 24 since I was ten or 12. We lived in southern Idaho. He was
 25 in the farming equipment business up there.

1 Q. And while you were growing up prior to actually
 2 moving to Diamond Valley did you have an opportunity with
 3 your father to fly over Diamond Valley coming from -- going
 4 from Idaho to Eureka and vice versa?
 5 A. Yes. He was a private pilot. He had been a
 6 military pilot. He had owned a number of planes in his life.
 7 But the last one was the one I primarily traveled in. It was
 8 the one he liked. He bought it, I'm trying to remember,
 9 about the end of the sixties. And from the end of the
 10 sixties probably till at least 1980 I would fly down there
 11 with him anywhere from four to ten times a year. That's not
 12 to say we always flew. Sometimes we drove, particularly if
 13 we had to haul a bunch of stuff down.
 14 Q. And did you notice anything about Diamond Valley
 15 when you were flying over it during that time period?
 16 A. Yeah. We usually would come down anywhere from
 17 the middle to the east side of the valley because our land is
 18 on the east side of the valley and we would look at the
 19 places as we went along.
 20 The Thompson place kind of stood out because it's
 21 so big. And I remember it didn't look like agriculture, as I
 22 remember from southern Idaho. It reminded me more of a river
 23 delta where water just runs where water is going to run.
 24 We all saw the map up there where there's the
 25 kind of bell-shaped delta that comes out of the spring. You

1 A. Drilling of wells.
 2 Q. And when did wells actually start being pumped
 3 for agricultural use --
 4 A. They were --
 5 Q. Excuse me. In southern Diamond Valley.
 6 A. They were pumped somewhat from the time that
 7 happened. But I don't think agriculture got very intense
 8 until electricity showed up in '73. I mean, there was
 9 agriculture. I remember we pumped diesel. Some of it was
 10 flood ground, a little bit of hand lines. But, I mean, it
 11 didn't really take off until electricity showed up.
 12 Q. And did you attend the 1982 curtailment hearings
 13 in Eureka --
 14 A. I attended --
 15 (The court reporter interrupts)
 16 HEARING OFFICER JOSEPH-TAYLOR: You've got to let
 17 her finish. Did you attend the 1982 curtailment
 18 proceedings --
 19 MS. PETERSON: In Eureka County before the State
 20 Engineer.
 21 THE WITNESS: I attended one of them.
 22 Q. (By Ms. Peterson) And do you recall any
 23 discussion with Mr. Milton Thompson about providing him a
 24 well?
 25 A. I do.

1 can see water running down the various channels. And in the
 2 summertime there would be a little bit of hay in the
 3 channels. But I don't recall ever seeing anything that I
 4 would call agriculture in my sense of things outside of that
 5 central bell on the Thompson Place.
 6 Now, the two smaller pieces of ground that have
 7 been mentioned, I guess they were small enough. I didn't pay
 8 attention to them. But what is called the Thompson Ranch
 9 that's what I noticed. I couldn't really see anything that
 10 looked like remotely like agriculture as I was familiar with
 11 it from southern Idaho outside of that bell.
 12 Q. And do you know when the electricity came in to
 13 Diamond Valley?
 14 A. 1973.
 15 Q. And do you know when wells started to be drilled
 16 in Diamond Valley, southern Diamond Valley?
 17 A. Well --
 18 HEARING OFFICER JOSEPH-TAYLOR: Mr. Burnham, make
 19 sure you let her finish her question, okay.
 20 Southern Diamond valley.
 21 MS. PETERSON: Southern Diamond Valley.
 22 THE WITNESS: I know what I've been told. I was
 23 two years old in 1960. But my understanding is it started
 24 intensely in the early sixties.
 25 Q. (By Ms. Peterson) Drilling of wells?

1 Q. And what is your recollection of that discussion?
 2 A. Of course I was just young so I wasn't really one
 3 of the main wheels. But as I recall, there was a discussion
 4 among the farmers about whether we should pitch in to drill a
 5 well. And whether it was a voice vote or a raise of hands,
 6 there was general agreement that we should. Not unanimous
 7 but certainly majority that we should pitch in and help drill
 8 a well.
 9 Q. And was that ever proposed to Mr. Thompson?
 10 A. Yes.
 11 Q. And did Mr. Thompson accept that offer?
 12 A. No.
 13 Q. Have you been by the Sadler Ranch recently?
 14 A. Yes. I flew over it with Mark Moyle last
 15 Tuesday.
 16 Q. And what did you see?
 17 A. Can I look at my notes? There is a new, I
 18 believe it's a seven-tower pivot, which would probably
 19 indicate it's about 125 acres. There are quite a number of,
 20 I'm assuming, new wheel lines laid out on some ground, some
 21 of them to the west and some of them -- Yeah, some of them to
 22 the east, I'm sorry, and some to the south. I don't really
 23 have estimated acreage on the wheel lines. Rough guess it's
 24 similar acreage to the pivot but I don't know that for sure.
 25 We saw some water dumping out on a slope and we

1 couldn't -- it didn't appear to be coming out of the pond.
 2 It looked more like there was a well just dumping water. But
 3 that was our opinion. I can't swear that that's the case. I
 4 couldn't see a water trail coming from the pond down to this
 5 water that was just being dumped out of the ground.
 6 Q. Are the use of pivots consistent with flood
 7 irrigation?
 8 A. No.
 9 Q. And under modern farming techniques are the use
 10 of pivots more efficient than flood irrigation?
 11 A. Far more efficient.
 12 Q. And to the best of your calculations, a thousand
 13 ton of meadow hay would require how many acre-feet of water
 14 rights using modern technology, farming technology?
 15 A. Well, I'd rather talk about alfalfa. I'm more
 16 familiar with it.
 17 Q. Okay.
 18 A. On a 125-acre pivot if you do even just a modest
 19 job, you can get four tons an acre, which is 500 tons. If
 20 you do a pretty good job, you can get five tons an acre,
 21 which is 625 tons on 125 acres. If you're really cutting
 22 edge and you're one of the best, you can probably get in the
 23 neighborhood of six tons an acre, which is 750 off a pivot.
 24 But like I say, I don't think you even have to be good to get
 25 four tons an acre, which is 500 tons off of a pivot.

1 Q. (By Mr. Taggart) What's your point with that?
 2 Do you think that water was being wasted?
 3 A. I'm saying it looked like water was coming from
 4 some place other than the pond.
 5 Q. Were you flying the plane?
 6 A. No, I was not.
 7 Q. How long were you looking at this?
 8 A. Three or four minutes.
 9 Q. And which side of the plane were you sitting on?
 10 A. On the right side.
 11 Q. And you could see it out the window?
 12 A. Uh-huh.
 13 Q. All right. Now, you haven't filed a protest?
 14 A. No.
 15 Q. Could you tell whether the center pivot you saw
 16 down there had been used this year?
 17 A. It didn't appear that it had. It looked to me
 18 like it was new. But the ground also looked like it had been
 19 built, so if it had been with water it would have been, the
 20 tracks of that would have been covered up.
 21 Q. What time of year was it?
 22 A. That I looked at it?
 23 Q. Yes.
 24 A. It was last Tuesday.
 25 Q. So it was in November?

1 I don't know that you can stay in business if you
 2 can't get four tons consistently on an established land. And
 3 I shouldn't say that. Maybe everybody has a different cost
 4 structure.
 5 MS. PETERSON: That's all the questions I have.
 6 HEARING OFFICER JOSEPH-TAYLOR:
 7 Cross-examination.
 8 MR. KOLVET: None from me.
 9 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 10 Mr. Kolvet.
 11 Mr. Taggart.
 12 CROSS-EXAMINATION
 13 By Mr. Taggart:
 14 Q. You saw water flowing out of a hole in the ground
 15 out there and you don't know where it came from?
 16 A. I did not see a water trail coming down.
 17 Q. You think somebody was wasting water, is that
 18 what you're trying to say?
 19 A. I'm saying it didn't appear to me that it was
 20 coming out of the pond.
 21 Q. Do you think somebody was letting water out and
 22 not using it and letting it flow down to the playa?
 23 A. It wasn't going that far.
 24 HEARING OFFICER JOSEPH-TAYLOR: Mr. Burnham, let
 25 him finish his question.

1 A. It was November.
 2 Q. So everything was dry other than this water
 3 flowing out of the ground?
 4 A. Uh-huh.
 5 Q. And where exactly was it? Where exactly was this
 6 water flowing out of the ground?
 7 A. Oh, it was east down the hill -- it was down the
 8 hill from some of the wheel lines.
 9 Q. So you're familiar with the ranch? You say
 10 you've flown over it a number of times; right?
 11 A. I've flown by the Thompson place many times. Not
 12 the Sadler place. We very infrequently went over the Sadler
 13 place. I haven't flown over the Sadler place in a lot of
 14 years.
 15 Q. Have you been at this hearing all week?
 16 A. Uh-huh.
 17 Q. Do you know what we've been calling the
 18 headquarters area?
 19 A. Yeah, uh-huh.
 20 Q. Can you recognize that from the air?
 21 A. Yeah, uh-huh.
 22 Q. Where was this flowing water in relation to that?
 23 I want to find out if there's a well out there that's flowing
 24 we better turn it off. So where was it in relation to that?
 25 A. It was east -- I couldn't tell you if it was

1 north or south.
 2 MR. TAGGART: All right. No further questions.
 3 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 4 Any redirect?
 5 MS. PETERSON: None.
 6 HEARING OFFICER JOSEPH-TAYLOR: Questions of
 7 staff?
 8 THE STATE ENGINEER: I have one.
 9 EXAMINATION
 10 By The State Engineer:
 11 Q. Mr. Burnham, you talked about perhaps not taking
 12 a whole lot of effort to get four tons per acre. We heard
 13 testimony from Mr. Bailey that on subsequent cuts that
 14 tonnage typically went down. Are you in agreement with that?
 15 Are you able to get four tons per cutting?
 16 A. Not per cutting. Per annum on -- Four tons per
 17 acre per --
 18 Q. Oh, that's total? Okay.
 19 A. No, you don't get that much out of alfalfa.
 20 THE STATE ENGINEER: Thank you.
 21 HEARING OFFICER JOSEPH-TAYLOR: Thank
 22 you, Mr. Burnham. You may be excused.
 23 Oh, I thought you said no.
 24 MR. WALMSLEY: No, I don't have a question of
 25 Mr. Burnham, but I have a little clarification. We were

1 forth.
 2 Q. How long have you lived in Diamond Valley?
 3 A. I moved to Diamond Valley in the spring of 1977.
 4 Q. And did you ever haul hay for Mr. Thompson?
 5 A. I did.
 6 Q. And when was that?
 7 A. It was in the fall of 1981 or '82.
 8 Q. And what was the condition of the ranch at the
 9 time that you were on the ranch to haul the hay?
 10 A. It was in very run-down condition at that time.
 11 You know, it's an old ranch and it was very similar to a lot
 12 of the pictures that we've seen in this presentation. A lot
 13 of things were old. The fields were old, rough. Things
 14 weren't kept up. Mr. Thompson had borrowed a baler from a
 15 neighbor because his baler wouldn't work. And he had tried
 16 to pick up a few bales with his equipment. It didn't work.
 17 So he hired me to pick up the bales.
 18 Q. And how much was the production?
 19 A. It was pretty light. It was wild meadow hay that
 20 we were picking up. I would estimate it to be less than or
 21 around one ton to the acre.
 22 Q. And how many acres?
 23 A. It was just west of the house and west of the
 24 main pond there. I would estimate it to be around 60 to 80
 25 acres.

1 talking about Timothy earlier and now we're talking about
 2 alfalfa, so there was a difference in the two crop types.
 3 HEARING OFFICER JOSEPH-TAYLOR: So noted.
 4 Thank you, Mr. Burnham. You may be excused.
 5 Next witness, Ms. Peterson.
 6 MS. PETERSON: Mark Moyle.
 7 HEARING OFFICER JOSEPH-TAYLOR: Come forward,
 8 Mr. Moyle. Your turn. Please be sworn.
 9 (The witness was sworn in)
 10
 11 MARK MOYLE
 12 Called as a witness on behalf of the
 13 Protestant, having been first duly sworn,
 14 Was examined and testified as follows:
 15
 16 DIRECT EXAMINATION
 17 By Ms. Peterson:
 18 Q. Please state your name for the record.
 19 A. My name is Mark Moyle, M-o-y-l-e.
 20 Q. Do you live in Diamond Valley?
 21 A. I farm in Diamond Valley. I live there most of
 22 the year. I have a house in Fallon. My PO box is in Fallon.
 23 But I reside in Diamond Valley from early April until
 24 November almost continually and then I go back to Fallon in
 25 the winter months for two or three months and go back and

1 Q. And were you at the 1982 curtailment proceedings?
 2 A. I was.
 3 Q. And do you recall any discussion about offering a
 4 well to Mr. Milton Thompson?
 5 A. I do.
 6 Q. And what is your recollection of those
 7 discussions?
 8 A. There was a lot of discussion about -- amongst
 9 the farmers there about trying to remedy Milton, challenge
 10 with less water. And I believe the -- I do remember that
 11 there was a vote on it and people were for it. And then I
 12 remember Mr. Morros, the State Engineer, talking about there
 13 would be some -- there was some funding available. I was 23
 14 at the time. I didn't know much about it. But I do know
 15 that he said there was some funding available and perhaps
 16 that funding could be accessed to drill a well.
 17 Q. And have you recently read the transcript of that
 18 curtailment proceeding?
 19 A. I have read it, yes.
 20 Q. And are all the discussions that you recall
 21 reflected in the transcript?
 22 A. No. I remember that -- I remember that hearing
 23 being very different than this one. Mr. Morros ran that
 24 meeting and it was an open discussion and it was quite
 25 western. It was the first hearing I had ever been to and

1 there was a lot going on. Quite out of control.
 2 Q. Was it all on the record?
 3 A. Oh, no. They were off the record a lot.
 4 Q. Do you have any observation about the maintenance
 5 of the Thompson Ranch since approximately 1982?
 6 A. Well, '82 it was run down and it's continually
 7 gone downhill since. There hasn't been any active good
 8 stewardship type activities going on there up until perhaps
 9 the new owner has taken over.
 10 Q. Are you familiar with the Sadler Ranch?
 11 A. Yes.
 12 Q. And do you have any observations about the
 13 maintenance or the work with regard to irrigation or farming
 14 on the Sadler Ranch since 1977?
 15 A. Not as much as the Thompson Ranch. But I would
 16 go by that ranch two or three or four times a year also.
 17 MR. TAGGART: Objection. I just -- If he could
 18 lay a foundation for what his knowledge is based upon so we
 19 can see if he really has personal knowledge of the
 20 application. He indicated he's only been there three times.
 21 HEARING OFFICER JOSEPH-TAYLOR: No. He said he
 22 drove pass it three or four times a year.
 23 MR. TAGGART: If that's the extent of his
 24 knowledge of the ranch, I object to his discussion of the
 25 operations of the ranch.

1 Cross-examination, Mr. Kolvet.
 2 MR. KOLVET: Thank you.
 3 CROSS-EXAMINATION
 4 By Mr. Kolvet:
 5 Q. What was the year that you hauled hay for
 6 Mr. Thompson?
 7 A. '81 or '82.
 8 Q. And you indicated at that point -- Well, let me
 9 ask you this. Was that before or after the hearing in '82
 10 before Mr. Morros?
 11 A. It was before.
 12 Q. And Mr. Thompson was contending at that time, was
 13 he not, that his water had been diminished because of pumping
 14 in the valley?
 15 A. Could you repeat the question?
 16 Q. Mr. Thompson was contending, was he not, that his
 17 water from his springs and the source of water for his
 18 property had been diminished due to the pumping in the
 19 valley; is that right?
 20 A. Yeah, that's right.
 21 Q. And this vote that was taken by the various
 22 irrigators to try and pay for a well for Mr. Thompson, what
 23 was the reason that that vote was taken?
 24 A. Well, there was a lot of discussion during that
 25 meeting of what was going on, what was causing it, why the

1 MS. PETERSON: Since he testified that he's
 2 driven by however many times a year since 1977 --
 3 HEARING OFFICER JOSEPH-TAYLOR: I think the word
 4 "operation" is the problem.
 5 MS. PETERSON: I think I used -- Well --
 6 HEARING OFFICER JOSEPH-TAYLOR: Just ask it
 7 again, please, Ms. Peterson.
 8 Q. (By Ms. Peterson) Mr. Moyle, do you have any
 9 observations about the Sadler Ranch and the activities on the
 10 Sadler Ranch related to farming, irrigation practices since
 11 you have been living in Diamond Valley since 1977?
 12 A. Well, when I've driven by it, I've observed that
 13 there hasn't been any water and irrigation equipment there.
 14 The irrigation was all flood irrigation out of a pond, which
 15 just basically appeared to mostly just run down through the
 16 meadows on its own. I would say that on that particular
 17 ranch I've never seen very much quantity of hay production or
 18 hay stacks. Always, what I did see was always up close to
 19 the home ranch or the home stead there.
 20 Q. So have you seen any improvements put on the
 21 property since 1977?
 22 MR. TAGGART: Objection. Asked and answered.
 23 MS. PETERSON: I'm done.
 24 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 25 Ms. Peterson.

1 decline had happened. And I think in a good faith effort the
 2 farmers were trying to find a way to maybe alleviate his
 3 water challenges by supporting him with the well.
 4 Q. And was that in part because they believed that
 5 their activities may have affected his water?
 6 A. I think it was mostly in part because he was
 7 claiming that there was injury and there was no way to really
 8 prove that that was the case. But I think the consensus was
 9 that if we can band together and provide him with a well that
 10 it may alleviate his concern.
 11 Q. In January of this year, were you at a hearing
 12 regarding Diamond Valley?
 13 A. I was.
 14 Q. And did you --
 15 MS. PETERSON: Objection. Outside the scope of
 16 direct.
 17 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 18 MR. KOLVET: The transcript is in. His comments
 19 speak for themselves. And if the office can view that. That
 20 would be just for the sake of the record Exhibit 286.
 21 HEARING OFFICER JOSEPH-TAYLOR: So noted.
 22 Q. (By Mr. Kolvet) When you were talking about the
 23 condition of the Thompson Ranch being run down and it wasn't
 24 being operated very well, is that because there was no longer
 25 any water to do a successful agricultural operation on that

1 property?
 2 A. Well, at that time there was water in the pond
 3 and there was some water running out of the pond. My
 4 observation didn't have as much to do with how much water was
 5 or wasn't there. I was 20. I was quite young then. I just
 6 remember being on that ranch and picking up hay and going,
 7 man, this place is a dump.
 8 Q. Okay. Is that the earliest memory you have of
 9 the property?
 10 A. Yes.
 11 MR. KOLVET: No further questions.
 12 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 13 Mr. Taggart?
 14 MR. TAGGART: Yeah.
 15 CROSS-EXAMINATION
 16 By Mr. Taggart:
 17 Q. Mr. Moyle, good morning -- or good afternoon.
 18 A. Good day.
 19 Q. Good day, that's much easier. So you filed a
 20 protest here; right?
 21 A. I did, sir.
 22 Q. You haven't presented any evidence to support
 23 your protest; right?
 24 A. I have not.
 25 Q. And right now you're testifying on behalf you

1 HEARING OFFICER JOSEPH-TAYLOR: Questions of
 2 staff?
 3 THE STATE ENGINEER: No.
 4 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 5 Mr. Moyle. You may be excused.
 6 THE WITNESS: Thank you.
 7 HEARING OFFICER JOSEPH-TAYLOR: Next witness.
 8 MS. PETERSON: James Moyle.
 9 HEARING OFFICER JOSEPH-TAYLOR: James Moyle.
 10 THE WITNESS: That would be me.
 11 HEARING OFFICER JOSEPH-TAYLOR: Please be sworn,
 12 Mr. Moyle. I apologize to keep you standing there.
 13 THE WITNESS: Ma'am, I'm extremely hard of
 14 hearing.
 15 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 16 THE WITNESS: I have a hearing aid in this ear.
 17 This ear is totally gone.
 18 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 19 THE WITNESS: So if I could beg the indulgence of
 20 the committee and the audience and the attorneys to speak up,
 21 I'm here to answer any questions.
 22 HEARING OFFICER JOSEPH-TAYLOR: We'd be glad to,
 23 Mr. Moyle. The court reporter will swear you in.
 24 THE WITNESS: Thank you.
 25 (The witness was sworn in)

1 Eureka County and its protest?
 2 A. I am.
 3 MR. TAGGART: I don't have any questions. I just
 4 have an objection with complete appreciation for the State
 5 Engineer's comments about public comment, I think it is very
 6 important. But if a protestant files a protest and does not
 7 put on their evidence and then uses public comment to make
 8 the comments, that's not what public comment is for. It's
 9 for people to make comments to you about the public interest,
 10 all of that information. I think this situation is unfair.
 11 These individuals are all testifying on behalf of Eureka
 12 County. They filed separate protests. That's why I asked
 13 that their protests be dismissed. That I can be clear that I
 14 don't have to worry about this information, I don't care
 15 about not being able to cross-examine them.
 16 He's going to come back at public comment now and
 17 then he's going to make all the comments that are going to
 18 support the position that he has written in his protest and I
 19 have no opportunity to ask him questions. So we request that
 20 we either be authorized to ask him questions regarding his
 21 protest or his protest be dismissed.
 22 HEARING OFFICER JOSEPH-TAYLOR: So noted. The
 23 objection is overruled.
 24 Redirect?
 25 MS. PETERSON: None.

1 JAMES MOYLE
 2 Called as a witness on behalf of the
 3 Protestant, having been first duly sworn,
 4 Was examined and testified as follows:
 5
 6 DIRECT EXAMINATION
 7 By Ms. Peterson:
 8 Q. Mr. Moyle, could you please state your full name
 9 for the record?
 10 A. My name is James Lamar Moyle or James L. Moyle.
 11 And I am a resident of Diamond Valley.
 12 Q. How long have you lived in Diamond Valley?
 13 A. I moved to Diamond Valley in -- My first visit to
 14 Diamond Valley was in 1975 where I was looking for property
 15 to buy. I acquired a lease option on the south half of
 16 Section 32 in 1976, which I farmed that year. And then I
 17 purchased that property in 1977, the south half of Section
 18 32.
 19 Q. And are those the pivots that are closest to the
 20 Thompson Ranch?
 21 A. Come again.
 22 Q. Are those the pivots that are closest to the
 23 Thompson Ranch?
 24 A. Yes. There are two pivots there. I since then
 25 acquired additional property. Would you like me to go

1 through those properties?
 2 Q. Unless the State Engineer wants to know that
 3 information, I'm fine with talking about your pivots that are
 4 closest to the Thompson Ranch.
 5 A. For the record, my wife -- when I refer to "we" I
 6 would like it to be recorded that is in reference to my wife
 7 and my two daughters, we are all owners in the farm business
 8 and they consist of 25 quarter sections and we run 25 center
 9 pivots.
 10 HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson,
 11 would it help you to move closer to the witness?
 12 MS. PETERSON: Would it help you if I moved
 13 closer to you?
 14 THE WITNESS: Yes, it would.
 15 HEARING OFFICER JOSEPH-TAYLOR: Why don't you
 16 move up here.
 17 THE WITNESS: Your voice is mousy.
 18 MS. PETERSON: That's a compliment.
 19 HEARING OFFICER JOSEPH-TAYLOR: She's never
 20 gotten to do this before. Mousy.
 21 MS. PETERSON: It's probably a compliment.
 22 Q. (By Ms. Peterson) When were those pivots put in?
 23 A. Well, we put -- the south half of Section 32 was
 24 put in wheel lines in 1977. And by '79, we had acquired the
 25 north half of that section, so we put pivots in the north

1 your pivots that were closest to the Thompson Ranch.
 2 A. Okay. Well, forget about the rest of them.
 3 Q. Okay. And if the State Engineer has any
 4 questions about those, others, he can ask you about those,
 5 okay.
 6 A. That's fine.
 7 Q. Okay. Have you taken water level measurements of
 8 your wells throughout the years that you've had your wells?
 9 A. I have always measured my wells. I started
 10 measuring wells in Diamond Valley that I was associated with
 11 in 1976. I actually have one of the old well logs with me
 12 when we did a test well on the southeast quarter of Section
 13 32 in preparation for that '77 installation of wheel line. I
 14 have measured through the season, at the beginning of the
 15 season, at the end of the season. I have a record with me of
 16 the last two years of all 25 wells in Diamond Valley, their
 17 static water level as of basically March 30th or the end of
 18 March of each year. I don't record pumping levels during the
 19 summer as such other than occasional notes. But I'm always
 20 looking for suspect wells that need attention. With 25
 21 wells, you're working on one of them or two of them every
 22 year. So my measurement purposes are a management tool of
 23 the farm.
 24 Q. And do you believe that you're using the same
 25 standards as the State Engineer when you measure your wells?

1 half of Section 32 in '79 and '80. I took a rest for a year
 2 or two.
 3 And then by '83 a friend of mine, he and I
 4 acquired Section 30 to the west and north of us from
 5 Mr. Burnham. In '83 we put two pivots in on the south half
 6 of Section 30. And the next year in '84 we put two more
 7 pivots on the north half of Section 30.
 8 From that time I took another little rest until
 9 along '87 or '88 and we purchased the south half of Section
 10 20, which is the very north piece of farm ground in Diamond
 11 Valley. Those wells on that piece of property are the
 12 closest wells to Taft Spring, Thompson Ranch, whatever you
 13 want to say.
 14 Q. And when did you put those in?
 15 A. I put those in in '87 and '88. Probably more
 16 like '88. Because we did some preparation work on that piece
 17 of ground.
 18 Later on from that time in the mid-nineties, we
 19 had an opportunity to buy what was known as the Cloud Ranch,
 20 which consisted of eight quarter sections in Township 21
 21 north, which is to the south or the middle of the valley.
 22 Orientation wise, that farm was between 11th Street and 9th
 23 Street. It consisted of the west half of Section 11, all of
 24 Section 14 and the north half of Section 23.
 25 Q. And I kind of wanted to limit your testimony to

1 A. My spring static water level is exactly that. I
 2 mean, that's the standard. His field personnel come in and
 3 take a static water level in those things. One of my wells
 4 on the north -- on the north evened would be on the northwest
 5 quarter of Section 32 is one of their primary wells they
 6 measure every year. I'm assuming if they don't have funding
 7 to measure all of them they don't. But they come in and
 8 measure the ones that they can all the time, the field office
 9 out of the Elko office if you will. But that well is on his
 10 records from the day it was drilled, probably '89, somewhere
 11 along in there.
 12 Q. So those wells that are in the northern part of
 13 southern Diamond Valley --
 14 A. Uh-huh.
 15 Q. -- what have you noticed about water level
 16 declines since you've been taking your measurements?
 17 A. Well, basically the water levels in the north end
 18 of the valley have not shown the drawdown that the water
 19 levels in the south end of the valley have, if you will.
 20 In relationship to Thompson Spring, our static
 21 water level in the north end of the valley is higher in
 22 elevation than the Thompson Spring. It's the very north well
 23 there is at about -- I have it in here, but I would sooner do
 24 it from memory, is about 5790 feet. The road above Thompson
 25 Spring, the county road, next to the house is at 5800 feet.

1 If you look out over there, you're looking over the top of
 2 the trees, the cottonwoods that are growing down there. And
 3 so I would assume that there's at least 35 to 40 feet of
 4 elevation drop down to where the spring discharge area is in
 5 the Thompson Spring.
 6 Q. So you've taken some elevation measurements also;
 7 is that correct?
 8 A. Yes, yes, yes.
 9 Q. Now I'm going to direct your attention to the
 10 1982 curtailment hearings.
 11 A. Okay.
 12 Q. Do you remember those?
 13 A. Yes, I do. I was there.
 14 Q. Thank you. What do you recall about the 1982
 15 curtailment hearings?
 16 A. Well, in regards to Mr. Thompson, that was the
 17 gist of the hearing. We were there -- I'm not quite sure
 18 what the legal term he was using. But we discussed several
 19 issues. He presented evidence where -- I remember he had
 20 some pictures of flooded areas on the ranch and those kind of
 21 things. Obviously that was a spring runoff on frozen ground
 22 in Diamond Valley, which is not unusual.
 23 But the meeting got to the point -- And
 24 Mr. Morros was in charge of the meeting. The meeting got to
 25 the point to where we were winding down, I guess you could

1 do this. If I'm not mistaken, they might have thrown out
 2 this will be X amount of dollars. I don't remember what that
 3 was. And so we went on from there.
 4 As the meeting got beyond that point, Mr. Morros
 5 asked Mr. Thompson if he had any interest in pursuing any of
 6 the ideas that had been put before him that day in regards to
 7 solving his situation. And he said absolutely not, I have no
 8 interest in entertaining any of those ideas.
 9 Q. And the person you're referring to that stated he
 10 had no interest in any of those ideas was Mr. Milton
 11 Thompson; is that correct?
 12 A. Was Mr. Milton Thompson, yes.
 13 Q. And then what did Pete Morros do?
 14 A. As I recall, he stood up and slammed his book and
 15 said the meeting was over, he was leaving Dodge.
 16 Q. Thank you.
 17 A. I don't think he was happy.
 18 Q. I'm going to direct your attention now to the
 19 ASCS committee.
 20 A. Okay.
 21 Q. And can you explain to the State Engineer what
 22 that acronym is?
 23 A. Okay. During the eighties and nineties, ASCS was
 24 an acronym for Agricultural Stabilization and Conservation
 25 Service. There was an elected county committee of which I

1 say, and Mr. Plaskett, who owned a local drilling company,
 2 also he was a farmer in the valley. Mr. Cooper was also a
 3 land owner in the valley at that time. And one other person
 4 was involved in the conversation with Mr. Groth, who was the
 5 driller for Mr. Plaskett's irrigation company. I don't
 6 recall whether it was Mr. Plaskett or Mr. Cooper said what do
 7 we think about drilling a well for Mr. Thompson, is there any
 8 support in the community to do that.
 9 Before or after the conversation, Mr. Plaskett
 10 being the irrigation company had to ask Mr. Morros if there
 11 was any funds in something called a well depletion fund that
 12 the state could have. Apparently every time you drill a
 13 well, that gets a dollar or something in it. Mr. Morros was
 14 undecided about how much funds were in there, to my
 15 recollection.
 16 One of the other, either Mr. Cooper or
 17 Mr. Plaskett asked the people in the room how many of them
 18 were willing to contribute to drilling this well. A lot of
 19 people raised their hand. And so I think a consensus was
 20 reached at that time that between contributions from the
 21 community, contributions from the well depletion allowance,
 22 if that was it -- I do recall Mr. Morros that he wouldn't
 23 guarantee that there was any money in there, but that's where
 24 it went.
 25 But we had come to the conclusion that we could

1 was an elected member. I served from mid-1980s to mid-1990s.
 2 Our committee was in charge of distributing federal funds,
 3 came through US Department of Agriculture through those
 4 things to cost share on several different types of projects,
 5 but the one in case was mostly water improvement projects,
 6 conservation improvement. We would allow a payment of about
 7 \$2500 a year if the applicant was qualified. And the
 8 applicant had to put up \$2500 but he could do that in sweat
 9 equity or contributions to the project in labor.
 10 Also we as the committee with the county
 11 executive director, she was called the CED, that person was
 12 called the CED, they received applications from local people
 13 within the county that wanted to do improvement projects. We
 14 either accepted or denied the application based on our
 15 knowledge of what they were doing in the area. We were the
 16 first screening, if you will.
 17 As the application went through the process, we
 18 turned it over to Soil Conservation Service. They were to do
 19 the engineering, the work-up, draw the plans, whatever was
 20 needed to prove that the project was done. And they would
 21 verify that the project was complete once the producer turned
 22 in his worksheets and all of those other things. He had to
 23 verify that he put time in to things as they went along. So
 24 this was the function of the committee along with SCS, the
 25 Soil Conservation Services.

1 Q. And did Mr. Milton also make an application to
 2 the --
 3 A. Yes, he did. Yes, he did. Mr. Thompson made an
 4 application. I don't remember exactly what year, but I'm
 5 assuming it was somewhere along the end of the eighties
 6 because --
 7 Q. It was while you were on the committee?
 8 A. It was while I was on the committee, yes, yes.
 9 Q. And what did Mr. Thompson want to do?
 10 A. Mr. Thompson wanted to -- wanted do dig or create
 11 some ditches on his meadows to distribute the water around so
 12 that he could better utilize the water that was there. So at
 13 first glance the committee approved that. We sent it to --
 14 The CED brought it to us and we told her to contact
 15 Mr. Thompson and tell him that the committee had approved the
 16 project. Okay.
 17 But most of the people on the committee were
 18 aware of Mr. Thompson's contemptuous nature. And we
 19 specifically instructed the CED at that time to inform
 20 Mr. Thompson that he could not start the project until Soil
 21 Conservation Service had surveyed the project, give their
 22 okay, they're writing off on it. So she did that.
 23 And when the application went in at the next
 24 meeting or whatever it was -- We met I think once a month,
 25 sometimes we met twice a month, I think. But any how, the

1 A. Okay.
 2 Q. And there was a heavy rain period in Eureka in
 3 2009; is that correct?
 4 A. In the spring?
 5 Q. Yes. In the spring of 2009, that time period, do
 6 you recall that?
 7 A. No. I recall 2012.
 8 Q. Oh, okay. What there heavy rain in 2012?
 9 A. Uh-huh, uh-huh.
 10 Q. And did you notice anything about water around
 11 Mr. Thompson's property? Well, it may have been
 12 Mr. Venturacci's property.
 13 A. Yeah. I need to give a little background. I
 14 have a cabin on the south fork reservoir and my farm is in
 15 Diamond Valley. And so the quickest route, and being a
 16 person that likes the road less traveled, I am always up and
 17 down the road between there and there. And so I was coming
 18 to the farm to help with the well work and well installation.
 19 And the runoff in that year, it was good. There
 20 was water coming out of Horse Canyon at a pretty good stream
 21 headed towards the Thompson Spring. That water probably ran
 22 for at least a month, maybe six weeks. I mean, I was only up
 23 and down there probably two or three times in that time
 24 period. But it was early from the standpoint of we would be
 25 getting pumps ready to go and those kind of things, which I

1 next time we come back, Soil Conservation had denied the
 2 request for cost sharing on the project. And the reason they
 3 were denied -- the reason they gave for denying the cost
 4 share is that Mr. Thompson had either built a dam or was
 5 going to build a dam at the outlet of the spring. Soil
 6 Conservation said that they would not approve that project
 7 because of the possibility of damage to the spring. It was
 8 irreparable if it went in the wrong direction. So we had no
 9 other choice then but to deny the application. At that point
 10 in time it was over. It was done.
 11 Q. And had Mr. Thompson started work on that dam at
 12 the time the Soil Conservation Service went out to look at
 13 the improvements that he was proposing?
 14 A. Did we?
 15 Q. Did -- Had Mr. Thompson started work on the dam?
 16 A. Oh, yes, yes. I think that was also -- Mr.
 17 Thompson had already started digging his ditch or building
 18 his dam. I don't remember. I don't remember which exactly
 19 one it was. But the Soil Conservation engineer, who was Joe
 20 Petty from the Elko office, I think at that time, he said,
 21 well, he's already started construction. And we had -- We
 22 had admonished the CED to be sure and tell Mr. Thompson don't
 23 start the project. Well, that was it.
 24 Q. And I'm going to direct your attention now to
 25 2009.

1 was helping with.
 2 Q. Did the Thompson Ranch Spring or the pond fill up
 3 from that spring runoff?
 4 A. No, no, no. It was interesting to me. There was
 5 a good stream of water but I never seen the pond fill up from
 6 my view as I drove down the road. So I don't know. The
 7 Maginni Spring was running good that year and there was a
 8 little jack pump just along the road. Maginni was flowing
 9 across the road at a good pace and it went down and really
 10 soaked up the north third or half of Maginni Canyon pivot
 11 that's there that's owned by Betchart to the point that it
 12 turned the hay yellow. I mean, if it's over watered it turns
 13 yellow. So there was a good stream but I never did see -- I
 14 never did see the Taft or Thompson Spring fill up at all.
 15 MS. PETERSON: That's all the questions I have.
 16 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 17 Cross-examination.
 18 MR. KOLVET: Thank you.
 19 CROSS-EXAMINATION
 20 By Mr. Kolvet:
 21 Q. Mr. Moyle, I'll try to speak up for you.
 22 A. Thank you.
 23 Q. If you have trouble hearing, I may stand over you
 24 because my voice gets low at times. I'm sorry about that.
 25 Your first pivot that you put in, you said was in 1979?

1 A. Yes, sir. First pivot.
 2 Q. Yes.
 3 A. I have developed a half section of wheel lines
 4 before that.
 5 Q. Right. But your first pivot was in '79; is that
 6 right?
 7 A. Yes.
 8 Q. And since then you've put in 25 additional
 9 pivots?
 10 A. Not quite yet because with some of them we bought
 11 were running, but at least 20.
 12 Q. Did you acquire water rights for any of those
 13 pivots?
 14 A. Well, the water rights came with the property.
 15 Q. The pivots that you put in after '82, where were
 16 they located?
 17 A. After '82. That would have been -- That would
 18 have been the south half of Section 20 and all of Section 30.
 19 Q. Altogether do you have an estimate as to the
 20 amount of water that your pivots use?
 21 A. Yes. But I need a calculator. I think we're
 22 permitted for somewhere around 14,000 acre-feet.
 23 Q. And do you utilize most of that 14,000 acre-feet?
 24 A. No, we don't.
 25 Q. How close do you get to it?

1 A. About four miles, maybe four and a half.
 2 Q. And you --
 3 A. They are on -- They are on -- The spring and the
 4 Thompson Ranch or the Taft Spring are on the north side of
 5 Township 23 north. Those other fields are closer to the
 6 south side.
 7 Q. And you said that you measure the water in your
 8 wells religiously every year?
 9 A. Do they what?
 10 Q. You measure the water level in your wells every
 11 year; is that correct?
 12 A. Uh-huh.
 13 Q. With respect to that furthest north pivot that
 14 you have, have you noticed the decline in the water levels
 15 over time?
 16 A. I don't know what you would call a decline. But
 17 I can reference, when I redrilled that well in 1993, in
 18 August of 1993 and there was pumping going on in the north
 19 end of the valley at that time, the static water level
 20 reported on the driller's report reports in August of 23
 21 feet. That's while the pumping season is going on, okay.
 22 When I read that well in the end of March of
 23 2012, it was at 29 feet exactly, 28 feet, six inches exactly
 24 is what it was. I round things off. That well in '13 was at
 25 31 feet. It was at 33 feet on the end of March. The spring

1 A. Well, in all honesty, we're not -- we're not
 2 averaging much over 300 acre-feet per pivot. So you can take
 3 that times whatever and come up with the math. I mean, I
 4 know exactly how much water I use on certain pivots that are
 5 metered and we're metering every year. We're trying to
 6 comply with the State Engineer's wish that all the wells are
 7 metered.
 8 Q. Do you know what the priority date is on the
 9 first wheel line or pivot that you established?
 10 A. I acquired that piece of property at the same
 11 time the original water wars that I call them were going on,
 12 when the whole valley was protesting in '77, okay. My
 13 financing through FMHA to purchase that piece of property was
 14 held up because of the water war. So I came to the State
 15 Engineer's office here in Carson City at that time period and
 16 refiled for a new number so that my financing on that piece
 17 of property would be cut loose and taken off. So I'm
 18 assuming that whenever I filed in that, that that would be
 19 the priority on that --
 20 Q. '78?
 21 A. -- on those first ones, yes.
 22 Q. '78, '79, somewhere in that time frame?
 23 A. Uh-huh.
 24 Q. How far away from the Thompson Ranch is your
 25 furthest north pivot?

1 was not sending recharge in to the valley as fast as it
 2 normally does because of the cold spring, I assume. So we
 3 remeasured the well back on about the 15th of April. At that
 4 point in time it was up to 31 feet.
 5 Q. And your measurements are from the top of the
 6 casing? Where are your measurements taken?
 7 A. Ground level.
 8 Q. From ground level?
 9 A. From ground level. I do the measurements.
 10 Q. There was some testimony, and I don't know if you
 11 were here for it, from Mr. Smith who put up a chart showing
 12 water declines and various wells in the valley.
 13 A. I wasn't here that day. I only arrived today.
 14 Q. Okay. Then you didn't have to sit through all of
 15 this stuff that we've sat through. How many wells do you
 16 have that are within five miles of Thompson Springs?
 17 A. Within five miles?
 18 Q. Yes, sir.
 19 A. Well, I'm assuming if I'm four then I would take
 20 the south half of Section 29 and I would take the north half
 21 of -- Excuse me -- the south half of Section 20 and the north
 22 half of Section 29, which actually belongs to my daughter.
 23 It's deeded in her name. So I would only have two. My
 24 daughter would have two, which would make four within five
 25 miles. And my daughter would own the north half of -- the

1 north half of section, one of the quarters within the north
 2 half of Section 30. So total in the family business
 3 operation we would have six wells.
 4 Q. Now, are your other pivots located on the west --
 5 east side of Diamond Valley as well?
 6 A. No. Our pivots run from Township 21 up through
 7 township -- No. Excuse me. Excuse me. Our pivots run
 8 from -- We don't have anything in Township 22. We run
 9 through Township 23 north and then 21 north and there, yes.
 10 They would range from 7th Street to the very north end of the
 11 valley. They're basically in a straight line. I mean, they
 12 go up to the thing, but there isn't much in Township 22.
 13 Q. Did you acquire or refile for any water rights
 14 after 1982?
 15 A. I acquired a lot, yeah. I bought existing,
 16 existing -- All of the 7th and 9th Street place was in
 17 production from a previous owner. I didn't necessarily -- I
 18 can't say I developed it, because it was pretty well
 19 developed and run in to the ground. And we redid the whole
 20 thing. I mean, put in new pumps and pivots because the ones
 21 that were there were done. So yes, we acquired those. And
 22 then just two years ago my daughter acquired five pivots down
 23 on the very south end of the valley just north of that.
 24 Q. My question was though did you refile on any of
 25 those for newer permits or was the only refile you did on

1 at that location. So maybe if you could point to which ones
 2 are yours.
 3 A. Well, basically there's 12 of -- 12 of these in
 4 the north end that belong to us. Move down through here,
 5 there's eight down through here and then five down in there.
 6 Q. Okay. So there's 12 up in the area where there's
 7 24, 24, 32, those numbers. I'm just doing it for reference.
 8 A. Uh-huh.
 9 Q. Twelve up in that area. There's a few in the
 10 north end of --
 11 A. Yes, yes.
 12 Q. -- where all the center pivots are?
 13 A. This would be 11th Street.
 14 Q. And then there's some further south from that?
 15 A. Yes, yes. Just purchased within the last couple
 16 years. My daughter purchased those.
 17 Q. Are you concerned about whether a curtailment
 18 will occur in Diamond Valley?
 19 A. Am I concerned about what?
 20 Q. Whether a curtailment of rights will occur in
 21 Diamond Valley.
 22 A. I would say I am, yeah. But I look about in
 23 Diamond Valley as I have this opportunity. And I don't have
 24 any control over the curtailment. That's this gentleman's
 25 job up here. I have a lot of sympathy for what he's doing.

1 the first pivot that you talked about?
 2 A. Well, I think -- Maybe I'm not gathering what you
 3 mean by refile. All of these places had PPU's done on them in
 4 the past. They all had legitimate numbers. We didn't buy
 5 anything that didn't have a permit number that hadn't been
 6 approved. This hadn't been through the 1977 water wars, if
 7 that matters. So as far as I was concerned, everything we --
 8 we wouldn't have went and bought something that didn't have
 9 water.
 10 Q. I understand that, sir. I'm looking more at the
 11 priority date of your water rights. Are any of your priority
 12 dates after 1982?
 13 A. I'm assuming there are probably some there, yes.
 14 I don't know where they are. I don't.
 15 Q. That's fair. May I have just a minute? I have
 16 no further questions.
 17 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 18 Mr. Taggart?
 19 MR. TAGGART: Just a couple.
 20 CROSS-EXAMINATION
 21 By Mr. Taggart:
 22 Q. Mr. Moyle, this is a map that we've all been
 23 looking at. Can you just tell me where on the map your
 24 center pivots are? And on the map it shows little numbers.
 25 This is represented on the map, at least this is the drawdown

1 But we're just there using the resource.
 2 Q. Okay. Now, you did file a protest against the
 3 Sadler Ranch --
 4 A. Yes.
 5 Q. -- applications?
 6 A. Uh-huh.
 7 Q. But you have not presented a separate case; is
 8 that true?
 9 A. No. No, I have not.
 10 MR. TAGGART: No other questions. And my same
 11 objection that I stated earlier I would make at this point.
 12 HEARING OFFICER JOSEPH-TAYLOR: So noted.
 13 Any redirect, Ms. Peterson?
 14 MS. PETERSON: None.
 15 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Any
 16 questions of staff?
 17 Thank you, Mr. Moyle. You may be excused.
 18 THE WITNESS: Okay.
 19 MS. PETERSON: We can adjourn until tomorrow.
 20 HEARING OFFICER JOSEPH-TAYLOR: That would be
 21 lovely. Let's -- I want to start tomorrow morning with
 22 public comment. Shall we start at 8:30? I want to make sure
 23 you've got enough time, Ms. Peterson.
 24 MS. PETERSON: Whatever your preference is.
 25 HEARING OFFICER JOSEPH-TAYLOR: We'll be

1 adjourned until 8:30 tomorrow morning. Public comment will
 2 be the first thing we do. Thank you, everyone.
 3 (Hearing concluded at 5:45 p.m.)
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1 STATE OF NEVADA)
 2 COUNTY OF WASHOE)ss.
 3
 4 I, CHRISTY Y. JOYCE, Official Certified Court
 5 Reporter for the State of Nevada, Department of Conservation
 6 and Natural Resources, Division of Water Resources, do hereby
 7 certify:
 8 That on Thursday, the 21st day of November,
 9 2013, I was present at the Division of Water Resources,
 10 Carson City, Nevada, for the purpose of reporting in verbatim
 11 stenotype notes the within-entitled public hearing;
 12 That the foregoing transcript, consisting of
 13 pages 890 through 1150, inclusive, includes a full, true and
 14 correct transcription of my stenotype notes of said public
 15 hearing.
 16
 17 Dated at Reno, Nevada, this 16th day of
 18 December, 2013.
 19
 20
 21
 22 CHRISTY Y. JOYCE, CCR #625
 23
 24
 25

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In The Matter Of:

*Applications 81719, 81720, 81825, 82268, 82570, 82571,
82572 and 82573*

*Public Hearing - Friday
Vol. 5
November 22, 2013*

*Capitol Reporters
208 N. Curry Street

Carson City, Nevada 89703*

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 7 IN THE MATTER OF APPLICATIONS
 8 81719, 81720, 81825, 82268,
 8 82570, 82571, 82572 and 82573
 9 _____ /
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 11 TRANSCRIPT OF PROCEEDINGS
 12 PUBLIC HEARING
 13 VOLUME V
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1 APPEARANCES:
 2 Jason King, State Engineer
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 4 Malcolm Wilson, Assistant Hearing Officer
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 6 Kristen Geddes, Hearing Officer
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 8 Steve Walmsley, Water Resource Specialist
 9
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 13 Balkenbush & Eisinger
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 16 and Etcheverry Family
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 18 Resources Protection and
 Conservation Association: Bob Burnham
 19 For James Gallagher: James Gallagher
 20 For Mark Moyle Farms: Mark Moyle
 21 For Eureka County: Allison MacKenzie, et al.
 22 By: Karen A. Peterson, Esq.
 23 Also present: Theodore Beutel, Esq.
 24 Chairman Ithurralde
 25 Vice Chairman Goicoechea
 Dale Bugenig
 Jake Tibbitts

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1 CARSON CITY, NEVADA, FRIDAY, NOVEMBER 22, 2013, 8:30 A.M.
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 3
 4 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 5 record. Just for some housekeeping, Malcolm is making copies
 6 of Exhibits 437 and 438 for legal counsel. We've just given
 7 you copies of 439 which was Ms. Penrod's diagram that she drew
 8 on.
 9 I am going to mark as State Engineer Exhibit 75
 10 the notice of the commencement of taking proofs for
 11 adjudication in Diamond Valley which includes an extension of
 12 time for taking those proofs. And this looks like a second
 13 extension of time for taking those proofs.
 14 Kristen, can I get you to mark those for me. Go
 15 ahead and just give those to Mac.
 16 So I'm going to mark it as State Engineer's
 17 Exhibit 75 and I'm going to call it notice of taking proofs,
 18 Diamond Valley. Is there going to be any objection to the
 19 admission of Exhibit 75?
 20 MR. TAGGART: No objection.
 21 MR. KOLVET: No objection.
 22 MS. PETERSON: No.
 23 HEARING OFFICER JOSEPH-TAYLOR: Woa, be careful,
 24 Mac.
 25 MR. KOLVET: It's been there for a whole week.

1 unrealistic and seek to take unfair advantage of a vested
 2 label.
 3 My remarks yesterday regarding the recently
 4 installed sprinkler systems on the Sadler Ranch were not an
 5 attempt to accuse the owners of using water in an unapproved
 6 manner. If they were perceived that way I'll attempt to be
 7 more precise.
 8 My intent was to point out that the Applicants
 9 are already adopting the technologies that can enable them to
 10 efficiently replace production lost by reduced spring flows.
 11 I hope that they would attempt to use resources as judiciously
 12 as possible. A vested claim should not come with a license to
 13 waste water, at least not in Diamond Valley.
 14 In the long run, adoption of the best irrigation
 15 technologies and practices will more than pay for itself.
 16 Much of my own family's farm was once flood irrigated. If we
 17 had not accepted the cost of switching to pivots we would not
 18 have survived.
 19 As Mr. King acknowledged, the Division of Water
 20 Resources bears much of the blame for the overdraft in Diamond
 21 Valley. That said, I appreciate your willingness to work with
 22 us to address the problem. Unfortunately, at least a few of
 23 the department's rules actually encourage people to use more
 24 water than necessary. Certainly the opposite of what was
 25 intended. I hope that we can work together to modify

1 HEARING OFFICER JOSEPH-TAYLOR: You don't see it
 2 when you're doing it yourself.
 3 (Short off the record.)
 4 HEARING OFFICER JOSEPH-TAYLOR: All right.
 5 Anyone wish to give public comment? Mr. Moyles, come forward.
 6 Mr. Burnham, you want to go first? Come forward, please. You
 7 don't have to -- well, you've already been sworn in, but this
 8 isn't sworn testimony, Mr. Burnham. You're just going to give
 9 your name and give your comment, please. Yep, right there,
 10 sir.
 11 So state your name for the court reporter.
 12 MR. BURNHAM: Robert Burnham.
 13 HEARING OFFICER JOSEPH-TAYLOR: Just proceed.
 14 MR. BURNHAM: Mr. King and staff, I appreciate
 15 the opportunity to speak with you this morning, particularly
 16 after allowing me to give testimony yesterday. I'd like to
 17 present my opinions on both the matter currently at hand and
 18 the larger issue of over-allocation in Diamond Valley.
 19 The Applicants have spoken of their need to be
 20 made whole. I do not necessarily disagree with that request
 21 if being made whole means a resource allocation that
 22 efficiently replaces production losses that have actually been
 23 caused by over-pumping. I do not believe that is truly what
 24 they are requesting. My concern is primarily with the
 25 magnitude of their applications. I believe they're

1 regulations that are a disincentive to conservation.
 2 The farmers of Diamond Valley are already very
 3 efficient, but there is still room for improvement. Jim
 4 Moyle's testimony was an admonition that most of us, myself
 5 included, can be even more effective with our water. There
 6 are many potential avenues for reducing consumption.
 7 Compensated set-asides and retirements should be attempted.
 8 Alternative crops, improved genetics and improved water
 9 application can help. There are no doubt other options which
 10 have yet to be proposed.
 11 It's my hope that a reasonable and realistic
 12 outcome can be achieved regarding the current Applicants. It
 13 is also my hope that we can all work together achieve a long
 14 term solution to the problem of over-allocation while
 15 minimizing damage to those of us who have invested our life's
 16 work and life's savings in Diamond Valley. Thank you.
 17 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 18 Mr. Burnham. Appreciate your time. Mr. Moyle, it looks like
 19 you want to go next.
 20 MR. MOYLE: I love this seat. Thank you. My
 21 name is Mark Moyle, for the record. And before I again my
 22 prepared statement, I'd like to acknowledge, Mr. King, some of
 23 the comments that were made yesterday and I want you to know
 24 that we did hear you when you came to the valley five years
 25 ago. We heard you a year ago, and I definitely heard you

1 yesterday in your remarks about how we need to work together
 2 to make a solution to what's going on out there. I appreciate
 3 that.
 4 I think it's important that even these new
 5 Applicants realize that there's a challenge there and if
 6 they're going to succeed in that valley they're going to need
 7 to be a part of the solution also, and we invite you to be a
 8 part of that solution.
 9 I'd also like to make comment on the fact that
 10 you stood up for the right for people to have public comment.
 11 That's a very important aspect. And I hope that you will
 12 continue -- I hope this office will continue to leave that
 13 door open. And I'll give you an example why. I made a
 14 promise to my girls and my kids that if they would work on the
 15 farm, do a good job, I would do everything in my power to help
 16 them get any education they wanted.
 17 When we had the prehearing, it was evident to me
 18 that this proceedings and all of the legal action that would
 19 have to happen would happen during the summer months and
 20 that's a time when the farmers especially would not have an
 21 opportunity to prepare for this hearing. That's our busiest
 22 time of the year.
 23 So our other only option was to hire legal
 24 counsel. And in my situation, if I'd would have had -- if I
 25 would have hired legal counsel, it would have taken away from

1 experience in Eureka in Diamond Valley. I want also to
 2 establish that I'm presenting this argument in an environment
 3 that is of a legal nature. I have no experience in the legal
 4 field. The fact that I am not an attorney should really not
 5 prevent me from protecting my interest and investment in the
 6 valley.
 7 Vested water rights. And again, my statement is
 8 based on my knowledge. Vested water rights and the use of
 9 water prior to 1905, the year Nevada water law began, only
 10 designates water that was put to use prior to this date. This
 11 water, like all other water rights, still has to be
 12 certificated and continually put to beneficial use in order to
 13 remain a water right in good standing.
 14 If the owners of a vested water right fail to
 15 certificate the right or fail to use it in a beneficial
 16 manner, it is subject to abandonment or forfeiture just like
 17 any other water right post 1905. A vested water right does
 18 not mean that the right is above or excluded from Nevada water
 19 law.
 20 It is clear to me that there was water use on
 21 both of these ranches prior to 1905. It is also clear to me
 22 from my visual appraisal and the pictures provided in the
 23 testimony by both Applicants that the large portions of both
 24 ranches have been in a state of neglect, disrepair, and
 25 abandonment for a considerable amount of time.

1 my opportunity to support my girls going to school. My oldest
 2 daughter just graduated from medical school and is doing a
 3 residency and I have another daughter just going into medical
 4 school. It's a huge expense.
 5 So I talked to them about that and they
 6 encouraged me to hire legal counsel. And I chose not to
 7 because I didn't want to break my promise to them. I couldn't
 8 do both. I didn't feel I could do both. So the only avenue
 9 that I have is to give my public comment and my input. And I
 10 hope it does have some weight in your decision-making process.
 11 I'm going to go on with my -- my presentation,
 12 but I -- I wanted to make one more statement. The hearing
 13 that happened Eureka in '82, was not of a legal nature. It
 14 was operated by the State Engineer. He sat at the head of the
 15 table. I don't think there was any legal counsel in the room
 16 that I'm aware of.
 17 And I'm not trying to take away from legal
 18 counsel, but I do know that in these kinds of situations, it's
 19 difficult, I think, sometimes for people to sit down and come
 20 up with solutions when you're concerned that every word you
 21 say can be used against you. It's a difficult situation. So
 22 I do hope that you continue to leave the avenue open for
 23 outside input, and I thank you for that.
 24 Okay. I want to explain my protest based on the
 25 rules and regulations that I have to abide by in my 35 years

1 This condition can be seen in field conditions,
 2 rodent control, fencing, weed control, water distribution
 3 systems, and many areas relative to good management practices.
 4 This observed state of neglect applies to water use and
 5 beneficial use on both ranches. The fact that these water
 6 rights still after 108 years have not been certificated is
 7 proof of neglect.
 8 The Applicants may want to state that the lack of
 9 beneficial use of water is due to a lack of water. However, I
 10 would respond by clarifying that the rules that I have to live
 11 by in regard to beneficial use of the water, for some time now
 12 the Division of Water Resources has conducted crop inventories
 13 in Diamond Valley to verify beneficial use of water.
 14 If I had a well that went dry or was compromised,
 15 and I did not apply water to my acreage for a period of four
 16 years, I would be contacted by the Division of Water Resources
 17 that my water was in jeopardy of forfeiture. I would be given
 18 one year to remedy that non-use problem, or I could file an
 19 extension of time to fix the situation.
 20 I would expect that the Division of Water
 21 Resources would be doing crop inventories on all water use in
 22 Diamond Valley. If this is the case, then the Division of
 23 Water Resources would have an on file non-use that has
 24 occurred on the Sadler and Thompson ranches and they would be
 25 able to verify that non-use has occurred.

1 If the Division of Water Resources has not been
2 doing crop inventories on these ranches, it may be, I don't
3 know, because there are not certificated water rights on file
4 on these ranches.

5 I believe that the current owners of both ranches
6 have spent considerable time examining the conditions of the
7 ranches and had an understanding of the conditions and lack of
8 certificated water on the ranches that were purchased. I
9 believe that the current owners had a due diligence obligation
10 to know what they were buying. I believe that the new
11 owners -- excuse me a minute.

12 I believe that the new owners of both of these
13 ranches bought these ranches because they had a vested water
14 right and that the vested water right could be used to go to
15 the Division and complete a case to acquire water that
16 physically did not exist on the property at the time of the
17 purchase.

18 I have a friend, a kid I grew up with, who was
19 best man at my wedding. I've known him a long time.
20 Contacted me in 2010 and was interested in purchasing the
21 Sadler Ranch. He wanted know what I thought of the ranch. I
22 advised him to look elsewhere for a ranch based on the
23 conditions which I have just described.

24 I also was aware the Thompson Ranch was for sale.
25 I chose to try not to buy it myself because it had limited

1 and attest to the fact that wild meadow hay can successfully
2 be raised on far less water than the Applicants are asking
3 for.

4 In my opinion -- it is my opinion that the duty
5 of water asked for in these applications is twice what the
6 Division of Water Resources has deemed necessary to raise wild
7 hay. Wild hay has been the predominant crop raised on both
8 ranches over the years. I believe that 1.4 to 1.6 acre feet
9 is more in line with what is reasonable for wild meadow hay.

10 I would like to address the factors that I
11 have -- I would like to address the factors that have affected
12 the flow on both the Taft and Sadler springs. I do not
13 disagree that the pumping in Diamond Valley has had an effect
14 on the head pressure of these two main springs in question.
15 There are also other factors that have an effect on water
16 flowing from Taft and Sadler springs.

17 It has been said that at the turn of the century
18 in the early 1900s that there was not a tree left standing
19 within a 50-mile radius of Eureka. That's a large area. The
20 trees were cut to provide charcoal for smelting ore in Eureka.
21 The lack of pinyon-juniper mahogany back then compared to
22 large areas of the mountains and foothills along the Diamond
23 and Sulphur Ranges has had to have an effect on the recharge
24 that feed those springs. Mr. Terry Katzer addressed this to
25 some degree when he talked about remedies to the Diamond

1 water and non-certificated water rights. My protest lists
2 abandonment of water rights as one of the reasons for denial
3 of the vested claims.

4 I've been farming in Diamond Valley in 1977. I
5 have good knowledge of how much water is needed to produce a
6 crop in the area. It is obvious, in my opinion, that the
7 acreage and water duty being applied for for mitigation on all
8 the applications on both ranches by both owners is a huge
9 attempt to gain more water. Both ranches are applying for
10 basically fence row to fence row acreage and water duties to
11 exceed four acre feet. Not only is the loss of water from the
12 springs, but in the case of the Thompson Ranch, for surface
13 canyon spring run-off water, all to be mitigated with the new
14 groundwater appropriation with a priority date prior to 1905.

15 I have experienced raising Garrison grass on
16 40 acres of flood ground that I have in Diamond Valley. The
17 soil is very similar to the ground on both the Sadler and
18 Thompson ranches, especially farthest away from the playa on
19 those ranches. I have raised four ton per acre on 1.4 acre
20 feet of water down on that piece of ground and I have had
21 grass left over for pasture. I could not do this, of course,
22 on sandy soil raising alfalfa, but it is possible on heavier
23 soil with the right crop.

24 This is an example of what can be done with good
25 fertilization and water management. I say this to reinforce

1 Valley water challenge in his testimony.

2 It is clear to me that even the expert
3 hydrogeologists cannot pinpoint the exact water source for
4 both Taft and Sadler springs. Without absolute knowledge of
5 the water source of these springs it is not possible to place
6 full blame of their decline due to pumping in Diamond Valley.
7 Weather, precipitation, tree cover on the foothills has had to
8 have an effect on the spring flows as well.

9 I have been involved in the past two years with
10 the Diamond Natural Resources Protection and Conservation
11 Association, the NRPCA. This is an association of Diamond
12 Valley farmers that has united in an effort to protect water
13 resources and conserve water in the Diamond Valley basin 153.

14 Our goal is to protect water source from further
15 water withdrawal from the basin. It has also been our goal to
16 cut back on water use to ensure the sustainability of our
17 water resource. We are working with the county, the Division
18 of Water Resources. We've gone to state and federal
19 government to find funding for methods to cut back water use
20 in Diamond Valley.

21 If the Division of Water Resources were to grant
22 these water permits on the scale of water being asked for I
23 fear it will end all hope that the farmers have to reasonably
24 find a solution for the over-appropriation of the basin.

25 It is imperative that the Division of Water

1 Resources deal with these applications with intense scrutiny.
 2 I believe in the protection of vested certificated water
 3 rights, as do the majority of the farmers and residents Eureka
 4 County. I also believe the State Engineer will act to protest
 5 vested certificated water rights.
 6 I want to encourage the Division of Water
 7 Resources to consider the gross impact of this decision that
 8 you render and evaluate it carefully. You must realize that
 9 these applications are asking to mitigate grossly exaggerated
 10 vested water claims, not certificated vested water rights.
 11 There needs -- there needs to be consideration of
 12 the abandoned acreage and water that were not beneficially
 13 used for long periods of times in these applications.
 14 Ask yourselves a question: why would these new
 15 ranch owners ask for such large quantities of water? How will
 16 this decision impact the long-term residents in Diamond Valley
 17 who have invested their entire lives to build successful
 18 farming communities? These are the very people who are
 19 working to remedy the over-appropriation of the valley by the
 20 Division of Water Resources. Thank you.
 21 THE STATE ENGINEER: Thank you, sir.
 22 HEARING OFFICER JOSEPH-TAYLOR: Thank you
 23 Mr. Moyle. Appreciate your time. Anyone else? Come on up,
 24 sir. I believe you sat here all week, haven't you?
 25 MR. SHODA: I have been here all week, you're

1 injured every day that the spring is drying up. Again, this
 2 year we irrigated 170 acres; next year who knows what it's
 3 going to be, because our spring flows -- I see our spring
 4 flows as they go through. And I'm in the field. I'm
 5 irrigating. And that's all I did before coming to the Sadler
 6 Ranch. You know, the new technology of sprinkler irrigation
 7 is not what I did.
 8 And, you know, from one piece of ground to the
 9 next, even in the Douglas County area, everything flood
 10 irrigates differently and so, you know, you have to be
 11 well-rounded in flood irrigation on understanding your ground.
 12 And we are struggling to irrigate 170 acres. And it's -- to
 13 me that's very sad.
 14 We would like to get water to fix this problem,
 15 because right is right. We're not seeking a full adjudication
 16 of our water right now but we do want that done. We're not
 17 here for a new water right. We're just asking that the water
 18 that was entitled to that ranch come back to that ranch.
 19 And we are here to recover our rights -- our
 20 rightful property, and we are senior water right holder and we
 21 only want what is rightfully to that ranch. So we're not here
 22 to sue for curtailment or demand that our springs flow again.
 23 We're willing to drill a well to get that water that used to
 24 flow from the Shipley Spring and to take substitute water from
 25 another source if necessary.

1 right.
 2 HEARING OFFICER JOSEPH-TAYLOR: *What's your name?*
 3 MR. SHODA: My name is Levi Shoda. Last name is
 4 S-H-O-D-A. And I'll apologize because I'm not a public
 5 speaker.
 6 HEARING OFFICER JOSEPH-TAYLOR: *You don't need to*
 7 *apologize, Mr. Shoda.*
 8 MR. SHODA: Okay. I'm a rancher. Thank you for
 9 letting me speak as well. I am Levi Shoda and I am the
 10 operation manager at Sadler Ranch. I grew up in Douglas
 11 County in the Carson Valley and I owned a custom hay company
 12 and I leased ground for haying and cattle for a number of
 13 years before going to Sadler Ranch.
 14 I have seen battles over water rights in Douglas
 15 County and what has and is happening to the Sadler Ranch in my
 16 opinion is terrible. It's really bad. Now, this ranch has
 17 the most senior rights in the Diamond Valley and those rights
 18 have clearly been impacted by pumping of junior wells. There
 19 maybe other factors in that, but the most predominant factor
 20 that we see is that, and we've spent a lot of effort with our
 21 professionals to clarify that for us.
 22 So the ranch, Sadler Ranch, is crippled by the
 23 decrease in flows from Shipley Spring. And I look at this
 24 ranch every day and I have to work very hard to get 170 acres
 25 irrigated that we can hay of those meadows today. We are

1 By the way, as was mentioned earlier on, we do
 2 have some new irrigation through wells and pivots that we just
 3 put in, and that process is not cheap. It's very expensive.
 4 Extremely expensive. And the focus should not be on what
 5 pivots we would do to put them in. We should get enough water
 6 to fill the pond the way that the spring used to and then we
 7 can try to irrigate the way it once was. And we'll let the
 8 ranch tell us how much water we need.
 9 I mean, there's guesses on duties and different
 10 things. But like I said, when you -- every piece of ground is
 11 different and until we understand what that ground is going to
 12 take, we don't know what the duty is to that ground.
 13 Let's see. We will not waste any water that
 14 we -- that we acquire. We will take it from the springs, run
 15 it down the existing ditches on the ranch to make the ranch
 16 work again. And we should get the amount of water to do that.
 17 The land will control again how much water we need.
 18 What matters is what was. What did the ranch
 19 use. We are entitled to that amount because it's draining to
 20 the south. We are the ones that have been impacted by the
 21 junior pumpers and we are currently being impacted by them,
 22 year in and year out.
 23 Let's see. And it would make no sense to us we
 24 should not get a senior priority for that water. As a senior
 25 right has been taken, a mitigation right must have the same

1 priority to make us whole, otherwise we will be first to be
2 cut in the curtailment and that just doesn't make any sense to
3 us. Should an adjudication happen to finally decide the
4 extent of our right, we agree with that. An adjudication
5 should happen. And we are there. We are ready to go. We are
6 asking for an adjudication on our ranch.

7 But what -- should we wait for an adjudication to
8 get the mitigation water? Absolutely not. The injury is
9 obvious to anyone that needs -- and that needs to be fixed
10 right now. Junior pumpers at Romano has caused our spring to
11 decline. Pumping at the Brown Ranch has caused our spring to
12 decline. Pumping at the Bailey's. There's pumping all around
13 our spring and it's all caused it to decline. And pumping in
14 the southern Diamond Valley has caused it -- it to decline.
15 Since everyone else can pump, I don't see why we can't pump.

16 Now, the county's solution has just been more
17 delay. They delayed in the '60s. They've delayed in the
18 '80s. And it seems to now that they're still delaying. And
19 it's time to do something. Don't let this hearing fall into
20 the past train of inaction of ignoring the problem or denial
21 from delay. Justice delayed is justice denied.

22 You've seen evidence where State Engineer in 1912
23 recognized our water rights. You've seen evidence that the
24 courts have recognized our water rights. The county in their
25 protest even recognizes our vested right. So there is no

1 claimants on our source and we'll let the courts determine the
2 extent of our property rights. The mitigation amount can be
3 adjusted based on the outcome of the adjudication. That way
4 we get our water for the years it will take to do an
5 adjudication, rather than simply watching the spring go dry
6 while we pay, waiting for the process to happen and B, watch
7 our livelihood be sucked down, as Mr. Thompson did.

8 We can stop the impacts while we wait for the
9 final decree. There's no need to wait for mitigating impacts
10 that are clearly occurring. Everybody wins, or as least as
11 much as one can expect. We get some water to stop the
12 bleeding and save the ranch, and the rest of the pumpers, they
13 get to avoid a curtailment and get the formal adjudication
14 that they want and are asking for from us.

15 Final numbers get hammered out down the road in
16 adjudication rather than picked to death here at this hearing.
17 We have put on more than enough evidence to show our request
18 is reasonable. And if you grant that, what we request, we
19 will work with that and see how it goes. It will take years
20 to ramp up the full amount again, and in that time we can be
21 moving to a final solid number through the courts. The State
22 Engineer can give Sadler Ranch what Bailey got while the
23 courts make the final determination as to our rights.

24 As far as curtailment goes, if we don't get our
25 water back we have no other choice to make -- to start to make

1 doubt that we are entitled to some water.
2 Lots of information those shows at least
3 1,700 acres was irrigated. We think we might be able to prove
4 more, maybe not in adjudication. But that's what we're asking
5 for is an adjudication.

6 We are up to -- today we are currently only able
7 to produce one-tenth of that. And that is big to us. To be
8 properly mitigated, we need to be able to meet that same
9 production under our vested right. That way we get the
10 water -- that way we get the water and we'll have to change.
11 We have to pump it out -- we have to pump it out of the ground
12 instead of it just flowing freely, but the replacement right,
13 the production should not change.

14 We have miles of ditches, many dams and head
15 gates, large unlined ponds over the springs, and multiple
16 diversion structures. The ranch was consistent with the same
17 acre production each year. The same tons of hay each year.
18 The same number of livestock each year, other than times of
19 other things financially might have affected the ranchers.

20 Now, right is right and we do need our water.
21 Mitigation water will stop the bleeding. We would ask to
22 approve our application and let us start to recover. Make
23 them subject to an adjudication again.

24 We'll put -- start the adjudication to put the
25 final number through the courts and confirm there are other no

1 that ranch whole. In fact in this hearing, it has been
2 indicated that we may have to seek curtailment in order to
3 protect the rights from abandonment. And we will also need to
4 protest everything, as the county first suggested, you know.
5 To protect our right, does that mean we need to protest
6 everything that comes down the line? Maybe we do.

7 And with all that said that I prepared over
8 thoughts of the week, two things I really want to address is,
9 you know, when you're -- when you're shopping to buy a ranch
10 in the State of Nevada, one of the most important things in
11 Nevada is water in the agricultural business. And so if the
12 law stated to purchase a ranch that is most currently in use
13 and most productive, then that's what we would have done in
14 purchasing the Sadler Ranch. But the law states first in use,
15 first in right.

16 And so I've heard a lot of comment on, you know,
17 you know what you bought when you bought it. Well, yeah, by
18 law, we bought something that had an old right to it and we
19 were secure in that right. And you've heard testimony from
20 the pumpers saying, you know, they called me and were asking
21 about it. I mean, Mr. Frazer and Mr. Yednock, they researched
22 this ranch a lot, and they went to the state and they looked
23 at the different options. And that is a huge consideration in
24 buying a ranch. It's very important. And that's where the
25 vested right came in that it, that it was an old senior right.

1 And then another thing that's really important to
2 me is the neighbors, and it seems to me you come to a hearing
3 like this and it can really create the vision within a
4 community. And, you know, I live at the ranch full time. I'm
5 there. I've planted my family there from the Carson Valley.
6 We've planted our seed, and we love that valley. And all
7 these protesters are my neighbors. And I've worked very hard
8 to be where I'm at, so I can understand why they're sitting up
9 here and why they're doing what they're doing. I understand
10 that.

11 And there is no easy solution to this problem. I
12 can really understand that. So when this hearing is over and
13 we go back to our work, we still have to see one another day
14 in and day out. And so I just -- I wanted to be clear that I
15 have really enjoy -- I don't know all my neighbors but the
16 ones that I do know, I really enjoy them, having them as
17 neighbors. And we do business on a different scale of this.
18 And so, you know, we are not here to shut down
19 anybody. We're not here to sue anybody. All we're here to do
20 is to try and make this ranch whole and make it productive
21 once again like it used to be. And in a lot of presentation
22 prior to me is very obvious. But, I mean, in closing I
23 just -- I really want that to be put that I'm a part of that
24 community and I enjoy that community, and I do not envy your
25 position. So ...

1 Q. And how long have you been the natural resources
2 manager for Eureka County?

3 A. Since July 1st, 2008.

4 Q. And what is your educational background?

5 A. I have a Bachelor's Degree in biology and a
6 Master's Degree in geographic information science.

7 Q. And what is your work experience, a brief summary
8 of your work experience?

9 A. I came to Eureka County right out of grad school,
10 but I did have experience before that as well. After my
11 Bachelor's Degree I stayed on at Idaho State. I received a
12 research fellowship just for that summer, but I also worked as
13 a student during the summers in a research lab at Idaho State
14 working mostly on molecular biology, working on pathogenic
15 ecoli.

16 But when I was at Idaho State my original plans
17 were to be a school teacher. I wanted to teach biology in
18 high school. And in that, I tried to gathered a breadth of
19 things that applied to that work afterwards. So my degree is
20 in biology but the focus was, you know, most of the issues
21 under that set -- scene.

22 And after that period I did work in a research
23 and development lab. I'm doing analytical and chemical
24 testing on some of the products that they created. And then I
25 decided to go back to school and I was accepted in the program

1 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
2 Mr. Shoda. We appreciate your time.

3 THE WITNESS: Thank you.

4 HEARING OFFICER JOSEPH-TAYLOR: And putting up
5 with those chairs you had to sit on all week.

6 THE WITNESS: Thank you.

7 HEARING OFFICER JOSEPH-TAYLOR: Anyone else want
8 to give public comment?

9 Seeing none we'll go back to the hearing.

10 Ms. Peterson, please call your next witness.

11 MS. PETERSON: Jake Tibbitts.

12 HEARING OFFICER JOSEPH-TAYLOR: Mr. Tibbitts,
13 please come forward and be sworn.

14 JAKE TIBBITTS,
15 called as a witness in this matter,
16 having been first duly sworn,
17 testified as follows:

18 DIRECT EXAMINATION

19 BY MS. PETERSON:

20 Q. Mr. Tibbitts, please state your full name for the
21 record.

22 A. Jake Tibbitts. T-I-B-B-I-T-T-S.

23 Q. By whom are you employed?

24 A. I'm employed by Eureka County. I'm the natural
25 resources manager.

1 at Idaho State for their geosciences program but with a
2 geographic information sciences track.

3 And with that I then -- that's the segue, I
4 guess, into my work with Eureka County.

5 Q. And what are your duties as the manager of the
6 natural resource department?

7 A. I'm a generalist as far as in my duties. Natural
8 resource manager, it's very broad, it's very encompassing,
9 especially in Nevada. Eureka County, 99 percent of our
10 economic base and our socioeconomic base relies on natural
11 resources.

12 So with that issues from water to grazing to
13 dealing with federal agencies, state agencies, mining. I do a
14 lot of monitoring within the county with rangeland monitoring.
15 We have a lot of water monitoring. I administer various
16 grants and projects and things for the county related to all
17 these natural resource things.

18 So my main job is my bosses are the County
19 Commissioners, so I keep them up to date on items of interest.
20 I stay up to date on, you know, various aspects from the
21 federal agencies and their proposals. State agencies. I
22 review water applications that are filed Eureka County, make
23 recommendations to the Board for action, and then they make
24 decisions based on my recommendations.

25 In addition to that, we have various advisory

1 boards in Eureka County. Eureka County has always been
2 very -- well before I was there, there's been a natural
3 resource manager Eureka County since the early 90s and they've
4 always had a natural resource manager. I believe I'm the
5 third.

6 They've -- I believe Eureka County is very
7 inclusive of its citizens and people that want to be involved.
8 We have various boards that meet honestly weekly. We have
9 wildlife advisory board. We have a natural resource advisory
10 commission that advises on natural resource issues. So I take
11 much of my direction from them.

12 We've had NEPA committees doing various --
13 N-E-P-A. When various proposals and federal lands come
14 forward with EISs and environmental assessments we often put
15 boards together with this various levels of interest, business
16 owners, ranchers, farmers, wildlife interests, and they all
17 provide direction to me.

18 They all provide recommendations to me and the
19 County Commissioners. So it's an inclusive process. Those
20 are all open meetings. They're all public meetings. Agendas
21 are out. Minutes are kept at all of those. There's
22 direction, you know, and those happen -- most of those boards
23 meet at least once a month and sometimes even more than that.

24 Q. And do you have Exhibit 313 in front of you?
25 There's a book, I think, right there that has your Eureka

1 Mr. Tibbitts. Remote sensing, elaborate on that a little.
2 MS. PETERSON: I'm going to let Mr. Tibbitts
3 elaborate on that.

4 THE WITNESS: All right. I guess I'll start with
5 that. Remote sensing is a subdiscipline of geographic
6 information science. And I -- I need to be clear for the
7 record that GIS is a term we hear quite a bit, but GIS can be
8 an acronym that means geographic information systems and
9 geographic information science. It's used both ways.

10 Geographic information systems is more related to
11 the hardware and software components in analyzing data, the
12 data storage, manipulation, and those type of things. So
13 itself is a subcomponent of geographic information science.

14 Remote sensing is also involved in that in that
15 there's a spatial aspect to it. It's -- remote sensing is
16 typically sensing something without coming in contact with it.

17 So in very simple terms, it's similar -- you
18 can -- it's like when you're looking at something. So we --
19 if I look at this water bottle up next to me, I look at that
20 and I can see there's various textures and colors and things
21 like that. But in a more technical scheme, it's usually
22 referred to as aerial photography, you know, ground-based
23 measurements, but it's mostly understood -- the large portion
24 of that discipline is mostly aerial photography interpretation
25 and analysis as well as satellite imagery interpretation and

1 County's exhibits in it.

2 A. Yes. And which Exhibit?

3 Q. It's 313.

4 A. Is that?

5 Q. Your CV.

6 A. Okay. I pulled some of my exhibits out.

7 Q. Okay.

8 A. It might just be easier if you tell me which it
9 is.

10 Q. Okay. So do you have Exhibit 313 which is your
11 curriculum vitae in front of you?

12 A. I do.

13 Q. And does that list your duties as financial
14 resource manager?

15 A. It does.

16 Q. And actually I should ask, back up. Was
17 Exhibit 313 prepared by you or under your direction?

18 A. It was completed by me.

19 Q. And we are offering you in the areas of -- as an
20 expert in the areas of GIS and remote sensing. Could you
21 please provide the State Engineers panel with information
22 regarding your educational background, your work experience,
23 your work involvement in that particular area?

24 A. Okay. As --

25 HEARING OFFICER JOSEPH-TAYLOR: Hold on,

1 analysis. And then, you know, making analysis and results
2 based on that.

3 BY MS. PETERSON:

4 Q. And you have an undergraduate degree from Idaho
5 State University, a master -- well, an MS in geographic
6 information science; is that correct?

7 A. That's correct.

8 Q. And then you just explained a couple
9 disciplines --

10 A. Right.

11 Q. -- under that science. Under that -- sorry?

12 A. So as an undergrad in biology I became aware of
13 GIS -- geographic information science and its subdisciplines,
14 and many things and I got an interest in that. When I
15 graduated I continued to have that interest and that's what
16 drew me back to the graduate school.

17 Also one of my main interests was in rangeland
18 science. Idaho State University is not the land grant college
19 for Idaho. It doesn't have the rangeland management program.
20 However, it has the biological, the botany, the natural
21 resource components related to that, and there are rangeland
22 courses there that I did take.

23 So when I was -- went back to get my Master's
24 degree I was actually hired as a research assistant. And --
25 and it's always something that -- kind of take a little pride

1 in it, that my graduate school was paid for by NASA. It was a
2 grant from NASA. It was a forecasting rangeland condition
3 grant that was received from the GIS training and research
4 center at ISU. And I worked for them but I also -- they paid
5 for my schooling. And that's what I worked on was rangeland
6 changes and condition and, you know, rangeland monitoring and
7 assessment under that program.

8 I did a lot of projects outside of just what I
9 was working on for my study that given to me by my boss who
10 was the director of that center I had talked about. And in my
11 CV on the second page I give a sampling of some projects and
12 associated publications that came out of that grant work with
13 NASA.

14 That work with them, there was a final report
15 that was put out which was for NASA. One of the requirements
16 for the grant in this final report is it is a peer reviewed
17 process. It's not a journal per se from one of the
18 organizations that puts out journals, but it is a NASA report
19 that goes through that peer review process, and it is
20 published and those documents are available.

21 So there's a sampling of that. And I think all
22 three of the examples I gave on my CV talked about the -- they
23 are all remote sensing projects. They're taking remote
24 sensing applications and applying that to the data on the
25 ground and, you know, making the various conclusions of that.

1 fuel reduction projects. Administer a couple different
2 projects associated with NDEP water quality grants. So that's
3 what I would say is the expertise in the natural resource
4 management.

5 MS. PETERSON: So we would offer Mr. Tibbitts as
6 an expert in the area of natural resources management. And
7 I'm wondering if I got this wrong. In our list of exhibits we
8 said in the area of -- or I said in the area of GIS and remote
9 sensing, but I'm wondering if what is more accurate is
10 geographic information science, which would cover those two I
11 would say, like, disciplines.

12 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
13 the qualification of Mr. Tibbitts as an expert in geographic
14 informational science?

15 MS. PETERSON: Information science.

16 MR. KOLVET: Yes.

17 MR. TAGGART: Yes.

18 HEARING OFFICER JOSEPH-TAYLOR: What did I say?
19 Informational?

20 MS. PETERSON: Yeah.

21 HEARING OFFICER JOSEPH-TAYLOR: Information
22 science.

23 MR. KOLVET: Whatever it is I object.

24 HEARING OFFICER JOSEPH-TAYLOR: Why?

25 MR. KOLVET: I don't think he's indicated that

1 Q. And I apologize about the master of science and
2 confusing that. So you -- we also wanted to qualify you in
3 the area of natural resource management.

4 A. Okay.

5 Q. And could you please give State Engineer's panel
6 some information about your background and qualifications for
7 being qualified in that area.

8 A. Okay. Natural resources management, you know,
9 just by the -- I guess the definition of the word itself, is,
10 you know, there's so many disciplines involved in that. And
11 so it takes general expertise in many different areas. But
12 I'm not a soil scientist. I'm not a rangeland scientist. I'm
13 not all the specific things. It takes that expertise in all
14 those avenues to be able to apply them in a management. So
15 that's what it comes down to for me in Eureka County is I'm
16 the natural resource manager, is I manage those different
17 resources through projects and policy development and many of
18 those things.

19 So again in my CV I talked about some of the
20 things I do. I administer a host of grants that are
21 on-the-ground projects. I'm involved day to day in those
22 projects, the actual implementation of that, from
23 pinyon-juniper thinning to noxious weed control to water
24 monitoring assessment to rangeland monitoring and assessments
25 to riparian monitoring and assessments. Fuels -- hazardous

1 he's qualified to do what he's here to testify about. He's
2 going to be testifying about various Landsat satellite and
3 photos that he examined and that those Landsat photographs
4 according to his report he relied on other publications
5 outside of the field that he's ascribed to.

6 HEARING OFFICER JOSEPH-TAYLOR: I think you're
7 getting past -- I don't know what his testimony is. I just
8 want --

9 MR. KOLVET: I'm just saying that that's the area
10 they want him to testify in. I don't think he's been
11 qualified on the interpretation of Landsat and satellites.
12 His thesis that or whatever it was that he wrote that he
13 published that's in his resume deals with interpretation of
14 rangeland, not crop land. We're talking crop land in this
15 case.

16 Secondly, I object because the time frame that
17 he's examining is past the time frame that the actual -- most
18 of the use of the water and the most growing of crops occurred
19 on my client's property. So I don't know how he could testify
20 as to what was there prior to 19 -- whatever year it was, '74,
21 that he intends to start with. So for a various number of
22 reasons I don't think he's qualified to testify.

23 Lastly, his report was submitted in rebuttal. It
24 was not a -- it was not a case in chief offering. And the
25 rebuttal portion of it dealt with various comments by experts

1 hired by the Applicants. And if he's allowed to testify, it
2 should be limited to rebuttal-type testimony, not direct or
3 initial type testimony.

4 HEARING OFFICER JOSEPH-TAYLOR: Okay. You're
5 getting far afield of me just qualifying him. You're getting
6 into the specifics of the evidence. Mr. Taggart.

7 MR. TAGGART: Yes, I just have two -- two parts
8 to the objection. One is procedural. And if you look at the
9 witness list that was submitted for the initial exchange,
10 Mr. Tibbitts is listed on that, and -- but he did not provide
11 a report in the initial exchange. And so he was listed as a
12 person who might testify but he did not provide a report at
13 that time.

14 Then when the rebuttal exchange occurred, he
15 submitted a rebuttal report but he was not listed as a
16 rebuttal witness. And so I don't have an objection to him
17 testifying about what he was listed for in his, you know, when
18 he was listed as a witness, but when he was listed as a
19 witness and the suggestion was that he would be an expert
20 there was no report submitted. And then like I say, then on
21 rebuttal he -- there was a report submitted but he wasn't
22 listed as a rebuttal witness.

23 So we weren't able to do work to hire experts or
24 whatever to review a report that we should have gotten during
25 the initial exchange and so I have -- I have an issue with

1 that process. So that's just the procedural part of it.

2 On the on the substance of it, you know, I guess
3 I thought GIS was GIS and so I was anticipating he was a GIS
4 expert. Sometimes we get a chance to do a little voir dire.
5 I just have -- like I just want to know if he's a water rights
6 surveyor or not, and --

7 MS. PETERSON: He's not.

8 MR. TAGGART: Okay.

9 MS. PETERSON: He's not, I don't think.

10 MR. TAGGART: All right. And so if he is allowed
11 to testify as an expert, and now we're just talking about on
12 the geographic information science part of that, it should be
13 limited to that type of work. And I think his report
14 includes, and this is probably part of Mr. Kolvet's concern
15 too, is his report goes far beyond just doing what I
16 understood to be general GIS. My concern is the
17 interpretation of irrigated land. And now, on remote sensing,
18 is that different or is that within GIS? Are we assuming that
19 for the most --

20 HEARING OFFICER JOSEPH-TAYLOR: He said it was a
21 subdiscipline of GIS science.

22 MR. TAGGART: Okay. With respect to remote
23 sensing, that's a very involved --

24 HEARING OFFICER JOSEPH-TAYLOR: I'm not there
25 yet.

1 MR. TAGGART: Oh, I'm sorry.
2 HEARING OFFICER JOSEPH-TAYLOR: I want to do G --
3 I want to do them one at a time.

4 MR. TAGGART: That would be separate. I thought
5 that would be one and the same.

6 MS. PETERSON: I think it is part -- my
7 understanding is that --

8 HEARING OFFICER JOSEPH-TAYLOR: No, you don't
9 understand me, Ms. Peterson. I want to hear objections on GIS
10 science, then I'm going to do remote sensing, then I'm going
11 to do natural resource management. I'm not doing the whole
12 thing as one.

13 MR. TAGGART: So I'll just finish by saying that,
14 you know, there's a limited amount of -- no offense to
15 Mr. Tibbitts -- there's a limited amount of work experience,
16 certainly has education. Typically an expert is going to have
17 more actual work experience applied in the field type of --
18 type of experience than he has.

19 HEARING OFFICER JOSEPH-TAYLOR: Okay. So remote
20 sensing, any objection to him being qualified as an expert in
21 remote sensing?

22 MR. TAGGART: I'll continue.

23 HEARING OFFICER JOSEPH-TAYLOR: Okay.

24 MR. TAGGART: Again that, is a technical area
25 that I'm familiar with. The State Engineer has seen

1 significant information about. It involved a tremendous
2 amount of subjective decisions that are made with respect to
3 which photographs do you use, how to mask -- you may recall
4 that remote sensing, you're going to have lots of photographs
5 and they have lots of clouds or atmospheric interference with
6 the photograph.

7 And so the, the remote sensing, an individual has
8 to, you know, judge which photographs to use and which
9 photographs not to use. So you're trusting an expert with all
10 of that when you make them an expert.

11 And then understanding what different range
12 within the infrared spectrum qualify for different types of
13 crops or different types of plant growth is also an expert
14 judgment, and I don't think I've heard enough experience in
15 that with respect to crops or rangeland, for that matter.

16 But so, you know, when you -- when you qualify an
17 expert you're -- you are trusting their judgment in all those
18 areas and I haven't seen the level of qualifications we need
19 to put that trust in this individual.

20 HEARING OFFICER JOSEPH-TAYLOR: Anything to add
21 on that, Mr. Kolvet?

22 MR. KOLVET: Just briefly that the information
23 provided to us in the CV talks about rangeland, remote
24 sensing, and that's his experience level. There is no remote
25 sensing experience, as Mr. Taggart said, in the area of crop

1 lands or irrigation or the like. So I don't think he has the
 2 expertise in the areas that are needed for this proceeding.
 3 MR. TAGGART: And I do want to say, this is just
 4 for me, the report itself, you know, there's parts of it that
 5 I'm not going to object to it coming in. So it isn't, you
 6 know, I think there's information in there that's useful.
 7 It's been compiled. And in my world what I came into this
 8 hearing thinking what GIS was, it seemed to satisfy me in
 9 terms of that. So --
 10 THE WITNESS: May I --
 11 HEARING OFFICER JOSEPH-TAYLOR: No, Mr. Tibbitts,
 12 you may not.
 13 THE WITNESS: Okay.
 14 HEARING OFFICER JOSEPH-TAYLOR: Natural resources
 15 management? Any objection to him being qualified.
 16 MR. TAGGART: Oh yes. On that one, I haven't
 17 seen any opinions that are offered in a report that go to
 18 natural resource management. So I -- so I guess I don't
 19 object to him being qualified because -- but I probably will
 20 object if he offers an opinion that I haven't seen in his
 21 signed report.
 22 HEARING OFFICER JOSEPH-TAYLOR: Mr. Culvert?
 23 MR. KOLVET: Join on that.
 24 HEARING OFFICER JOSEPH-TAYLOR: My response,
 25 Ms. Peterson?

1 remote sensing. But we did submit aerial photos in the
 2 document exchange.
 3 As far as listing him in the second document
 4 exchange, our second document exchange for a list of
 5 additional hearing witnesses, the first item says Eureka
 6 County may call any or all of the witnesses listed in its
 7 initial list of witness served on September 13th, 2013, as
 8 rebuttal witnesses. So Mr. Jake Tibbitts was included in the
 9 first witness list and then his report was included in the
 10 second document exchange.
 11 With regard to irrigated acreage, there has been
 12 testimony by hydrologists, testimony by a person qualified as
 13 an expert in Nevada water rights matters about their
 14 interpretations of aerial photos, and actually one of the
 15 owners of the Sadler Ranch about their interpretation of crop
 16 lands and irrigation on the aerial photos and irrigated
 17 acreage.
 18 If there is any issues with any of the statements
 19 that Mr. Tibbitts has made in his reports, which have been
 20 disclosed prior to this hearing, certainly counsel -- opposing
 21 counsel will have an opportunity to cross-examine him on any
 22 of those matters that are listed in his report. And the State
 23 Engineer can give the weight it deems as necessary if they
 24 think that they can impeach or somehow discount the testimony
 25 or the opinions or the statements that he has in his report.

1 MS. PETERSON: Yes. First with regard to the
 2 document exchange, in the first document exchange Mr. Tibbitts
 3 is listed and his -- he has two reports that he prepared on
 4 soils and those were provided in that document exchange.
 5 HEARING OFFICER JOSEPH-TAYLOR: The first
 6 exchange?
 7 MS. PETERSON: The first document exchange. And
 8 also there were aerial photos that there was a -- Eureka
 9 County and the Etcheverrys had exhibits and each
 10 cross-referenced each other's exhibits in their initial
 11 document exchange so that we adopted their exhibits and they
 12 adopted our exhibits.
 13 And so that's why Mr. Tibbitts was proposed to be
 14 qualified in the initial document exchange as an expert in the
 15 area of GIS and remote sensing and natural resources
 16 management. And his CV was included in that initial document
 17 exchange.
 18 Then when we got the evidence from the
 19 Applicants, Mr. Tibbitts prepared his land -- his rebuttal
 20 report and that, of course, addressed the issues that were
 21 raised by the Applicants in their document exchange. We had
 22 already disclosed that Mr. Tibbitts -- we would attempt to try
 23 to qualify Mr. Tibbitts as an expert in the area of GIS and
 24 remote sensing and natural resources management, so his
 25 rebuttal report really does, then, concentrate in the GIS and

1 And finally, under the rules of evidence, and I
 2 know you don't abide or you don't necessarily have to follow
 3 all the rules of evidence.
 4 HEARING OFFICER JOSEPH-TAYLOR: By statute they
 5 don't apply.
 6 MS. PETERSON: But -- but the rules of evidence
 7 provide us with guidance as to how courts are supposed to use
 8 experts, and NRS 50.275 provides that expert witness may
 9 testify if scientific, technical, or other specialized
 10 knowledge will assist the trier of fact -- assist the trier of
 11 fact, the State Engineer, to understand the evidence to
 12 determine a fact in issue.
 13 So Mr. Tibbitts is being presented as an expert
 14 who having scientific, technical, or other specialized
 15 knowledge that hopefully will assist the trier of fact to
 16 understand the evidence that's been presented before him by
 17 the Applicants.
 18 HEARING OFFICER JOSEPH-TAYLOR: Thank you. We'll
 19 be off the record and in recess for ten minutes.
 20 (Recess.)
 21 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 22 record. Mr. Tibbitts will be qualified as an expert in
 23 geographic information science, remote sensing and natural
 24 resources management.
 25 We do have a problem, Ms. Peterson, with an

1 expert report coming in that does not rebut evidence but
 2 presents new evidence. So how are we supposed to handle this?
 3 MS. PETERSON: And you're talking about -- just
 4 so I understand, you're talking about the report on the
 5 rebuttal?
 6 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 7 MS. PETERSON: The rebuttal?
 8 HEARING OFFICER JOSEPH-TAYLOR: Yes. How it's
 9 bringing in new evidence that is not rebutting Landsat images
 10 and things that the Applicant presented in its case in chief.
 11 MS. PETERSON: Oh, it is trying point out the
 12 distinction between precipitation, groundwater discharge, and
 13 crop irrigation by use of the Landsat photos. And it's for a
 14 limited purpose, and that can be explained by Mr. Tibbitts in
 15 his, in his testimony.
 16 But it is -- it was in response to the general
 17 groundwater discharge information, the precipitation
 18 information, or I guess information in the reports. And the
 19 Landsat part of it provides the visual. So ...
 20 HEARING OFFICER JOSEPH-TAYLOR: Is it trying to
 21 quantify acreages?
 22 MS. PETERSON: No. And Mr. Tibbitts will explain
 23 that.
 24 HEARING OFFICER JOSEPH-TAYLOR: Because I have a
 25 real problem if you go there.

1 Q. And I believe Chairman Goicoechea testified
 2 yesterday that he was not on the board of the Eureka County
 3 commission at the time that these protests were filed; is that
 4 correct?
 5 A. Yes.
 6 Q. And you were working and involved on behalf of
 7 Eureka County and you were involved in the drafting of these
 8 protest points; is that correct?
 9 A. Yes.
 10 Q. Based upon the approval of the County
 11 Commissioners to file the protest?
 12 A. Yes.
 13 Q. And would you please explain the relief, I guess,
 14 requested or stated in the protest or the position of Eureka
 15 County stated in the protest?
 16 A. Sure. Both application 81719 and 81720 asks or
 17 states that the protestant requested that the application be
 18 issued subject to Eureka County's protest points and only to
 19 supplement the yet to be established decline in flow.
 20 Q. And what was your understanding of the -- of the
 21 rights sought in those two applications filed by Sadler Ranch?
 22 A. My understanding at the time when these were
 23 filed on March 30th, 2012, was there was a host of various
 24 orders, management decisions from the State engineer in the
 25 Diamond Valley.

1 MS. PETERSON: It's -- he'll explain what the
 2 purposes of the report are at the very beginning and so if
 3 there's issues with it, you -- I guess you cannot hear it at
 4 that time if that's ...
 5 HEARING OFFICER JOSEPH-TAYLOR: Our frustration
 6 continues. Let's move to admit Mr. Tibbitts's CV.
 7 Exhibit 313, any objection?
 8 MR. KOLVET: No.
 9 HEARING OFFICER JOSEPH-TAYLOR: Hearing none,
 10 we're going to allow you to testify, Mr. Tibbitts, but you may
 11 get cut off on some testimony because if you go where I think
 12 you might go, it should have been presented on the first
 13 exchange. Ms. Peterson, please continue.
 14 MS. PETERSON: Thank you.
 15 BY MS. PETERSON:
 16 Q. Mr. Tibbitts, do you have the Eureka County
 17 protest to the first Sadler application in front of you? I
 18 think it was application 81719.
 19 A. Yes, I have that.
 20 Q. Okay. And then actually 81720, it was filed at
 21 the same time. Do you have those in front of you?
 22 A. I have both.
 23 Q. And they're exhibits that have been marked in
 24 this proceeding?
 25 A. Yes.

1 Order 1226 had not been ordered by State Engineer
 2 at that time. And with these applications when we read them
 3 they talked about being supplemental groundwater rights to
 4 that diminished spring flow. And our understanding of
 5 supplemental groundwater rights at this time, on March 30th,
 6 2012, was why we had that specific language in there.
 7 Q. And the other thing I wanted to ask you,
 8 yesterday there was some comments by State Engineer on the
 9 record about an adjudication that had been called for in
 10 around 1985 by State Engineer's office for Diamond Valley. Do
 11 you recall that statement yesterday on the record?
 12 A. Yes.
 13 Q. And were you aware of that call prior to the
 14 State Engineer's comments yesterday?
 15 A. I was not.
 16 Q. Are you aware -- to your knowledge, was anybody
 17 in Eureka County aware that -- any of the current County
 18 Commissioners, the current DA, the current people that you
 19 work with with regard to water right matters in Eureka County,
 20 were they aware of that call prior to yesterday?
 21 A. My discussions with everybody representing Eureka
 22 County that are here at this time, nobody was aware of that.
 23 Q. Thank you.
 24 A. I have --
 25 Q. Oh, go ahead.

1 A. I've reviewed everything I could get from the
 2 State Engineer's web site on orders and rulings and various
 3 things and I have a fairly large file about issues in Diamond
 4 Valley over the years and I've never come across that. So
 5 that's -- I was surprised to see that.
 6 Q. And are you aware of any property owners in the
 7 Sadler Ranch area that might have a vested water right claim
 8 besides Sadler Ranch?
 9 A. I am. There's -- at the Sadler Ranch there's a
 10 40-acre piece that had been referred to earlier in the week
 11 that is not owned by the current owners of the Sadler Ranch.
 12 And I have taken the time to look at the deeds, the transfers
 13 regarding the sale deeds, and the various things in the county
 14 recorder's office related to that 40-acre piece.
 15 And in -- there's various references in the deeds
 16 I looked at. And I'm not saying I did an exhaustive search.
 17 I searched simply what was easily accessible in the Eureka
 18 County court house. And there's -- those deeds referenced
 19 whenever there was a transfer the water rights appurtenant
 20 thereto. It actually references ditches and dams on that deed
 21 as well.
 22 So that, I think, is kind of getting to the
 23 concern that Eureka County has, is that it's not about -- in
 24 my mind, it's not about determining the valid rights on the
 25 Sadler Ranch or the valid rights on the Thompson Ranch, and

1 process where we determine what everybody's rights are out
 2 there, not just these separate places. And then we determine
 3 the management decisions we make on these individual
 4 applications and properties to mitigate what are the results
 5 of that.
 6 We have to know so we can put it to rest so we're
 7 not back here in a few more years addressing the Flynn
 8 Springs, we're not here addressing other springs that are
 9 further north on lands that Milton Thompson still owns. You
 10 know, there's just a lot of issues involved there that, you
 11 know, when we say we want to settle it, this 40-acre piece at
 12 the Sadler Ranch I think is a good highlight where there's
 13 deeds recorded at the county courthouse to talk about a
 14 transfer of water rights, ditches, and dams. So, you know, I
 15 think that's a fairly good example of where we need to go
 16 moving forward from here.
 17 Q. And are you familiar with the interim order that
 18 was issued by the State engineer's office in this proceeding?
 19 A. I am.
 20 Q. Okay. Do you have a copy in front of you?
 21 A. I'm sorry, I don't have a copy of that one.
 22 Maybe in here.
 23 Q. I don't think it's in here because it's a State
 24 Engineer Exhibit. It's Exhibit 2.
 25 HEARING OFFICER JOSEPH-TAYLOR: No, Exhibit 2 is

1 then determining what we do to mitigate those if they've been
 2 impacted.
 3 The concern that I have is that if we do provide
 4 mitigation for the Sadler Ranch after that -- that
 5 determination has been made on their rights, I haven't seen
 6 anything presented about now what will that pumping -- I have
 7 not seen any quantitative analysis presented on what that
 8 pumping there will do to others further away.
 9 I haven't seen any analysis about the potential
 10 impacts on that vested -- that 40-acre piece that may have a
 11 vested right too. We don't know that. They're not involved
 12 in this.
 13 There's other springs further north of both of
 14 these properties that are still flowing. There's the Flim
 15 Springs further north on the west side of the basin. There's
 16 various springs.
 17 So the concern is, is that when we -- if we
 18 install a well for mitigation then that may expand and now you
 19 have another vested claim out there that they may -- we don't
 20 know their priorities. We don't know that. So maybe then
 21 they are now influenced, so then they're -- it's just kind of
 22 this chain event that could tend house of cards.
 23 So, you know, kind of building off what Chairman
 24 Goicoechea said yesterday, we do think we need to find ways to
 25 get this issue resolved. But it needs to be an all-inclusive

1 order 1226.
 2 MS. PETERSON: Then it must be Exhibit 50
 3 something.
 4 HEARING OFFICER JOSEPH-TAYLOR: 74, does that --
 5 MS. PETERSON: 74, it could be. It's the interim
 6 order that was issued August 9th, 2013.
 7 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 74.
 8 BY MS. PETERSON:
 9 Q. Do you have that in front of you?
 10 A. I do.
 11 Q. And could you read into the record the very last
 12 portion of that order.
 13 A. "Please take notice in addition to any other
 14 evidence each party intends to present, the State Engineer
 15 puts all parties on notice that they should be prepared to
 16 present evidence, testimony or additional briefing on the
 17 issue of whether Applicants' vested claims have been
 18 abandoned."
 19 Q. Thank you. And now directing your attention to
 20 your soils report.
 21 A. Okay.
 22 MR. KOLVET: What number is that?
 23 BY MS. PETERSON:
 24 Q. It is Exhibit -- there are two soils reports, and
 25 they're Exhibit 319 and 320, and then also 321. Do you have

1 those exhibits in front of you?
 2 A. I do.
 3 Q. And what are those exhibits?
 4 A. I'm not sure on the number.
 5 Q. Oh, 319 is the USDA soil report Sadler Ranch?
 6 A. 319?
 7 Q. Yes.
 8 A. And 320 is the Venturaccis'?'
 9 Q. Yes.
 10 A. Okay.
 11 Q. And then 321 is the site descriptions. Do you
 12 have those in front of you?
 13 A. I do.
 14 Q. And what are those? Do you recognize those
 15 documents?
 16 A. I do recognize them. I created them through a
 17 process on the NRCS web soil survey which is a step-wise
 18 process you go through and select various items that are
 19 reported based on the underlying soil survey.
 20 So it's basically taking the Diamond Valley soil
 21 survey that has been digitized and placed into a data base
 22 with all of its components and then creating the web soil
 23 survey, you can select various things.
 24 There's also procedures when you go through that
 25 you have to select criteria there's -- to determine, you know,

1 main soil types for what have been referred to as the meadows
 2 is labeled on the map as BD which is the -- excuse me, I
 3 can't -- Bicondoa-Dianeve soil map unit as depicted on here.
 4 And what's interesting in this circumstance is
 5 that if you look at the Venturacci soil report which is
 6 Exhibit 320, the BD, the Bicondoa-Dianeve soil, is the exact
 7 type of soil mapped at the Thompson Ranch in the meadows, the
 8 lower meadows.
 9 The reason that's important is there was -- I
 10 recall testimony from George Thiel was he asked about the
 11 different soils and he said -- he actually said the soils were
 12 completely different. And he had stated that he came to that
 13 conclusion on his review of the soil maps, but the reality is
 14 is the soil maps, it's the exact same soil types in those
 15 meadows, both Bicondoa-Dianeve.
 16 One other thing I would like to point out is
 17 there's an acreage calculation throughout the reports tied to
 18 these various soils. That acreage calculation was -- it
 19 seemed to be used by Mr. Frazer as an indication of those
 20 soils receiving irrigation. The one thing I'd like to point
 21 out is the type of soil there doesn't mean it's receiving
 22 irrigation.
 23 Another thing that's really important on this is
 24 when you're creating the soil map, you create an area of
 25 interest. And you can import a GIS shape file of, like, the

1 what will be out in whatever you're wanting look at.
 2 Q. Then did you prepare one of those reports for the
 3 Sadler Ranch and then also the other one for Venturacci?
 4 A. Yes, I prepared one for both properties.
 5 Exhibit 319 is for the Sadler Ranch. And I can use this as an
 6 example for both in lieu of time.
 7 Q. That would be great. And then also explain, I
 8 guess, when you're going through that how you use Exhibit 321.
 9 A. Okay. So if we look at Exhibit 319, I'm going to
 10 use this Exhibit as an example of the types of things you can
 11 see in both reports.
 12 So essentially I'm going to flip through to areas
 13 that I feel are important. A lot of the -- the default
 14 options of these reports is it provides background on what the
 15 soils are and the characteristics and how the surveys were
 16 made and applies all that. So that's all in here if there's
 17 anybody that wants to look at that for more information.
 18 So now I'm turning to page 9 of Exhibit 319. And
 19 so stated with page 9, the legend, the map legend is on
 20 page 10. And I will not belabor the different soil types
 21 here, because we've heard testimony by Mr. Frazer, who does
 22 have a background in soil science, speaking about the various
 23 soil types.
 24 The one thing I do want to point out on this
 25 slide is just to, I guess, refresh everybody's memory, is the

1 Assessor's property lines into there. The algorithm in the
 2 web soil survey does not allow for the gaps. You have to have
 3 a complete polygon.
 4 So the acreages, often you had to take in areas
 5 because it would have left these little donut hole-type things
 6 and so it would include acreages that are not necessarily
 7 coincident with the private property lines. So that would be
 8 the 40-acre piece. That's more apparent on the Thompson Ranch
 9 soil map because I actually had to connect the home ranch, the
 10 Cox place as well as Willow field all in one long piece. So
 11 it takes in all that acreage in between. But the intent was
 12 to show the soil types, not acreages of the ranch.
 13 So the next few pages break down the general
 14 descriptions of the various soil associations and how that's
 15 broken down into their map unit compositions, and I won't
 16 belabor that at all either.
 17 So now I'd like to go to page 27. Excuse me, I'd
 18 like to go to page 31. On page 31 and then the associated map
 19 on page 32 and the legend that goes with that associated map
 20 on page 33, shows -- describes what are called ecological
 21 sites. And there's a description here about what an
 22 ecological site is, just for a definition, so moving forward
 23 we know what we're talking about.
 24 And it states that an ecological site is the
 25 product of all environmental factors responsible for its

1 development. So that site, what are all the factors that
2 create the water conditions, the vegetation conditions, the
3 soil conditions, all those different factors in there. And it
4 lists some of the things that contribute to that.

5 Characteristic hydrology, infiltration and runoff
6 that is developed over time. It's the characteristic plant
7 community. The vegetation soils and hydrology are all
8 interrelated and each is influenced by the other and
9 influences the development of the other. So it's this,
10 they're all interconnected.

11 What you do with the water, whether it's
12 naturally or done by man through irrigation or other
13 management decisions, will affect those other things. That's
14 the important part about the ecological sites. So I'll come
15 back to ecological sites later.

16 So I'll now move to page 35. Page 35 talks
17 about -- it's a classification by the NRCS, the natural
18 resource conservation services. It's part of the US
19 Department of Agriculture. And it defines irrigated
20 capability. And this description on page 34 or, excuse me, on
21 page 35 that rolls over to page 36, can also be referenced to
22 the map on page 37 and the legend on page 38. So they all
23 have to be looked at together.

24 There are many -- there's a handful of soil types
25 mapped at both of the ranches, but for the purposes of this

1 So that's the basic irrigated capability class.
2 So it's taking, you know, the basic general description of
3 those soils and its irrigated capability, but the soils survey
4 and this report break that down into irrigated capability
5 subclasses, things under that general overall thing.

6 So if we move to page 40. On page 40, we get
7 into the section on page 40 that's entitled "Irrigated
8 Capability Subclass." So this further refines the soil types
9 at both ranches and gives them a class distinction by a
10 letter. There's letters E, W, S or C.

11 And if you compare -- if you look at the map on
12 page 41 and the map legend that describes what's depicted on
13 the map, which is the map legends on page 42, the large -- I'd
14 say most of the land below the spring -- Shipley Spring at the
15 Sadler Ranch, both to the north, to the east, and to the -- to
16 the southeast, all have a shaded color that looks to me to be
17 brown or brownish tint. That is classified as excess water.

18 And when we compare that to the table on page 43,
19 you'll see that that gets the rating W, the Bicondoa-Dianeve is
20 a W. You also see that the Dianeve, the DN, also received a
21 rating with a W. So to define what that is, if we turn back
22 to page 40 in the third full paragraph under the irrigated
23 capability subclass section, it defines that W shows that
24 water in or on the soil interferes with plant growth or
25 cultivation, but -- and it does state that in some soils the

1 present -- my discussion here, is that I'm going to focus on
2 the Bicondoa-Dianeve association composition or map unit. I'm
3 going to focus on that because that's the areas of the
4 meadows. There are -- you can see some of the areas,
5 especially on the Sadler Ranch, on the map on page 37 where
6 the lands we have heard through testimony that would have been
7 put into production for the alfalfa and those soils I call the
8 upper end of the ranch, at both ranches are different soils.

9 The -- so if you track this through and you look
10 at the way that those BD or Bicondoa-Dianeve soils have been
11 classified, they've been classified as a class 5. Class 5 for
12 their irrigated capabilities states on page 36, the class 5
13 soils are subject to little or no erosion but have other
14 limitations, impractical to remove, that restrict their use
15 mainly to pasture, rangeland, forestland, or wildlife habitat.

16 One thing I would like to point out is the DN,
17 which is that there's a Bicondoa-Dianeve association but
18 there's DN would be the Dianeve itself. And especially on the
19 Thompson Ranch, a lot of soils on the upper end of the ranch
20 extending down through the Cox place and Willow field are that
21 DN.

22 DN received a classification of class 3, which
23 are soils that have severe limitations that reduce the choice
24 of plants or that require special conservation practices or
25 both.

1 wetness can be partly corrected by artificial drainage.

2 Now if we move to page 44, we get into the land
3 management actions. And these are the things that we do as
4 humans on the land that may affect things that happen on the
5 land. Under land management there's a section on page 44
6 entitled site "Degradation Susceptibility." And this same
7 description would be on the Thompson Ranch as well.

8 On the second paragraph of that section, it
9 states that the ratings represent the relative risk and it
10 states what those risks are. Water and wind erosion,
11 salinization, sodification, organic matter and nutrient
12 depletion and/or redistribution, and loss of adequate rooting
13 depth to maintain desired plant communities.

14 And remember, this is land management. This is
15 the things that are taken into account when we actually
16 managing the land. It's not the natural -- it's when we
17 decide to do something to actually manage the land. The
18 things have to be taken into account.

19 If we turn to page 45, the second full paragraph
20 on page 45, the last sentence states, "that when degradation
21 of soil and natural plant community characteristics goes
22 beyond the threshold or the ecological site, the ecological
23 site characteristics cannot be restored without artificial
24 restoration efforts."

25 So in the concept of rangeland science there's --

1 there is what they call state and transition. And what it is,
2 is you have reference dates that are essentially in place, and
3 I like to compare it similar to what we hear from the water
4 experts on water modeling as the steady state.

5 So it defines what we could see there in natural
6 conditions, what we could expect to be there when these folks
7 were coming into Diamond Valley and these historical records
8 and the types of things we see there. That's what the
9 ecological site description is. It's the steady states that
10 tells us what we should see there.

11 But what happens is man comes in and starts
12 influencing things and diverting water and doing various
13 things. Through that, the state and transition theory in
14 rangeland science is that there's various pathways to
15 degrading a site. And some -- well, it can be livestock
16 management. It can be cultivation. It can be -- so many
17 different things can degrade areas. Water drawdown can
18 degrade areas.

19 There's been models created for this area. This
20 is MLRA, it's major land resource area 28B. Those have been
21 developed by the NRCS to define what those degradation
22 pathways are. I did a lot of research into this with the
23 Mount Hope project because we were concerned of what would
24 happen in areas -- in the wet meadow areas in Kobeh Valley as
25 well as the areas around -- the phreatophyte areas. And I

1 for other things.

2 I have personal experience with this on some
3 riparian areas where there have been historic wet meadows that
4 are -- would be boggy or saturated. They're referred to as
5 lentic systems. They're wet areas where there's seeping or
6 even a spring that comes to the ground but it doesn't flow
7 off. It creates kind of a wet area.

8 And simply on management, one circumstance that
9 I'm thinking about on Roberts Mountain is there a was a road
10 created right at the edge of this wet meadow that created what
11 they call a nick or a head cut. So if you start that little
12 erosion area, and then more cars go through and other things
13 keep making it worse and worse, and essentially you start to
14 get a trench and the trench starts to work it up way through
15 the meadow and that meadow drains. It wasn't because there
16 was more water. The water that was there is still there, but
17 it's no longer coming out the way it was.

18 That's what the ecological sites speak to, those
19 various transitions. And it's something that can be done.
20 I'm not saying it did happen here. And I want to make that
21 clear. I'm not saying that that's what happened. I'm just
22 saying there's other influences of things that man can do that
23 can actually dry out the areas.

24 So on page -- so if we go to page 50 now. On
25 page 50 we get to the section talking about vegetative

1 heard that question asked by the panel and maybe Mr. Walmsley
2 earlier about what would happen when you have that drawdown.

3 So there's models defined of when you have water
4 drawdown what will happen, you know, all these different
5 things can push these areas out of their referenced state.
6 Diverting water and irrigating water, irrigation is one of
7 those transition pathways that actually degrade a site.

8 And the reason that can take place is you can --
9 you can create ditches and gullies and you have down cutting
10 and erosion and they get deeper and deeper or you are digging
11 them deeper and deeper. There becomes a point when those
12 soils may be subwetted because of the capillary action of the
13 shallow groundwater. And if you look at these sites back
14 earlier in the report where it talks about what the conditions
15 are, it talks about very shallow groundwater within a couple
16 feet of the surface.

17 So a lot of the conditions that exist there
18 are -- based on the ecological site description, are from this
19 capillary action subwetting. The roots are getting wet. So
20 if you cut and have these entrenchments, these entrenches,
21 there's some point when you may actually intercept that
22 shallow groundwater where then it's also draining and you --
23 and the deeper you go, the more draining you get in these
24 sites. So you can actually lower the water tables in these
25 areas based on digging ditches deeper or grazing management

1 productivity. And I'm going to -- you know, honestly there's
2 nothing -- this isn't of much use to us in the Bicondoa-Dianeve
3 association or the Dianeve soil association itself because
4 simply that information wasn't provided. The soil survey
5 never provided deals on those areas. But you also need to
6 remember that the soil survey also said that they didn't
7 assume that they'd be intensively cropped or irrigated for
8 this process.

9 So yields of irrigated crops the subsection under
10 vegetative productivity. The one thing it can tell us is some
11 of those areas which I call the better soils at the upper end
12 of both ranches and the Dianeve itself, this talks -- on
13 page 50, the first paragraph under the section yields of
14 irrigated crops, the thing that we need to focus on, I
15 believe, is the estimated average yields per acre that can be
16 expected or selected -- of selected irrigated crops under a
17 high level of management.

18 So what it does do, if we look at the tables
19 associated with this, it puts a value on these soils of tons
20 per acre expected for alfalfa or grasses. So it can give us
21 an idea under a high level of management the yields that can
22 be associated.

23 And again, let me make it clear that it doesn't
24 provide anything for the Dianeve, the Bicondoa-Dianeve
25 association or the Dianeve. This is for more from about -- so

1 if you look at the map, let's go to it, map on page 52,
2 there's only one soil -- soil rating on that map, which is
3 labeled AD. It's in a red color. Everything else that's in a
4 gray color has not rated or not available.

5 But simply this AD is Alhambra silt loam silty
6 substratum is the way it's classified, and it says that based
7 on highly managed irrigation here you could expect 5 tons per
8 acre per annum for alfalfa hay. So I'm just trying to give
9 some perspective on what -- when alfalfa is grown on these
10 areas we could probably expect a yield and I think that that
11 is similar to some of the yields we've heard from some of the
12 irrigators in Diamond Valley.

13 It now steps through -- it goes to if you're
14 using it as pasture how many AUMs you could expect. An AUM is
15 an animal unit month and it's defined in the rangeland science
16 community and in livestock industry about the amount of forage
17 available to sustain one cow-calf pair. And there's a certain
18 number of sheep and horses all associated with that.

19 Again this doesn't tell us much because it didn't
20 raise those places where there might have been grazing or
21 where there's been testimony that there may be grazing. So it
22 doesn't give us much value. It doesn't provide it. But it
23 does again say that that same map unit on alfalfa is rated
24 here and it says that it would provide 3.9A AUMs per acre in
25 that soil type.

1 I'm skipping over may be duplicative or it doesn't provide us
2 much information. I'm not -- for some reason on the Sadler
3 report when I printed it out it did put duplicative
4 information in there. That's why it's more lengthy than the
5 Venturacci report. But the same information is available in
6 both.

7 So if you turn to page 75, this section is
8 "Entitled Water Management". And the first section --
9 subsection under water management, is entitled "Irrigation
10 General." And if you read down through there, this
11 interpretation is for general irrigation. It doesn't specify
12 whether it's flood irrigation, whether it's with sprinklers.
13 It doesn't -- it doesn't talk about that. It's just general.
14 It gives general things. But it does break it down to
15 specific types of irrigation later on in the report.

16 And what this does is it gives a rating of
17 limitations to irrigation. The ratings are stated on page 76,
18 the second paragraph. They're decimal fractions ranking from
19 .01 to 1.0. So there are degradations between .10 and 1,
20 which if you have a rating of 1, this states that it has the
21 greatest negative impact on the use. And if there's no
22 limitation it would be at zero. So the highest limitations
23 are at 1.

24 If you look at page 77, the map and then the
25 associated map legend on page 78, all of the soils at the

1 So that would mean that you could run 3.9 -- I'll
2 round it up -- you could run four cows per acre in that type
3 of soil, and again, under a high level of management. That's
4 a high level of management.

5 If we go to page 60 now it gets into the grass
6 and legume, which this always throws me off, because alfalfa
7 is a legume as well. So grass -- but what it's looking at
8 more is, you know, you may have some clovers and things for
9 more of your grasses. Again I need to point out on page 60
10 under this section it does speak about a high level of
11 management again.

12 But what this does tell us is that if you're
13 doing -- it's the same thing, it doesn't rate those soils. A
14 lot of soils we'd like to know about and NRCS never rated
15 them. However, that Alhambra complex there at the south of
16 Shipley Hot Spring and up in what I call again the upper end
17 of the ranch, the Sadler Ranch, which would be the western
18 edge of the Sadler Ranch is rated.

19 And so I think it can again give us a good idea
20 under a high level of management if we were growing a grass
21 type of hay it would be -- it rates it as 3 acre feet or -- 3,
22 excuse me, 3 tons per acre per annum. And there's also
23 ratings on the Thompson Ranch related to all this, but again,
24 there's not a whole lot of information over there as well.

25 So if we now go to -- well, a lot of the stuff

1 Sadler Ranch except that one that -- Alhambra, all are the
2 color red which is the rating 1 and is defined as very
3 limited.

4 If we turn to page 80 for the general irrigation
5 at the Sadler Ranch. I'd like to back up here a little too.
6 These same, you know, typical results on the Thompson Ranch,
7 again they're very, very similar soils and very typical.

8 So on the Bicondoa-Dianeve association is what I'd
9 like to focus on in the table on page 80. It would be the
10 first row. There is a column that is five columns over
11 entitled "Rating Reasons." So we get some insight into why
12 they would have rated severe limitation for irrigation. The
13 first one is depth to saturated zone. So again which would be
14 you have saturated soil and very, very close to the surface.
15 They're already saturated for the irrigation to be applied.

16 Excess salt receives a rating of .5. Excess
17 sodium receives a rating of 1 which remember, you cannot go
18 over 1; 1 is the highest.

19 So it breaks it down, Bicondoa-Dianeve, so the
20 various soil types with that association. So you can see
21 across that, even in those when it breaks them down to the
22 various types, depth to saturated salt, and excess salt and
23 excess sodium are listed through all of those.

24 Now we can move more specifically into surface
25 irrigation. So this is on page 84. On page 84, surface

1 irrigation, the one thing I do need to note here, that there's
2 an assumption by the NRCS in preparing this that it's level.
3 It's level ground. They're talking about level ground. So we
4 need to keep that in mind.

5 The third full paragraph talks about the soil
6 properties. And properties that are important in this is the
7 depth, which means the depth of soil, the available water
8 holding capacity, the sodium absorption ratio, the saturated
9 hydraulic conductivity, salinity, slope, and flooding. Those
10 are all factors that go into this.

11 So if we look at the map on page 86 and again the
12 associated legend on page 87, the same soils are still all
13 rated very limited even when it's defined further down to
14 surface irrigation.

15 And the associated table on page 89 lists the
16 same limitations and rating reasons I had talked about
17 earlier. The third -- there's starting on page 93 we get into
18 the excavated ponds. And I think this is important too
19 because it talks about aquifer-fed excavated ponds. So this
20 would be the case at both of these ranches if there's shallow
21 groundwater there. If you excavate down to where the
22 groundwater level is, it fills with water.

23 So that doesn't mean -- in my mind it doesn't --
24 if there's water apparent through an aerial photo or other
25 means, if there's been extensive ditching and digging and

1 ponding and building things, they may not be spring-fed. They
2 can be areas that are dug out that are the shallow groundwater
3 that are now -- now are at the surface. There's an example of
4 this in -- it's called Gravel Pit Spring. They call it Gravel
5 Pit Spring in the Kobeh Valley where the water table is very
6 shallow there.

7 And in the -- when Atlas gold mining was in that
8 area building their roads to the mine they excavated and that
9 became a gravel pit. And they eventually breached the
10 groundwater level, which was again fairly shallow, and now
11 that water is always in that pond and always in that area.
12 But that didn't take place until, you know, the late '70s to
13 the '80s.

14 On page 93 it talks about -- the second paragraph
15 about mid way down there's a sentence that begins "very
16 limited" and it defines if it's defined as very limited what
17 that means. And it indicates that the soil has one or more
18 features that are unfavorable for the specified use. And then
19 you can see on the map associated with this on page 94, again
20 the legend on page 95 ranks the entire area of interest at the
21 Sadler Ranch as being very limited.

22 If we look at page 96, which is the table that
23 further describes why it received those ratings, you can see
24 on the Bicondoa-Dianeve association slow refill, unstable
25 excavation walls received a fairly low rating, so it didn't

1 have much weight in that.

2 Salinity in the saturated zone received a rating
3 of .06. The Dianeve unstable excavation rating of 1, salinity
4 of saturated zone rating of 1, slow refill rating of 1, and
5 depth to saturated zone .38. And then the remainder
6 association, that's a minor component. I won't go into it.

7 So I'm -- I said earlier I'd come back to the
8 ecological site description. So now if we turn to page 100.
9 I've already defined or read what how the NRCS defines an
10 ecological site and so now with this I'll segue into
11 Exhibit 3 --

12 MS. PETERSON: 21.

13 THE WITNESS: -- 21, which are the ecological
14 site descriptions described in the soil survey. There were
15 four ecological sites described at both of the ranches, both
16 the Sadler Ranch and the Thompson Ranch.

17 Again for the purposes of my testimony I'm going
18 to focus on the Bicondoa-Dianeve association again since that's
19 the meadow areas, the large acreage that we're talking about
20 here. And again both the Sadler and Thompson, that is the
21 soil type of those meadow areas.

22 That ecological description number is 028 BY 002
23 NV. So I think this, the ecological site description I
24 believe will get to some of the questions that I've heard
25 Mr. Walmsley ask many of the witnesses this week about what

1 would have been the vegetation types out there at the time if
2 the surveyor, the GLO surveyors noted any of those other
3 things.

4 You know, I'm not going into this a lot of detail
5 but one thing I would like to point out is the first column on
6 the first page of the ecological site for the Bicondoa-Dianeve
7 association. Under number 3 -- well, I'll just get there. On
8 number 2 it talks about climactic factors.

9 MR. TAGGART: I'm sorry, can you just -- what
10 page are you on?

11 THE WITNESS: It's on page 1 of ecological site
12 description 028 BY 002 NV.

13 MR. TAGGART: On the first page of the Exhibit?

14 MS. PETERSON: It is.

15 MR. KOLVET: It is.

16 MR. TAGGART: All right. Thank you.

17 THE WITNESS: So under climatic factors the
18 average precipitation is 6 to 10 inches and this matches with
19 the precipitation values that are from the Diamond Valley
20 precipitation station. The precipitation estimates or the
21 precipitation data that I have seen presented this week have
22 all used the Eureka station which presents precipitation at
23 over 11 inches, for the record. For the precipitation at
24 Diamond Valley station since 1980 is about 8 inches, right
25 around there.

1 If we move to soil factors, I would actually like
2 to read this. The soils in the site are deep to very deep and
3 poorly to somewhat poorly drained. These soils are strongly
4 salt and sodium-affected in the upper profile, with soil
5 reaction and salinity decreasing with depth. There is a water
6 table near the surface for short periods in the early spring
7 that usually stabilizes at depths below 40 inches during the
8 summer.

9 I think that's important because we saw a lot
10 of -- some of the aerial photos showing very wet conditions in
11 the spring and then it drying out later in the summer. So
12 part of that I believe is due to this description here, that
13 it stabilizes below 40 inches. It provides more quarter for
14 some of those wetting soils that were further -- those soils
15 that are wetted by shallow groundwater are no longer wetted.
16 The subirrigation portion, not the applied irrigation portion.

17 It says the capillary rise of this groundwater
18 enhances soil and moisture during the growing season. That
19 again is what I term as subirrigation. Additional moisture is
20 received on this site as run in from higher landscapes or as
21 overflow from adjacent streams. Run off is slow to very slow
22 and there maybe some brief ponding in depressional areas.
23 These soils are susceptible to gullyng, which intercepts
24 normal stream overflow patterns and results in site
25 degradation.

1 It gives percentages by weight in that area. The
2 thing to keep in mind is this is weight -- dry weight. It
3 actually says species by weight but it's air-dried weight.
4 It's not the weight if you went out clipped it and weighed it.
5 That would still be wet. This is if this is clipped, dried,
6 and weighed, this would be the types of pounds per acre that
7 you'd expect of these plants and its potential native
8 vegetation. You can see there's also the shrubs, the
9 greasewood, the rabbit brush, and the alkali rabbit brush.

10 Now moving to page 2. We're still under
11 section 4, vegetation factors. The first column talks about
12 the annual air production and pounds per acre. So again, this
13 is an assuming air dry. And when they're talking pounds of
14 production they're talking everything there, whether it's a
15 grass, a shrub, all -- any of the vegetative production in
16 that area is rolled into this.

17 It's not just the species that would have been --
18 that could have been harvested or by haying or harvested by
19 grazing. So this is everything in there. And can you see in
20 favorable years, 1,500 pounds per acre. Normal years, 1,000
21 pounds per acre. And unfavorable years, 700 pounds per acre.
22 So in a favorable year under predevelopment conditions you
23 could have expected 1,500 pounds per acre of air dry
24 production, which is less than one ton per acre of production.
25 I have the other ecological sites in there. I'm

1 So moving now to the vegetation factors, it talks
2 about the potential native vegetation. This -- I've seen many
3 ecological site descriptions and some often refer to a
4 potential native vegetation as potential natural vegetation.
5 The acronym is PNV. And it's used often in the rangeland
6 science and those terms are interchangeable, native and
7 natural. But this speaks to the vegetation types that
8 could -- that would be expected at the site in pre-human
9 influence. This is what we would see out there. So very
10 early on, periods when settlers and folks were coming, this is
11 what they could have expected in those areas.

12 It talks about the -- if we now move to section 4
13 on the second column of page 1, it describes the vegetative
14 composition is 85 percent grasses and grass-likes, 10 percent
15 forbs and 5 percent shrubs. And then under section B it
16 actually lists the various species by the plant symbol and
17 their common name. And it lists these -- this is -- when it
18 says grasses, this is grasses and grass-likes. The grass like
19 species are other graminoids such as rushes, sedges, those
20 types of things.

21 If you look at the things that would be expected
22 here, there's alkali sacaton, alkali cordgrass, sedge, baltic
23 rush, inland saltgrass, alkali grass. Blue grass I missed.
24 Then there's other perennial grasses. They'll be your wheat
25 grasses and basin wild rye, you know, those type of things.

1 not going to go into in detail, but there the Dianev
2 association and the column. One thing I do want to point out
3 is -- one more thing I want to point out on this. Under plant
4 community dynamics. It's on page 2. It's E, labeled E under
5 section 4. And this is talking about ecological condition
6 declines as I talked about, you know, it's these degradation
7 pathways. It doesn't say whether it would be human influences
8 or natural influences.

9 What it does say is as ecological condition
10 declines, inland, salt grass and baltic rush increase, alkali
11 sacaton and alkali blue grass decrease. Where severe stream
12 entrenchment occurs, the potential for the site is lost due to
13 change in soil moisture balance. What I was talking about
14 earlier. You start to lose that soil moisture.

15 Typically the site is succeeded by the plant
16 community characterized in the saline bottom. So as it is
17 degraded it moves from stable steady state in this ecological
18 site description to the saline bottom which is the ecological
19 site description associated with the Dianev on its own. And
20 you have different species that come in in that period too.

21 So what -- the species that would come in after
22 some site condition declines, you see -- start to see loss of
23 the more the species that I say need their feet wet for a
24 large period of the growing season, like the sedges and the
25 rushes and the riparian plant species.

1 So I think this could possibly be compared to
 2 later periods in, you know, the oral histories or the data we
 3 have in seeing how maybe the different crops changed over time
 4 based on the management on the ground.
 5 Q. Does that conclude your information on your
 6 report?
 7 A. On the soil reports, yes.
 8 Q. On the soil reports.
 9 MS. PETERSON: I don't know, do you want to take
 10 a break or can --
 11 HEARING OFFICER JOSEPH-TAYLOR: How much more
 12 direct do you have?
 13 MS. PETERSON: Well, we'd just go into the next
 14 report, and I do have some questions too on some other topics
 15 that were discussed.
 16 HEARING OFFICER JOSEPH-TAYLOR: Sure. We'll be
 17 off the record for ten minutes.
 18 (Recess.)
 19 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 20 record. Please continue, Ms. Peterson.
 21 BY MS. PETERSON:
 22 Q. Thank you. And just continuing on in the soils
 23 area, Mr. Tibbitts, you've been here all week and you've heard
 24 the testimony in this proceeding to date; is that correct?
 25 A. Yes.

1 elevations.
 2 And so it just seemed to make sense that your
 3 soils at your lower elevations in your ranch would be creating
 4 conditions that would not allow you to continue to grow crops
 5 there or it would impede the things you had done earlier.
 6 Maybe -- well, the salts go somewhere. If they're all kept on
 7 the ranch they would have to build up somewhere else.
 8 Q. And then quickly we're going to go to
 9 pinyon-juniper?
 10 A. Okay.
 11 Q. And is pinyon-juniper a factor the State Engineer
 12 should consider in evaluating long-term water level trends?
 13 A. Yes, I do think that it's a factor to consider.
 14 We've heard quite a few people talk about it and provide
 15 opinions -- opinion on juniper encroachment. But the reality
 16 is is that the history and the records and -- do show that the
 17 trees were denuded from -- many miles away from Eureka. And
 18 there's -- there's evidence of that.
 19 There's actually been studies by done by Eureka
 20 County. We did a photographic comparison study of finding all
 21 the earliest historical photos that we could gather that
 22 showed the various trees. When my predecessor Dr. John
 23 Hutchins had the position that I am in now, he worked with our
 24 natural resource advisory commission and Dr. Wayne Burkhardt
 25 from the University of Nevada Reno, who's a rangeland

1 Q. And do you have any concerns with the in and out
 2 of ditch soil samplings by Mr. Frazer?
 3 A. I do have concerns about that on the conclusions
 4 drawn from that I think on some of the follow-up questions
 5 where it was stated there was a handful of samples in some
 6 locations, you know, the -- not repeat sampling over many
 7 locations on the ranch.
 8 But the thing that just became concerning to me
 9 on that is that there was sampling in a ditch and out of a
 10 ditch. And roughly -- there's a certain distance out of the
 11 ditch that was sampled. And I heard that there was a higher
 12 duty of water necessary per acre to be able to flush or leach
 13 salt out, but the areas that receive water for irrigation at
 14 the higher duty are not the ditches.
 15 So if that type of over and over historical
 16 application of duty on the areas outside of the ditches that
 17 were supposedly receiving all of that irrigation, it seems
 18 that they would have lower salt content in there.
 19 The other concern is that the salt has to go
 20 somewhere. As soon as they leach out of the soil then they
 21 have to go somewhere. And we heard that they -- the
 22 Applicants felt that every drop was put to use on their land.
 23 So in my mind, salt leach from higher elevation are -- they're
 24 leached -- they become soluble in the water. That's what the
 25 leaching is. So the water carries them down to lower

1 professor, and they located all -- gathered all these historic
 2 photos from central Nevada. They weren't all in Eureka
 3 County. And then they revisited these areas, located the same
 4 locations, took the same pictures, and -- to show the changes
 5 in the trees. So there is real evidence through these
 6 photographic records that we have.
 7 The other thing that's really interesting about
 8 this is that there's peer-reviewed journal-published articles
 9 about this issue specifically in what is referred to as the
 10 Western Juniper species, which is more an Oregon-Idaho
 11 species. There's a couple of gentleman up there, Tim Deboodt,
 12 Robin Tausch, who has done a lot of work here in Nevada, and
 13 they have published many publications -- journal publications
 14 about this issue, but it was related to Western Juniper. And
 15 what they did show was that they were able to quantify the
 16 amount of the water precipitation -- the amount of
 17 precipitation that was intercepted by the trees that never
 18 made it to the surface, like the ground. It actually landed
 19 on the tree and evaporated right off the tree.
 20 And they also evaluated the stem flow of the
 21 trees where it rains and then it funnels and goes right to the
 22 tree. So it captures essentially very efficient harvest of the
 23 precipitation. And then how much the trees took up from
 24 the soils.
 25 That work was all done many years ago in Idaho

1 and Oregon. However, that work was not done in Nevada. There
2 is tremendous anecdotal information about the effects of
3 pinyon-juniper, but that -- that scientific research had not
4 been done in Nevada.

5 The reason it was important to move that into
6 Nevada is because there -- the species here is not Western
7 Juniper it's Utah Juniper. So when we talk about pinyon and
8 juniper, there's single-leaf pinyon pine and Utah Juniper. So
9 different species but the same idea.

10 So there was a watershed study implemented in
11 central Nevada. It's called the Porter Creek watershed study,
12 or excuse me, the Porter Canyon watershed study. It's on the
13 Smith Creek Ranch. And there's many principle -- there's many
14 coprincipal investigators on that project including the
15 University of Nevada Reno, the Agricultural Research Service.
16 The Fish and Wildlife Service is involved in that. The BLM is
17 involved in that.

18 And essentially what they did is they removed
19 every tree in a select watershed. And it's a fully
20 instrumented watershed in that they have local metrological
21 stations precipitation stations. They have gauging stations
22 on the streams.

23 They have spring -- they take many spring
24 measurements, seepage runs, vegetation measurements. They
25 install shallow groundwater monitoring wells in the meadow

1 depending on the weather conditions. But they quantified it
2 in all -- and then they actually had a dry year and a wet year
3 that they could compare against too.

4 And the results are actually very informing on
5 what one tree can use. They pare it down to per tree use with
6 all of the statistical analysis and everything else.

7 And some of the trees at Eureka County, we have
8 some projects going on in Eureka County where we've received
9 grant funds to remove pinyon-juniper in areas where it is
10 encroached where it should not be. And the focus part of the
11 requirement of the grant was that we focus on wet areas,
12 because of the acknowledgement the spring's decline in flow
13 and these riparian corridors and things become encroached.

14 But there's some real data about these trees.
15 And some of these total enclosed stands where you can have
16 literally hundreds of stems per acre, is what they talked
17 about, each tree using that amount of water is very important,
18 and it's important because that's happening on a regional and
19 a state-wide basis.

20 So it's been testified that these are regional
21 springs at issue here. You take the Diamond Valley flow
22 system alone and you look at the tree encroachment that has
23 taken place in Monitor Valley, Antelope valley, Kobeh Valley,
24 Diamond Valley, and it's millions of trees that are all taking
25 up gallons of water per day that is otherwise not able to

1 down below the watershed where they install pressure
2 transducers and other -- they installed the things for them to
3 measure those variables.

4 I have been at the project two times. I have
5 taken an extensive tour of the project with Dr. Tansen
6 Stringem who is one of the principal investigators on the
7 project I have seen instrumentation in place. I've been there
8 when all the other agencies in place. I returned a second
9 time with the ranch owner and Dr. Tansen Stringem and went
10 through the watershed to see the results, because we were very
11 interested about it in Eureka County.

12 Their results are -- can all be verified. There
13 was a -- there's many master's students that are working on
14 projects in that watershed. There was a thesis that was
15 actually published this year in June, I believe, and that was
16 the thesis that had to do with the water use by the trees.

17 And it's very interesting results to read about
18 that, but essentially those are the results, is that the trees
19 use a tremendous amount of water from the precipitation.
20 They're intercepting those type of things and then the use by
21 the root system itself.

22 And they quantified those numbers, and it ranges
23 on whether it's a dry side and a dry year or a high side
24 higher up on the mountainside, the upland sites, because
25 trees, they go through their photosynthesis different

1 recharge the system.

2 Q. I'm going to turn now to your Landsat report, and
3 it's Exhibit 328. And I'm going to, I guess, just ask at the
4 outset a question about the purpose of the report and then I
5 guess we can hear if there's an objection to it. That's the
6 procedure that I was going to use, for the record.

7 Mr. Tibbitts, do you have Exhibit 328 in front of
8 you?

9 A. I do.

10 Q. And was that prepared by you or under your
11 direction?

12 A. Yes, it was.

13 Q. And what was your purpose and intent in preparing
14 this report?

15 A. My purpose in preparing this report was after the
16 initial document exchange with the various reports from both
17 Applicants that I believed incorporated areas to be under the
18 place of use that were subirrigated. Also areas that may have
19 been influenced by things like precipitation or outside
20 influences may have been included that were not actually
21 spring water applied on the surface.

22 And this was prepared to try to give some range
23 of variability from those influences.

24 Q. And hence the purpose for which the report would
25 be offered, and I don't know if there's an objection to that.

1 MR. KOLVET: I do have an objection based on that
2 being the purpose. The applications in this case filed by my
3 client clearly sought to appropriate water over a specific
4 area that included the issue of how it was irrigated and
5 whether it was irrigated. That was part of the applications.

6 The report that has been described goes to the
7 very heart of those applications and should not have been a
8 rebuttal report, but an initial report.

9 The effect of not having this report exchanged
10 initially is that my experts haven't really had a chance to
11 present any evidence in writing to this proceeding and
12 therefore we've been prejudiced by the lateness of the report.

13 MR. TAGGART: Well, I share that concern. One of
14 the reasons I don't offer an expert report until after the
15 expert has testified is because then you know what they're
16 going to say, and that's when you can judge whether or not the
17 report contains opinions that they're not qualified to give.

18 And I don't exactly what the witness is going to
19 say. I think there's a lot of things the witness can say
20 based on this report. I think it was improper that we didn't
21 get an opportunity to respond to it. I don't want to have it
22 excluded, but, you know, I guess it depends on, I mean, should
23 we get an opportunity to file something in response, you know,
24 after the hearing. I don't want to delay and I don't want to
25 add things, but, you know, I don't know exactly what to do.

1 I think there are opinions I object to
2 specifically on the question of how you translate remote
3 sensing into whether something was irrigated. And as we know,
4 you have to be a water rights surveyor to file an application
5 or a vested claim map or any kind of map that indicates what's
6 irrigated.

7 I think you should be a water rights surveyor to
8 challenge what a water rights surveyor said. We have a water
9 rights surveyor who has testified about how much land was
10 irrigated and I think you need to have somebody with that
11 level of qualifications who could file application them self,
12 file a map them self in order to challenge that.

13 So my concern mostly with the report is those
14 types of opinions and that's -- that's it.

15 MS. PETERSON: Could I ask what areas the report
16 are not objectionable. And maybe the whole report is
17 objectionable to Mr. Kolvet, I don't know.

18 MR. KOLVET: I've stated my objection. I just
19 leave it at that.

20 HEARING OFFICER JOSEPH-TAYLOR: I have a hard
21 time with this report coming in on rebuttal. We're going to
22 exclude it.

23 MS. PETERSON: Okay. I have -- well, I would
24 just make an offer of proof.

25 HEARING OFFICER JOSEPH-TAYLOR: Sure.

1 MS. PETERSON: That it is in response, as
2 Mr. Tibbitts testified, to information that was received in
3 the initial evidence exchange regarding subirrigation areas,
4 precipitation issues, all those related to the applications as
5 Mr. Kolvet said.

6 So the report I guess I'll read -- well, I just
7 stand on, I guess, the offer of the purpose for which it was
8 submitted as stated by Mr. Tibbitts.

9 But I do have some questions since he is an
10 expert in the area of GIS about --

11 BY MS. PETERSON:

12 Q. Mr. Tibbitts, I'd like to ask you some questions
13 about Mr. Fraser's aerial photos.

14 Do you have some concerns about Mr. Fraser's
15 aerial photos?

16 A. I have concerns on the way that Mr. Frazer and
17 Mr. Buschelman interpreted those photos.

18 Q. And what are those concerns?

19 A. My concern, and I am an expert in remote sensing.
20 That's been all my background has been in remote sensing.

21 I understand the corrections and things that have
22 to take place. I have downloaded these same photos from Earth
23 Explorer from the USGS website. These photos are what they
24 call stereo pairs. We saw earlier that there is overlap of
25 the photos when they take them. There is a purpose for that,

1 because those stereo pairs you're able to compare to each
2 other through various methods to remove the distortions that
3 always take place in aerial photography based on the terrain
4 and the camera angle.

5 And those photos, there was never anything in
6 there about any corrections they had done. There's wide
7 varying - varying terrain in both of those where you're
8 receiving much of the mountain and much of the valley. When
9 those photos were taken there was no description about the
10 datum plane on which the photo was referenced. That is
11 crucial to know if your measurements on the ground are right.

12 What happens is you have a datum plane and then
13 you have your real terrain, and when do you what's called
14 orthorectification by comparing your photo or your stereo pairs,
15 it removes those inherent distortions.

16 So what happens if you have low areas or high
17 areas when the energy from -- that is reflected back to the
18 photo on the airplane platform and is sensed by the photo, if
19 you don't remove those things you stretch things that they may
20 look bigger than they actually are on the ground; you may
21 actually make things look smaller. We don't know that. It
22 stretches and does all those things.

23 To be able to do those corrections, it takes
24 workstation with software with two different screens where you
25 can have each stereo pair on there. It's a very extensive

1 process to do.
 2 So what can be done is I have extreme --
 3 MR. TAGGART: I'm going to object. All the
 4 photos were put into the initial exchange. I didn't object
 5 till now. I mean, he had an opportunity to look at every
 6 photo we had in the initial exchange and didn't say anything
 7 in rebuttal to indicate what his opinions were about how those
 8 photographs were taken.
 9 So, I mean, now we're getting into opinions about
 10 what he should have said before. He could have corrected it.
 11 He could have tried to correct it if he thought there was
 12 problems with the way the photos looked when he reviewed them
 13 with the initial exchange.
 14 MS. PETERSON: That's exactly what is shown in
 15 his report that has just been excluded.
 16 HEARING OFFICER JOSEPH-TAYLOR: I don't have a
 17 problem with him testifying to the problems that he sees with
 18 the photographs. Overruled.
 19 THE WITNESS: So as I was saying, I have extreme
 20 concerns about how it was said that the photos were brought
 21 into AutoCAD and that there were measurements -- actually on
 22 the ground measurements determined by plotting various
 23 segments in AutoCAD to give very precise acreages. That is
 24 not the way that those photos should be used unless they've
 25 been orthorectified.

1 MS. PETERSON: Thank you. That's all the
 2 questions I have.
 3 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 4 Cross-examination?
 5 MR. KOLVET: I guess I'll start.
 6 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 7 CROSS-EXAMINATION
 8 BY MR. KOLVET:
 9 Q. Mr. Tibbitts, in your soils analysis report, the
 10 report I'm not exactly sure what it was, did you do any site
 11 investigation to verify what was on your various drafts and
 12 charts and drawings of the soil effects?
 13 A. No. I believe the agency that is granted that
 14 authority, the NRCS, was capable in doing that themselves.
 15 HEARING OFFICER JOSEPH-TAYLOR: Mr. Tibbitts,
 16 just answer the question.
 17 THE WITNESS: No, no.
 18 BY MR. KOLVET:
 19 Q. And so you were not on the Thompson Ranch to
 20 determine if the areas you outlined in your report did in fact
 21 coincide with the soil types that you listed there?
 22 A. No.
 23 Q. Is that correct? All that being said, what did
 24 that have to do with the amount of water historically
 25 appropriated on the Thompson Ranch, the Cox Ranch and the

1 It can't -- I did not do those corrections myself
 2 but I know taking them off the website and simply putting them
 3 on the map, they've been -- I need to clarify that the photos
 4 have been georectified, which means that they've been
 5 essentially been put in the right place, but it doesn't remove
 6 those distortions from the terrain and camera tilt until you
 7 do the other corrections.
 8 So unless that was done, the acreages that were
 9 calculated from aerial mapping or from image interpretation
 10 and AutoCAD, we don't know. They may be close, but we simply
 11 do not know that unless it's -- they've been corrected for
 12 those effects.
 13 BY MS. PETERSON:
 14 Q. And was there any testimony from the persons that
 15 had used those aerial photos that they had taken those
 16 measures?
 17 A. There wasn't any evidence on that. So that's why
 18 I say there's nothing -- if it was done it was not discussed
 19 that it was. When I do --
 20 HEARING OFFICER JOSEPH-TAYLOR: Just answer the
 21 question.
 22 THE WITNESS: It was not --
 23 HEARING OFFICER JOSEPH-TAYLOR: Or we're never
 24 going to get through today.
 25 THE WITNESS: It was not discussed.

1 Willow Ranch?
 2 A. I stepped through that in my report in the
 3 various limitations.
 4 Q. Those are natural limitations that you outlined;
 5 is that right?
 6 A. Yes.
 7 Q. What if over the course of a hundred years of use
 8 of water on property things would change on those properties,
 9 for example, fertilization, replanting of certain areas with
 10 Timothy red top as opposed to native grasses. There's
 11 evidence of that happening. Things like that, how would that
 12 effects the natural conditions that you described in your
 13 report?
 14 A. Yes, I did discuss, human management can change
 15 things quite a bit.
 16 Q. Do you know what human management was done on
 17 Thompson Ranch, Cox Ranch, or Willow Ranch subsequent to the
 18 appropriation of water?
 19 A. I don't have firsthand knowledge on that.
 20 Q. Did you look into or examine the amount of hay
 21 that may have been produced on these properties over the
 22 course of the various years?
 23 A. That was not the scope of my analysis.
 24 Q. Well, you put in your analysis the tonnage of
 25 crops of under certain conditions and those were all natural

1 conditions?
 2 MS. PETERSON: I object, because that was not the
 3 testimony. The testimony was that this is an NCRS report.
 4 MR. KOLVET: Well, and you included the NCRS
 5 report in your report, did you not?
 6 THE WITNESS: The NRCS report, yes.
 7 BY MR. KOLVET:
 8 Q. And one of the aspects of that report dealt with
 9 how much tonnage you could harvest from natural conditions?
 10 A. That is incorrect.
 11 Q. Well, you included in that there rabbit brush,
 12 greasewood, various grass types, shrub types in the total
 13 overall harvesting and the weight of those crops or those
 14 plants per acre, did you not?
 15 A. That was based on natural, but there was a
 16 cropping section based on land management that was also
 17 included, which is land managed intensive irrigation.
 18 Q. And that was for alfalfa only?
 19 A. No, that was also for grass, legume, hay.
 20 Q. And only in one soil type?
 21 A. That's correct.
 22 Q. Not in the other types?
 23 A. Not in the poor soils.
 24 Q. Do you dispute the contention by Mr. Venturacci
 25 that the pumping in the southern portion of Diamond Valley and

1 denuded within 50 miles of Eureka.
 2 Q. In 1860?
 3 A. In the 1860s and 1870s.
 4 Q. I'm talking 1859, 1869, any photographs in your
 5 collection that show that time frame?
 6 A. No.
 7 Q. Were you present when Mr. Thiel read an excerpt
 8 from a journal by Sir Richard Burton when he arrived in
 9 Diamond Springs in 1860?
 10 A. I heard that testimony. I can't remember exactly
 11 what the quote said.
 12 Q. Well, as I recall, it said something about how
 13 the spring was clear, good water and bubbling out of the
 14 ground?
 15 A. I remember something similar, yes.
 16 Q. But you have no idea what the tree situation was
 17 in the Diamond Valley in the 1860s?
 18 A. I do not. Just from records.
 19 Q. These pinyon-juniper that you've been describing,
 20 are they phreatophytic?
 21 A. No, they're not.
 22 Q. So their roots extend only into the shallow
 23 surface of the soil; is that right?
 24 A. They're typically on the foothills and the
 25 mountains.

1 up beside the east side of the valley has affected the springs
 2 on his property?
 3 A. That's not in the scope of my analysis.
 4 Q. So you have no opinion on that?
 5 HEARING OFFICER JOSEPH-TAYLOR: You would object
 6 if he did.
 7 MR. KOLVET: I would, and that's why I was
 8 asking.
 9 HEARING OFFICER JOSEPH-TAYLOR: So why ask him.
 10 MR. KOLVET: Good point. I will pass that
 11 question and go to the next one.
 12 BY MR. KOLVET:
 13 Q. One of the areas you testified to was related to
 14 the effects on a groundwater system from various things like
 15 climate change increase the tree growth, that type of thing;
 16 is that correct?
 17 A. I do not believe I spoke to climate change.
 18 Q. But you did have a considerable amount of
 19 testimony about the amount of trees that had encroached into
 20 the area?
 21 A. Yes.
 22 Q. Do you have any knowledge of in 1860, say, what
 23 the tree growth on the Diamond mountains looked like?
 24 A. The knowledge I have is from a published report
 25 from the historians of the time that states that they were

1 Q. And so they don't affect the deep flowing waters
 2 and the water table; is that right?
 3 A. Not directly.
 4 MR. KOLVET: That's all I got.
 5 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 6 Mr. Taggart.
 7 MR. TAGGART: Thanks.
 8 CROSS-EXAMINATION
 9 BY MR. TAGGART:
 10 Q. Good morning.
 11 A. Morning.
 12 Q. Make sure it's still morning. So is it -- is it
 13 that there's a million more trees now than there was in 1860;
 14 is that the understanding of this report that you talked
 15 about?
 16 A. No. There is --I don't know how many more trees
 17 in 1860. I know that active mining took place in the '60s,
 18 '70s, '80s in Eureka County and that's where the trees -- the
 19 use of the trees at the time was the carbonari who made the
 20 trees into charcoal and hauled the charcoal to Eureka to the
 21 smelters.
 22 Q. So is there a study that says how many more trees
 23 there today, the pinyon pines, pinyon junipers, how many more
 24 there are today than there was in 1860s?
 25 A. There are studies by Robin Tausch in Nevada that

1 do talk about the increases from historic times.
 2 HEARING OFFICER JOSEPH-TAYLOR: Spell Tausch for
 3 the court reporter.
 4 THE WITNESS: T-A-U-S-C-H.
 5 BY MR. TAGGART:
 6 Q. Third time. Is there a number, the difference?
 7 A. I can't tell you the year. I don't know about
 8 from the 1860s. I don't know that.
 9 Q. So if -- if there's is more trees drinking water
 10 then doesn't that mean we have to lower the perennial yield
 11 that's available in all the groundwater basins in that region
 12 because there's less water available because of the trees?
 13 A. No, I think we need to do land management to put
 14 the trees in the proper ecological state.
 15 Q. But if we don't, then we have -- if we don't go
 16 do what you're talking about, is that -- cutting down trees is
 17 that the --
 18 A. Cut them down and utilizing them in some economic
 19 way.
 20 Q. So you're talking go cut them down, make them
 21 stop drinking water, that's what your -- I don't know how you
 22 refer to it. But that's how would you do it?
 23 A. (Nodded head.)
 24 Q. If we don't do that -- I'm sorry, is than an
 25 audible yes?

1 But I just -- just to clear this up, as long as
 2 the State Engineer relies upon the survey map that was
 3 submitted by Boyack, are you comfortable with the -- with the
 4 acreages that are being discussed in this hearing as
 5 opposed --
 6 MS. PETERSON: I object. Compound for sure, but
 7 the first objection to the first question is that -- well, I
 8 need to hear the question again. But -- could I ask the court
 9 reporter to read the question back.
 10 MR. TAGGART: Let me just strike it and I'll ask
 11 it again.
 12 MS. PETERSON: Thank you.
 13 BY MR. TAGGART:
 14 Q. You had problems with the aerial photographs and
 15 you were concerned about acreages that were based on the
 16 aerial photographs. As long as State Engineer relies in the
 17 acreage on a surveyed map would you be comfortable?
 18 A. I have no issues with the acreages in the
 19 photographs because I do not know how the acreages were
 20 calculated from the photographs.
 21 My issue was using photographs in a way they're
 22 not intended to be used.
 23 HEARING OFFICER JOSEPH-TAYLOR: You're not
 24 understanding the question, Mr. Tibbitts, and it's far outside
 25 the scope of direct, Mr. Taggart. But he's trying to ask you

1 A. Yes.
 2 Q. If we don't do that then we have to lower the
 3 amount of water that's available for all of us humans and that
 4 means we would have to lower the perennial yield in each
 5 basin?
 6 A. I don't believe so.
 7 Q. Okay. You know, you were critical of the aerial
 8 photographs and you understand that there's a survey that's
 9 called the -- the proof map that was submitted in 1978 to the
 10 State Engineer by a water surveyor named Boyack and that the
 11 acreages for the claim will be based upon that survey map; do
 12 you understand that?
 13 A. From my understanding, the acreages on the
 14 applications at hand are the acreages from the Boyack map.
 15 Q. And do you have any issues with the
 16 qualifications of Boyack or the way that he prepared the map
 17 of cultivated lands on the Sadler Ranch?
 18 A. I doubt with the scope of the -- I'm not going to
 19 draw any assumption. I didn't know the man and I don't know
 20 much about him.
 21 Q. So you never analyzed whether his -- whether his
 22 map matched the 1974 aerial photo?
 23 A. No, I am not a water rights surveyor.
 24 Q. Well, you are a remote sensing expert so that's
 25 why I asked.

1 if you're comfortable with the map that was submitted with the
 2 proof.
 3 THE WITNESS: My understanding is he compounded
 4 that with the acreages -- with the aerial photography. He put
 5 them both together. I had issues with aerial photography and
 6 he's trying to say if I have issues with the photography would
 7 I have issues with the map and I don't see the link.
 8 HEARING OFFICER JOSEPH-TAYLOR: That's not now I
 9 heard the question. Move on, Mr. Taggart. He didn't testify
 10 to the map, whether he's comfortable with it or not.
 11 BY MR. TAGGART:
 12 Q. I'm gathering from your testimony based upon --
 13 oh, first of all, please strike that.
 14 The reports that you were talking about on soil,
 15 those aren't your expert reports. That's just information the
 16 NRCS generates; right?
 17 A. Yes. Based on the soil surveys.
 18 Q. You're not -- you didn't author those reports.
 19 You didn't write anything in those reports; right?
 20 A. No, I selected criteria that was put in the final
 21 report, the things I was concerned or interested about.
 22 Q. Okay. And the things that you highlighted,
 23 sounded to me like Sadler Ranch is full of a lot of really bad
 24 low yield soil; is that -- is that what you concluded?
 25 A. I can only conclude what the NRCS said in their

1 reports about the soil.
 2 Q. But the NRCS, they don't take samples on the
 3 properties where you can get these reports; right?
 4 A. They do take samples when they do soil surveys.
 5 I can't definitively say whether they did there.
 6 Q. Did you check whether they've done a soil sample
 7 on the Sadler Ranch?
 8 A. I didn't check their field data with their soil
 9 survey, no.
 10 Q. How many -- well, that's okay.
 11 Do you understand how the maps are generated?
 12 A. Somewhat.
 13 Q. Is the NRCS, when they say that something is
 14 incompatible or has a low compatibility for various uses, are
 15 they saying that Bicondoa-Dianeve soils cannot grow hay? Are
 16 they saying that, yes or no?
 17 A. They don't refer to that at all.
 18 Q. And haven't we seen -- well, haven't we heard
 19 testimony yesterday from Wids Bailey that, that hay was grown
 20 and cut in the lower Taft field which your diagram shows as
 21 Bicondoa-Dianeve soil?
 22 A. Yes.
 23 Q. So you can grow hay and cut hay in
 24 Bicondoa-Dianeve DN soil; right?
 25 A. It appears so, yes.

1 changes in ecological sites in Kobeh Valley; right?
 2 A. Yes.
 3 Q. And where were you when this was happening in
 4 northern Diamond Valley to Sadler Ranch? Where was Eureka
 5 County then?
 6 HEARING OFFICER JOSEPH-TAYLOR: Where were you?
 7 That didn't make sense.
 8 MR. TAGGART: I mean why didn't Eureka County
 9 make an issue of it when was it happening at Sadler Ranch.
 10 THE WITNESS: I've only been with Eureka County
 11 for five years. I guess -- I don't understand.
 12 BY MR. TAGGART:
 13 Q. Okay. Let me ask you about the protest. Do you
 14 have Exhibit -- I think you were asked about Exhibit Number 6.
 15 And you prepared this?
 16 A. I'm sorry, I don't -- is it the county's.
 17 MR. TAGGART: I'm sorry, you don't have it. It's
 18 State Engineer number 6.
 19 HEARING OFFICER JOSEPH-TAYLOR: Protest to what
 20 application?
 21 MR. TAGGART: To 81 -- I can give him my copy.
 22 MS. PETERSON: He has it. He just didn't know
 23 number what it was.
 24 BY MR. TAGGART:
 25 Q. Okay. The protest to application number 81719?

1 Q. The -- what was remarkable to me was the number
 2 of references that you made to the saturated nature of the
 3 soils in the area that I just referred to as the lower Taft
 4 field, for instance. Are you with me geographically?
 5 A. Yeah.
 6 Q. And -- and that must indicate that at one time
 7 there was a lot of water there; right?
 8 A. It indicates there is saturated soil.
 9 Q. Okay. And did you hear testimony that was given
 10 by, you know, Mr. Frazer or Dr. Yednock that they had dug down
 11 12 feet out there in the lower Taft field and hadn't got to
 12 water? Did you hear that testimony?
 13 A. I don't recall that, I'm sorry.
 14 Q. Let me just ask you to assume that that happened,
 15 I guess, for the purpose of my question. I'll represent that
 16 was the testimony. That would change, wouldn't it, the --
 17 that would be a, what did you call it, the transitional
 18 pathway of an ecological site as a result of water level
 19 drawdowns, wouldn't you say?
 20 A. The soils are no longer being subirrigated, I
 21 believe.
 22 Q. And that's because of a lower groundwater table;
 23 right?
 24 A. I don't know what it's because of.
 25 Q. Now, you heard the county is concerned with

1 A. Yes, I have that.
 2 Q. You prepared this?
 3 A. No, I did not prepare the protest, no.
 4 Q. Who prepared it?
 5 A. I believe it was prepared in concert with -- I
 6 believe legal counsel prepared the protest.
 7 Q. Okay. And your counsel asked to you read an
 8 order of the State Engineer and it talked about all parties be
 9 ready to come and present evidence about abandonment.
 10 Remember that?
 11 A. The interim order, yes.
 12 Q. Right. So I reviewed your protest here and it
 13 doesn't say anything about Eureka County and abandonment;
 14 right? That's not a protest ground in Eureka County?
 15 A. This was before the order.
 16 Q. Okay. So the only reason Eureka County is
 17 alleging abandonment then is because of that order of the
 18 State Engineer?
 19 A. I believe that that's part of it, because we
 20 wanted all the best information brought forward and felt we
 21 need to get any issues for State Engineer to consider.
 22 Q. And you were present during yesterday's
 23 testimony?
 24 A. I was.
 25 Q. Is it your responsibility as natural resource

1 manager to attend Eureka County commission meetings and then
 2 implement the direction of the County Commission?
 3 A. Yes.
 4 Q. And when -- were you present when the County
 5 Commission approved the filing of these protests?
 6 A. Yes.
 7 Q. And when you were -- and you saw the minutes that
 8 we read from yesterday?
 9 A. Yes.
 10 Q. Were those minutes accurate?
 11 A. I believe so, yes.
 12 Q. I didn't see anywhere in those minutes where it
 13 authorized Eureka County to allege abandonment of water within
 14 Eureka County. Do you recall that ever coming up specifically
 15 in a County Commission meeting?
 16 A. No.
 17 Q. Okay. You said that -- excuse me, you said that
 18 the protest was filed before order 1226 was issued?
 19 HEARING OFFICER JOSEPH-TAYLOR: No, he said the
 20 interim order.
 21 MR. TAGGART: No, I think before that.
 22 MS. PETERSON: It was before 1226.
 23 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 24 BY MR. TAGGART:
 25 Q. And so you indicated that the Protestants drafted

1 Q. What would that protest ground say about the
 2 priority of that application, or would it be that specific?
 3 A. It's not -- the form itself?
 4 Q. Right.
 5 A. Or the points?
 6 Q. If you don't understand my question I'll ask it
 7 again.
 8 A. Okay. Please ask it again.
 9 Q. What you just read, does it -- does it go into
 10 the detail of indicating to the State Engineer what priority
 11 those water rights should have if they were issued?
 12 MS. PETERSON: I'm just going to object to that
 13 only because the issue of priority of mitigation rights didn't
 14 come about until order 1226 was issued.
 15 When these applications were filed and this
 16 protest was filed the applications were for supplemental
 17 groundwater rights.
 18 MR. TAGGART: It doesn't matter. I'll strike it.
 19 It's not that important.
 20 BY MR. TAGGART:
 21 Q. When were you told that the county's position
 22 would be what you just stated?
 23 MS. PETERSON: Which statement?
 24 HEARING OFFICER JOSEPH-TAYLOR: The one he just
 25 read.

1 and my understanding was with an understanding that the law in
 2 place at the time was pre order 1226; is that a fair
 3 statement?
 4 A. I don't believe that that's what I testified to.
 5 Q. Okay. Let me ask the question -- let me ask the
 6 question differently, sir.
 7 Would it change in the way the protest was filed
 8 by Eureka County after order 1226 was filed? And I'm trying
 9 to understand why you pointed this out, and so is it because
 10 something would be different -- if the county had known that
 11 1226 was going to be approved by State Engineer would its
 12 protest have been different?
 13 A. Yes.
 14 Q. How?
 15 A. We asked that this application be issued subject
 16 to Eureka County's protest points and only to supplement the
 17 yet to be established decline in flow. For subsequent
 18 applications we asked that they be denied.
 19 Q. Okay. I -- you read that kind of fast. You
 20 would do that what?
 21 A. On application -- on the protest form for
 22 application 81729 and 81720 we asked on both that the
 23 application be issued subject to Eureka County's protest
 24 points and only to supplement the yet to be established
 25 decline in flow.

1 BY MR. TAGGART:
 2 Q. When were you told that is the county's position?
 3 A. I was not told that. As I mentioned earlier, we
 4 have an inclusive process between advisory boards and the
 5 County Commission to develop our policies and make changes as
 6 circumstances change. I was never told that the county's.
 7 Q. So there was a board meeting and at that board
 8 meeting there was a discussion, and based upon that
 9 discussion, this position that you just stated was decided to
 10 be the position of Eureka County?
 11 A. There was not a board meeting when that decision
 12 was made.
 13 Q. Where did it come from?
 14 A. My job as the natural resource manager is to work
 15 with those advisory boards and other county staff and legal
 16 counsel on drafting things and at the direction of the County
 17 Commissioners.
 18 Q. You have authority to make the statement you just
 19 made. That's my question. You have authority to make the
 20 statement you just made?
 21 MS. PETERSON: Which statement?
 22 HEARING OFFICER JOSEPH-TAYLOR: Yeah, I don't
 23 know which statement.
 24 MR. TAGGART: Oh, I'm sorry. The one about the
 25 protests would be filed if it had been filed after order 1263.

1 You had the authority to make that statement.
 2 You had been authorized by Eureka County?
 3 THE WITNESS: They never at a meeting authorized
 4 and told me, that's true.
 5 MR. TAGGART: Okay.
 6 BY MR. TAGGART:
 7 Q. You mentioned a 40-acre parcel within Sadler
 8 Ranch that's owned by someone else and you know that the ranch
 9 is about 4,000 acres; right?
 10 A. Yes.
 11 Q. And you haven't heard anything from that person
 12 specifically about a concern; right?
 13 A. No, I have not heard from them.
 14 Q. You said that what you haven't seen is an
 15 analysis in this hearing of the impacts of the grantee of
 16 these applications on other water rights?
 17 A. True.
 18 Q. Is that your testimony?
 19 A. Sorry, yes.
 20 Q. Should -- should that occur in every application
 21 that's filed for a change of use in southern Diamond Valley,
 22 that there's an analysis of the conflicts with Sadler --
 23 Sadler Ranch's water rights?
 24 A. I believe there needs to be a determination of
 25 the potential conflicts with existing water rights on every

1 to answer his question.
 2 THE WITNESS: It can't be answered a simple yes
 3 or no.
 4 HEARING OFFICER JOSEPH-TAYLOR: You going to
 5 leave it at that?
 6 BY MR. TAGGART:
 7 Q. And as a representative of Eureka County, it's
 8 your testimony that before any water rights are awarded for
 9 Sadler Ranch that this person with a potential claim, this
 10 40-acre person, their claim should be adjudicated and gone
 11 through the process that's so important that we have to take
 12 care of those potential conflicts before we can make right an
 13 injury with senior water rights?
 14 A. I think we need to know who is out there and what
 15 is their priority before granting a priority that may not in
 16 fact be senior.
 17 Q. Even though they haven't said anything?
 18 MR. TAGGART: All right. Nothing further.
 19 HEARING OFFICER JOSEPH-TAYLOR: I don't think he
 20 answered.
 21 MS. PETERSON: I don't think he wanted an answer,
 22 because you didn't ask.
 23 HEARING OFFICER JOSEPH-TAYLOR: Redirect.
 24 MS. PETERSON: I don't have any questions on
 25 redirect, but I do have exhibits to get in.

1 application.
 2 Q. Even if it's a senior right that's been taken
 3 away by the junior rights that -- that you want the analysis
 4 done for?
 5 MS. PETERSON: You know what, I'm going to
 6 object, because it's kind of getting into the legal issues of
 7 order 1226, because that specifically says that State Engineer
 8 will grant applications under the exemptions but they have to
 9 be granted in accordance with NRS chapters 533 and 534. And
 10 so if he is asking legal questions of this witness about the
 11 county's intent in filing its protests I would object to that.
 12 HEARING OFFICER JOSEPH-TAYLOR: That wasn't the
 13 question though. The question was do you think any analysis
 14 of conflict of existing rights need to be done really in every
 15 situation and I heard him say yes. So the objection is
 16 overruled.
 17 BY MR. TAGGART:
 18 Q. And I think your testimony is even when a -- a
 19 senior right is being mitigated from the impacts of the junior
 20 rights, an analysis should be done of whether that junior
 21 right is being conflicted with. Is that your position?
 22 A. In my testimony? Sorry.
 23 Q. Is that your position?
 24 A. My -- can I discuss my position?
 25 HEARING OFFICER JOSEPH-TAYLOR: No, you just have

1 HEARING OFFICER JOSEPH-TAYLOR: Right.
 2 MS. PETERSON: And I assume that, because they're
 3 either State Engineer's records or county records, that there
 4 would be no issues with stipulating to the admission of them.
 5 HEARING OFFICER JOSEPH-TAYLOR: Let's go through
 6 them.
 7 MS. PETERSON: But I would like Mr. Tibbitts stay
 8 up there.
 9 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 10 MS. PETERSON: In case there are issues with them
 11 coming in.
 12 HEARING OFFICER JOSEPH-TAYLOR: Let's get 320 and
 13 321 first, are you moving to admit those?
 14 MS. PETERSON: 319, 320 and 321.
 15 HEARING OFFICER JOSEPH-TAYLOR: 319 is already
 16 in.
 17 MS. PETERSON: Yes.
 18 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 19 the admission of 320 and 321?
 20 MR. TAGGART: Just a second.
 21 MR. KOLVET: Those are the soil reports?
 22 MS. PETERSON: Yes.
 23 MR. KOLVET: No objection.
 24 MR. TAGGART: No objection.
 25 HEARING OFFICER JOSEPH-TAYLOR: They will be

1 admitted.
 2 (Exhibits 320, 321 received.)
 3 HEARING OFFICER JOSEPH-TAYLOR: Now,
 4 Ms. Peterson.
 5 MS. PETERSON: I don't think I moved for the
 6 admission of 313, the CV of Mr. Tibbitts.
 7 HEARING OFFICER JOSEPH-TAYLOR: No, we took care
 8 of it.
 9 MS. PETERSON: Okay. Exhibit 314, 315 and 316
 10 are the transcripts from the 1982 curtailment hearing, and
 11 then the transcript from the January 23rd, 2013, Diamond
 12 Valley designation order hearing.
 13 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 14 314, 15 or 16?
 15 MR. KOLVET: No objection.
 16 MR. TAGGART: No objection.
 17 HEARING OFFICER JOSEPH-TAYLOR: They'll be
 18 admitted.
 19 (Exhibit 314, 315, 316 admitted into
 20 evidence.)
 21 MS. PETERSON: Thank you. And then the next
 22 exhibits -- is 322 in already?
 23 HEARING OFFICER JOSEPH-TAYLOR: Yes.
 24 MS. PETERSON: Okay. The next Exhibit would be
 25 323 and 324. 324 is in the records of Mr. Tibbitts in his

1 MS. PETERSON: Okay. 328 you denied. That's the
 2 Landsat report. 333, 334, 335 are exhibits from the
 3 curtailment hearing.
 4 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 5 MR. TAGGART: Can I have a second on that one?
 6 MR. KOLVET: I just need to look at them really
 7 quickly.
 8 MR. TAGGART: Have those been discussed?
 9 MS. PETERSON: No, but I can have him discuss
 10 them.
 11 MR. TAGGART: Okay. Let me --
 12 HEARING OFFICER JOSEPH-TAYLOR: They're records
 13 of our office.
 14 MR. KOLVET: No, I understand, but I just wanted
 15 to make sure what they were.
 16 MR. TAGGART: Do you have those handy? I just
 17 can't --
 18 MR. KOLVET: Here they are.
 19 MR. TAGGART: Oh, it's the shot hole?
 20 MR. KOLVET: Yes.
 21 MR. TAGGART: Yeah. No objection.
 22 MR. KOLVET: No objection.
 23 HEARING OFFICER JOSEPH-TAYLOR: That was 333, 34,
 24 and 35? Karen?
 25 MS. PETERSON: 33 and 34 are the shot hole data,

1 office, and Exhibit 323 is from the official records of the
 2 State Engineer.
 3 HEARING OFFICER JOSEPH-TAYLOR: 323, any
 4 objection?
 5 MR. TAGGART: Well, it wasn't discussed but it is
 6 in your records.
 7 HEARING OFFICER JOSEPH-TAYLOR: It has been.
 8 MS. PETERSON: Now, I did ask some questions on
 9 cross-examination to somebody.
 10 MR. TAGGART: This is the petition.
 11 HEARING OFFICER JOSEPH-TAYLOR: No, this is the
 12 Morros letter 1982 that said I can't --
 13 MR. TAGGART: Right. I'm sorry. No objection.
 14 MR. KOLVET: No objection.
 15 HEARING OFFICER JOSEPH-TAYLOR: 323 will be
 16 admitted.
 17 (Exhibit 323 admitted into evidence.)
 18 HEARING OFFICER JOSEPH-TAYLOR: 324.
 19 MR. TAGGART: No objection. Well, it's just a
 20 newspaper article.
 21 HEARING OFFICER JOSEPH-TAYLOR: Okay. 324 will
 22 be admitted.
 23 (Exhibit 324 admitted into evidence.)
 24 MR. TAGGART: Do you have an objection?
 25 MR. KOLVET: I don't have an objection.

1 and 35 is the letter that the irrigators sent to the State
 2 Engineer.
 3 HEARING OFFICER JOSEPH-TAYLOR: I'm just asking
 4 if I have the numbers right.
 5 MS. PETERSON: Oh, I'm sorry. Yes.
 6 HEARING OFFICER JOSEPH-TAYLOR: 333, 334 and 335
 7 will be admitted.
 8 (Exhibit 333, 334, 335 admitted.)
 9 HEARING OFFICER JOSEPH-TAYLOR: Oh, was 332 also
 10 one?
 11 MS. PETERSON: I thought that was in already.
 12 HEARING OFFICER JOSEPH-TAYLOR: I don't show it
 13 as.
 14 MS. PETERSON: Okay. So I move for the admission
 15 of 332.
 16 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 17 MR. TAGGART: No.
 18 HEARING OFFICER JOSEPH-TAYLOR: 332 will be
 19 admitted.
 20 (Exhibit 332 admitted into evidence.)
 21 MS. PETERSON: And then I know we said we would
 22 takes administrative notice of that deposition of Reinhold
 23 Sadler that was attached to the proof through V 01114 and
 24 1115. But I get concerned sometimes about that actually being
 25 included in the record if for some reason there is an appeal.

1 HEARING OFFICER JOSEPH-TAYLOR: Bring copies
2 after lunch.
3 MS. PETERSON: Okay. I have copies.
4 HEARING OFFICER JOSEPH-TAYLOR: Okay. Let's mark
5 it.
6 MR. TAGGART: Where does it go?
7 HEARING OFFICER JOSEPH-TAYLOR: 340. Marking as
8 Exhibit 340 deposition of Reinhold, R-E-I-N-H-O-L-D. Here it
9 actually spells it Sandler, S-A-N-D-L-E-R. I think it was
10 supposed to be Sadler. We'll mark that as Exhibit 340.
11 (Exhibit 340 marked for
12 identification.)
13 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
14 MR. TAGGART: No.
15 MR. KOLVET: No objection.
16 HEARING OFFICER JOSEPH-TAYLOR: It will be
17 admitted.
18 (Exhibit 340 received.)
19 MS. PETERSON: I think that's it for right now
20 but I would like to check during the break just to make there
21 aren't any out there for Eureka County.
22 HEARING OFFICER JOSEPH-TAYLOR: Actually I'm
23 going to let all these people go to lunch and we're going to
24 check it.
25 MS. PETERSON: Okay. Thank you.

1 Q. Did your Exhibit address the photographic -- the
2 photos themselves or how they were interpreted by the
3 Applicant?
4 A. The only component of that they addressed was
5 whether it was surface supplied or other influences that
6 showed all those ponds and puddles and things.
7 HEARING OFFICER JOSEPH-TAYLOR: I don't think
8 he --
9 THE WITNESS: All right. Sorry.
10 HEARING OFFICER JOSEPH-TAYLOR: Correct.
11 THE WITNESS: No, I did not address the photos
12 directly.
13 MR. FELLING: Okay. That's my only question.
14 Thank you.
15 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
16 Mr. King?
17 BY THE STATE ENGINEER:
18 Q. A couple. Mr. Tibbitts, I have really no
19 questions on the NRCS soils report, but I -- I'm just
20 interested, perchance did you look at the soil types
21 classification in the main farm area just to see what soil
22 classification it was and if it was good for farming?
23 A. The main part, the upper graft?
24 Q. Yes.
25 A. At both ranches?

1 HEARING OFFICER JOSEPH-TAYLOR: Questions of
2 staff?
3 BY MR. FELLING:
4 Q. Yes. Good morning. I just -- I just have one
5 set of questions just to clarify the record.
6 You gave testimony regarding the Applicants use
7 of photographs, stereo photographs and explained that you have
8 issues with those photographs. And then Ms. Peterson said
9 that you actually had documentation of that rebuttal testimony
10 in your excluded Exhibit 328; do you recall that?
11 Ms. Peterson said that you actually addressed
12 that specific thing in your Exhibit which was excluded. So
13 I'll just ask you this: in your Exhibit that was excluded did
14 you address any of the photographic evidence presented by the
15 Applicant?
16 A. I addressed the corrections necessary to make
17 correct estimates.
18 Q. Of stereo photos?
19 A. No, I guess I'm not clear. No, my report didn't
20 speak specifically to the -- specifically to the photographs,
21 but it was done to address some of the lands that showed in
22 the photographs that may have been influenced by
23 subirrigation.
24 Q. Yeah. Just so we're clear.
25 A. Okay.

1 Q. I'm actually talking about the main farm area,
2 I'm sorry.
3 HEARING OFFICER JOSEPH-TAYLOR: Which farm?
4 THE STATE ENGINEER: Just on the southern area
5 I'm not talking about either Thompson or Sadler. I'm talking
6 about the main farm area. What it that classification of
7 soil?
8 THE WITNESS: There's different classifications
9 depending on the inclusions of soil and things, so generally
10 speaking -- just general?
11 HEARING OFFICER JOSEPH-TAYLOR: Yes.
12 THE WITNESS: As a whole? There are in the -- I
13 didn't do it for this hearing, but I've done that. In Diamond
14 Valley soils there -- in limitations there are limitations for
15 cited for some of those soils. So all soils have inherently
16 some type of limitation.
17 And yes, I've examined it in Diamond Valley.
18 There's so many different types but typically they're
19 classified as suitable for cropping.
20 BY THE STATE ENGINEER:
21 Q. I guess the short question would have been
22 generally speaking, is that soil in that main farm area a
23 better soil for growing than the Bicondoa-Dianeve?
24 A. Without -- again, I'm not a soil scientist so I'm
25 not comfortable --

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1 HEARING OFFICER JOSEPH-TAYLOR: Correct --
 2 THE WITNESS: I --
 3 THE STATE ENGINEER: That's good enough. Thank
 4 you.
 5 BY THE STATE ENGINEER:
 6 Q. And you had real interesting testimony about the
 7 studies that have been done on the pinyon-juniper and how much
 8 water they perhaps drink but I never heard a number. I
 9 understand there's a range, but again, for my own education,
 10 can you give me a range?
 11 A. I would happy to provide you with the thesis
 12 itself which I have a copy of.
 13 Q. Is it in an Exhibit?
 14 A. No, it's not, that's why I didn't reference it in
 15 my testimony.
 16 Q. Yeah.
 17 A. That's why I didn't provide a value because it
 18 wasn't in an Exhibit. And I do have that with me.
 19 Q. Don't worry about it now.
 20 A. I do have it and I have the draft right here. If
 21 you want me to speak to it I can.
 22 Q. Sure.
 23 A. Okay. So in -- there's a range again, so there's
 24 valley, trees, and upland trees. Valley trees in both a wet
 25 year and a dry year use more water. And it's based on what

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1 they write up in the thesis is there's a lot of influences in
 2 that. It doesn't kick in, this photosynthesis, until later in
 3 the day and those types of things.
 4 So --
 5 THE STATE ENGINEER: Okay.
 6 HEARING OFFICER JOSEPH-TAYLOR: I really don't
 7 want you to doing this on the record. I'm not comfortable
 8 with it. I'm sorry, Mr. King.
 9 THE STATE ENGINEER: No, that's -- that's --
 10 THE WITNESS: The document's available through
 11 the University of Nevada. It's a published thesis.
 12 THE STATE ENGINEER: Thank you.
 13 MR. FELLING: Who is the author?
 14 THE WITNESS: The author is Amira, A-M-I-R-A, C.
 15 Dittrich, D-I-T-T-R-I-C-H. June 2013.
 16 HEARING OFFICER JOSEPH-TAYLOR: Thank you,
 17 Mr. Tibbitts, you may be excused. We'll be in recess till
 18 1:15. If counsel can stay for a --
 19 Oh, I'm sorry. Did you have any questions,
 20 Steve?
 21 MR. WALMSLEY: No. Mr. Felling and Mr. King
 22 pretty much covered anything that I would have asked.
 23 HEARING OFFICER JOSEPH-TAYLOR: Thank you. If
 24 you guys could just stay for a second we'll quickly go through
 25 the Exhibit list once we get everybody out for lunch.

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1 (Lunch recess.)
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1 CARSON CITY, NEVADA, FRIDAY, NOVEMBER 22, 2013, P.M. SESSION
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 3
 4 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 5 record. Next witness, please, Ms. Peterson.
 6 MS. PETERSON: Ms. Ure is getting the next
 7 witnesses. The witness is we were proposing an expert panel
 8 of Dale Bugenig and Mary Tumbusch.
 9 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 10 MS. PETERSON: Eureka County's witness is Dale,
 11 and Mary Tumbusch is Etcheverry's witness.
 12 HEARING OFFICER JOSEPH-TAYLOR: Um-hum.
 13 MS. PETERSON: So we thought to speed things
 14 along we'd try to -- they did a joint report.
 15 HEARING OFFICER JOSEPH-TAYLOR: Right.
 16 MS. PETERSON: And so we thought we would present
 17 them as a panel and Ms. Ure would take the lead on the direct
 18 examination.
 19 HEARING OFFICER JOSEPH-TAYLOR: All right. Come
 20 forward and be sworn. Dale has been here before. Mary, is
 21 this your first rodeo?
 22 MS. TUMBUSCH: Well, I have been here to report
 23 in front of the panel on the report, but I don't think --
 24 HEARING OFFICER JOSEPH-TAYLOR: I don't think
 25 I've ever had you in a hearing before. Please be sworn.

1 DALE C. BUGENIG AND MARY L. TUMBUSCH
 2 called as witnesses in this matter,
 3 having been first duly sworn,
 4 testified as follows:
 5 MR. BUGENIG: Good afternoon, Counselor.
 6 MS. URE: Good afternoon.
 7 MR. TUMBUSCH: Good afternoon.
 8 MS. URE: So just to lay a little bit of
 9 groundwork, I have a few questions that I would like to ask
 10 Ms. Tumbusch that are a little bit separate from the panel and
 11 I don't know if Ms. Peterson has a few questions after the
 12 panel presentation by Dale, but we're trying to do it all as
 13 one in an effort to expedite the process.
 14 HEARING OFFICER JOSEPH-TAYLOR: I appreciate it.
 15 Let me just ask you, are you going to be qualifying
 16 Mr. Bugenig as an expert?
 17 MS. URE: Yes, ma'am.
 18 HEARING OFFICER JOSEPH-TAYLOR: In what?
 19 MS. URE: As a hydrogeologist and in groundwater
 20 modeling.
 21 HEARING OFFICER JOSEPH-TAYLOR: He has been
 22 qualified here at least three -- four times in hydrogeology
 23 and once in groundwater modeling already. Does anybody have
 24 any objection to Mr. Bugenig being qualified?
 25 MR. TAGGART: No, I saw his resume. It's pretty

1 College in geographic information systems.
 2 Q. Did you have any additional training that relates
 3 to hydrology, or can I call it ET for short?
 4 A. Yes, through the USGS I have taken a NEPA 1900-01
 5 course on advanced water rights. Actually Mr. Buschelman was
 6 one of my teachers in that. Nevada water rights, open path A
 7 covariant systems, principles of resource management, water
 8 quality principles, groundwater principles, wetland plant
 9 identification, basic hydraulic principals, and probability
 10 and statistics.
 11 Q. And can you please describe your employment and
 12 emphasize some of the projects you've done in your various
 13 employment.
 14 A. I have worked for the Nevada water science
 15 center, the US Geological Survey for 22 years. I started in
 16 1988 and left there in 2010. I've been the project lead --
 17 chief project lead for the Diamond Valley -- Diamond Valley
 18 regional flow system study for the USGS from 2004 to 2010.
 19 And that was -- served as a project chief for the
 20 whole hydrologic investigation of the Diamond Valley flow
 21 system. And that included the collection -- actually the --
 22 developing the work plan, budget requirements, collection,
 23 interpretation, analysis, and an evaluation of all the
 24 hydrologic data that we collected for USGS.
 25 And a report came out of that which is -- which

1 extensive.
 2 MR. KOLVET: No.
 3 HEARING OFFICER JOSEPH-TAYLOR: Then we'll just
 4 save time on that.
 5 MS. URE: Thank you.
 6 HEARING OFFICER JOSEPH-TAYLOR: You'll be so
 7 qualified as an expert in hydrogeology and ground water
 8 modeling, Mr. Bugenig.
 9 MS. URE: And then we will be qualifying
 10 Ms. Tumbusch in hydrology with an emphasis in
 11 evapotranspiration.
 12 HEARING OFFICER JOSEPH-TAYLOR: Actually you're
 13 going to have to do some foundation.
 14 MS. URE: Yeah.
 15 HEARING OFFICER JOSEPH-TAYLOR: Okay. Thank you.
 16 DIRECT EXAMINATION
 17 BY MS. URE:
 18 Q. Ms. Tumbusch, could you turn to Exhibit 401,
 19 please. Is this your resume?
 20 (Answers by Ms. Tumbusch)
 21 A. Yes, it is.
 22 Q. Can you please describe your education?
 23 A. I have a Bachelor's Degree 1986 in -- from
 24 University of Nevada Reno in range management and minor soils.
 25 I also have an associates degree from 2004 from Western Nevada

1 is an Exhibit now. The scientific investigation hydrologic
 2 framework and groundwater basin filter project in the Diamond
 3 Valley flow system, 2006-5249, SRI scientific investigations
 4 report for the USGS.
 5 Also I was project chief of the Lake Tahoe
 6 groundwater basin inventory from 2007 to 2009 and that was
 7 pretty much developing a standardized geospatial data set for
 8 the whole Lake Tahoe basin for the Forest Service through the
 9 USGS.
 10 I've been the hydrology project chief and task
 11 leader for the Great Basin multidisciplinary information for
 12 adaptive management project from 2005 to 2008, and that was to
 13 collect, document, and make common data sets available for
 14 analysis of sage grass habitat. And that was working with the
 15 BLM on the Owyhee uplands of the Great Basin.
 16 Also team leader in collaboration with University
 17 of Nevada program in ecology evolution and conservation
 18 biology to determine how climate change has an effect on the
 19 American pika habitat in the Great Basin. And I was lead
 20 hydrologist on that as well.
 21 Also been project chief for National Atmospheric
 22 Deposition Program for their participation gauge comparison
 23 studies for the United States, and that was from 2003 to 2005.
 24 And I also have worked on various projects as on-going project
 25 support for the northern Nevada hydrologic study section

1 including evapotranspiration studies, GIS support, geochemical
 2 analysis, field evaluation, identification and mapping of
 3 plant communities and their distribution, development of
 4 groundwater networks and soil analysis.
 5 Also I have a year --
 6 HEARING OFFICER JOSEPH-TAYLOR: Just hold on one
 7 second. I'm going to try to move this along. Is there going
 8 to be any objection to qualifying her as an expert in
 9 hydrogeology with an emphasis --
 10 THE WITNESS: Hydrology.
 11 HEARING OFFICER JOSEPH-TAYLOR: Hydrology, I'm
 12 sorry. I just put hydro down. With an emphasis in ET.
 13 MR. TAGGART: I don't object, but that that's not
 14 water rights; right?
 15 HEARING OFFICER JOSEPH-TAYLOR: That's not water
 16 rights.
 17 MR. TAGGART: Okay.
 18 HEARING OFFICER JOSEPH-TAYLOR: Any objection,
 19 Mr. Kolvet?
 20 MR. KOLVET: No.
 21 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 22 You'll be so qualified.
 23 MS. TUMBUSCH: Thank you.
 24 BY MS. URE:
 25 Q. Ms. Tumbusch, are you here today on behalf of the

1 please.
 2 (Answers by Mr. Bugenig)
 3 A. Complies.
 4 Q. Can you describe the slide and its purpose?
 5 A. Well, this is just -- we've seen something like
 6 this several times, I think. This is, just for reference,
 7 Diamond Valley hydrographic area was 153, some general
 8 features. Bear with me because I have tremors that I got from
 9 my grandfather and as I get older they get worse. So if you
 10 see this dancing that's the reason.
 11 This is the Diamond Valley hydrographic basin.
 12 This is the air. You can see the center pivots, the round
 13 circles, irrigation center pivots, for reference, playa. And
 14 then we're going to be talking about Sadler Ranch LLC and
 15 Daniel Venturacci's property and we coded them in yellow just
 16 to make them stand out.
 17 Q. Okay. Turning to the next slide.
 18 A. Well, we've all been sitting here a long time
 19 this week and there's been a lot of interesting information
 20 provided, and so our thought was rather than walk through our
 21 report page by page by page ad nauseam we decided to address
 22 what I call themes, for want of a better term.
 23 And so we're going to address and just talk a
 24 very little bit about Diamond Valley water level declines,
 25 estimates of historical spring discharge. We're going to talk

1 Etcheverry Family Trust, the Diamond Cattle Company and Ken
 2 Benson?
 3 A. Yes.
 4 Q. Did they file protests in this matter?
 5 A. Yes, they have.
 6 Q. And do you know the reasons on those protests?
 7 A. My Protestants were interested in protecting
 8 their water rights. They are both holders, interest in both
 9 vested claims and certificated water rights.
 10 Q. Okay. I would like now to move into a general
 11 presentation. I did have that as an Exhibit. It's
 12 Exhibit 327. However, over the course of the week we've tried
 13 to pare that down a bit so I have an updated presentation to
 14 present. It does have all the Exhibit numbers for each slide
 15 on it. So with that, I'd like to, you know, I guess add it as
 16 an Exhibit just to replace it out.
 17 HEARING OFFICER JOSEPH-TAYLOR: Let's be off the
 18 record.
 19 (Recess.)
 20 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 21 record. I've just marked as Exhibit 440 the Bugenig-Tumbusch
 22 PowerPoint. Please proceed.
 23 DIRECT EXAMINATION
 24 BY MS. URE:
 25 Q. Okay, Mr. Bugenig, can you turn to the next slide

1 a little bit about the groundwater discharge areas because
 2 these applications are in groundwater discharge areas and I
 3 think the discussion of these discharge areas is fairly
 4 important.
 5 And then potential other influences, and by that
 6 I mean something -- is there anything else happening out in
 7 eastern Nevada or in the Diamond Valley area that might have
 8 an influence on the spring flows. It doesn't mean they are,
 9 but I just thought that in the interest -- I thought maybe
 10 State Engineer would be interested to see if we think maybe
 11 there is something else out there. We didn't do extensive
 12 analysis but, you know, in some instances we just threw out
 13 ideas that maybe are worth considering.
 14 MS. URE: Mr. Bugenig and Ms. Tumbusch, did you
 15 guys prepare reports in this case?
 16 MS. TUMBUSCH: Yes.
 17 MR. BUGENIG: Yes. Actually two reports.
 18 MS. URE: And are those Exhibit 302 and 326?
 19 MS. TUMBUSCH: Correct.
 20 MS. URE: Did you have an errata sheet prepared
 21 to fix some of your typos?
 22 MR. BUGENIG: Yes, ma'am.
 23 MS. URE: I'm going to hand that to everyone.
 24 HEARING OFFICER JOSEPH-TAYLOR: We need one more.
 25 MS. URE: Okay. In the interest of time I'm not

1 going to go through all of these edits but I would like it to
 2 be added to the back of Exhibit 302 and 326 when we get to
 3 admitting them.
 4 HEARING OFFICER JOSEPH-TAYLOR: Go ahead.
 5 BY MS. URE:
 6 Q. Now, Ms. Tumbusch, turning to the next slide.
 7 (Answers By Ms. Tumbusch)
 8 A. Okay. I am going to read the slide for the court
 9 reporter so it gets in the record, but we have the four
 10 conclusions that we've come up with for each of the different
 11 categories that we had in the previous slide.
 12 So conclusion number 1, exploitation of the
 13 groundwater resources in Diamond Valley resulted in a
 14 widespread decline in water levels in the basin as well as the
 15 likely reduction in or cessation of the flow of some springs
 16 within the groundwater discharge areas mapped by the United
 17 States Geological Survey in the northern half of the valley.
 18 And I think most people would agree that the
 19 Diamond Valley water levels are declining.
 20 Q. All right. Let me interject real quick. Are the
 21 conclusions that you are presenting throughout this
 22 presentation from your expert reports at exhibits 302 and 326?
 23 MS. TUMBUSCH: Correct.
 24 MR. BUGENIG: Yes.
 25 ///

1 the groundwater contour intervals that were plotted from
 2 appendix 6 of that report 312.
 3 I selected wells on the -- I did this report just
 4 to show the area of where the again the concentrated pumping
 5 is in that center of the southern part of the valley and
 6 radiating out.
 7 The solid lines here, what we're inferring as the
 8 water level contours -- and it's hard to see on this slide,
 9 but the water level gradients, the arrows that show what the
 10 direction of flow is for the groundwater, are shown as arrows.
 11 They travel perpendicular to the groundwater contour lines.
 12 What I wanted to point out here is the areas of
 13 the dotted disconnect here, not the solid lines that represent
 14 that, the area where water levels are -- water level gradients
 15 are flowing. And to me, you know, that's representative of
 16 uncertainty of what is happening in those areas because of
 17 lack of data or the -- not enough data to make a statement on
 18 that.
 19 I wanted to show that from the cone of depression
 20 that has been developing and radiating outwards as of 2005
 21 when this was published. And the line pretty much stops here.
 22 This is the Pony Express Road here. And I'm shaking as well,
 23 so excuse me, I'm nervous.
 24 Q. Ms. Tumbusch --
 25 A. Yes.

1 BY MS. URE:
 2 Q. Okay continue.
 3 (Answers By Ms. Tumbusch)
 4 A. Thank you. This slide is from Exhibit 312 and
 5 that's from the Tumbusch and Plume report for the USGS SIR
 6 2006-5249. And we've seen this slide a few times, I believe,
 7 and it's the water level declines in Diamond Valley from 1960
 8 to 2005.
 9 And just I want to reiterate, this is the area
 10 that has the most declines in the basin and radiating outward
 11 from that point. This is where the concentrated pumping is
 12 from the center pivots.
 13 Q. Ms. Tumbusch, when you're describing things on
 14 the Exhibit can you tell us what this is.
 15 A. I'm sorry.
 16 Q. For the record.
 17 A. Okay. So this slide -- this figure 2 is showing
 18 the water level declines in Diamond Valley and the
 19 concentrated area of pumping is approximately in the center of
 20 the southern Diamond Valley sub basin and with the greatest
 21 declines happening in the center of that.
 22 Yeah, the next slide.
 23 This is also from Tumbusch and Plume. This is
 24 plate 1 and we've seen this before as well. This -- this is
 25 illustrating the direction of groundwater flow inferred from

1 Q. When you say "this" can you please describe --
 2 A. Okay.
 3 Q. -- on the map --
 4 A. Okay.
 5 Q. -- where you're at?
 6 A. The Pony Express Road is the road in the center
 7 of the valley between the north Diamond Valley area and the
 8 southern Diamond Valley area. And what I wanted to point out
 9 is that I found in my investigations that the cone of
 10 depression is kind of divided in -- the cone of depression is
 11 in the southern part of the basin, whereas in the northern
 12 part of the basin the groundwater flow is still in the
 13 direction of the playa where pre -- predevelopment from
 14 Harrill's report, the direction of the groundwater flow
 15 gradients, have been to the playa from the south to the north
 16 of Diamond Valley.
 17 I also wanted to show the lithology here, because
 18 we talked a lot about the alluvium and pumping from the
 19 alluvium. And just to show you how extensive that alluvium
 20 area is, that's in the yellow throughout the basin.
 21 Also I want to point out that -- that the
 22 uncertainty, and if we -- if we look at where approximately
 23 the Pony Express Road comes across through the center of the
 24 valley, Thompson Springs would be approximately here and then
 25 Sadler Ranch I believe is up in this area.

1 Q. And can you describe "here"?

2 A. Okay. Sorry. The northern part of Diamond
3 Valley right at the -- the southern end of northern --
4 northeast Diamond Valley, I'm sorry -- northern, the -- in the
5 northern part of Diamond Valley in the southeast corner is
6 where Thompson Ranch Springs -- the springs are, the spring
7 complexes, as they've been called.

8 Now, the Moyle farm, and Mr. Moyle testified
9 yesterday, the Moyle farm is right in here with the wells.
10 Not all of his wells are shown on this map.

11 HEARING OFFICER JOSEPH-TAYLOR: So, Ms. Tumbusch,
12 for the record.

13 THE WITNESS: Um-hum.

14 HEARING OFFICER JOSEPH-TAYLOR: Between the two
15 major circles on the Exhibit.

16 THE WITNESS: Um-hum.

17 HEARING OFFICER JOSEPH-TAYLOR: Is the Pony
18 Express Road.

19 THE WITNESS: Correct.

20 HEARING OFFICER JOSEPH-TAYLOR: And the Moyle
21 wells are to the southeast of the area you -- south of the
22 Pony Express Road?

23 THE WITNESS: Correct.

24 HEARING OFFICER JOSEPH-TAYLOR: Thank you.

25 THE WITNESS: Southeast. Looking at the water

1 on that, 182 and -- 181 and 182 which are right below the
2 wells I just stated, and that is in that Moyle complex.

3 BY MS. URE:

4 Q. Ms. Tumbusch, are the numbers 182, for instance,
5 is that on these maps?

6 A. This is on this map and this is from appendix 2.

7 Q. Okay.

8 A. Of the raw data --

9 HEARING OFFICER JOSEPH-TAYLOR: Hold on. You're
10 talking over each other.

11 Q. Sorry.

12 HEARING OFFICER JOSEPH-TAYLOR: Take a deep
13 breath.

14 WITNESS TUMBUSCH: Okay.

15 HEARING OFFICER JOSEPH-TAYLOR: And watch your
16 pointer.

17 WITNESS TUMBUSCH: Oh, I'm going all over the
18 place. Okay.

19 BY MS. URE:

20 Q. So if we were to go back and look at the actual
21 Exhibit map we could relate when you're discussing about
22 different well numbers that are on this map?

23 A. Correct. In appendix 2.

24 Q. Thank you.

25 A. Exhibit 312. It prompted me to go back and look

1 level, the data for the USGS -- I worked there till 2010 and
2 in charge of the study I collected all the water level
3 measurements for the study from 2004 to 2010. What has been
4 published is water level data till 2005.

5 So I looked up -- was looking at the data and
6 Mr. Katzer had testified that well 177, which is approximately
7 in the northeastern half of the southern part of Diamond
8 Valley in the Moyle -- Moyle farms area there. He testified
9 this well is at township north 23, range east 54, section 8 CD
10 CD, that that water level has declined about 40 to 50 feet, he
11 testified.

12 Well, looking back at the data that has been
13 published and peer reviewed, that the measurements are
14 really -- there's a real large gap in the measurements. They
15 go from -- there's two measurements on most of these wells
16 from approximately 1964 and one in 1968, and then they
17 continue on in 2004.

18 So I reported that the water levels were
19 declining in the area. But what I want to know is in 2004 and
20 2005 I went back and looked at those measurements, and Mr. Jim
21 Moyle that testified yesterday was correct, the water level is
22 static in. In 2004 it was 50 feet; 2005 it was 50 feet.

23 So that led me to kind of go look a little bit
24 more. And this is approximately six miles south of the
25 Thompson Springs area. So I looked at a couple of more wells

1 at a couple more of those measurements, because the same
2 situation where, for example, in -- remember well number 181
3 in -- south of the well I just described, that's in
4 township 22 north, 54 east, well number 288 AA CC. There was
5 a measurement in 1961. So going on, the next measurement is
6 2004 is at 76 feet. The measurement in 2005 was 74 feet. So
7 that was a 2-foot increase in the water level at that place at
8 this point.

9 Going on and looking at a couple of more, in 182
10 is right next to number 181, and that's the well at
11 township 22 north, 54 east, 28 CA DD. In 2004 there was an
12 80-foot water level measurement. 2005 -- I mean, 2005 was a
13 79-foot water level measurement.

14 As well looked at the well right next to the one
15 number 177 that Mr. Katzer mentioned, and that's number 176,
16 township 22 north, 54 east, 7 DD CD. One measurement was made
17 in 1963. The next measurement in 2004 was at 48 feet. In
18 2005 it was at 46 feet. That was a 2-foot rise.

19 So by the time we're looking at all this and I
20 wasn't -- I could not -- I did not have the time to pull the
21 rest of the data off State Engineer's website because the USGS
22 has not published that data yet, from 2005 to 2009.

23 And it leads me to believe something is going on
24 right there. And to -- you know, that's where the dotted
25 lines that I drew in that northeast corner of the southern

1 part of Diamond Valley, that there's an uncertainty there.
2 And it leads me to question whether -- what's happening. Is
3 the cone of depression traveling north or is it not? Or is
4 there some other kind of mechanism going on, different water,
5 is it perched or whatnot.

6 So I think that -- there's a question there on
7 if -- how much that has affected those springs in Thompson's
8 area. And if -- if there is a need to, you know, I'm saying
9 that there is probably a need to look into that more and study
10 that area more to really determine if the groundwater pumping
11 in southern Diamond Valley, how much that has affected that
12 area.

13 HEARING OFFICER JOSEPH-TAYLOR: The Thompson
14 Springs area?

15 WITNESS TUMBUSCH: The Thompson Springs area,
16 thank you.

17 BY MS. URE:

18 Q. Mr. Bugenig, now turning to the next slide.

19 (Answers by Mr. Bugenig)

20 A. The second theme or conclusion that we'd like to
21 address relates to the historical flow of the springs in
22 northern Diamond Valley, in particular Bay Shipley or Shipley
23 Hot Springs and Thompson Springs at the Venturacci Ranch. The
24 best estimate of the annual discharge from these springs
25 are -- I believe are based on actual measurements. These are

1 the basin. You know, at first blush you wonder why is it
2 there's only one spring. Well, I don't really know, but I
3 think in one of Eureka County's witnesses yesterday, I think
4 it was Mrs. Penrod, Milt Thompson's sister who was raised on
5 the Thompson Ranch, and I thought some of her testimony, even
6 though she had trouble placing herself on a map, she obviously
7 remembered the ranches. And some interesting comments that
8 she made. One really struck me was if it wasn't for the shot
9 holes at the north end of their ranch, the cattle would have
10 had to go all the way back to the home ranch to get water.

11 What she also said was at the Cox Ranch there was
12 water everywhere. Well, why, you know, are those, you know,
13 are those statements contradictory? Well, I don't think so,
14 because a lot of the spring areas in northern Diamond Valley
15 are groundwater discharge areas. You can go out and get a
16 pick-up stuck but that doesn't mean irrigation. It suggests
17 to me a fair amount of sub, you know, groundwater discharging
18 or possibly subirrigation, but it doesn't mean that you're
19 getting -- it's wet because there was irrigation going on.

20 This slide is adapted from Jim Harrill and I just
21 wanted for reference to be able to identify the locations of
22 the major springs that were identified in the previous table.

23 BY MS. URE:

24 Q. And so on this slide you label each spring with
25 an arrow; is that correct?

1 not estimates, but measurements collected by the USGS in the
2 mid 1960s.

3 And Mr. Jim Harrill, who was an investigator, an
4 author of the USGS report we're referring to, estimated
5 4,900 acre feet per year which equates to an average annual --
6 you know, the average flow throughout the year of about 6
7 cubic feet per second.

8 He also estimated the annual discharge from
9 Thompson Springs and it was based on an average annual
10 discharge of 2.2 CFS, which was the average of three
11 measurements, which equates to about 1,600 acre feet per year.

12 Table 9, this slide number 8 is a table 9 from
13 Mr. Harrill's report. And in this report he identified what
14 he considered to be the major springs in north Diamond Valley.
15 And as you see here there are not very many. The one that
16 we're really interested in here, here is measurements for
17 Shipley Hot Springs and his estimate of 4,900 acre feet per
18 year.

19 On the east side, interestingly, he only
20 identified one major spring and that was Thompson Ranch
21 Spring. And here are his -- the three measurements collected
22 by the USGS and based on those measurements they estimated
23 1,600 acre feet per year.

24 Now, you know, like a lot of the testimony, we've
25 heard testimony on just oodles of water on the east side of

1 A. Well, I actually added circles that you could
2 see, because when you take digital -- you know, you make a --
3 you scan a scan of a scan things wash out. So actually I
4 added circles at the springs to make them stand out. I also
5 labeled the springs, and each spring had the annual estimates
6 of flow from Harrill's report, and then I drew the lines from
7 the labels to the springs. Again, this is just, you know, for
8 illustration purposes to get us all thinking about physically
9 what's on the ground.

10 Q. And for the record, can you just briefly read
11 which springs you outlined on this slide?

12 A. Yes. There's Thompson Springs, Bailey Springs.
13 Thompson Springs on the east. Starting from the south,
14 there's Bailey Spring, Indian Camp Spring, Shipley Hot Spring,
15 Siri Ranch Spring.

16 And then I added the Flynn Ranch springs, you
17 know, it's -- a number of years ago its flow was only about
18 ten gallons a minute but occasionally it comes up in the
19 literature. It's also in the area, I believe, of Diamond
20 Springs Ranch and the springs that have been developed up
21 there flow quite a bit more. So I just put it in there for
22 illustration purposes.

23 Q. Thank you. And moving to your next slide, Mr.
24 Bugenig.

25 A. This is something I think we've seen before.

1 These are water levels that are available from the USGS
 2 website and we just plot it up there. It shows what most of
 3 us believe, is that the flow in Shipley Hot Springs has
 4 declined over time.
 5 Q. And where are these -- the data taken from to
 6 make this?
 7 A. Well, it's from the USGS weapon web site. The
 8 reference is down in the corner.
 9 Q. Okay. Can you turn to your next slide, please.
 10 A. Yeah, this one's a slide that we took from
 11 Mr. Smith's report. I actually like a lot of the work that
 12 Dwight does because he makes good figures and it makes it easy
 13 for me to -- you know, sometimes it helps with discussions.
 14 But these are -- this figure depicts either
 15 measurements of spring discharge from Shipley Hot Springs
 16 or -- I don't know what they call them. They're not
 17 measurements. Some of them aren't even estimates. But these
 18 are reports of discharge from various sources.
 19 Now, the measurements taken in the 1960s, the
 20 three measurements by Harrill -- I mean, in Harrill's report,
 21 those were taken by Robert Lamke who's a very, very renowned
 22 hydrologist, and I would take those measurements to the bank
 23 as being accurate. The measurements in the lower right-hand
 24 corner, many of those were made by Mr. Smith and his colleague
 25 Terry Katzer. I would take those to the bank. I've had the

1 Q. Okay. Turning to your next slide.
 2 A. So as you see, they disappear. If you don't
 3 believe them to be represented they've been reprised from
 4 previous reports. And if you recall from Mr. Smith's
 5 testimony, he thought these earlier values were good enough to
 6 run an average, to calculate an average flow. And I think he
 7 was -- he calculated something like 11 or 12 cubic feet per
 8 second. 12 CFS was a number that might be representative of
 9 an average.
 10 Well, you know, I looked at the data and I'm
 11 thinking hmm, if they're good enough to calculate an average,
 12 why not just draw a line best fit through them, you know,
 13 these are anecdotal reports but just out of curiosity. So I
 14 did that and, you know, there's a pretty trend line. I didn't
 15 calculate an R-squared value to look at their statistical
 16 significance but I don't think you have to do that to see that
 17 there was a trend.
 18 And if you extend that trend, you'd see that the
 19 spring -- well, let me back up. There were a series of
 20 artesian wells drilled in the '40s right about here and they
 21 were estimated to flow about one cubic feet per second. So
 22 they started to flow and they're taking water out of the
 23 system. But if, you know, so you extend that trend down and
 24 whoa, they go right through Mr. Harrill's measurements. So
 25 maybe if you believe that trend is -- is real, then it would

1 opportunity to go out in the field with Mr. Katzer and he's
 2 extremely precise. So he's really enjoyable to be in the
 3 field with as well. We're going to talk about this cluster of
 4 measurements in middle here later.
 5 Q. Can you turn to your next slide, please.
 6 A. Yes. So these three items, one of them was --
 7 Q. And these items are the three?
 8 A. Right. There are three --
 9 HEARING OFFICER JOSEPH-TAYLOR: You got to let
 10 her finish, Mr. Bugenig.
 11 THE WITNESS: Yes, ma'am.
 12 BY MS. URE:
 13 Q. These three items are the ones that are circled
 14 on this figure; is that correct?
 15 A. Right. What I wanted to do is segregate out
 16 three of these reported values of flow from Big Shipley Hot
 17 Springs. Again one of the witnesses prior referred to the --
 18 a photograph near the front of Tom Eakin's USGS report and the
 19 caption read something to the effect that the reported -- and
 20 I emphasize the word "reported" -- discharge was 15 CFS.
 21 Now, I was unable to find the actual citation as
 22 to the source of that estimate or whatever it was of 15 CFS.
 23 It was repeated again in another report and then -- again,
 24 these were all -- these three encircled in blue, you cannot
 25 find the actual reference that these are measurements.

1 have predicted Mr. Harrill's measurements in the 1960s and the
 2 spring would have gone dry on its own.
 3 However, I don't believe that trend, you know. I
 4 think that is a reality that doesn't really exist. But it is
 5 a trend, nonetheless.
 6 Q. So are we on slide 14 now?
 7 A. Yes, ma'am. Now, this was pretty interesting.
 8 There's a cluster showing a lot of variation in water levels
 9 beginning in the spring discharge beginning in the '80s and
 10 going through the '90s. And I think most of us here are
 11 hydrogeologists and hydrologists -- engineer types have been
 12 calling these regional springs. And one of the
 13 characteristics of regional springs is their flows don't vary
 14 a lot over time or seasonally because they -- they draw water
 15 from a large catchment area and the water -- and so that long
 16 travel path dampens out of a lot of these things like year to
 17 year slight changes in recharge or what have you.
 18 So, you know, being of the mind of, you know,
 19 when I went to high school and they were teaching us science
 20 they talked about multiple working hypotheses. You throw out
 21 an idea and you noodle it around and then you either accept it
 22 or you throw it out.
 23 The other thing that I was thinking about is I've
 24 been involved in development of fairly good springs, not large
 25 springs, but things that have been developed by the companies

1 I worked for as sources of municipal water supply. And I know
2 when we go in and do work around the springs you can kind of
3 muck them out and they'll flow like crazy for a while and then
4 it will taper off like an artesian well. Mr. Smith did a good
5 job of explaining how artesian wells, when they first go into
6 use they flow like mad and then they fall off.

7 So I threw out the idea that well, maybe the
8 folks at Shipley Hot Springs, you know, Dan Russell bought the
9 ranch in the '80s. Dan Russell was an acquaintance of my
10 brother and mine, and I think that would be something Dan
11 would do. But I think Mr. Smith and the other folks at
12 Shipley -- at Sadler Ranch, you know, they made it very clear
13 that that didn't happen, and I'm okay with that. And I think
14 Mr. Bailey in our talks with him said nobody wanted to do it
15 because it's such a good spring and if you muck around a
16 spring you could ruin it. That was -- I grew up in a ranching
17 family. They were very, very careful when you worked around a
18 spring so you didn't cut the water off or send it someplace
19 out.

20 So I threw that out as an idea and I don't
21 believe that's the case. So what is -- what is the cause of
22 that? Well, Ms. Tumbusch and I, we had an opportunity to
23 speak with Jim Harrill, who wrote the 1968 report, and what he
24 thought about that. And Mr. Harrill told us --

25 MR. TAGGART: Can I make an objection to hearsay

1 this group and had this person take a measurement, and that
2 measurement they -- the field technician took was very similar
3 to what they took. Something in the 6 CFS range.

4 So their conclusion was that there was a lot of
5 guesstimation going on in those measurements. They may not be
6 very reliable. There's maybe -- you know, as you can see,
7 that large variation is likely due to measurement error.

8 BY MS. URE:

9 Q. Can you turn now to your next slide, please.

10 A. So if we don't believe that this data trend is
11 correct and that these measurements are just repeats of
12 measurements made previously, you know, what is, you know, a
13 good value for the historic CFS. Well, it wasn't the 45 CFS
14 that was requested on and application in the 1913s which
15 seemed to have prompted an investigation by the Nevada State
16 Engineer.

17 So there are actually two sets of -- I believe
18 that there are two sets of measurements, one in 1912 by a
19 gentleman by the name of Payne who apparently worked for State
20 Engineer, and he estimated 8 CFS or a little more. Then there
21 was the letter from the State Engineer in response to I
22 believe it was the Eccles application where he said he made an
23 investigation of the flow of the spring. And the estimate
24 that was made by State Engineer was between 7 -- approximately
25 7 to 8 CFS.

1 just for the record. I mean, Mr. Harrill did two reports.
2 We're relying on them now. They spoke with him. I think he's
3 retired; is that right?

4 MS. TUMBUSCH: Correct.

5 MR. TAGGART: And so, I mean, he's not easily
6 available but he's alive and could have come and told us what
7 his new thoughts are about the reports that he wrote. His
8 work is pretty important in this hearing. So ...

9 HEARING OFFICER JOSEPH-TAYLOR: So noted. I know
10 the State Engineer is going to want to hear it. Overruled.

11 WITNESS BUGENIG: Well, what Mr. Harrill said,
12 and it's echoed by Mr. Katzer, is that it's very difficult to
13 get measurements -- good measurements at Shipley Hot Springs.
14 There are, as Mr. Smith identified, depending on which ditch
15 the water is being sent to, it changes the heads and so water
16 can be going in and out of storage.

17 There was multiple outlets from the dam. There
18 are also places where the water seeps. And if you're not
19 extremely precise, as I believe Robert Lamke would have been,
20 because again he's a renowned hydrologist, or Terry Katzer
21 would have been, you might make some big errors.

22 So Jim Harrill and Roger Lamke concluded that
23 maybe there was a lot of error in those messages --
24 messages -- measurements. So they actually sent out one of
25 their senior most experienced technicians towards the end of

1 So I find those to be the earliest reliable
2 estimates of flow from Big Shipley Hot Springs. Now, you'll
3 remember we talked a little bit about artesian wells in the
4 1940s. Well, these wells start, flowed approximately 1 cubic
5 feet per second and there was testimony by Mr. Smith that that
6 1 foot per second -- cubic foot per second caused a 4 CFS
7 decline in the flow of the springs. Given the distance, well,
8 if you're capturing the groundwater discharge I don't receive
9 how you can get 4 to 1.

10 But what I can -- what I can believe is that if
11 Harrill's measurements were pretty good and these measurements
12 were pretty good you can kind of draw a line to best fit. And
13 what do you see? You see half a CFS perhaps captured by those
14 wells several miles away and, you know, that seems pretty
15 plausible to me. So I think Jim Harrill's measurements
16 represent the influence of flowing artesian wells drilled in
17 the '40s at Romano Ranch.

18 And then if you sort of -- if you believe that
19 there's a lot of windage in this cluster of measurements that
20 are surrounded by the little dashed line, you can either,
21 again, eyeball the line to best fit through the lower data.

22 And quite frankly, I believe that that's an
23 indication of the effect they -- you're finally starting to
24 see an effect of groundwater development in the southern part
25 of the basin. It seems, you know, plausible to me. And then

1 these more recent measurements that were taken by Mr. Smith
 2 and his colleagues Terry Katzer, that's kind of showing the
 3 bottom falling out, you know, of a real increase in the
 4 decline.
 5 So I don't think that there's any argument that
 6 groundwater pumping has had some effect on the decline in
 7 spring flow.
 8 Q. Can you go onto your next slide, please.
 9 A. Now, we're going to jump across the valley to the
 10 property owned by Mr. Venturacci, the Thompson Ranch, the Cox
 11 and the Willow place. They're on the east side. They're
 12 identified in blue. And we threw up -- there's the names of
 13 the canyons because sometimes it's a little hard when you're
 14 looking at the maps to figure out where Horse Canyon is,
 15 Telegraph, Cox, and Judd Canyon.
 16 So again here we have a hydrograph with data
 17 available through the USGS of Thompson or Taft springs. As
 18 you can see, there's a little bit of noise in there but the
 19 end result is that the flow went from between 2 and 2 and a
 20 half cubic feet per second down to pretty near zero in the
 21 course of this record. So, you know, there's no arguing that
 22 the spring flow has declined.
 23 Q. Mr. Bugenig, now, why did you put this slide in
 24 here?
 25 A. Well, we're not going to rehash the Mount Hope

1 model, okay.
 2 HEARING OFFICER JOSEPH-TAYLOR: You better not.
 3 THE WITNESS: No, ma'am. But, you know, again,
 4 you know, Mr. Smith who's a consultant for Sadler Ranch was
 5 involved in another project a few years ago. He constructed a
 6 groundwater flow model and it was calibrated to what was
 7 called a steady state or predevelopment condition and he
 8 adopted that year 1955 as representative of steady state. And
 9 again that was an interesting interaction, you know, the
 10 county was involved in review of the model. We didn't really
 11 address this issue but Mr. Smith and I had an opportunity to
 12 interact some and he took some of our comments to heart and
 13 built what we thought turned out to be a more robust or better
 14 model. But we're not going to talk about how the model
 15 predictions here or whether it replicates the change the
 16 change in spring flows.
 17 But what we want to talk about is again here we
 18 have 1955, which is the beginning, you know, early -- prior to
 19 development, and he -- and he seems to have adopted as a
 20 predevelopment flow for Shipley Hot Springs about 6 and a half
 21 cubic feet per second. That number was consistent with
 22 Mr. Harrill back when he was working 2 -- or 2 to 4 years ago,
 23 however time he was working on the model.
 24 The other is this green line here, again taken
 25 from Harrill. It's a little under 3 cubic feet per second

1 when Harrill's estimate was here. But certainly he adopted a
 2 couple of years ago the flow from Thompson Springs as a
 3 legitimate value. This was the starting point for his model,
 4 a legitimate value for discharge in the vicinity of Thompson
 5 Springs, and I wouldn't dispute that that number is not
 6 reasonable.
 7 Q. Ms. Tumbusch, can you turn to the next slide,
 8 please.
 9 MR. BUGENIG: Oh, I'm sorry.
 10 WITNESS TUMBUSCH: Okay. Again I'll read. This
 11 is our conclusion three.
 12 HEARING OFFICER JOSEPH-TAYLOR: A little slower
 13 this time.
 14 WITNESS TUMBUSCH: Okay, I'll read it for the
 15 court reporter.
 16 Conclusion three, the places of use in
 17 applications by both parties on the east and west side of the
 18 playa include areas with shallow water table and wetted soils
 19 with increased evapotranspiration by native vegetation, for
 20 example, land not purposely irrigated via surface application
 21 of spring discharge.
 22 The studies of Diamond Valley by the USGS at --
 23 near the beginning of the large scale groundwater exploitation
 24 in Diamond Valley in the 1960s estimated 4,600 acres of
 25 natural meadow in northern Diamond Valley and approximately

1 1,000 acres of meadow flooded with water discharge from
 2 springs. That's from Eakin. And the amount that the
 3 Applicants are applying for or they're proposing to irrigate
 4 do not reconcile with the USGS estimates.
 5 So it appears that much of the land claimed by
 6 the Applicants appears to be irrigated by spring discharge --
 7 appearing to be irrigated spring discharge is actually areas
 8 subirrigated by shallow water tables. And the next --
 9 Q. Ms. Tumbusch, also --
 10 A. Um-hum.
 11 Q. -- I think when were you reading that you said
 12 "for example." Doesn't it say i.e. as in to explain?
 13 A. Yes.
 14 Q. Okay.
 15 A. Okay. So this is Table 6 from Eakin's report in
 16 1962 for the entire Diamond Valley basin. So what he's
 17 referring to as natural vegetation there's principally
 18 greasewood, rabbit brush, salt grass in various proportions,
 19 that is what we have been interchanging this native vegetation
 20 with phreatophytic plants. And he estimated in the entire
 21 valley 47,000 acres of native vegetation equalling approximate
 22 discharge of 14,100 acre feet per year.
 23 Q. When you say the entire valley is that the entire
 24 Diamond Valley?
 25 A. Entire Diamond Valley, correct.

1 He parsed out meadow and pasture grasses at
 2 5,600 acres with approximate discharge of 8,900 acre feet a
 3 year, and the playa area he did not estimate those groundwater
 4 discharge measurements.
 5 I know that we've talked about in these hearings
 6 recharge versus discharge and the discrepancy between Harrill
 7 and Eakin and this is a big discrepancy here where Eakin did
 8 not apply the playa evaporation in his estimates.
 9 It's important to note, though, that in this
 10 table that he made he includes 4,600 of that 5,600 acres as
 11 like a mixed grass from -- with a water table from 0 to
 12 5 feet, and then a 1,000 acres of meadow which normally is
 13 flooded with discharge from water from the springs. So he's
 14 estimating that in Diamond Valley there's approximately 1,000
 15 acres of meadow which is irrigated by the springs.
 16 The next slide is -- and this is comparing
 17 Harrill's table from Exhibit 304. This is table 8. And Jim
 18 Harrill approached Diamond Valley a little different way. He
 19 divided Diamond Valley into a south Diamond subarea which is
 20 where the concentrated pumping and agricultural areas are, and
 21 north Diamond subarea which is mostly playa. And that's the
 22 north of the Pony Express Road.
 23 Now, when Mr. Harrill developed his table, if you
 24 notice in the south Diamond subarea he did not attribute much
 25 of the groundwater discharge to -- about the -- evaporation or

1 saying 4,500 acres per year being discharged by that meadow
 2 area and attributing 1,500 acres to that, where if you can
 3 remember the previous table, Eakin estimated about 1,000 acres
 4 of that spring discharge area attributed to spring discharge.
 5 So moving on to the next slide. This is from Jim
 6 Harrill as well. As can you see, he's mapped out the areas of
 7 groundwater discharge. And the green area, the darker green
 8 area here, the darker green area in the north Diamond subarea,
 9 is the -- this is what he said spring-supported pasture and
 10 meadow grasses. And in the table, if you remember, he divided
 11 that up into less than 5 feet and less than a half a foot, so
 12 that 1,500 acre feet of discharge by springs is intermixed
 13 with that, what was it, 4,000 -- could you go back to the
 14 previous slide -- with that 4,500 acres or 5,400 acre feet per
 15 year.
 16 So these two are meshed together because I
 17 believe that, you know, there's a transition zone in between
 18 the areas of subirrigation. I mean, the spring discharge
 19 areas that I mean the water table is at or near land surface.
 20 And so --
 21 Q. Ms. Tumbusch, I want to stop you right there.
 22 A. Okay.
 23 Q. You just said these two off from the table.
 24 Which, for the record, can you tell us what you were referring
 25 to when you said --

1 evapotranspiration, I should say, an area of about 4,000 acres
 2 equalling about 1,400 acre feet per year.
 3 So most of this -- he's attributing most
 4 evapotranspiration into the north Diamond subarea which he
 5 divides, and he's calling that first line there
 6 evapotranspiration with the rabbit brush. That is that we're
 7 referring to basically as the phreatophytic areas of the north
 8 Diamond subarea.
 9 So he is saying that that area, the phreatophytic
 10 plants that live off the groundwater -- off the groundwater,
 11 the depth of the water in that area is 5 to 20 feet. So he
 12 attributed 46,000 acres of phreatophytic vegetation using a
 13 .3 acre feet per acre at 14,000 acre feet per year of
 14 discharge.
 15 So when he says -- he comes down here and talks
 16 about evapotranspirations in areas supported by spring
 17 discharge, he divided that up where he's saying that meadow
 18 grass, hay, some salt grasses, so that about less than 5 feet
 19 to groundwater. And he's attributing 4,500, which is very
 20 similar to what Eakin found, and 5,400 acre feet per year,
 21 which Eakin's estimate was 5,600.
 22 Now, he parses out there the wet meadow marsh
 23 normally flooded, which includes some alfalfa. Now, he
 24 includes -- that's also less -- actually this is less than
 25 .5 feet. So this is near surface groundwater where he's

1 A. I was referring to evapotranspiration and areas
 2 supported by spring discharge that are parsed out as meadow
 3 grass with a water table less than 5 feet, and a wet meadow or
 4 marsh including some irrigation of alfalfa and estimated
 5 acreage of 1,500 --
 6 Q. Thank you.
 7 A. -- acres. So I just wanted to illustrate there,
 8 and in this north Diamond subarea we can point out -- we can
 9 see where Shipley Hot Springs is and the Thompson Spring
 10 complexes are. And again, those are the two that are
 11 intermixed -- the two are intermixed in this illustration.
 12 Q. And this illustration, what slide is that?
 13 A. This is slide 22.
 14 Q. Okay. So moving on to slide 23.
 15 A. Now, I read all of the historical documents that
 16 were in the exhibits as well as the GLO survey notes and
 17 really looked at the plats, and we zoomed in here on the plat
 18 from township 24 north, range 52 east from August of 1879.
 19 And I -- you know, just to get a idea that
 20 looking at, you know, Harrill's map, which we're considering
 21 is pretty much predevelopment, and the way the area had looked
 22 before agricultural pumping really went into effect, versus
 23 these and --
 24 Q. And what are these?
 25 A. Versus -- versus the GLO plats.

1 So we're illustrating here, and I believe
 2 Mr. Buschelman went over these maps as well. And in reading
 3 these GLO surveys, these gentlemen were very astute in what
 4 they put on these maps. They really recognized a lot of what
 5 was there on the ground. And they didn't just plot what was
 6 on the -- what they surveyed on the township range lines and
 7 section lines. They -- they drew what they saw pretty much.
 8 And on this, in the -- what the yellow dots we
 9 have circled from the best we can figure out we've lost this
 10 line here, whether it's --
 11 Q. What's this line, Ms. Tumbusch?
 12 A. The -- the dotted yellow line described a swamp.
 13 And we were not sure if this connects right here. We just
 14 thought we would end it where we were sure --
 15 Q. So --
 16 A. That the fair line -- yes.
 17 Q. For the record, your dotted yellow line, there's
 18 a gap in it and that's what you were referring to?
 19 A. Referring to. And those are denoting swamp
 20 areas.
 21 Q. And you circled swamp on your ---
 22 A. Correct.
 23 Q. In red?
 24 A. In red. And just for a reference here, Big
 25 Shipley Springs at this point right here. So this is quite an

1 A. You know, what I can't tell what section that is.
 2 Q. On the west side of the map and on the --
 3 A. Right to the -- I'm about a half a section north
 4 of Big Shipley Springs.
 5 Q. Okay.
 6 A. There are two lines designated as ditches right
 7 there. One is fence. I don't see any other fence line
 8 associated with this area. There are some blue dotted areas
 9 that encircle and I believe those are designated as -- and
 10 they're all pretty much all over the map designating desert
 11 land entries. A little set of springs in the -- let's see, to
 12 the east -- to the southeast of section 26. And just a
 13 general observation that I do not see a lot of irrigation.
 14 There's the one large ditch I already pointed out
 15 and two at the top. No -- no designation of cultivated areas
 16 or agricultural except for the field to the northeast of
 17 section 26. There's a small field near the house, near --
 18 it's right -- it's south of Shipley Hot Springs.
 19 This the only place that I've seen in the two GLO
 20 maps that were presented for the west side of Diamond Valley
 21 that doesn't have any type of field or agricultural or
 22 irrigated crop lands.
 23 Q. Did you read the field notes that go with this
 24 plat map?
 25 A. Yes.

1 extensive area here. Approximately about -- I would say about
 2 five sections. And surveyors, when they denote a swamp they
 3 these little squiggly lines here. So as they write here, this
 4 is a swamp.
 5 This is a ditch coming out of Big Springs Shipley
 6 and this line here, the line is denoting --
 7 Q. What line?
 8 A. -- the meadow.
 9 Q. Can you describe the line you're referring to.
 10 A. The line is pretty much taking up the -- from the
 11 center to the end -- the right-hand side of the plat that we
 12 were showing on this slide, on slide 23 I believe it is.
 13 HEARING OFFICER JOSEPH-TAYLOR: I think that's
 14 not going to be clear. Are you talking about a line that runs
 15 north and south on the west of the green area on slide 23 in
 16 the southwest corner of the --
 17 THE WITNESS: Correct. That whole lined area is
 18 considered meadow.
 19 Now, kind of looking at some of the features that
 20 they have they designated on the map.
 21 BY MS. URE:
 22 Q. And they being?
 23 A. The GLO surveyors from 1879, there's a small
 24 spring, a house, Big Shipley Spring, a little fence there.
 25 Q. And are you in section 23?

1 Q. Was there any evidence of an amount of acreage
 2 that was irrigated?
 3 A. No.
 4 Q. Does this map -- are groundwater discharge areas
 5 evidenced on this map in your opinion?
 6 A. I believe they are in this swamp area.
 7 Q. Is that outlined by the yellow dotted line?
 8 A. Correct.
 9 Q. Okay. Moving onto your next slide.
 10 A. This is our slide 24 from Exhibit 326. This is
 11 the combination of the GLO plats -- the GLO survey plats from
 12 township 23 north, range 54 east and township 24 north,
 13 range 54 east. We designate blue circles where it denotes
 14 springs.
 15 There are -- there's a spring at -- listed in
 16 section 22 as well as sections -- I believe that's 25. Cox
 17 Ranch is located in about the center of the plat and there's a
 18 spring denoted in section 3. The red lines that we have
 19 designated on the map or the patents -- or I'm sorry, the
 20 applications from the Ventaruccis -- Venturaccis, excuse me,
 21 their applications.
 22 Q. Are those approximate locations?
 23 A. Yes, they are approximate.
 24 Q. Okay?
 25 A. Now, there's a couple things I wanted to point

1 out on this slide that when Mr. Thiel was discussing these GLO
 2 plats he had designated the area, it's approximately in the
 3 center of the plat at section 3. Gosh, I'm not sure what
 4 section that is. Right in here.
 5 Q. 34?
 6 A. 34, thank you. He had mentioned in this square
 7 here that it was an irrigated or cultivated -- or irrigated
 8 field.
 9 HEARING OFFICER JOSEPH-TAYLOR: This square here
 10 being where you have the blue oval?
 11 WITNESS TUMBUSCH: Yes, on section 34. The blue
 12 -- no, the blue oval is something different?
 13 HEARING OFFICER JOSEPH-TAYLOR: Right. You said
 14 where.
 15 WITNESS TUMBUSCH: Okay. It's near where we have
 16 the blue oval.
 17 BY MS. URE:
 18 Q. So for the record, is that square that you're
 19 talking about in the west half of the southeast quarter?
 20 A. Of 34?
 21 Q. Yes.
 22 A. Yes. He designated that as irrigated acreage but
 23 it's actually the denotation of the desert land entry for Cox.
 24 And the blue oval there is where the Applicants
 25 identified springs on applications on there and there are no

1 things on the map, as can you see on this map a lot of what
 2 they consider a creek, for instance, is very squiggly. Is
 3 that with any section approximation but actually shows that
 4 the ditch went through the entire section?
 5 A. In certain cases, like there -- on this slide on
 6 the southern edge from -- there's a -- there's a notation of a
 7 ditch, but this is -- this in here, this -- I'm saying this
 8 again. But coming from the spring here at Thompson Ranch,
 9 this is called Taft Creek, and it comes -- it's denoted as a
 10 creek.
 11 Now, Mr. Thiel had suggested that this was an
 12 irrigation ditch that comes off of that creek. I just don't
 13 see that. The squiggly lines I see as a creek and I think
 14 maybe it might be a branch of that. I think it's hard to
 15 tell. And I didn't see the notion on that in the survey
 16 notes. As well we talked about Mr. Thiel talks about this
 17 here. We asked --
 18 Q. What's "this here"?
 19 A. This is a dry -- dry channel. And Mr. Thiel had
 20 mentioned that he thought that might have been a ditch until I
 21 think, Ms. Ure, you asked him to read what that was.
 22 Q. Um-hum.
 23 A. And that is a dry channel.
 24 Q. All right. Moving onto your next slide, please.
 25 A. Okay. I wanted to look at -- this is --

1 springs shown on that map.
 2 Q. Is there any cultivated fields shown on this plat
 3 map like there was on the last one we reviewed?
 4 A. No.
 5 Q. Okay. Can you turn to your next slide please?
 6 A. Okay. Let's see. Let me just mention one more
 7 thing if I could.
 8 Q. Yes.
 9 A. In both GLO surveys of east and west sides of
 10 northern Diamond Valley looking at the plats and reading the
 11 notes extensively I found no denotation of any measurements of
 12 irrigated agricultural anywhere. And these surveys, as you
 13 can see, they just did not stop at identifying things on the
 14 section line, like I said before. They drew -- they drew it
 15 in like the ditches.
 16 They did -- they were really good at putting
 17 measures of channels and creeks or the dry beds or the houses
 18 that we saw on the previous slide but no mention anywhere
 19 of -- they do say something about cultivation but not where.
 20 So ...
 21 Q. And Ms. --
 22 A. No indication.
 23 Q. And Ms. Tumbusch?
 24 A. Yes.
 25 Q. When you talk about that they actually grew

1 Q. This is -- sorry. For the record, this is
 2 slide 25.
 3 A. Okay. This is the GLO plat from township 23
 4 north, 54 east. This is the whole plat. I just wanted to
 5 clarify something that a lot of us have used the --
 6 Mr. Crofut's memoirs, "Diamond Valley Dust," for just as
 7 historically what has been happening in the valley at the
 8 time. And Mr. Crofut was born in 1889 at the -- he was born
 9 on the Crofut Ranch.
 10 Now, I wanted to specify here that his parents
 11 moved to Diamond Valley and I have the quote here from page 9
 12 and page 10 of "Diamond Valley Dust." This is Exhibit 248 and
 13 130. And it mentions how his parents, his father Ike, moved
 14 to Mud Springs, which is in the circle here, that --
 15 Q. Where is the circle -- oh, I guess the circle is
 16 on the map; is that correct?
 17 A. The circle is on the map. And they opened up a
 18 dinner station at Mud Springs.
 19 Now, in 1881 they bought a place at Box Springs
 20 which is -- Mr. Crofut denotes here is six miles north of
 21 Diamond station. Now, I don't want to be confused that the
 22 Crofuts left this place, the Crofut house that's listed on the
 23 plat, which is -- I think it's about two miles south of the
 24 Thompson Ranch, and they moved six miles north to Diamond
 25 station in 1881.

1 And there's been a lot of references in all of
2 these reports going back and forth of the area that Mr. Crofut
3 lived. I just don't want it to be confused with south of
4 Thompson Springs because it was actually north six miles of
5 Thompson Springs in 1881. Mr. Crofut was born in 1889 in the
6 Box Springs area. But there's a lot of comments that he makes
7 about some irrigation in the family garden, running cattle,
8 and he is talking about Box Canyon six miles north.

9 Q. Thank you.
10 THE WITNESS: You're welcome.

11 Q. Mr. Bugenig, can you turn to the next slide which
12 is slide number 26.

13 (Answers by Mr. Bugenig)

14 A. Yes, ma'am. We're on the home stretch. We're on
15 kind of our fourth theme. Again it's my opinion that he
16 can't -- that it's hard to deny that changes in the water
17 levels due to the groundwater exploitation in the basin are
18 likely cause of the -- of a decline in the springs or, if you
19 want, cessation of some springs.

20 But I don't think that should limit us that, you
21 know, we shouldn't have a closed mind that maybe there are
22 some other side influences that maybe we can't quantify. But
23 they are out there. And I was -- I think I heard -- I
24 apologize, I don't remember your name, but it was the ranch
25 manager, the residential manager Levi.

1 I was pretty sure I heard him say that he thought
2 that maybe there were other influences out there during his
3 public comment. And I was kind of gratified to hear that
4 because I feel like I'd been pilloried for mentioning that
5 maybe there are things happening out there that we don't
6 understand. But again, my -- you know, my training tells me
7 that there's nothing wrong with suggesting a topic to look
8 into and if you're proven wrong, hey, that's a good thing.

9 So any way, we think that there are other factors
10 out there. Some may not be very easy to quantify, but -- and
11 it and it really puts a burden on the State Engineer to deal
12 with those, but I think you have to maybe be aware that things
13 are happening out there that we maybe don't really understand
14 in some instances.

15 Q. So with that, can you turn to your next slide?

16 A. Yeah, you know, we talked about climate change
17 and whether or not it has affected the spring. Truth of the
18 matter is climate's changing. Some people don't like to admit
19 it. But if I had a house on the beach I'd be a little
20 concerned about climate change because water levels are rising
21 and temperatures seem to be getting a little bit warm and
22 there is a potential if the weather changes or the climate
23 changes that I truly believe that can have a long-term effect.

24 And I don't think I'm the only one who believes
25 that. This is an excerpt from a journal that was written by

1 -- what is it, the Nevada water resources journal. It was an
2 article that Mr. Smith wrote and I thought it was a good
3 article. And I'm just going to read part of it. I'm not
4 going to read the whole slide.

5 Throughout Nevada and the Great Basin there are
6 occurrences of long-term water level trends, both declining
7 and increasing, some of which can be sprained by natural and
8 human-created changes, and some of which are anomalous and
9 difficult to understand. Some possible explanations for
10 long-term water level trends include long-term climate change
11 and invariability including lag and response time effect.

12 So yeah, I think Mr. Smith's a smart guy and we
13 talked a lot over on both sides of the projects on both sides
14 of the issue before this. Now, if he recognized it as a
15 possible cause, you know, I don't -- I don't think I'm smarter
16 than he is. I might accept it as a possible cause.

17 Q. And this excerpt is from something that Mr. Smith
18 prepared?

19 A. That's -- it was -- his firm is referenced here,
20 InterFlow Hydrology, and it was I believe it was a 2012
21 article in the Nevada water resources association journal.
22 And that was a good article.

23 WITNESS TUMBUSCH: If I can interject something
24 here, that next line I think is very important, watershed land
25 use changes. For example, pinyon and juniper vegetation

1 changes, we've heard that several times. And I know Mr.
2 Taggart was questioning Jake Tibbitts about the pinyon-juniper
3 situation, but I've read in the historical literature that in
4 1889 the hills were devoid of vegetation from the mines, and
5 that they have come back.

6 So I think that really has something to do with
7 pinyon-juniper encroachment as is happening and is this the
8 reason maybe some of the water level levels are changing.

9 MR. BUGENIG: So let's talk about some of these
10 other influences.

11 BY MS. URE:

12 Q. And we're at slide 28?

13 (Answers by Mr. Bugenig)

14 A. On slide 28 in Mr. Smith's rebuttal of our first
15 report he proceeded some plots of depth to groundwater in
16 wells comparing them with the discharge from Shipley Hot
17 Springs. And what it shows that there appears to be a
18 statistical relationship between the depth to groundwater and
19 the flow in the -- in the spring. And I don't dispute that.
20 I truly believe if the water level goes down in the vicinity
21 of the spring, by golly, you would expect the flow to go down.
22 I think that's a good conclusion.

23 But -- and I realize that these are not large
24 statistical samples. In some -- one of the graphs there's
25 only four measurements and the others have half a dozen, yeah,

1 half a dozen. But he did -- he did draw -- he did do -- draw
2 a line of best fit layer regression and he calculated the
3 R-squared which is a measure of the variance. And for a
4 perfect fit you get an R-squared value of 1.

5 I know when I analyze pumping test data I feel
6 I'm a little outside, you know, I'm not doing a very good job
7 if I get an R-squared value of less than about .9 or .95. If
8 I've got the aquifer properties dialed in I can simulate it to
9 where I have a pretty good R-squared value.

10 But what we see here, we see R-squared values of
11 about -- let's just use two significant figures -- .66, .78
12 and .78. So what that tells me is that the change of water
13 level can account for, let's say, in the -- in the top left
14 graph, it can account for about 66 percent of the variance,
15 and in the other two it's about 78 percent.

16 So you can turn that around that something is
17 causing about -- is accounting for as much as 34 percent of
18 the change in the springs. I don't know what that something
19 is, but something that these are not -- these are not
20 definitive that there is no outside influence. That was the
21 purpose of this slide. And again I thought that was a good
22 way to present the data by Mr. Smith.

23 MS. URE: Thank you.

24 BY MS. URE:

25 Q. Ms. Tumbusch, would, you like to do this slide?

1 just saying there was a lot of missing data.

2 But as you can see, you know, this is more true
3 to what is going on. And unfortunately it's not a long time
4 to develop trend analysis, but it's just another example of
5 something's happening, that is, about a 20 percent decline in
6 precipitation.

7 And as Jake mentioned, there's a difference
8 between probably about 5 inches from the Eureka station
9 average to the average of the AgriMet station. So I think
10 there is a need to -- and I know the USGS studies, and I was
11 project chief, and those studies have not been completed yet.
12 I put the -- all four ET stations in and maintained them since
13 from 1980 to 2010.

14 We had a station in the north Diamond area just
15 south of the playa off of the Pony Express Road and collecting
16 measurements from there, and I can attest to the reliability
17 of this data is very similar as far as precip. I took a
18 bucket rain gauge out there and temperature sensors and what
19 not. So I just think there's just a need to collect more data
20 to see what's going on and find out what trends are developing
21 out there.

22 BY MS. URE:

23 Q. Thank you. And, Mr. Bugenig, can you go on to
24 the next slide.

25 (Answers by Mr. Bugenig)

1 (Answers by Ms. Tumbusch)

2 A. Yes. This is slide 29. This is from Exhibit 432
3 and 433. This is showing precipitation and temperature data
4 from the Diamond Valley AgriMet station. And you can see on
5 the right-hand side of the axis is temperature; left-hand side
6 is precipitation.

7 There's about a 20 percent trend in decline in
8 precipitation since about 1980 -- from 1980 to 2006. Now,
9 I -- one thing that -- I've sat through this whole thing and
10 looked at this, you know, looking at the Applicant's
11 precipitation data, and I think Jake Tibbitts mentioned this
12 as well. They used the Eureka station as their hundred-year
13 average and I noticed in one of the slides, and I don't know
14 if it was Mr. Thiel or not, a lot of that data was missing.

15 And there is a big variation in those stations
16 where at the Eureka station in Eureka is, excuse me for a
17 minute, let me find my -- is at an elevation of 6,540 feet,
18 where the Diamond Valley station is 5,970 feet, and that is on
19 the basin floor. It was in the -- near the agricultural area
20 in south Diamond Valley.

21 The AgriMet station is run by the USDA and
22 they've been online since about 1980. I listed the data since
23 2006 because there was some missing data from 2007 through
24 2010 and I was a little bit concerned about plotting that
25 because I didn't -- I wanted to be a little more accurate than

1 A. Yeah, again in Mr. Smith's -- one of Mr. Smith's
2 report he did what I thought was a pretty good analysis of the
3 potential for the wells at the Romano Ranch to impact the flow
4 at Shipley Hot Springs. Those wells again were drilled in the
5 1940s.

6 And so he did -- as hydrogeologists we all
7 recognize this, but he did a fairly simple analysis using the
8 Theis equation where he used aquifer properties that he
9 believed were representative, I think, based on his aquifer
10 stress tests of their test wells at Big Shipley Hot Springs
11 and values for the storage coefficient. And then he assumed a
12 flow rate from those wells and he drew the conclusion that --
13 the Romano Ranch wells are down in the southeast, that they
14 affected the flow of Big Shipley Hot Springs.

15 Well, in 1960, the Brown family -- this is the
16 Brown Ranch by the two northernmost stars. The north well was
17 drilled in about 1968. It was a flowing artesian well. There
18 was a -- they drilled a well later. It's amazing, it was
19 about 85 feet deep and according to John Brown, the son of the
20 owner of the ranch, when they test pumped it, that 85-foot
21 deep well produced 3,500 gallons a minute. It's amazing to
22 me. I almost didn't believe him but he's a real honorable
23 guy.

24 The Sadler Ranch, those wells now, they were
25 purchased by predecessors of --

1 Q. Mr. Bugenig, I'm going to interrupt you real
2 quick.
3 A. Yes.
4 Q. So on slide 30 when you say "those wells" can you
5 tell us where you're at.
6 A. Yeah, the two wells that are -- that are -- the
7 two wells indicated by the stars at the north that are in
8 section 6, okay. Those two wells in section 6 were -- that
9 ranch was purchased by predecessor to the Sadler Ranch, again
10 Dan Russell, a rodeo stock contractor from California and
11 rancher in Nevada. So -- and those wells were -- those wells
12 were pumped. It was certificated -- the north well of those
13 two was certificated in 1990 and I think for a flow rate of
14 2.54 CFS. But given my inability to type one word in a row
15 that's correct I believe that number is -- I don't think I
16 mistyped it.
17 And they started pumping that -- there's not
18 really a good history on how much water was pumped and it's
19 not included in any crop inventories by the State Engineer.
20 Sadler Ranch also drove a well north of Shipley
21 Spring, and that would be section 13, I think it says. And
22 that was a flowing artesian well also.
23 So I'd figured if the wells at the Romano Ranch
24 several miles to the south could affect the flow at Big
25 Shipley Hot Springs, then a well just three miles to the north

1 pumping test, and you have to calculate that value with --
2 based on the drawdown in an observation well. You need that
3 to calculate storage.
4 But there it's my understanding that they've
5 completed their well in fractured limestone and the distance
6 from that well from the -- of the observation well from the
7 fractures is more important than the -- the fractures that the
8 production well penetrates is more important than the radial
9 distance away from the well.
10 So I think that his values is a little bit high
11 because of effective distance between the two wells. But I
12 didn't investigation that. That's just -- that's one way to
13 explain why he got a higher value than the one -- or he used a
14 value that was a little bit higher than the one that I used.
15 I also assumed a pumping rate on 800 gallons a
16 minute and that was really based on these values in table 2 on
17 slide number 30 where they showed anywhere from 1,308 acre
18 feet per year in 2006 to as little as 440. But I took out of
19 the middle, these two were the same from 1906 or 1908, 1909.
20 That was just an assumption. To test my hypothesis I picked a
21 pumping rate.
22 Q. Thank you.
23 A. Yeah, I'm sorry, 2008, 2009.
24 Q. Now, moving onto slide 32, why did you put this
25 slide in your report?

1 in the same aquifer might have an effect. So I did just the
2 analogous kind of simple Theissian -- Theis analysis to see if
3 there was a potential for effect.
4 Q. Now, you did you also do related to the Bailey
5 well in relation to trying to discuss the Bailey well pumpage
6 in relation to Shipley Hot Springs?
7 A. No, I didn't analyze the drawdown caused by
8 Bailey's pumping.
9 Q. Okay.
10 A. I was more interested in the pumping of wells
11 that are now owned by Sadler Ranch to possibly affected their
12 own spring. So I did the analysis. Here are my assumptions
13 of the transmissivity of the aquifers.
14 Q. And we're on slide 31 now?
15 A. Slide 31. I assumed the transmissivity of
16 7,600 feet squared per day. That's pretty high. I assumed a
17 coefficient of storage of 10 to the minus 4 and 10 to the
18 minus 5. Now, that's where White and I maybe have a little
19 bit of difference of opinion. He assumed a storage
20 coefficient of about 10 to the minus 3. It's an order
21 magnitude higher than my higher value.
22 Now, in my experience, that 10 to the minus 3 is
23 more semi-confined conditions. I wasn't exactly sure whether
24 that was really appropriate. And I know -- and I'm pretty
25 sure that he used the value that they determined from their

1 A. Why --
2 Q. I'm sorry, slide 32.
3 A. We're still on slide 31?
4 Q. Oh, I missed one. Go ahead.
5 A. So anyway, these are the results of the
6 calculation at the -- this is the calculated drawdown at
7 Shipley Hot Springs and these are for the two storage
8 coefficients that I assumed.
9 For the smaller storage coefficient or the larger
10 one, pardon me, of .0001 or 10 to the minus 4, after 30 days
11 of pumping -- just 30 days, you know, through the first growth
12 cycle before you get your first cutting at an average rate of
13 800 gallons a minute, you know, it calculates out to less
14 than, what is that, 4.8 feet of drawdown. Let's just round
15 that to 5 feet of drawdown. I don't like false accuracy.
16 And then at the smaller storage coefficient,
17 which was representative of an aquifer that's a little more
18 confined, at 30 days -- 10, 20, 30, 30 days we see a little
19 over 8 feet of drawdown. And then as you go to the end of the
20 irrigation, the irrigation season is, yeah, I think this is
21 the irrigation season, so I assume they go I think it was
22 120 days, nearly 14 feet of drawdown assuming one storage
23 coefficient and let's call it 17 feet of drawdown towards the
24 end of the irrigation season.
25 Q. Next slide, please. Why did you put that in

1 here?

2 A. Okay. This slide caused a hot bed. I stepped in
3 an hornets' nest when I put this one in. Because we were
4 talking about climate change, quite frankly, and, you know,
5 most people when they talk about climate change they just --
6 you see the same boring diagram over and over and over again
7 where they plot either precipitation or temperature over time,
8 okay.

9 Well, I wanted to do something a little bit
10 different. These are different representations of the
11 elevation at which water freezes. Let's call it the snow
12 line. And it goes from 1948 through 2012. I really think --
13 it's pretty busy, but these are average values, the nice
14 straight line. The ones that are above are -- the snow line
15 is a little bit higher; the blue lines going down below are a
16 little bit lower and you see these various different ways they
17 calculated it.

18 But the point is, is that -- and the axis here,
19 this is elevation. So these are elevations at which the water
20 freezes, the snow line. And so I just thought it was a neat
21 diagram because it shows since about the 1960s there's been
22 a -- no matter how you calculate it, there's been increase in
23 the snow line.

24 Now, there's nowhere in my report did I say we
25 can do a positive calculation or correlation between the

1 this data came from Kelly Redmond who is -- yeah.

2 BY MS. URE:

3 Q. I actually forgot, Ms. Tumbusch. Can you go back
4 to slide 24?

5 MR. BUGENIG: I don't know the easiest way to go
6 back.

7 MS. URE: I think on the computer you can see the
8 is the arrow.

9 MR. BUGENIG: Okay. You may do it.

10 MS. TUMBUSCH: Just click off somewhere there.

11 Thank you.

12 MR. BUGENIG: I apologize that I am not nearly as
13 good as this as I believe George's daughter is. I was
14 impressed with her ability to navigate around the slide show.

15 BY MS. URE:

16 Q. Okay. Ms. Tumbusch, did you look at the patents
17 that were in the exhibits relating to the Venturacci claim?
18 (Answers by Ms. Tumbusch)

19 A. Yes, I did.

20 Q. And did you map those patents against this GLO
21 plat?

22 A. Yes.

23 Q. Can you briefly describe what you found.

24 A. Well, I -- that wasn't part of the -- actually I
25 did that just for my knowledge to see how the acreage has

1 elevation of the snow line and the flow in Shipley Hot Spring.
2 I was accused of doing that, and maybe that's what you
3 interpreted in my report because, you know, people will -- you
4 know, I'll accept criticism.

5 If I wrote a sentence that people didn't
6 understand, I should have written it better. But all I wanted
7 to say was there's some evidence of climate change and I
8 don't, to be upon honest with you, I don't know the State
9 Engineer's, their staff, what their opinion is. Maybe they're
10 doubters. Maybe they're both are believers. I don't know.

11 But again a lot of the thoughts that we brought
12 up it was just to kind of get the little gray cells working to
13 say that, you know, is the decline in the springs that we see,
14 can you attribute it a hundred percent to the irrigators in
15 the southern part of the valley.

16 And, you know, I'm not smart enough to say that,
17 you know, that I know the answer, and I haven't analyzed it,
18 but it seems to me that I can't believe climate change can't
19 have an effect on spring flow.

20 And again I kind of regret putting that slide up
21 there because people, you know, accuse me of being absurd and
22 an idiot and all kinds of other things, but it was just food
23 for thought.

24 Q. Thank you.

25 WITNESS TUMBUSCH: And again I'd like to say too

1 changed with -- over the years. So Nils Toft in 2012 -- I
2 mean, 2012, I'm sorry -- in 1912, I believe it was, had
3 patents at the Thompson Spring area, and I believe that is
4 section -- I think it's section 9 in the --

5 Q. How about 3?

6 A. Is it 3?

7 Q. Yes.

8 A. Okay. Okay. And the top section in the north
9 section of the northeast corner of section 3 Nils Toft put
10 there. He also had and I believe it was a patent in section 9
11 on the top half of the northeast quarter-section there.

12 So in approximately -- and I don't -- I didn't
13 bring that. Do you have that?

14 Q. I don't. Can you just generally explain.

15 A. Okay. So -- and for all of Thompson in 1975 Ted
16 and Olive Thompson I believe their patent came through here,
17 did a little jog, came up, went here.

18 So from Nils Toft in 1911 or '12, I believe, to
19 1975, that expanded quite a bit. And now the patent here, how
20 large that is, that's the Applicants patent for -- I'm sorry,
21 that's the patent for -- I don't have -- you know what, my map
22 is over there because I didn't think were you going to ask
23 that.

24 Q. Just one general question, I guess.

25 A. So it was Toft and Thompson.

1 Q. Okay. Let me --
 2 A. Okay.
 3 Q. So do you recall the testimony by Eileen Penrod?
 4 A. Yes.
 5 Q. And would the area that you described that was
 6 under patent at the time correlate with what she thought? Do
 7 you recall her testimony where she thought that certain
 8 section lines should have been cut off?
 9 A. No, I don't remember her.
 10 Q. Okay.
 11 A. That clearly that I can testify to that.
 12 Q. Okay. Can you please turn to slide 33 and Dale,
 13 would you summarize for us. Or, I'm sorry, Mr. Bugenig.
 14 (Answers by Mr. Bugenig)
 15 A. Yes, ma'am. Surprise, groundwater levels in
 16 Diamond Valley are declining. It's a revelation. This is the
 17 first time you heard that ever. The historical discharge of
 18 Shipley Hot Springs was likely in the range of 7 to 8 CFS and
 19 that's based on investigations by the Nevada State Engineer
 20 1912, 1913.
 21 The historical discharge of Thompson Springs was
 22 likely in the range of 2 to 3 CFS. 2.2 is what -- what Jim
 23 Harrill measured on average. Mr. Smith, who, like I said, I
 24 know reasonably well, he assumed it was about 3 CFS in his
 25 groundwater flow model so that's about a reasonable range.

1 list of what you mentioned here. Let's take care of that.
 2 MS. URE: Exhibit 301 is Mr. Bugenig's CV.
 3 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 4 301?
 5 MR. KOLVET: No.
 6 HEARING OFFICER JOSEPH-TAYLOR: It will be
 7 admitted.
 8 (Exhibit 301 admitted into evidence.)
 9 MS. URE: Exhibit 302 is their direct report.
 10 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 11 302?
 12 MR. KOLVET: No.
 13 HEARING OFFICER JOSEPH-TAYLOR: It will be
 14 admitted.
 15 (Exhibit 302 admitted into evidence.)
 16 MS. URE: Exhibit 305 is the InterFlow Hydrology
 17 report referenced in their first report.
 18 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 19 MR. KOLVET: That's the Nichols report?
 20 MS. URE: Yes.
 21 MR. KOLVET: No objection.
 22 HEARING OFFICER JOSEPH-TAYLOR: 305 will be
 23 admitted.
 24 (Exhibit 305 admitted into evidence.)
 25 MS. URE: 306 was referenced, I believe, in their

1 Much of the proposed places of use are
 2 groundwater discharge areas. You know, again that's an area
 3 where you have bogs where you get tractors stuck, where you
 4 have small potholes where you have I think what Mr. Tibbitts
 5 described as lentic soils where the water is at the land
 6 surface but it may not, you know, you may have little potholes
 7 with water in it but there aren't big flowing springs.
 8 The general land survey maps and field notes
 9 don't support in the large areas that the Applicants purport
 10 to be cultivated -- cultivated, and that's the key word.
 11 There's only one field depicted in the GLO survey maps. And
 12 water levels changes in the valley due to the surprising
 13 change in water levels in Diamond Valley may not be the only
 14 cause of spring discharge decline.
 15 MS. URE: Thank you.
 16 MS. TUMBUSCH: Can we take a break?
 17 MS. URE: Well, I'm done with direct.
 18 HEARING OFFICER JOSEPH-TAYLOR: Thank you. We'll
 19 be in recess for 15 minutes. We're off the record.
 20 (Recess.)
 21 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 22 record. Cross-examination. Oh, hold on a sec. Did you have
 23 any exhibits that you need today take care of first, Ms. Ure?
 24 MS. URE: Yes.
 25 HEARING OFFICER JOSEPH-TAYLOR: I have a whole

1 first report. I'm not sure.
 2 MS. PETERSON: Yes.
 3 MS. URE: Yeah, it was.
 4 MR. KOLVET: Did we have any testimony about
 5 that?
 6 MS. PETERSON: Yes.
 7 MR. TAGGART: The first report?
 8 MR. KOLVET: 306 Montgomery and Associates.
 9 HEARING OFFICER JOSEPH-TAYLOR: I've got a little
 10 X next to it so must have.
 11 MR. TAGGART: Those are --
 12 MR. KOLVET: That's fine. I just couldn't
 13 remember.
 14 HEARING OFFICER JOSEPH-TAYLOR: 306 will be
 15 admitted.
 16 (Exhibit 306 admitted into evidence.)
 17 MS. URE: I believe that the 307, the Diamond
 18 Valley presentation, was already in, but in a different spot.
 19 MS. PETERSON: 287.
 20 MS. URE: Thank you.
 21 HEARING OFFICER JOSEPH-TAYLOR: Thank you, Karen.
 22 MS. URE: And then 308 and 309, I think those are
 23 already in as well. State Engineer ruling 6127 and 1126.
 24 HEARING OFFICER JOSEPH-TAYLOR: Yeah, the order
 25 in as Exhibit 2. Ruling 6127, I couldn't tell you. Does

1 anybody know if that's in?
 2 MS. URE: I know they mention it in the first
 3 report.
 4 MS. PETERSON: It's not another Exhibit.
 5 HEARING OFFICER JOSEPH-TAYLOR: It's not.
 6 MS. PETERSON: It's not. But it is mentioned in
 7 the report.
 8 HEARING OFFICER JOSEPH-TAYLOR: Okay. Any
 9 objection to 308?
 10 MR. KOLVET: No.
 11 HEARING OFFICER JOSEPH-TAYLOR: It will be
 12 admitted.
 13 (Exhibit 308 admitted into evidence.)
 14 MR. KOLVET: 309 you're not offering.
 15 HEARING OFFICER JOSEPH-TAYLOR: 309 is also
 16 Exhibit 2. It's already in.
 17 MS. URE: 311 is the Smith climate change and
 18 pressure influences.
 19 HEARING OFFICER JOSEPH-TAYLOR: *Objection to 311?*
 20 MR. KOLVET: No.
 21 MR. TAGGART: No objection.
 22 HEARING OFFICER JOSEPH-TAYLOR: *Thank you. It*
 23 *will be admitted.*
 24 (Exhibit 311 admitted into evidence.)
 25 MS. URE: 312 is the Tumbusch report with the

1 (Exhibit 326 admitted into evidence.)
 2 MS. URE: And we're not going to offer 327 but we
 3 will offer replacement which I forgot to write down.
 4 MR. KOLVET: 341.
 5 MS. URE: 440. It's the PowerPoint presentation.
 6 HEARING OFFICER JOSEPH-TAYLOR: *Any objection to*
 7 *440?*
 8 MR. TAGGART: No objection.
 9 MR. KOLVET: No.
 10 HEARING OFFICER JOSEPH-TAYLOR: It will be
 11 admitted.
 12 (Exhibit 440 admitted into evidence.)
 13 MS. URE: Exhibits 336 and 337, they were
 14 mentioned in the rebuttal report.
 15 HEARING OFFICER JOSEPH-TAYLOR: *Any objection?*
 16 MR. KOLVET: I'm just trying to find them.
 17 HEARING OFFICER JOSEPH-TAYLOR: *The reference is*
 18 *in the report.*
 19 MS. URE: 336 and 337.
 20 MR. TAGGART: Those are referenced in the
 21 rebuttal report.
 22 MS. PETERSON: The rebuttal report.
 23 MR. KOLVET: That they're relying on in part
 24 somewhere?
 25 MS. PETERSON: Yes.

1 USGS.
 2 HEARING OFFICER JOSEPH-TAYLOR: *Any objection to*
 3 *312?*
 4 MR. KOLVET: No.
 5 MR. TAGGART: No objection.
 6 HEARING OFFICER JOSEPH-TAYLOR: It will be
 7 admitted.
 8 (Exhibit 312 admitted into evidence.)
 9 MS. URE: Exhibit 317 is the Bailey monitoring
 10 well data.
 11 HEARING OFFICER JOSEPH-TAYLOR: *Any objection?*
 12 MR. KOLVET: No.
 13 HEARING OFFICER JOSEPH-TAYLOR: It will be
 14 admitted.
 15 (Exhibit 317 admitted into evidence.)
 16 MS. URE: Exhibit 326 is the rebuttal report for
 17 Bugenig and Tumbusch.
 18 HEARING OFFICER JOSEPH-TAYLOR: *Any objection?*
 19 MR. TAGGART: What number?
 20 HEARING OFFICER JOSEPH-TAYLOR: 326.
 21 MR. TAGGART: That's the rebuttal report, no
 22 objection.
 23 MR. KOLVET: No objection.
 24 HEARING OFFICER JOSEPH-TAYLOR: It will be
 25 admitted.

1 MR. TAGGART: All right.
 2 MR. KOLVET: All right.
 3 HEARING OFFICER JOSEPH-TAYLOR: *336 and 337 will*
 4 *be admitted.*
 5 (Exhibit 336, 337 admitted into
 6 evidence.)
 7 HEARING OFFICER JOSEPH-TAYLOR: *While we're on*
 8 *that page, how about 401, Ms. Tumbusch's CV?*
 9 MR. KOLVET: No objection.
 10 HEARING OFFICER JOSEPH-TAYLOR: It will be
 11 admitted.
 12 (Exhibit 401 admitted into evidence.)
 13 MS. URE: Are you ready?
 14 HEARING OFFICER JOSEPH-TAYLOR: Um-hum.
 15 MS. URE: 418, 419, 420, 21, 22, 423, 426, 27, 8,
 16 9, those are all various proofs, amended proofs of the
 17 Applicants' water rights that are in the files of the State
 18 Engineer's office.
 19 HEARING OFFICER JOSEPH-TAYLOR: *Any objection to*
 20 *418 through 423?*
 21 MR. KOLVET: No.
 22 HEARING OFFICER JOSEPH-TAYLOR: It will be
 23 admitted.
 24 (Exhibit 418, 419, 420, 421, 422, 423
 25 admitted into evidence.)

1 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 2 426 through 428?
 3 MR. TAGGART: Are those --
 4 HEARING OFFICER JOSEPH-TAYLOR: They're records
 5 of our office.
 6 MR. KOLVET: I thought two of them were in -- I
 7 thought 24 and 25 were in.
 8 MS. URE: Those are in.
 9 HEARING OFFICER JOSEPH-TAYLOR: 426 through 428.
 10 MR. KOLVET: No objection.
 11 HEARING OFFICER JOSEPH-TAYLOR: They'll be
 12 admitted.
 13 (Exhibit 426, 427, 428 admitted into
 14 evidence.)
 15 MS. URE: And 429.
 16 HEARING OFFICER JOSEPH-TAYLOR: And 429?
 17 MR. KOLVET: No objection.
 18 HEARING OFFICER JOSEPH-TAYLOR: It will be
 19 admitted.
 20 (Exhibit 429 admitted into evidence.)
 21 MS. URE: 432 and 433 were the data used in the
 22 rebuttal report.
 23 HEARING OFFICER JOSEPH-TAYLOR: Any objection?
 24 MR. KOLVET: No objection.
 25 MR. TAGGART: Can I just look at that real quick?

1 MR. KOLVET: That's the first one.
 2 HEARING OFFICER JOSEPH-TAYLOR: Yeah.
 3 MR. KOLVET: No objection.
 4 HEARING OFFICER JOSEPH-TAYLOR: 417 will be
 5 admitted.
 6 (Exhibit 417 admitted into evidence.)
 7 MR. TAGGART: While we're at it --
 8 HEARING OFFICER JOSEPH-TAYLOR: 440 is in,
 9 Ms. Peterson.
 10 MR. TAGGART: 604. I thought there would be a
 11 next area of witness testimony. And I would have talked Mr.
 12 Goicoechea about it. It says records at your office of the
 13 vested claims. It's the one that is in Kobeh Valley.
 14 HEARING OFFICER JOSEPH-TAYLOR: Any objection to
 15 604?
 16 MS. URE: I don't believe there's been any
 17 testimony or evidence on it and I question the relevancy.
 18 MR. TAGGART: I just explained. I was under the
 19 expectation that one of your witness -- one of your lay
 20 witnesses was going to testify and I was going to ask them
 21 about it. It's the same water right I asked Mr. Goicoechea
 22 about. It's the water right that's being sought to be
 23 protected by Eureka County in Kobeh Valley. The unadjudicated
 24 vested claim. And it's a record of the State Engineer's
 25 office.

1 HEARING OFFICER JOSEPH-TAYLOR: It's just raw
 2 data from the AgriMet station.
 3 MR. TAGGART: No objection.
 4 HEARING OFFICER JOSEPH-TAYLOR: 432 and 433 will
 5 be admitted.
 6 (Exhibit 432, 433 admitted into
 7 evidence.)
 8 MR. KOLVET: I don't object to 434, 435 and 436.
 9 HEARING OFFICER JOSEPH-TAYLOR: Thank you. 434,
 10 435, and 436 will be admitted.
 11 (Exhibit 434, 435, 436 admitted into
 12 evidence.)
 13 MS. PETERSON: Is --
 14 HEARING OFFICER JOSEPH-TAYLOR: Question,
 15 Ms. Peterson?
 16 MS. PETERSON: Is 417 all exhibits listed by
 17 Eureka County some other place?
 18 HEARING OFFICER JOSEPH-TAYLOR: Ah, thank you.
 19 417, the Exhibits listed by Eureka County that were adopted
 20 by --
 21 MR. KOLVET: I thought that was 434.
 22 MS. URE: It's in both places.
 23 HEARING OFFICER JOSEPH-TAYLOR: It's their
 24 Exhibit list during the exchange.
 25 MS. URE: In the first exchange.

1 MS. PETERSON: Yeah, we don't recall that
 2 testimony, any questions to Chairman Goicoechea about that.
 3 MR. TAGGART: I asked him about the brief that
 4 you filed at the 7th judicial Exhibit court about a water
 5 right that you wanted to have protected.
 6 HEARING OFFICER JOSEPH-TAYLOR: We're not going
 7 to fight over a record of our office. 604 is going to be
 8 admitted.
 9 (Exhibit 604 admitted into evidence.)
 10 HEARING OFFICER JOSEPH-TAYLOR: That's everything
 11 off my list that you touched, Ms. Ure. You got any others?
 12 MS. URE: No.
 13 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 14 MS. URE: Yes.
 15 HEARING OFFICER JOSEPH-TAYLOR:
 16 Cross-examination, please.
 17 CROSS-EXAMINATION
 18 BY MR. TAGGART:
 19 Q. Good afternoon.
 20 WITNESS TUMBUSCH: Good afternoon.
 21 WITNESS BUGENIG: Good afternoon.
 22 Q. My name is Paul Taggart. I represent Sadler
 23 Ranch, and I have some questions for you.
 24 HEARING OFFICER JOSEPH-TAYLOR: On the 81 Post-It
 25 not papers that you.

1 BY MR. TAGGART:
 2 Q. Let's start with the errata page. And in
 3 particular, I wanted to look at page 21 of Exhibit 302. Has
 4 this already been put into evidence, this errata page?
 5 HEARING OFFICER JOSEPH-TAYLOR: Yes. We -- Mac,
 6 you just attached it to -- what Exhibit number, Mac?
 7 MR. WILSON: 302 and 326.
 8 HEARING OFFICER JOSEPH-TAYLOR: 302 and 326, they
 9 were attached to the back.
 10 MR. TAGGART: Okay.
 11 BY MR. TAGGART:
 12 Q. Mr. Bugenig, did I say that right?
 13 (Answers by Mr. Bugenig)
 14 A. Close enough, sir.
 15 Q. So on page 21 in the draft of your report there's
 16 a sentence at the end of the third paragraph. Well, actually
 17 I'll go back one sentence. It says based on the measured flow
 18 of Shipley Hot Springs in the early days of groundwater
 19 exploitation in Diamond Valley, it seems improbable that the
 20 springs were capable of supporting the annual irrigation due
 21 to four-acre feet per acre --
 22 HEARING OFFICER JOSEPH-TAYLOR: We're having a
 23 hard time hearing you, Mr. Taggart.
 24 MR. TAGGART: All right. A continuous year-round
 25 flow rate of 6 to 7 CFS equates to approximately 2,700 to

1 A. Yes, sir.
 2 Q. Okay.
 3 A. I'm just glad I spelled erotic correctly.
 4 Q. Is that the same as the change on page 21, is
 5 that the same thing?
 6 A. I'm sorry, what was.
 7 Q. The --
 8 A. Yes, yes, sir. I'm sorry.
 9 Q. Okay. Okay, now, Ms. Tumbusch, if you don't mind
 10 I'm going to go just back and forth. It will probably track
 11 how you presented it.
 12 But was I correct in understanding your testimony
 13 that those wells that we talked about yesterday when I believe
 14 it was Mr. John Moyle was testifying about wells in the
 15 northwestern -- or northeastern side of the southern part of
 16 the valley? Do you understand what I mean by the same thing?
 17 (Answers by Ms. Tumbusch)
 18 A. Um-hum. Yes.
 19 Q. Do you have Dwight Smith's report and the plate
 20 that is with that report?
 21 A. What Exhibit number?
 22 Q. 108, and the plate folds out.
 23 MS. URE: It's not in there.
 24 MS. TUMBUSCH: It's not in here. No, I do not
 25 have it.

1 3,100 acre feet per year, which is much less than the amount
 2 requested by the Applicant.
 3 And now, it's actually 43,000 to 5,086 acre feet;
 4 is that -- is the calculation of CFS to acre feet, that's the
 5 correction?
 6 MR. BUGENIG: Yes, I took Mr. Smith's word for it
 7 that I couldn't do the arithmetic. Or I typed it in wrong.
 8 I'm a notoriously bad typist.
 9 BY MR. TAGGART:
 10 Q. Okay. And then -- you just took all the fun out
 11 of it. And then on page 5 of Exhibit 126?
 12 A. Yes.
 13 Q. This is the -- I guess this is probably the
 14 amount of distribution of recharge between northern and
 15 southern Diamond Valley?
 16 A. Right. The 12,000 acre feet is the value from
 17 Harrill's report of groundwater recharge in the southern part
 18 that prior to groundwater development flowed north to the
 19 playa, and again is just a testimony to what a lousy typist I
 20 am and maybe even a worse editor.
 21 Q. Okay. So in your report, the rebuttal report
 22 Exhibit 128 -- I'm sorry 126, page 5, it said -- used to say
 23 approximately 20,000 acre feet of groundwater. Flow
 24 originates in southern Diamond Valley and flows in the north
 25 Diamond subarea. That should be 12,000?

1 MR. TAGGART: If we could give her a copy of
 2 that, please.
 3 HEARING OFFICER JOSEPH-TAYLOR: We got it, Mac.
 4 Thank you.
 5 BY MR. TAGGART:
 6 Q. Over on the right-hand side of the plate there's
 7 a series of hydrographs and there's one right below where it
 8 says Thompson Ranch. Do you see that hydrograph?
 9 A. Yes.
 10 Q. Now, it seems to me like that hydrograph is
 11 showing is that the first reading was at ground surface around
 12 1965. Do you agree with me with that?
 13 A. Yes.
 14 Q. And then that in 2004 there was a reading of
 15 about a 22-foot decline?
 16 A. Yes.
 17 Q. Is that fair? And then in the latest reading,
 18 which is the 2013, which it doesn't say that on here but it's
 19 in the report, shows a 30-foot decline at that location. And
 20 that's actually where the 31, I guess, comes from where the
 21 line is pointing where that observation was?
 22 A. Um-hum.
 23 Q. Were you testifying that you think groundwater
 24 levels have -- are not declining and are actually increasing
 25 in that part of Diamond Valley?

1 A. I did not testify to that, no.
 2 Q. Okay.
 3 A. I just said there was -- there's something
 4 happening there where -- then I see the little bump you're
 5 talking about. And explaining that, could I ask where that
 6 data comes from, from 2005 on?
 7 Q. Well, it's in his report. And I don't want to be
 8 wrong. I don't --
 9 A. Is that peer reviewed or published in -- I'm
 10 sorry, I just --
 11 Q. Did you review Mr. Smith's report?
 12 A. Yes, I did.
 13 Q. Because all that information is in his report.
 14 A. Okay.
 15 Q. I believe it's in State Engineer's as well. It's
 16 from an online data base.
 17 A. Okay.
 18 Q. Is that where you got that, an online data base?
 19 HEARING OFFICER JOSEPH-TAYLOR: You can whisper
 20 to him.
 21 BY MR. TAGGART:
 22 Q. Yeah, it's right in the legend on the plate.
 23 A. That's interesting, because I did not find --
 24 Q. There's no question pending, ma'am.
 25 A. I'm sorry. Okay.

1 Q. Well, there's an Exhibit 154 and it's well logs
 2 that are part of the State Engineer's records.
 3 MS. PETERSON: I don't think you have them up
 4 there.
 5 MS. TUMBUSCH: Hum-um.
 6 MR. TAGGART: Let me just -- I'd thought could I
 7 do this quickly. I'll show this to you and you can just -- do
 8 you mind if I approach?
 9 HEARING OFFICER JOSEPH-TAYLOR: No.
 10 BY MR. TAGGART:
 11 Q. So this is a well log on the first page of the
 12 Exhibit from 1948 from AC Florio and later on the well log is
 13 .5 CFS. Do you see that?
 14 A. Yes, sir.
 15 Q. Do you agree that I got that right?
 16 A. Yes.
 17 Q. This is another well, same time, 1948, .68 CFS?
 18 A. Okay.
 19 Q. And then this is another well log, .65 CFS on the
 20 same day?
 21 A. Okay.
 22 Q. And here's another one on the same day .65 CFS,
 23 sorry?
 24 A. Yes.
 25 Q. Okay. So those four wells, those well logs

1 Q. Mr. Bugenig, so you have concluded that the
 2 Romano wells did not impact the flow at Shipley Spring?
 3 (Answers by Mr. Bugenig)
 4 A. No, sir, that's incorrect.
 5 Q. So there is some impact from Romano on Shipley
 6 Spring flows?
 7 A. If you compare the 2012, 2013, 7 to 8 CFS from
 8 the State Engineer's office and the 1960s vintage measurements
 9 of the discharge from -- made by -- that were provided in Jim
 10 Harrill's report, there's about a half of CFS decline. So I
 11 concluded that perhaps as much as a half a CFS decline might
 12 have been attributed to those flowing artesian wells.
 13 Q. And that decline would have occurred prior to the
 14 Harrill measurements in the mid '60s?
 15 A. That's what -- if you recall my graph, it
 16 occurred somewhere in between.
 17 Q. And did you look at any of the data on the flow
 18 in those artesian wells on the Romano Ranch prior to 1965?
 19 A. I utilized the numbers. I looked at the well
 20 logs. They had flow measurements. And then I was recalling
 21 the discussion between Mr. Smith and Mr. Felling that the flow
 22 was about 1 CFS.
 23 Q. In 1965?
 24 A. Oh, in 1965. I don't recall what the flow was in
 25 1965.

1 indicate that -- I won't make you do the math.
 2 A. 1.3, let's call it 2, and 2 and a half.
 3 Q. 2 and a half CFS?
 4 A. Yeah.
 5 Q. So when they were drilled they were flowing two
 6 and a half CFS?
 7 A. Right. But as Mr. --
 8 Q. Right. Then do you know if there were any wells
 9 there before 1948?
 10 A. I think Mr. Smith mentioned there were some wells
 11 drilled in the early -- closer to 1940.
 12 Q. Okay. You remember Eakin's report from 1962 and
 13 on page 28 of that report he notes, and again --
 14 HEARING OFFICER JOSEPH-TAYLOR: Exhibit number.
 15 MS. PETERSON: 303.
 16 BY MR. TAGGART:
 17 Q. 303. That -- I'm sorry, I'm going to start a new
 18 question now.
 19 The four wells I just showed were 1949; right?
 20 A. I recall that.
 21 Q. So he says in about 1943 -- this is on page 28 of
 22 303 -- drilling on the Romano well resulted in the development
 23 of several flowing wells. The wells generally were less than
 24 200 feet deep and the combined flow of six wells was about
 25 600 gallons per minute. Over the years the flow gradually

1 diminished and now be on the order of 200 gallons per minute.
 2 A. What page, please.
 3 Q. Page 28.
 4 A. Yes.
 5 Q. So he counted several flowing wells?
 6 A. Yes.
 7 Q. We don't know exactly how many. Then we have
 8 four new wells in 1949 and I think we -- we counted that to
 9 2 and a half. Maybe we're up to 2.7 if you count the ones he
 10 saw in 1943?
 11 A. Um-hum.
 12 Q. Do you agree with me?
 13 A. Yes.
 14 Q. Then we have another one from 1949. I'm going to
 15 show it to you. It's the last page of that Exhibit with the
 16 well logs. And it says 1.5 CFM. That's Exhibit 154. Have
 17 you seen that document before?
 18 A. I have it, yes. Cubic feet per minute being CFM?
 19 Q. I don't know. Maybe. That's what it says on a
 20 piece of paper.
 21 So would you agree that from the 1943 through
 22 1950 time period there was more than 1 CFS of water flowing
 23 from the wells in Romano?
 24 A. Initially but it tapered out -- tapered off over
 25 time.

1 CFS decline from 7 CFS to about 6 and a half.
 2 Q. So it doesn't matter how much water was flowing
 3 from the Romano wells, your opinion is the impact on Shipley
 4 is half a CFS?
 5 A. I have didn't analyze the specific -- I didn't do
 6 a Theis type analysis of the drawdown based on a specific
 7 pumping rate. What I looked at was the difference in the
 8 spring discharge from 1912, 1913, and 1965, let's say, and the
 9 difference speaks for itself. That is the effect of the
 10 flowing artesian wells in the vicinity regardless. You don't
 11 have to make an assumption over the flow rate. Just looking
 12 at the difference in data on the hydrograph.
 13 Q. How far away is the Romano well from Shipley
 14 Springs?
 15 A. Well, I think there are multiple wells and I
 16 think they're, what, 3 to 5 miles perhaps.
 17 Q. How far away is the Brown well?
 18 A. Three miles.
 19 Q. Same distance; right?
 20 A. As some of the wells as the Romano Ranch.
 21 Q. But the Brown well is the main contributor to the
 22 decline in the Shipley, but the Romano well hasn't caused
 23 Shipley to decline except 1 and a half CFS?
 24 A. No, what I said was the Brown well was one of the
 25 other possible impacts.

1 Q. Well, how do you know that? Didn't I just ask
 2 you about the wells and you said you didn't know about them
 3 before?
 4 A. What's that?
 5 Q. I mean -- okay, more than 1 CFS --
 6 HEARING OFFICER JOSEPH-TAYLOR: Let me stop a
 7 second. Just answer his questions.
 8 THE WITNESS: Okay.
 9 HEARING OFFICER JOSEPH-TAYLOR: Don't elaborate.
 10 Then he can ask you the next one. Go ahead, Mr. Taggart.
 11 BY MR. TAGGART:
 12 Q. Okay. So more than 1 CFS was flowing before
 13 1965?
 14 A. It appears so yes.
 15 Q. And if more water was flowing than 1 CFS before
 16 1965 that would change your analysis of how much of decline
 17 that would have caused Shipley Spring; right?
 18 A. No, I believe what I said was that the flowing
 19 artesian wells, whatever that flow was, whether it be 1 CFS, 2
 20 CFS, 6 CF, appears be given the difference in flow
 21 measurements from 1912, '13 of 7 to 8 CFS and the measurements
 22 made by this -- that are provided in Mr. Harrill's report show
 23 a decline of about a half a CFS.
 24 So that's my analysis is whatever the flowing
 25 artesian wells were in the area, there's only about a half of

1 Q. I'll look for it, but I thought in your first
 2 report you said you thought the major contributor to the
 3 decline at Shipley was the Brown well?
 4 A. I think -- I know what sentence you're looking
 5 for. I think what I meant to say is that it is one of the
 6 other main -- one of the other contributors of the -- we
 7 talked -- I was trying to get to that there were other
 8 influences and of these other influences perhaps the Brown
 9 well might have been the main.
 10 Q. So is that what you still think? Do you still
 11 think the Brown well of those other influences is the main
 12 one, the main contributor?
 13 A. Well, the calculation suggests a fair amount of
 14 drawdown. I think pumping at the Brown Ranch was a major
 15 contributor.
 16 Q. Okay. What you said was may have had a more
 17 significant influence over the decline of spring flow in the
 18 pumping of junior appropriators south of the playa.
 19 A. Could be. It's closer.
 20 Q. Um-hum.
 21 A. It's closer, so -- and it was pumping a fair
 22 amount of water.
 23 Q. But you think Brown impacted the spring more than
 24 Romano. We already established that; right?
 25 A. Might have.

1 Q. Now, if -- if -- regardless of how much the
2 Romano wells impacted flow at Shipley, do you agree that that
3 impact would have equilibrated over some time frame and it
4 wouldn't continue to cause decline indefinitely?
5 A. It takes a long time for water levels to come to
6 a -- to equilibrate, and especially in a basin that's being
7 over-pumped.
8 Q. Well --
9 A. It may not equilibrate.
10 Q. At that time there was no impacts from the
11 southern pumping out in this area, was there?
12 A. I don't believe so, no.
13 Q. So we're talking about a 3-mile to 5-mile
14 distance, pumping stress occurs?
15 A. Um-hum.
16 Q. Let's says 1945, '46, '47. And that pumping
17 stress moves through the system the 3 to 5 miles to Shipley
18 Spring; right?
19 A. Right.
20 Q. And if it impacted Shipley Spring, Shipley Spring
21 would decline; right?
22 A. Yes.
23 Q. And at some point do you agree that the decline
24 would equilibrate and it would not continue to decline?
25 A. At some time. It can often take up to decades

1 A. I discount that, yes.
2 Q. All right. And even though that case was in
3 litigation and they were setting a number to settle the
4 litigation, you don't place value on that estimate at all in
5 your opinion about what the historic flow of Shipley Spring
6 was; correct?
7 A. No, sir.
8 Q. And you acknowledge the measurement problems with
9 Shipley Spring?
10 A. Yes.
11 Q. And you know that Payne indicated he could not
12 make an accurate measurement when he standing next to the dam;
13 right?
14 A. Yes.
15 Q. And then you still want -- and how do you factor
16 that in? Do you still believe that his was the best
17 approximation of historic flow even though he knew when he was
18 standing there that he could not make an accurate estimate
19 because of the dam -- the dam situation?
20 A. You know, I have a great deal of respect for
21 State Engineer's office and when the State Engineer's office
22 goes out and does an investigation and they make an estimate,
23 I believe it's reasonably good.
24 Q. All right.
25 A. And he was honest in saying rather than saying he

1 for a dynamic -- for drawdown from a well to equilibrate. It
2 depends on the aquifer properties, the relative stress of the
3 well related to the groundwater flux, and other factors.
4 Q. Okay. Boy, you really discount Eakin's
5 measurements of Shipley Spring, don't you. You rely on
6 Payne's measurement in 1912, but I didn't hear you mention
7 Eakin's measurement when you went out there. We showed some
8 field notes of when he went out there. You don't think
9 there's any value to that measurement by Tom Eakin who in your
10 report you've indicated is one of the founding fathers of
11 hydrology in Nevada?
12 A. I think that measurements made by Tom Eakin are
13 beyond reproach. If you look at that field note it says REPT
14 and that's reported, as he said, the reported discharge of
15 Shipley Springs was 15 CFS, and that was the caption of the --
16 beneath the photograph on the second behind the cover sheet of
17 his -- of his report.
18 And so I think he was being very straightforward
19 that somebody reported that value to him. There's not the
20 basis of a measurement.
21 Q. So what's a WAG?
22 A. A wildly approximate guess. For this proceeding.
23 Q. And you discount the -- the credibility of the
24 15 CFS number from the litigation case; right? Is that a yes
25 or a no?

1 measured it he made an estimate. And this is a guy who drives
2 around with a pygmy Price meter in his truck and measures
3 spring flows a lot and so I put a lot of credibility in his
4 estimate.
5 Q. Well, I don't know if he had a truck but --
6 A. Car, pardon me.
7 Q. Yeah, I don't know if he had that either. But do
8 the people in the State Engineer's office generally take field
9 notes or write a field investigation when they go out and look
10 a location and measure a spring?
11 A. I don't know if it's usually but I've seen
12 numbers of field notes.
13 Q. Did you look in the records of the State
14 Engineer's office for field notes or a field investigation for
15 the -- for the examination that was referenced in that letter
16 from State Engineer that denied the water right in 1913? Did
17 you look for anything like that?
18 A. I did not personally do research at State
19 Engineer's office. I relied on the exhibits, I believe, that
20 were submitted by you, and that was a letter where the State
21 Engineer said that he made a field investigation.
22 Q. Did you do any analysis of any other documents
23 than the ones that were provided to you in this case?
24 A. Explain analysis. Did I do any other analysis?
25 Q. Well --

1 HEARING OFFICER JOSEPH-TAYLOR: Don't talk over
2 each other.
3 BY MR. TAGGART:
4 Q. Before you started your exercise of drafting your
5 expert report, did you go out and go to the records of the
6 State Engineer's office or go to the records of any official
7 office and get information, or did you just rely on the
8 information that was provided by the Applicants?
9 A. No, I --
10 Q. That's not going to work.
11 A. I'm sorry, I don't.
12 Q. I -- I'd ask you to --
13 HEARING OFFICER JOSEPH-TAYLOR: He's already said
14 the documents were provided to him; he analyzed the documents.
15 MR. TAGGART: I know, but when --
16 HEARING OFFICER JOSEPH-TAYLOR: I got it. He
17 knows she shouldn't have done it.
18 MR. TAGGART: Okay.
19 THE WITNESS: Well, yeah, I'm very familiar with
20 the reports by Eakin, Harrill, Arteaga, anyway, all of the
21 groundwater flow, the reports of -- dealing with the
22 hydrogeology of Diamond Valley, and they're invaluable sources
23 of information.
24 BY MR. TAGGART:
25 Q. But when you saw the letter from the State

1 A. There are measurements in that time period which
2 I believe are suspect.
3 Q. Okay. And some of the measurements are 8 CFS in
4 the '80s; right?
5 A. Yes.
6 Q. Would you agree that the flow records do not
7 indicate the spring declined in that 1965 to 1982 period?
8 A. No, you discount the measurements that Jim
9 Harrill thinks are erroneous, there is a decline. If you
10 looked at the graph that I provided that's my testimony that
11 there is a decline in that period.
12 Q. Do you agree that the flow of the spring is less
13 than 2 CFS today?
14 A. That's a measurement by Terry Katzer and I would
15 take that to the bank.
16 Q. So you agree that the spring has declined almost
17 75 percent in flow since the mid-60s?
18 A. Yeah, if it was 6 and it's 1 and a half now
19 that's 75 percent. I think -- I don't think the data lie.
20 Q. Now it's 6, is what the historic flow was, 6?
21 A. Well, no, from 1960, because that was the time
22 period, I think, that you addressed.
23 Q. Okay. In slide number 7 of your PowerPoint. And
24 in the protest from Eureka County they reference this 4,900
25 acre feet and 6.8 CFS; right?

1 Engineer and you are relying upon it in your analysis you
2 didn't come to the offices and look for that letter or look
3 for any field notes that supported or looked at the water card
4 that doesn't list it. You didn't do -- you're assuming there
5 was a separate --- you're assuming there was a separate
6 examination of the spring from what Mr. Payne did; right?
7 A. I believe that's correct.
8 Q. So you think the USGS flows, their estimate of
9 flows are the best ones; right?
10 A. The estimates of flows, well, it depends on what
11 time period you're talking about.
12 Q. 1960 to 1985.
13 A. For the entire time period, no. The best
14 estimates are those made by Robert Lamke for Jim Harrill, for
15 Jim Harrill's 1968 report. I believe there's some windage in
16 those estimates from the 1980s and early 1990s and that belief
17 is reinforced by my conversation with Jim Harrill, the
18 conversation that Mary Tumbusch and I had with Jim Harrill,
19 that many of those measurements maybe suspect.
20 Q. So you do or you do not?
21 HEARING OFFICER JOSEPH-TAYLOR: What?
22 BY MR. TAGGART:
23 Q. I'd ask the question. I don't know the answer
24 yet. You do or you do not think the USGS flow measurements
25 are the best ones for the period 1960 to 1985?

1 A. Does the protest?
2 Q. Well, forget about that. Do you know -- did you
3 help prepare the protest?
4 A. I was -- I was part of the discussion and some of
5 my input was taken for the protest points.
6 Q. Well, you acknowledge that Harrill reported that
7 there was 4,900 acre feet in table 9 of his 1968 report coming
8 out of Shipley Hot Spring; right?
9 A. Yes.
10 Q. And also there was another 540 acre feet coming
11 out of an unnamed spring which is Indian Camp Spring?
12 A. I believe that Indian Spring is Indian Camp
13 Springs and it contributes to that total.
14 Q. So the total there is 5,440 acre feet; right?
15 A. Right.
16 Q. Then on slide 9 of your PowerPoint you -- you
17 indicate Shipley Hot Spring 4,900 acre feet to 5,700 acre
18 feet. And I believe that's because there were the later
19 measurements of -- of higher flow in the spring -- in the
20 Shipley Spring in the early '80s; is that true?
21 A. No, that's not true. The upper one -- upper --
22 the higher measurement is based on the 7 to 8 CFS from 1912.
23 1912, 1913.
24 Q. Can you -- do you have plate 1? Okay. The
25 questions I have are coming from Exhibit 108 or referring to

1 Exhibit 108, plate 1. You agree that there is approximately a
 2 hundred foot of drawdown in the southern part of Diamond
 3 Valley; right?
 4 A. I don't think anybody disputes that.
 5 Q. All right. And that drawdown started in the
 6 early 60s?
 7 A. I think that's correct.
 8 Q. And the cone of depression propagates in all
 9 directions from that cone?
 10 A. It does.
 11 Q. Including north?
 12 A. Absolutely.
 13 Q. And on this plate there's a drawdown of 51 feet
 14 to the northwest of the center of the cone of depression; do
 15 you see that?
 16 A. Okay, yes.
 17 Q. Do you believe that's caused by the pumping in
 18 the southern part of the valley?
 19 A. Yes.
 20 Q. And then we move up to one that Mr. Smith talked
 21 about. It shows 35 feet of drawdown. And that's at Sulphur
 22 is what it's called; do you see that?
 23 A. Yes.
 24 Q. Do you believe that 35 feet of drawdown is caused
 25 by pumping at the southern end of Diamond Valley?

1 the valley too?
 2 A. Large percentage of it. I believe that's the
 3 largest stress in the basin.
 4 Q. And have you analyzed how it's tracked on a time
 5 line, how the draw downs have occurred as time goes by
 6 starting in the southern part of the valley in the '60s and
 7 moving up in the 70's and tracking it in the hydrographs?
 8 A. I've looked at virtually of the hydro -- you know
 9 water level data, the same data that Mr. Smith has looked at,
 10 and I've seen how things have changed over time.
 11 Q. What about the Bailey well or the Bailey Spring,
 12 do you think that's dry because of pumping in the southern
 13 part of the bail?
 14 A. I believe so. I think Mr. Bailey said it took
 15 28 years for that to occur after -- for his spring to dry up
 16 after electricity came to the valley.
 17 Q. How far is the Bailey Spring from Shipley Spring?
 18 A. I'd make it to be five miles.
 19 Q. Is it farther from Shipley and the Romano wells?
 20 A. Well, I don't have a ruler, but let me get a
 21 piece of paper.
 22 Q. No, I don't need it. I'm sorry, I thought you
 23 knew because you know how far the Romano wells were when I
 24 asked you first.
 25 So the Brown well on page -- PowerPoint page 28.

1 A. A large percentage of it is. We've talked about
 2 these possible outside influences, but it looks like it's
 3 caused by drawdown in the southern part of the valley.
 4 Q. So you agree that Sulphur Spring has dried up?
 5 A. Well, I think --
 6 Q. You agree that it's dry?
 7 A. From all indications it's dry, yes.
 8 Q. And you believe it's dry because of the pumping
 9 in the southern part of the valley?
 10 A. Largely, but perhaps not exclusively.
 11 Q. But -- and I'm just, I just want to find out how
 12 far we agree.
 13 A. Okay.
 14 Q. And so Tooley Spring?
 15 A. Yes.
 16 Q. Same answer?
 17 A. Um-hum.
 18 Q. And then we get up to the Romano wells. Do you
 19 think that the cone of depression made its influence felt at
 20 the Romano well at the Romano Ranch?
 21 A. Which hydrograph is that?
 22 Q. Well, there's a 19-foot drawdown called Tooley.
 23 You see that hydrograph?
 24 A. How is it labeled? Oh there, Tooley, all right.
 25 Q. All right. That's caused by the southern part of

1 You have four of Mr. Smith's hydrographs or three of
 2 Mr. Smith's hydrographs on that page; right?
 3 A. Well, they're not exactly hydrographs. They're
 4 cross spots of water level versus discharge.
 5 Q. All right. So you have three. You left one out
 6 that you had on the two pages that contain these three and
 7 that was the one for the Brown well; right?
 8 A. Yeah, the Brown well I don't believe is -- the
 9 same conditions are occurring at the Brown well as are
 10 occurring that are represented by here.
 11 Q. Do you agree that the groundwater level of the
 12 Brown well has not gone down?
 13 A. No, it used to be a flowing artesian well. Now
 14 it's below the land surface.
 15 Q. Well, has it gone down in the last five years?
 16 A. That's a really interesting point because if you
 17 looked at -- could can I go to the slide of the --
 18 Q. Has it gone down in the last five years?
 19 A. It has not gone down in the last five years
 20 because the pumping rate has been decreasing, and as the
 21 pumping rate decreases, the water level will either stabilize
 22 or rise slightly. So I believe it's the gradual decrease in
 23 discharge pumping at the Brown well that is artificially
 24 causing a quasi-equilibrium.
 25 Q. Well, on this same page you would agree that when

1 Mr. Smith put that in there he concluded that there was no
 2 correlation between water level declines at the Brown well and
 3 spring flow decline at the Shipley Spring; right?
 4 A. That's his opinion.
 5 Q. That's his opinion. Now, you said that on one of
 6 these, like, figure 2, when there's a 78 percent correlation
 7 to -- you said 28 percent of the cause could be something
 8 else. It looks like it's 22 percent. Is that how the math
 9 was?
 10 A. Yeah.
 11 Q. 22 percent could be from some other cause?
 12 A. That's what a -- if the correlation is a
 13 100 percent you're going to get a value of 1. And as if -- as
 14 the R-squared value gets smaller and smaller and smaller, that
 15 suggestions that you cannot account for 100 percent of the
 16 variation by -- due to the dependent variable, which is the
 17 variable on -- the data on the horizontal axis, or the
 18 independent variable on the horizontal axis and the dependent
 19 variability on the vertical access which is the flow rate.
 20 So something -- there is not a hundred percent
 21 correlation and one interpretation of that is if you have a
 22 .78 correlation coefficient that perhaps something is
 23 influencing the -- the relationship between the two. I mean,
 24 I don't know whether it's bad data, whether it's climate,
 25 whether it's variation in pumping rate, but something other

1 Diamond Valley.
 2 Q. So do you think the Eureka gauge would be a
 3 relevant gauge to look at as well?
 4 A. I've looked at that data. There's a lot of
 5 missing data. No, I do not think that's a good correlation.
 6 Q. You don't think it's relevant. To determine
 7 whether precipitation trends in the Diamond Valley area are
 8 going up or down you don't think it's relevant to look at the
 9 gauge in Eureka?
 10 A. For the --
 11 MS. PETERSON: Objection he asked about the gauge
 12 in Eureka again.
 13 HEARING OFFICER JOSEPH-TAYLOR: No, he asked if
 14 it was relevant to look at it. Overruled.
 15 THE WITNESS: It could be.
 16 BY MR. TAGGART:
 17 Q. Well, I'm going to show you a pull-out of a
 18 hundred year. On the last page there's a hydrograph.
 19 A. Page --
 20 Q. I put it on the front page.
 21 A. That's okay.
 22 Q. And you're right, there's some data gaps; right?
 23 A. Yes.
 24 Q. Okay. But aren't there some high water years --
 25 well, strike that, please. Let me ask you this. If you were

1 than the independent variable is causing -- is causing the
 2 dependent variable.
 3 Q. I just asked you if your testimony was that
 4 22 percent was being caused by something else.
 5 A. Yes. I'm sorry.
 6 Q. And then figure number 3?
 7 A. Okay.
 8 Q. Does the same logic mean that 78 percent of the
 9 cause in decline in Shipley Spring is from the pumping in
 10 southern Diamond Valley since there's a 78 percent
 11 correlation?
 12 A. Yes.
 13 Q. I want to ask Ms. Tumbusch about this
 14 precipitation chart on page 29. So your opinion is that
 15 precipitation trends are declining; is that --
 16 (Answers by Ms. Tumbusch)
 17 A. Correct.
 18 Q. Based upon 20 years -- I'm sorry, 26-year record
 19 of the Eureka gauge?
 20 A. Yes.
 21 Q. Did you look at the 100-year record of the Eureka
 22 gauge?
 23 A. Excuse me, it's the AgriMet station Diamond
 24 Valley. I did not compare the Eureka gauge because the Eureka
 25 gauge is in Eureka and the Diamond Valley's which is in

1 to just look at the last 26 years on this chart would it show
 2 a decline in precipitation at this gauge?
 3 A. Yes.
 4 Q. But if you look at the entire chart do you see a
 5 decline over time --
 6 A. I see 35 years of missing data.
 7 Q. Okay.
 8 HEARING OFFICER JOSEPH-TAYLOR: Make sure you let
 9 him finish his question.
 10 THE WITNESS: Okay.
 11 BY MR. TAGGART:
 12 Q. Now, I heard you mention -- oh, let me ask you
 13 about this. Exhibit 310, Eureka County Exhibit, page 33, it
 14 says state-wide precipitation hydrograph. Have you looked at
 15 that?
 16 A. From Kelly Redmond? Is that 310?
 17 Q. Yes.
 18 A. Yes.
 19 Q. Does that show a declining trend or an increasing
 20 trend in Nevada statewide?
 21 A. Statewide precipitation it shows variability. It
 22 shows increasing in 1980, decreasing in 1990, and slightly
 23 increasing in 2000, and really increasing -- decreasing in
 24 2010.
 25 Q. Is there a hundred-year trend on that?

1 A. The linear trend from 1895 to the present is what
 2 you're speaking of?
 3 Q. I think you answered the question. Don't worry
 4 about it.
 5 A. Okay.
 6 Q. Now, did you talk to Kelly Redmond?
 7 A. No, I have not.
 8 Q. Do you know Kelly Redmond?
 9 A. I know of him.
 10 Q. Who is?
 11 A. He is a climatologist at DRI.
 12 Q. Very well known?
 13 A. Yes, he is.
 14 Q. Probably the authority on precipitation trends,
 15 isn't he?
 16 A. Yes.
 17 Q. And climate change in the Great Basin; correct?
 18 A. Yes.
 19 Q. And did you contact him and ask him what his
 20 opinion was?
 21 A. No, I did not.
 22 Q. Well, I did. And I asked him --
 23 MS. URE: Objection, he's about ready to make a
 24 statement versus asking a question.
 25 MR. TAGGART: Well, what I have here is Kelly

1 MS. TUMBUSCH: Case in point.
 2 HEARING OFFICER JOSEPH-TAYLOR: You don't get to
 3 fight back.
 4 MS. TUMBUSCH: Okay. Excuse me.
 5 HEARING OFFICER JOSEPH-TAYLOR: We've had this
 6 problem before with conference materials and we didn't let
 7 them in before either. I don't know if --
 8 MR. TAGGART: This is a direct communication with
 9 the source, just like Harrill.
 10 HEARING OFFICER JOSEPH-TAYLOR: Yeah, yeah, but
 11 it's -- you're not a -- coming through you. You're not a
 12 witness.
 13 BY MR. TAGGART:
 14 Q. Mr. Bugenig, do you review the aerial photographs
 15 about the history of irrigation about from the Brown well?
 16 (Answers by Mr. Bugenig)
 17 A. Nope.
 18 Q. You have a, Mr. Bugenig, on page 31 of your
 19 PowerPoint you have a -- can I call this side a graph?
 20 A. Yeah, it's a water level -- it's a drawdown plot.
 21 Q. That's what I was going to say, a drawdown plot.
 22 Okay. So according to this drawdown plot, and this is showing
 23 what the drawdown at Shipley Springs would be from drawdown at
 24 the ground well there, this indicates that there would be how
 25 many feet of drawdown? You said 17 feet of drawdown at the

1 Redmond, the person you --
 2 HEARING OFFICER JOSEPH-TAYLOR: Hold on, hold on.
 3 respond to her objection.
 4 MR. TAGGART: I won't ask a question. I was
 5 responding to the objection.
 6 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 7 MR. TAGGART: What I have here is Kelly Redmond,
 8 the person she just said is the expert in climate change in
 9 the Great Basin.
 10 MS. URE: Object, it's hearsay.
 11 HEARING OFFICER JOSEPH-TAYLOR: I haven't even
 12 heard the question yet.
 13 MR. TAGGART: I'm not going to say what he said,
 14 okay.
 15 HEARING OFFICER JOSEPH-TAYLOR: Finish the
 16 question.
 17 MR. TAGGART: I just have what he -- I mean, he
 18 spoke at a conference that I chaired and he made a statement
 19 at the conference about what in central Nevada the temperature
 20 and precipitation trends were going to be and what the -- and
 21 I asked him what they were and he wrote me back in an e-mail
 22 and told me exactly what they were.
 23 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 24 MR. TAGGART: The information is there.
 25 Mr. Redmond is easy to get a hold of.

1 end of the irrigation season?
 2 A. Yeah, I think that's -- that's 120 days, I think.
 3 Q. That doesn't seem unreasonable to you?
 4 A. Pardon?
 5 Q. That doesn't seem unreasonable to you?
 6 A. I didn't make any qualifying judgment whether
 7 that was unreasonable or not. I just said that's what it
 8 predicts.
 9 Q. Okay.
 10 A. What that was to demonstrate was that there was a
 11 potential for a well that is now owned -- that has been owned
 12 by the predecessors of Sadler Ranch LLC.
 13 Q. Sir, I did not ask that question. I asked you if
 14 this was reasonable or not.
 15 A. I think the calculation speaks for itself, that
 16 the drawdown calculated seems reasonable in one sense in terms
 17 of does it -- would you expect that kind of drawdown. That's
 18 what I mean by reasonable.
 19 Q. So you would expect that kind of drawdown three
 20 miles away, 17 feet in 120 days?
 21 A. Assuming the aquifer properties that Mr. Smith's
 22 company determined on the basis of the pumping test of the
 23 well at Shipley Hot Springs, it's a simple calculation.
 24 Q. I didn't think you used the same aquifer property
 25 as Mr. Smith.

1 A. They're pretty close.
 2 HEARING OFFICER JOSEPH-TAYLOR: Guys, you're
 3 talking over each other.
 4 MR. TAGGART: Okay.
 5 HEARING OFFICER JOSEPH-TAYLOR: Let's not get
 6 argumentative. It's the end of the long week.
 7 WITNESS BUGENIG: I used a slightly smaller
 8 storage coefficient, but I used the value of transmissivity
 9 similar to what Mr. Smith's firm calculate.
 10 BY MR. TAGGART:
 11 Q. And you don't think that the whatever impacts
 12 from the Brown well to Shipley Spring would have equilibrated
 13 since 1960, or do you think that impact was still increasing
 14 every day the Brown well pumps?
 15 A. Well, I think it's based on the hydrograph that
 16 shows the water levels being relatively constant and comparing
 17 that with gradually decreasing pumping rates. That might be
 18 the reason for the relatively stable water levels that
 19 Mr. Smith provided in that one hydrograph.
 20 Q. Ms. Tumbusch, on slide number 21 you talk about
 21 Harrill and his -- his table regarding evapotranspiration and
 22 he indicates there was 9,900 acre feet of water for meadow
 23 grass, hay, and some salt grass combined with the wet meadow
 24 marsh normally flooded and including some acreage of alfalfa;
 25 is that right?

1 Q. Do you believe that land has to be cultivated in
 2 order for it to have a water right?
 3 A. I can't answer that.
 4 Q. You don't know?
 5 A. I am not a water rights expert.
 6 Q. Right. Well, earlier you just said that that was
 7 the only land that was cultivated, but that that's -- you
 8 don't know whether that means it's the only land that's
 9 water-righted?
 10 A. I do not know.
 11 Q. Mr. Bugenig, you were here for Mr. Bailey's
 12 testimony; right?
 13 A. Yes, sir.
 14 Q. And did you hear him testify that there was a
 15 change of water usage on the ranch in 1950?
 16 A. The ranch, his ranch or --
 17 Q. Good, thank you for the clarification. Sadler
 18 Ranch?
 19 A. A change, yes.
 20 Q. In that the cultivation of the upper fields was
 21 stopping water from getting to John's field?
 22 A. I believe that's what I heard.
 23 Q. Were you here for the testimony from Dr. Yednock?
 24 A. Yes.
 25 Q. And do you recall his testimony that some of the

1 (Answers by Ms. Tumbusch)
 2 A. Yes.
 3 Q. Did you make an effort to partition that
 4 9,900 acre feet among the separate discharge areas in northern
 5 Diamond Valley?
 6 A. Did I -- could you rephrase? That partition on
 7 the table or --
 8 Q. You know there's multiple discharge --
 9 A. Oh yes.
 10 Q. -- on the following slide that you showed?
 11 A. Yes.
 12 Q. And did you make an effort to partition that
 13 discharge among the green discharge areas on the following
 14 page?
 15 A. No, I did not, because I'm trying to simulate
 16 pre --
 17 Q. That's a yes or no.
 18 A. No.
 19 Q. The next slide, have you ever done an
 20 investigation of a vested claim before?
 21 A. No, I have not.
 22 Q. Had you ever reviewed survey notes before?
 23 A. Yes, I have.
 24 Q. And you've looked at plots like this before?
 25 A. Many.

1 diary entries from Ethel Eccles indicated that the John's
 2 fields and the upper fields were in production simultaneously
 3 in the 1940s?
 4 A. That's what he represented her diaries to say.
 5 Q. And were you here for Mr. Fraser's testimony?
 6 A. Yes.
 7 Q. And did you see an aerial photograph from 1946
 8 that showed the upper fields in production?
 9 A. I don't recall that photograph.
 10 MS. URE: Objection. This line of questioning is
 11 outside the scope of direct.
 12 HEARING OFFICER JOSEPH-TAYLOR: Sustained.
 13 You're going far afield.
 14 MR. TAGGART: Well, my last question is because
 15 this has to do with the Romano and the Romano wells and the
 16 impact on Shipley Spring is -- couldn't Mr. Bailey's
 17 observations that water couldn't get down to the John's field
 18 in the 1950s, couldn't that be explained potentially by the
 19 impact of the Romano wells on Shipley Springs during that time
 20 period?
 21 (Answers by Mr. Bugenig)
 22 A. Could it be?
 23 Q. Um-hum.
 24 A. I guess I don't understand. Could you rephrase,
 25 please.

1 MR. TAGGART: Can you read it back.
 2 (Record read.)
 3 (Answers by Mr. Bugenig)
 4 A. I think Mr. Bailey recollection was that it was a
 5 change in the irrigation practices or the part of the farming
 6 practices on the ranch.
 7 HEARING OFFICER JOSEPH-TAYLOR: Answer what he
 8 asked.
 9 MR. BUGENIG: Oh, sorry.
 10 MS. URE: I'm not sure even with the read back
 11 what the question was.
 12 MR. TAGGART: He apparently he understood the
 13 question.
 14 HEARING OFFICER JOSEPH-TAYLOR: I heard couldn't
 15 the Romano wells have an impact on Shipley Springs.
 16 WITNESS BUGENIG: I testified earlier that
 17 pumping the Romano wells had the potential -- or the data
 18 indicate to me that the impact was a half a CFS.
 19 HEARING OFFICER JOSEPH-TAYLOR: Right. We're
 20 retreading the same ground.
 21 BY MR. TAGGART:
 22 Q. So you don't think Mr. Bailey's testimony could
 23 have that indication on what was happening from Romano to
 24 Shipley?
 25 (Answers by Mr. Bugenig)

1 the point at which the State Engineer has to make a very
 2 difficult decision possibly might be accelerated.
 3 Q. Okay. My last question. I think this is
 4 probably Ms. Tumbusch, but you agree that the perennial
 5 concept of spring water rights are coming from the perennial
 6 yield part of the perennial yield water rights that are
 7 appropriated by these springs?
 8 (Answers by Ms. Tumbusch)
 9 A. I am not a water rights expert.
 10 MR. TAGGART: Okay. No further questions.
 11 HEARING OFFICER JOSEPH-TAYLOR: Questions,
 12 Mr. Kolvet?
 13 MR. KOLVET: Thank you.
 14 CROSS-EXAMINATION
 15 BY MR. KOLVET:
 16 Q. The first is a kind of a house keeping matter.
 17 It's on your errata. Is it Mr. Bugenig?
 18 (Answers by Mr. Bugenig)
 19 A. Bugenig, yes, thank you.
 20 Q. You have a correction to page 15 of the 302
 21 Exhibit with respect to the last sentence on that page?
 22 A. Yes.
 23 Q. And that changed 1.44 inches that was relating to
 24 the discharge at Thompson Springs?
 25 A. Oh, that's not inches, that's the number in

1 A. I don't draw that conclusion.
 2 Q. All right.
 3 A. From Mr. Bailey's testimony.
 4 Q. Okay.
 5 HEARING OFFICER JOSEPH-TAYLOR: All right. You
 6 guys are talking over each other. Everybody is getting tired.
 7 BY MR. TAGGART:
 8 Q. Mrs. Tumbusch, on page 3 of your expert report,
 9 number 302. And I just have a question about how this and why
 10 this is your analysis. It's the last sentence of the first
 11 paragraph and it says that such an increase, and I think it's
 12 and I crease in groundwater pumpage in the valley, will only
 13 accelerate declining water levels. And I understand that.
 14 And adversely affect a very vibrant agribusiness economy and
 15 Eureka County's culture and custom.
 16 So do you think that these applications if
 17 granted are going to affect Eureka County's local culture and
 18 custom?
 19 (Answers by Ms. Taumbusch)
 20 A. I did not write that.
 21 Q. Mr. Bugenig?
 22 (Answers by Mr. Bugenig)
 23 A. I believe it will. If it accelerates the rate of
 24 drawdown in the basin, which an additional groundwater
 25 withdrawals will affect, then the point at which the water --

1 quotes.
 2 Q. Okay.
 3 A. So I was changing 1.44 CFS with 2.33.
 4 Q. So 233 is the correct number for that reference?
 5 A. Yes, sir.
 6 Q. In the report.
 7 A. I believe it is, unless I erred again.
 8 Q. You did. It should have been 5.33.
 9 HEARING OFFICER JOSEPH-TAYLOR: Mr. Kolvet, do we
 10 need to be correcting something on the errata?
 11 MR. KOLVET: No, I was just clarifying what that
 12 errata related to.
 13 HEARING OFFICER JOSEPH-TAYLOR: Thank you.
 14 MR. KOLVET: Thank you.
 15 BY MR. KOLVET:
 16 Q. Get organized here a little bit. Turn now to
 17 Exhibit 440 which is your presentation. I had a few questions
 18 as we go through there. But before I get to all that
 19 nitty-gritty it's my understanding from your testimony,
 20 Mr. Bugenig, that you do not question the fact that the
 21 drawdowns and the drawing of the springs is related to the
 22 pumping in the valley?
 23 (Answers by Mr. Bugenig)
 24 A. What -- I do not question that.
 25 Q. In the case of Thompson Springs, unlike Sadler

1 Spring, there's a very limited amount of data related to
 2 spring flows. Would you agree with that?
 3 A. Yeah, we don't have -- we have data over the same
 4 period of time of the USGS studies and to -- and then up until
 5 to the 1990s when it stopped, but we don't have the historical
 6 predevelopment data.
 7 Q. So if you were to draw a line like you did with
 8 Shipley as predicting drawdowns at Shipley Springs, Thompson
 9 Springs goes down to zero, does it?
 10 A. Oh, Thompson Springs did go down to zero.
 11 Q. That was back in the '90s?
 12 A. That's my recollection without looking at the
 13 hydrograph.
 14 Q. So in the case of Thompson Spring the drawdowns
 15 that occurred in the valley affected it to the point where it
 16 no longer flows; is that right?
 17 A. That's my current understanding.
 18 Q. Okay. Then I guess the only issue that we're
 19 going to have here is how much water was lost due to that
 20 drawdown and how many acres it may have covered; is that
 21 right?
 22 A. Well, I didn't look at the acreage but I would be
 23 prepared to discuss the flow rates.
 24 Q. Okay. Well, let's go to the flow rates then.
 25 You have indicated that the best estimate is somewhere between

1 Q. Okay. Well, I don't recall Mrs. Redmond saying
 2 that there was no flow. What she said was that she didn't do
 3 the irrigating. Do you recall that?
 4 A. Well, I recall that, but what she said was that
 5 if it wasn't for the flow from the seismograph holes up here,
 6 whether it was the rock field or something of Willow Ranch,
 7 the cattle would have had to have come all the way back to the
 8 home ranch to get water. So that suggests to me that there
 9 was not a lot of flow.
 10 Q. Do you know if the pasture on the other side of
 11 that area that she's talking about was fenced so the cattle
 12 couldn't get back up and water and they had to travel that
 13 other way?
 14 A. I can't attest to that.
 15 Q. So there's another possibility or explanation for
 16 that testimony, isn't there?
 17 A. I don't see it that way.
 18 Q. Well, and you weren't there so you don't know?
 19 A. No, sir, I don't.
 20 MS. URE: Objection, argumentative.
 21 HEARING OFFICER JOSEPH-TAYLOR: Overruled.
 22 BY MR. KOLVET:
 23 Q. With respect to the -- again the amount of water
 24 that was flowing from the spring complex at Thompson Spring,
 25 other than the one spring, the major spring as you refer to

1 3 and 2 point something?
 2 A. Yes.
 3 Q. CFS out of Thompson Spring?
 4 A. Yes, sir.
 5 Q. But we don't have any measurements on any other
 6 springs within that complex, do we?
 7 A. Well, there's only one major spring in that
 8 complex and that's Thompson Springs.
 9 Q. There are other springs in that complex?
 10 A. There are springs and seeps both.
 11 Q. Okay. Do you know how many springs?
 12 A. I've heard numbers I think -- I've heard or read
 13 that Milt Thompson said there are maybe 80 springs to the
 14 north of there, springs and seeps.
 15 Q. And if you add up all the potential discharges
 16 from that do you have any estimate as to how much water was
 17 coming out of those 80 springs?
 18 A. Well, a lot of those springs are related to what
 19 I think Mr. Tibbitts referred to as lentic soils. It's a
 20 shallow water table. So any time you have a little divot in
 21 the land surface there may be water or a seep, but, you know,
 22 based on Milt Thompson's sister's observations having lived
 23 there, there was no flows from those seeps and Mr. Thompson at
 24 one point said there's only a few gallons and maybe they, you
 25 know, affect a few yards.

1 it, there are no other measurements that you're aware of; is
 2 that right?
 3 (Answers by Mr. Bugenig)
 4 A. No, sir.
 5 Q. I am not right?
 6 A. I mean no, sir, there are no other measurements
 7 that I am aware.
 8 Q. Thank you. I asked a bad question and got the
 9 answer I deserved. I apologize.
 10 With respect, though, to the use of that water on
 11 the property, you indicate that it's just seeps and
 12 subirrigation. Is that your contention?
 13 A. On part of the Thompson Ranch it was obviously
 14 irrigated. The large portion of the ranch appears to be --
 15 it's a groundwater discharge area where you have lentic soils
 16 where the water is at or near the land surface so a large part
 17 of it is subirrigation.
 18 Q. Did you read it or investigate any of the oral
 19 histories or other statements by other persons who had
 20 knowledge back in the day -- I hate that phrase, but back in
 21 the day of the history of Thompson Ranch?
 22 A. Well, I read, you know, there were several
 23 diaries. There was Sir Richard Burton's paragraph. There
 24 were the GLO's, the general land survey maps, and the field
 25 notes that went along with it.

1 Q. But you didn't do in-depth research into any of
 2 the history of the ranch, did you?
 3 A. No, sir.
 4 Q. And have you ever been on the ranch?
 5 A. I've been to the ranch.
 6 Q. On the ranch?
 7 A. No, sir.
 8 Q. So you don't know what kinds of structures are in
 9 place out in the fields that might divert or change the flow
 10 of water across, say, the Thompson Ranch, the home ranch?
 11 A. No, sir.
 12 HEARING OFFICER JOSEPH-TAYLOR: Where are you
 13 going, Mr. Kolvet? You're far afield here.
 14 MR. KOLVET: I really am not. I would suggest
 15 based on his reports that he's testifying from and their
 16 contention that only so much acreage was developed and
 17 irrigated. This is directly on point.
 18 HEARING OFFICER JOSEPH-TAYLOR: I don't think
 19 they testified to irrigated acreage.
 20 MR. KOLVET: They have in their reports.
 21 MR. TAGGART: It's in the reports.
 22 HEARING OFFICER JOSEPH-TAYLOR: Okay.
 23 MR. KOLVET: And this is my only chance to
 24 question them about those reports.
 25 HEARING OFFICER JOSEPH-TAYLOR: I'm still not

1 BY MR. KOLVET:
 2 Q. Do you recall her testimony that certain areas of
 3 the ranch got so wet that they had to dry it out so they could
 4 hay it?
 5 (Answers by Mr. Bugenig)
 6 A. Yes, I do.
 7 Q. Do you know how that drying out was accomplished?
 8 A. You wait till the end of the year or later in the
 9 summer where evapotranspiration is working and the plants dry
 10 up the ground.
 11 Q. That's the only way you're aware of?
 12 A. Well, there may be parts that were irrigated
 13 below Thompson Springs but the rest of the ranch is -- is high
 14 water table.
 15 Q. Mrs. Tumbusch, you have a graph in your
 16 Exhibit 312 at plate 6 regarding the water level contours?
 17 (Answers by Ms. Tumbusch)
 18 A. Yes.
 19 Q. And you indicate that there are certain areas of
 20 uncertainty on this map; is that right?
 21 A. Correct.
 22 Q. What is the reason for the uncertainty again?
 23 A. And I think that the plate that we had up as well
 24 Mr. Smith's has dotted lines on it which indicates uncertainty
 25 because the water level measurements aren't there for a

1 going to let you go too far afield.
 2 BY MR. KOLVET:
 3 Q. How about on the Cox Ranch, have you walked those
 4 seen what's out in the fields?
 5 A. No, sir.
 6 WITNESS TUMBUSCH: I have.
 7 HEARING OFFICER JOSEPH-TAYLOR: Ms. Tumbusch,
 8 they're not directing the question to you.
 9 BY MR. KOLVET:
 10 Q. And how about the Willow Ranch, have you, have
 11 you dealt with them?
 12 (Answers by Mr. Bugenig)
 13 A. No.
 14 Q. So what you're referring to as being subirrigated
 15 and marshy and that type of thing is based on a supposition
 16 from you; is that right?
 17 A. No, it's based on Jim Harrill's and Tom Eakin's
 18 assessment of the groundwater discharge areas and on Eakin and
 19 Harrill's investigations. I trust them.
 20 Q. Do you recall Mrs. Redmond's testimony that
 21 certain parts of the ranch --
 22 HEARING OFFICER JOSEPH-TAYLOR: How about if we
 23 get her name right. I believe it's Penrod.
 24 MR. KOLVET: Thank you. You're right. I
 25 apologize to her. She's not here.

1 prolonged period, so it's hard to develop. Maybe a trend.
 2 Q. Prior to the era when these water levels were
 3 recorded, are you aware of what which way the potential metric
 4 head was going?
 5 A. Yes.
 6 Q. Which way was it headed?
 7 A. It was headed towards the playa.
 8 Q. Headed from south to north?
 9 A. From south to north according to Harrill.
 10 Q. And what direction of flow is there now in that
 11 system?
 12 A. In that system in the southern part of Diamond
 13 Valley we have the cone of depression or the groundwater flow
 14 gradient going towards -- flowing towards the center of the
 15 valley where the irrigation is.
 16 Q. So in essence it's -- I'm sorry, go ahead.
 17 A. And then in the northern part of the valley -- of
 18 Diamond Valley in the playa area the flow grading is flowing
 19 towards the center of the playa.
 20 Q. So in the south the flow gradient has been
 21 reversed?
 22 A. Correct.
 23 Q. And in the north in the area of Thompson Springs
 24 then it would be remaining the same as it historically has
 25 done?

1 A. That's where the uncertainty lies.
 2 Q. Well, on your map you've --
 3 A. On my --
 4 HEARING OFFICER JOSEPH-TAYLOR: Whoa, whoa, you
 5 got to let him finish his questions.
 6 THE WITNESS: Sorry.
 7 HEARING OFFICER JOSEPH-TAYLOR: Finish your
 8 question, Mr. Kolvet. I didn't hear your question, Mr.
 9 Kolvet.
 10 MR. KOLVET: I'm sorry. I thought I asked it and
 11 I was waiting for her to finish her answer.
 12 HEARING OFFICER JOSEPH-TAYLOR: It got lost in
 13 her jumping over you, so I didn't hear your whole question.
 14 MR. KOLVET: Now I can't remember it.
 15 BY MR. KOLVET:
 16 Q. With respect to the area of the Thompson Ranch is
 17 the flow basically the same in that area as it has been in
 18 past times?
 19 (Answers by Ms. Tumbusch)
 20 A. There's an uncertainty there. I did not fill
 21 that in because I don't know.
 22 Q. Okay. Well, let's assume that it is. Then if
 23 Mr. Venturacci is allowed to drill a well and recapture what
 24 he's lost from the surface flow do you see an effect on the
 25 wells to the south?

1 A. Well, that's directly related to the amount of
 2 data that are available, sir.
 3 HEARING OFFICER JOSEPH-TAYLOR: There's no
 4 question pending, Mr. Bugenig.
 5 MR. KOLVET: Thank you.
 6 BY MR. KOLVET:
 7 Q. One of the things in your report that you talk
 8 about is the vested rights claims on I think it's Telegraph
 9 and Horse Canyon. Do you recall that?
 10 (Answers by Mr. Bugenig)
 11 A. Vaguely, yes, sir.
 12 Q. You do realize that the vested claims for the
 13 groundwater that we're seeking had nothing to do with those
 14 two canyons?
 15 A. You know, I do now because Mr. Thiel explained
 16 things I think in ex -- well, I don't want to say in
 17 excruciating detail.
 18 Q. It may have been something like that?
 19 A. But I -- I can attest to the fact that it was
 20 confusing to me, the language of the permit, that it looked
 21 like they were trying to somehow be tied together because they
 22 couldn't differentiate between the land that was irrigated.
 23 Q. So do you have an opinion then as to the acreage
 24 that was historically watered on the Thompson Ranch by the
 25 Thompson Spring?

1 A. I won't speculate on that.
 2 Q. So you don't know whether there would be an
 3 impact or not; is that --
 4 A. I do not know.
 5 Q. With respect -- I'm going to jump back to you,
 6 Mr. Bugenig. With respect to the subirrigation that you've
 7 testified you suspect was going on on the Cox Ranch and the
 8 Thompson Ranch and the Willow Ranch in certain places, that's
 9 no longer occurring, is it?
 10 (Answers by Mr. Bugenig)
 11 A. No, sir.
 12 Q. So that irrigation that was happening is lost as
 13 well; is that right?
 14 A. Well, it's subirrigation. Irrigation is a verb
 15 and it implies work that's being done to distribute water, so
 16 I don't equate irrigation with subirrigation.
 17 Q. Okay. That's an argument for another day, I
 18 expect.
 19 But at any rate, the water that was providing
 20 that is no longer there; is that right?
 21 A. The groundwater level appears to have declined
 22 and so that subirrigation is no longer occurring.
 23 Q. You sure got a lot of stuff in there here about
 24 Shipley, very little about Thompson. I'm trying to find the
 25 Thompson stuff.

1 A. No, sir, I don't. I think they're --
 2 Q. That's fine?
 3 A. No, sir.
 4 Q. How about the Cox Ranch, do you have an estimate
 5 of acreage on that ranch?
 6 A. How much was irrigated?
 7 Q. Yes.
 8 A. According to Milt Thompson's sister there was no
 9 irrigation on the Cox Ranch.
 10 Q. And that's the basis of your answer is her
 11 testimony?
 12 A. And the fact that most of the ground there had
 13 high water table indicative of subirrigation.
 14 Q. And how about the Willow Ranch, same question?
 15 A. I don't have an opinion.
 16 Q. Thank you.
 17 Ms. Tumbusch, I want you to go to plate 24 of
 18 Exhibit 326. Or I'm getting them mixed up here?
 19 MS. URE: Exhibit 440.
 20 MR. KOLVET: 440, plate 24, I'm sorry. That's
 21 the GLO plot of the east side of Diamond Valley in the area of
 22 the Thompson Ranch; is that correct?
 23 (Answers by Ms. Tumbusch)
 24 A. Correct.
 25 ///

1 BY MR. KOLVET:
 2 Q. You've indicated that you've read these field
 3 notes related to these types of plats and looked at these
 4 plats many times; is that right?
 5 A. Yes.
 6 Q. For what purpose?
 7 A. For preparation for these -- this protest, the
 8 applications here.
 9 Q. For this protest meaning the ones that we're here
 10 in front of the State Engineer for?
 11 A. Correct.
 12 Q. Other than for this case, have you ever done that
 13 before?
 14 A. Have I ever looked at these before, these
 15 particular plats, is that what you --
 16 Q. GLO plots or the field notes associated with them
 17 in any other case?
 18 A. Yes, I have. And not in a case. As part of my
 19 position with the USGS.
 20 Q. And it's your testimony that this Exhibit
 21 plate 24 does not show any signs of irrigation on this
 22 property?
 23 A. Cultivated fields or irrigated fields.
 24 Q. Is that your testimony?
 25 A. Correct.

1 BY MR. KOLVET:
 2 Q. Back to you, Mr. Bugenig. You've indicated that
 3 there may be other causes of this stream or spring declines in
 4 this area; is that right? Besides the pumping in the valley?
 5 (Answers by Mr. Bugenig)
 6 A. Well, there could be. We don't know.
 7 Q. That's like saying something is possible but you
 8 can't identify what the possibility is. Is that what you're
 9 saying?
 10 A. I have not done an analysis to evaluate various
 11 potential impacts.
 12 Q. But the one thing we're all sure of is the
 13 pumping in the valley has caused the decline?
 14 A. Has caused at least some of the decline. Perhaps
 15 the majority.
 16 Q. Well, if you look at your next page or plate 28.
 17 I think Mr. Taggart touched on this to some degree so I'm not
 18 going to go into it too much. But basically the way I read
 19 this if you got an 80 percent certainty that it's the pumping
 20 then at least 80 percent of the rights may be diminished by
 21 pumping; is that right?
 22 A. That as much as 80 percent of the rights could
 23 have been diminished by pumping.
 24 Q. And it could be higher because you can't quantify
 25 the rest of the influence?

1 Q. There were several land patents issued on these
 2 properties, were there not?
 3 A. Yes.
 4 Q. And in order to get a patent for these properties
 5 did the owner or the claimant would have to show that the
 6 water was being put to use on the properties?
 7 A. From my understanding, yes.
 8 Q. Did you ever do any comparison with that
 9 information against the GLO plot or the field notes associated
 10 with it?
 11 A. Yes.
 12 Q. And what did you determine?
 13 A. I determined that in -- well, I just plotted out
 14 the areas of the patents. And that was the question that was
 15 asked before and I didn't have the information in front of me,
 16 I'm sorry.
 17 Q. Okay. So the limit of what you did is look at
 18 the patents and try and place them on this map?
 19 A. Correct.
 20 HEARING OFFICER JOSEPH-TAYLOR: *Let him finish.*
 21 WITNESS TUMBUSCH: Oh, sorry.
 22 HEARING OFFICER JOSEPH-TAYLOR: *You need to learn*
 23 *to take a breath.*
 24 THE WITNESS: Okay.
 25 ///

1 A. Well, it all depends on the line of best fit.
 2 But there's an uncertainty of about 20 percent having been not
 3 caused by the pumping.
 4 MR. KOLVET: If I can look at my stack of notes.
 5 I think I'm about done.
 6 HEARING OFFICER JOSEPH-TAYLOR: *I think everybody*
 7 *is about done.*
 8 BY MR. KOLVET:
 9 Q. Mr. Bugenig, at the time of the Harrill
 10 measurements, which were in the mid '60s, are you aware of how
 11 much water had been pumped at that point in time from the
 12 southern valley?
 13 (Answers by Mr. Bugenig)
 14 A. I don't recall exactly, but it was maybe, what,
 15 10 or 20,000 acre feet.
 16 Q. How about 50,000?
 17 A. You're talking in total?
 18 Q. Yes. A cumulative amount.
 19 A. Okay. A cumulative amount about 50,000 is -- I
 20 think sounds close to my recollection.
 21 MR. KOLVET: That's all I have.
 22 HEARING OFFICER JOSEPH-TAYLOR: *Thank you. Any*
 23 *redirect?*
 24 MS. URE: Yes.
 25

1 REDIRECT EXAMINATION
 2 BY MS. URE:
 3 Q. Mr. Bugenig, on Exhibit 440 at slide 28, are
 4 these figures taken from Mr. Smith?
 5 (Answers by Mr. Bugenig)
 6 A. Yes.
 7 Q. And are those figures limited to the time period
 8 between 2008 and 2012?
 9 A. I can't read it from here, but -- what's it say
 10 here.
 11 MS. TUMBUSCH: I don't know how to get the full
 12 screen. Do I press --
 13 MR. BUGENIG: I don't know.
 14 THE STATE ENGINEER: Can I do it?
 15 MR. BUGENIG: Thanks.
 16 MR. KOLVET: It's the zoom thingy.
 17 THE STATE ENGINEER: My eyes are getting bad.
 18 MR. BUGENIG: Yeah, I'm sorry, that's what the
 19 total says, 2008 and 2013.
 20 MR. KOLVET: I'm old.
 21 THE STATE ENGINEER: I'll accept middle age.
 22 MS. URE: I have no further questions.
 23 HEARING OFFICER JOSEPH-TAYLOR: Thank you. Any
 24 recross?
 25 MR. KOLVET: No.

1 100,000 gallons per day per foot. And the -- so if I take my
 2 7,600 times 7 that's about half of that.
 3 Q. Now I have to find it. If I told that you those
 4 units were feet squared per day would that change your
 5 analysis?
 6 A. Yeah, it would be a lot more transmissive.
 7 Q. Okay. I could read it into the record but the
 8 record will speak for itself.
 9 So in your analysis --
 10 HEARING OFFICER JOSEPH-TAYLOR: Mr. Felling, can
 11 you tell us what Exhibit you're referring to and what page
 12 number.
 13 MR. FELLING: Yes. I'm referring to Exhibit 109
 14 and I'm referring to pages 109 -- I'm sorry, 23, 24 and 25.
 15 MR. BUGENIG: Wait a minute. It's Exhibit 109,
 16 pages 23?
 17 MR. FELLING: Yeah, pages 23, 24 and 25.
 18 MS. PETERSON: I don't know that you have that up
 19 there.
 20 MR. BUGENIG: No.
 21 HEARING OFFICER JOSEPH-TAYLOR: Okay, I just
 22 wanted him to make a record of it so that when we go back to
 23 the transcript we know what he's looking at.
 24 BY MR. FELLING: Let's just grab it.
 25 ///

1 MR. TAGGART: No.
 2 HEARING OFFICER JOSEPH-TAYLOR: Questions of
 3 staff? Mr. Felling.
 4 CROSS-EXAMINATION
 5 BY MR. FELLING:
 6 Q. On your slide 31 and 3 slides further, for this
 7 simulation you used a transmissivity of 7,600 feet squared per
 8 day. Where did that come from?
 9 MR. BUGENIG: That came from a specific capacity
 10 from of -- one of the flowing artesian wells had a flow rate
 11 of, what was it, 940 gallons per minute and so -- and then the
 12 well -- another well in the area had an artesian head of
 13 14 feet. So I assume I just divided 940 gallons per minute by
 14 14 feet of head loss or drawdown and used those standard
 15 relationships between specific capacity and transmissivity.
 16 Q. Okay. Did you say that one of those wells
 17 85 feet deep was pumped at the rate of 3,500 gallons a minute?
 18 A. That's what John Brown mentioned to me.
 19 Q. Okay. Could you pump that much water from a
 20 shallow -- from that depth well if the transmissivity were
 21 7,600 feet squared per day?
 22 A. It might have to be higher than that.
 23 Q. Okay. Did you look at the transmissivity
 24 estimates from Mr. Smith's pumping tests at Shipley Spring?
 25 A. Yeah. I think that he estimated it at

1 BY MR. FELLING:
 2 Q. Let me thank you for actually bringing that up
 3 because I had it wrong. I was looking at the page numbers at
 4 the top of my screen. So they are pages 20, 21 and 22 of the
 5 document.
 6 (Answers by Mr. Bugenig)
 7 A. Yes, 100,000 square feet per day.
 8 Q. Okay.
 9 A. Okay.
 10 Q. Now to my question. If the transmissivities were
 11 significantly higher than you have represented here, what
 12 would be effect on drawdown at Shipley from pumping at Brown
 13 Ranch wells?
 14 A. It might be less.
 15 Q. It might be or it would be?
 16 A. It would be, yes.
 17 Q. Okay. We had a bit of a discussion earlier
 18 between myself and Mr. Smith and then between I think
 19 Mr. Taggart and you that had to do with the rate of discharge
 20 on the flowing wells on the Romano Ranch and had to do with my
 21 mention of a number of 1 CFS. Do you recall that?
 22 A. Yes, sir.
 23 Q. So I'm going to give you now from Exhibit 108,
 24 which is Mr. Smith's expert report, and I'd like you to read
 25 into the record the last two sentences on page 6 and the first

1 sentence on page 7.
 2 A. Yes.
 3 Q. If you would.
 4 A. Five well logs filed in 1948 and '49 per AC
 5 Florio Romano Ranch indicate artesian well discharge from five
 6 wells ranging from 0.5 to 1.5 CFS and totalling 4 CFS, well
 7 logs 509, 625, 626, 627 and 1037. Note 1.5 CFM on well log
 8 1037 assumed to be CFS. Artesian flows reported on well logs
 9 probably diminished after a period of time. In November of
 10 1965 the USGS measured a total combined discharge from
 11 13 artesian wells on the Romano Ranch at 521 GPM equal to
 12 848 acre feet per year parentheses Harrill 1968 and USGS field
 13 work notes in Carson City close parentheses.
 14 Q. So are you able to convert that to CFS off the
 15 top of your head, the last number?
 16 A. That's a little over -- 5.1 GPM is about 1 and a
 17 quarter CFS perhaps.
 18 Q. Okay. So is my reference to 1 CFS, is that far
 19 off?
 20 A. No.
 21 Q. Okay. That's all. My last question is -- I got
 22 two more. Were you here when I was asking Mr. Bailey about
 23 flow rates at these springs in the period up to the mid-1960s?
 24 A. Yes, sir.
 25 Q. I asked Mr. Bailey if he noticed a decrease in

1 And looking for an explanation as to why there
 2 was a decline, I didn't think it was unlikely that it affected
 3 that flowing wells at the Romano Ranch. I think it was
 4 likely -- well I equated that change to perhaps the flowing
 5 wells at the Romano Ranch and so if it affected Shipley based
 6 on available data, it likely had an effect on Mr. Bailey's
 7 spring but he did not recognize it.
 8 Q. Okay. Last question was the question from
 9 Mr. Kolvet to Ms. Tumbusch that she declined to answer and it
 10 had to do with the ability of pumping at Thompson Ranch to
 11 effect water levels in the main part of the valley, and I'll
 12 call that where all the pivots are, based on the direction of
 13 flow.
 14 So in your opinion, could pumping at the Thompson
 15 Ranch impact water levels in the main part of the irrigated
 16 valley?
 17 A. Well, I think the drawdown responses go in all
 18 directions. If you're going to have a response from the south
 19 to the north, I would expect a response if you pumped in the
 20 north to go to the south. It might be mitigated a little bit
 21 by the fact that you're in a groundwater discharge area and
 22 you'll be capturing that discharge, but I don't believe there
 23 would be zero effect to the south.
 24 MR. FELLING: Okay. Thank you. No more
 25 questions.

1 flow rate on his springs prior to the 1960s and he recalled
 2 no. Do you recall that?
 3 A. Yes, sir.
 4 Q. Do you know where his springs are with respect to
 5 Shipley Spring and the Romano Ranch?
 6 A. Yes, I've been to his ranch.
 7 Q. And where is it with respect to those two
 8 locations?
 9 A. It is, what did I say earlier, about five miles
 10 south of Shipley Hot Springs by looking at the scale on the
 11 map.
 12 Q. Is this -- is the Bailey Ranch between the Romano
 13 Ranch and the Shipley?
 14 A. The Romano wells I believe are a little farther
 15 to the east, but yes.
 16 Q. Okay. Do you think it's likely that -- that
 17 flowing wells on the Romano Ranch could cause a decline in
 18 flow at Shipley but not at Bailey Springs?
 19 A. I don't believe so. I think it's likely that
 20 if -- if I believe -- let me rephrase that.
 21 It appeared to me based on the State Engineer's
 22 measurements in 1912, 1913 that the initial discharge or
 23 historical discharge of Shipley Hot Springs was in the 7 to
 24 8 CFS range. I -- the next best measurements were made in the
 25 mid-1960s in at about 6 and a half CFS let's call it.

1 HEARING OFFICER JOSEPH-TAYLOR: Any questions,
 2 Mr. King? Any questions of staff? Thank you. You may be
 3 excused. We're going to take about five-minute break here and
 4 come back.
 5 (Recess.)
 6 HEARING OFFICER JOSEPH-TAYLOR: Let's be on the
 7 record. We have some issues to take care of. Ms. Peterson,
 8 you were going to provide us with a transcribed attachment to
 9 Exhibit 134.
 10 MS. PETERSON: Yes. That would be a
 11 transcription of the assessment of property Eureka County for,
 12 I guess, beginning the fiscal years 1873.
 13 HEARING OFFICER JOSEPH-TAYLOR: And you've given
 14 us those copies and you've given them to the rest of counsel?
 15 MS. PETERSON: Yes.
 16 HEARING OFFICER JOSEPH-TAYLOR: Can we just
 17 attach it to Exhibit 134?
 18 MR. KOLVET: I have no objection.
 19 HEARING OFFICER JOSEPH-TAYLOR: Thank you. We'll
 20 just put them in as Exhibit 134. I've talked to everybody off
 21 the record. Everybody is too tired for oral closing
 22 arguments. But, Ms. Peterson, you had an issue you thought we
 23 should brief. I think Mr. Taggart has a few issues -- legal
 24 issues he thinks we should brief. Let's get those on the
 25 record.

1 MR. TAGGART: You want me to start, Karen?
 2 MS. PETERSON: Oh.
 3 HEARING OFFICER JOSEPH-TAYLOR: Her issue was she
 4 wanted to brief the law regarding issuing of certificates in
 5 the early adjudication statutes. I have no problem if there's
 6 no objection to briefing that issue. Mr. Taggart, Mr. Kolvet?
 7 MR. KOLVET: That should be a short brief.
 8 HEARING OFFICER JOSEPH-TAYLOR: Yeah.
 9 MR. KOLVET: I believe there is a Supreme Court
 10 case on it, but --
 11 HEARING OFFICER JOSEPH-TAYLOR: I didn't ask for
 12 argument. I just asked if you were willing to brief it.
 13 MR. KOLVET: I was just saying I don't know that
 14 it's all that new, but whatever. Yeah, we can do that.
 15 HEARING OFFICER JOSEPH-TAYLOR: It's an important
 16 issue I think that has come up and I would like everybody to
 17 get educated on it. I can't see the harm in it.
 18 MR. KOLVET: That's fine.
 19 HEARING OFFICER JOSEPH-TAYLOR: Okay. So that's
 20 our first issue. Mr. Taggart, you had some legal issues.
 21 MR. TAGGART: Relation, the doctrine of relation,
 22 how it applies after 1905, if it does. In other words, if --
 23 HEARING OFFICER JOSEPH-TAYLOR: I think that's a
 24 great issue. Great issue. I have no problem with that.
 25 MR. TAGGART: Whether a water right can be

1 MR. TAGGART: Yeah, you remember Christmas?
 2 MR. KOLVET: Christmas and Thanksgiving are
 3 coming up. 60 days.
 4 HEARING OFFICER JOSEPH-TAYLOR: Remember we're
 5 under a time constraint to get rulings out when we get the
 6 transcript. Don't push it out too far. I'd actually like
 7 to -- I was thinking at least that are we doing opening and
 8 reply or are we just doing simultaneous briefs?
 9 MR. KOLVET: On these issues?
 10 HEARING OFFICER JOSEPH-TAYLOR: Um-hum.
 11 MR. KOLVET: I would suggest simultaneous.
 12 HEARING OFFICER JOSEPH-TAYLOR: Can we have them
 13 before Christmas so everyone cannot have this over their heads
 14 on the holidays.
 15 MS. PETERSON: That's fine with me.
 16 HEARING OFFICER JOSEPH-TAYLOR: How about by
 17 Friday, December 20th, 5 o'clock. 5:00 p.m. Simultaneous
 18 briefs. Is everyone clear on the issues?
 19 MR. KOLVET: I believe so. Could you --
 20 HEARING OFFICER JOSEPH-TAYLOR: You want me to
 21 repeat them?
 22 MR. KOLVET: Please.
 23 HEARING OFFICER JOSEPH-TAYLOR: The adjudication
 24 laws and the issuing of certificates and its relevance. The
 25 doctrine of relation back, how it applies after 1905. Whether

1 acquired on public land, like off the private land, through --
 2 I mean, and then we're talking about a vested claim. I know
 3 you guys have dealt with that in this agency before.
 4 HEARING OFFICER JOSEPH-TAYLOR: Yeah, we have
 5 vested stock water rights on the public land all the time.
 6 MR. TAGGART: But it came up a lot.
 7 HEARING OFFICER JOSEPH-TAYLOR: It's irrigation
 8 right -- sorry, I'm talking over him after I scolded him for a
 9 week. I don't have a problem with that.
 10 MR. TAGGART: And then -- that's it.
 11 HEARING OFFICER JOSEPH-TAYLOR: Any other legal
 12 issue that anyone thinks needs briefing?
 13 HEARING OFFICER JOSEPH-TAYLOR: So we have three.
 14 Do we -- well, let's get some timing on that first.
 15 MS. PETERSON: Well, may I ask a question?
 16 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 17 MS. PETERSON: Do you want closing argument with
 18 the briefs?
 19 HEARING OFFICER JOSEPH-TAYLOR: I haven't gotten
 20 there yet.
 21 MS. PETERSON: Okay that's fine.
 22 HEARING OFFICER JOSEPH-TAYLOR: I just want to do
 23 the briefs first. Timing.
 24 MR. KOLVET: 30 days. We better makes it longer
 25 because of Christmas.

1 you can acquire a vested water right on public land for
 2 irrigation. Those are our three issues. And I'm not issuing
 3 another order so make sure you got these down. Simultaneous
 4 briefs due by 5 o'clock, December 20th.
 5 Now to closing. Wait a sec, I want to go through
 6 the Exhibit list first. There's a few. Mr. Kolvet.
 7 MR. KOLVET: I believe all of mine are in.
 8 HEARING OFFICER JOSEPH-TAYLOR: And I believe
 9 not. Exhibit 213, photographs of the Cox Ranch Spring area.
 10 MR. KOLVET: I don't even remember. If they're
 11 not in I offer them.
 12 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 213.
 13 It's just one he forgot. They came out of Mr. Thiel's
 14 testimony. 213 will be admitted.
 15 (Exhibit 213 admitted into evidence.)
 16 MR. KOLVET: Oh, that's right, that was what I
 17 was supposed to come back to and I've already forgotten.
 18 HEARING OFFICER JOSEPH-TAYLOR: Exhibit 230, the
 19 Thiel exhibit list, any objection?
 20 MR. KOLVET: Those are --
 21 HEARING OFFICER JOSEPH-TAYLOR: 230 is not in
 22 yet.
 23 MR. KOLVET: No, I'm saying I'm offering -- you
 24 asked for objection. I didn't hear anybody jump up.
 25 HEARING OFFICER JOSEPH-TAYLOR: Okay. They're

1 too tired to object. 230 will be admitted.
 2 (Exhibit 230 admitted into evidence.)
 3 HEARING OFFICER JOSEPH-TAYLOR: Okay. Those are
 4 my remaining housekeeping on exhibits.
 5 MS. URE: I have a question going back to the
 6 legal issues. Would you like additional briefing on whether
 7 or not a mitigation right gets a priority of underlying --
 8 HEARING OFFICER JOSEPH-TAYLOR: No, I think
 9 that's an issue for the State Engineer. I don't need that
 10 briefed.
 11 MS. PETERSON: Abandonment per the interim order
 12 indicated more briefing maybe desired.
 13 HEARING OFFICER JOSEPH-TAYLOR: No, I think
 14 that's argument.
 15 MS. URE: And then one more.
 16 HEARING OFFICER JOSEPH-TAYLOR: Sure.
 17 MS. URE: You can tell me if it's argument, but
 18 whether a call for adjudication or a call for a vested claim
 19 filing would cut off any amendments of vested claims.
 20 HEARING OFFICER JOSEPH-TAYLOR: Whether we when
 21 we called for proofs in Diamond Valley in the '80s they've cut
 22 off amending those claims. No, I don't think so, Ms. Ure.
 23 The State Engineer has already set it to go tour, there's no
 24 need reopening that.
 25 Okay. We are not doing oral closing arguments.

1 date in January for closing arguments.
 2 MR. TAGGART: Can we -- can we just set it off
 3 the receipt of the transcript.
 4 HEARING OFFICER JOSEPH-TAYLOR: No, I like dates
 5 certain.
 6 MR. TAGGART: Okay.
 7 HEARING OFFICER JOSEPH-TAYLOR: What about
 8 January 31st, Friday by 5 o'clock? Everybody okay with that?
 9 MR. KOLVET: Fine with me.
 10 HEARING OFFICER JOSEPH-TAYLOR: Any other issues
 11 that remain open that I have forgotten, because I think I've
 12 hit felony dumb.
 13 MR. KOLVET: I think you've joined the club.
 14 HEARING OFFICER JOSEPH-TAYLOR: All right, folks,
 15 thank you, we really appreciate you pushing through this week.
 16 That will be off the record.
 17 (Proceedings concluded at 5:10 p.m.)
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 25

1 And written closing arguments, what's your time line for that?
 2 MR. KOLVET: Kind of need to know when we're
 3 potentially get the transcript because I'd like to read it
 4 before I do it.
 5 HEARING OFFICER JOSEPH-TAYLOR: Usually have them
 6 within about 30 days for us.
 7 MR. KOLVET: I'm trying to use my calendar in my
 8 head.
 9 HEARING OFFICER JOSEPH-TAYLOR: End of December.
 10 This is the end of November.
 11 MR. TAGGART: So.
 12 MR. KOLVET: End of January.
 13 HEARING OFFICER JOSEPH-TAYLOR: Sure, that's fine
 14 with me.
 15 MR. TAGGART: Remind me, there's a time frame
 16 from the time of the transcript.
 17 HEARING OFFICER JOSEPH-TAYLOR: 240 days unless
 18 the State Engineer has other reasons not to get it out on time
 19 I believe it's 533370 sub --
 20 MR. KOLVET: So 30 days after receipt of
 21 transcript.
 22 HEARING OFFICER JOSEPH-TAYLOR: Hold on, let's
 23 get it. If I can find the statute this late in the --
 24 MR. TAGGART: That's okay.
 25 HEARING OFFICER JOSEPH-TAYLOR: So let's pick a

1 STATE OF NEVADA)
 2 CARSON CITY) ss.
 3
 4
 5
 6 I, MICHEL DOTY LOOMIS, a Certified Court
 7 Reporter, do hereby certify;
 8 That on the 22nd day of November, 2013, in Carson
 9 City, Nevada, I was present and took stenotype notes of the
 10 hearing held before the Nevada Department of Conservation and
 11 Natural Resources, Division of Water in the within entitled
 12 matter, and thereafter transcribed the same into typewriting
 13 as herein appears;
 14 That the foregoing transcript, consisting of
 15 pages 1152 through 1418, is a full, true and correct
 16 transcription of my stenotype notes of said hearing.
 17
 18 Dated at Carson City, Nevada, this 16th day of
 19 December, 2013.
 20
 21
 22
 23 MICHEL DOTY LOOMIS, CCR #228
 24
 25

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