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STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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IN THE MATTER OF:

Evidence and Testimony Concerning Possible Curtailment of Pumpage of Ground Water in Diamond Valley, Eureka County, Nevada.

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REPORTER'S TRANSCRIPT OF PROCEEDINGS

OF THE HEARING

Before

PETER G. MORROS, State Engineer

Held at

District Courtroom
Eureka County Courthouse
Eureka, Nevada

Monday, May 24, 1982

1:00 o'clock, p. m.

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CAPITOL REPORTERS
OFFICIAL AND GENERAL COURT REPORTERS

APPEARANCES

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For the Division of Water Resources:

PETER G. MORROS, State Engineer,
HEARING OFFICER.

BUD DANNER, State Division of Water Resources.

JERRY BROWNFIELD, State Division of Water Resources.

RALPH GAMBOA, State Division of Water Resources.

JAMES HARRILL, United States Geological Survey.

TERRY KATZER, United States Geological Survey.

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Reported by:

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EUREKA, NEVADA, MONDAY, MAY 24, 1982,

1:00 O'CLOCK, P. M.

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MR. PETER G. MORROS (Hearing Officer): Ladies and gentlemen, I guess we better get started.

By way of introduction, my name is Pete Morros. I am the State Engineer for the State of Nevada.

I have a couple of members of my staff here today: Bud Danner, who I think probably most of you are familiar with, is now with our Carson City staff.

Jerry Brownfield, who is also an engineer with our ground water section of our Carson City staff, and Ralph Gamboa, the Supervising Water Commissioner out of Elko, Nevada.

Also here today is Jim Harrill of the U. S. Geological Survey and Mr. Terry Katzer, who is the Acting District Chief of the Nevada U. S. Geological Survey.

The Court Reporter is a certified court reporter, so it won't be necessary to swear him in.

Mr. Gamboa, I think, has passed a tablet around. I would like to get an indication of the people who are here and also whether you are a property owner out in the Diamond Valley area or not.

The purpose of this hearing today is to receive evidence and testimony of interested parties and affected persons or parties concerning the possible curtailment of

pumpage in the Diamond Valley ground water basin.

The staff of the Division of Water Resources, along with the assistance of the members of the staff of the U. S. Geological Survey, will make a presentation for the purpose of establishing the record on the current status of the effect of pumpage within the basin.

The authority for this hearing is set out under chapters N.R.S. 533 and 534.

The State Engineer's Office will require the original copy, the original of the transcript and one copy. If anybody else desires a copy of today's transcript, they can make arrangements with the Court Reporter.

I guess I have introduced all of the staff, so I think we can proceed.

I am going to have to introduce some exhibits into the record on behalf of the State. That is going to take a little while since I want to make sure this record is fully developed before any decisions are made on what has to be done concerning this problem with Diamond Valley. I think at the conclusion of the introduction of those exhibits, and for the purpose of giving you people a little better understanding, my staff will explain each one of these exhibits. After we have introduced all the exhibits into the record, I think we will take about a fifteen or twenty minute recess for the purpose of the people coming up here. I know it is a little hard to see some of these exhibits. We try to make the copies

as large as we could. You may have some questions, you may want some clarification. You are certainly welcome to ask your questions and have them put into the record, but prior to that you may want to get a little closer to the exhibits and the staff will be here to try to answer some of your questions for you.

Each one of these exhibits will be marked for identification as State's Exhibits. Number 1, the Notice of Hearing to Receive Evidence and Testimony Concerning Possible Curtailment of Pumpage of Ground Water in the Diamond Valley Area, Eureka County, Nevada.

(This exhibit was then marked for identification as State's Exhibit No. 1.)

MR. MORROS: State's Exhibit No. 2, consists of two Affidavits of Publication, where the Notice of Hearing was published in the Eureka Sentinel and the Elko Daily Free Press.

(The exhibit was then marked for identification as State's Exhibit No. 2.)

State's Exhibit 3 is a letter dated April 20, 1982, to the Eureka County Commission from the State Engineer.

(The exhibit was then marked for identification as State's Exhibit No. 3.)

State's Exhibit 4 is an Order Designating and Describing the Diamond Valley Ground Water Basin, issued by the State Engineer on August 5, 1964.

(The Order Designating and Describing the Diamond Valley Ground Water Basin was then marked for identification as State's Exhibit No. 4.)

MR. MORROS: State's Exhibit 5 is and Order of the State Engineer dated August 23, 1964, amending the designated area of the Diamond Valley Ground Water Basin.

(The exhibit was then marked for identification as State's Exhibit No. 5.)

MR. MORROS: State's Exhibit No. 6 is an order of the State Engineer issued on December 22, 1975, on a notice of curtailment of water appropriation within the Diamond Valley Ground Water Basin.

(The exhibit was then marked for identification as State's Exhibit No. 6.)

State's Exhibit No. 7 is a State Engineer's Order dated July 10, 1978, indicating a notice of curtailment of water appropriations within the Diamond Valley Ground Water Basin.

(The exhibit was then marked for identification as State's Exhibit No. 7.)

MR. MORROS: State's Exhibit No. 8 is an Abstract of Water Filings dated April, 1982, on underground sources within the Diamond Valley Basin.

(The exhibit was then marked for identification as State's Exhibit No. 8.)

State's Exhibit No. 9 is an Abstract of the Water

Filings dated April, 1982, on surface water within the Diamond Valley Ground Water Basin.

(The exhibit was then marked for identification as State's Exhibit No. 9.)

State's Exhibit No. 10 is an Abstract of Water Filings forfeited dated April, 1982, on underground sources within the Diamond Valley Ground Water Basin.

(The exhibit was then marked for identification as State's Exhibit No. 10.)

MR. MORROS: State's Exhibit No. 11 is a Summary of Pumpage Inventories for the years 1975 through 1981, and Summary of Water Level Measurements on Selected Wells, 1964 to 1981, spring and fall measurements. The Summary is dated April, 1982.

(The exhibit was then received and marked for identification State's Exhibit No. 11.)

MR. MORROS: State's Exhibit No. 12 is a letter to the State Engineer dated February 25, 1982, under the signature of T. M. Thompson.

(The exhibit was then marked for identification State's Exhibit No. 12.)

State's Exhibit No. 13 is a Field Investigation Report prepared by James R. Harrill of the U. S. Geological Survey, dated March 15, 1982.

(The exhibit was then marked for identification as State's Exhibit No. 13.)

MR. MORROS: State's Exhibit No. 14 is a letter to Mr. T. M. Thompson, dated April 14, 1982, under the signature of the State Engineer.

(The exhibit was then marked for identification State's Exhibit No. 14.)

MR. MORROS: Now we will proceed to the exhibits that we have set up here.

State's Exhibit No. 15 is an enlarged plat of the Diamond Valley Ground Water Basin, indicating water level contours in April of 1966.

(The exhibit was then marked for identification as State's Exhibit No. 15.)

State's No. 16 is an enlarged plat of Diamond Valley Ground Water Basin, illustrating water level contours in November of 1981.

(The exhibit was then marked for identification as State's Exhibit No. 16.)

State's Exhibit No. 17 is an enlarged plat of Diamond Valley Ground Water Basin, illustrating approximate net decline of the water levels in the South Diamond Sub Area, 1950 through 1966.

(The exhibit was then marked for identification as State's Exhibit No. 17.)

MR. MORROS: State's Exhibit No. 18 is an enlarged plat of Diamond Valley Ground Water Basin, illustrating the approximate net declines of water levels in the Diamond

Valley Area, in the South Diamond Valley Area, 1967 to 1981.

(The exhibit was then marked for identification State's Exhibit No. 18.)

MR. MORROS: State's Exhibit No. 19 is a graphic illustration of, one, the irrigated lands in Diamond Valley in thousands of acres; number two, the pumpage in the Diamond Valley, thousands of acre feet over a period of time, as illustrated on the graphs; number three, hydrographs of four selected wells in Diamond Valley and the location of those wells. These are examples. We do have an additional exhibit that we will enter with additional hydrographs, but the wells depicted on those hydrographs that are depicted there are also shown as red dots on Exhibit No. 15, which is, I believe, this exhibit right here, right next to Jerry. And also there is a tabulation of average water table declines in the major pumping areas of Diamond Valley, 1967 to 1982, and that's identified by township and range.

(The exhibit was then marked for identification State's Exhibit No. 19.)

MR. MORROS: State's Exhibit No. 20 is a Ground Water Resources Recon Series Report No. 6, entitled "The Ground Water Appraisal of Diamond Valley." This particular report is out of print. We have a limited number of copies and I will indicate for the record we are taking administrative notice of this report and that we will make a Xerox copy and enter it into the record, into the permanent record.

(The exhibit was then marked for identification as State's Exhibit No. 20.)

MR. MORROS: State's Exhibit No. 21 is Water Resources Bulletin Number 35, dated 1968. Incidentally, this previous report was dated 1962. This report is titled "The Hydrologic Response to Irrigation Pumping in Diamond Valley, Eureka County and Elko County, Nevada, 1950 to 1965." We do have copies of this particular report available. If anybody desires copies of this report, if you'll make arrangements with either Mr. Gamboa or Mr. Danner here and leave your name and address, we'll see that you get a copy of it.

(The exhibit was then marked for identification as State's Exhibit No. 21.)

Exhibit No. 22 is a computer tabulation of water level data compiled by the U. S. G. S. in Diamond Valley. Now, this particular exhibit just came out of the computer a few days ago, as I recall, didn't it, Mr. Harrill?

MR. HARRILL: That's correct.

MR. MORROS: It has not been confirmed yet. There is a confirmation process the USGS goes through to confirm the data as to computer errors or bad printing, this type of thing. This will be entered in the record with the understanding that if there are any corrections to be made to this exhibit, that they will so be entered in the record and the record will be left open to receive that as well as a

copy of Exhibit No. 20.

(The exhibit was then marked for identification as State's Exhibit No. 22.)

MR. MORROS: The last exhibit, and I'm sure you are all glad to hear that, is Exhibit No. 23, and that is the exhibit over there on the easel. That is a graph illustrating the water rights that have been issued in Diamond Valley in thousands of acre feet, 1952 to 1980.

(The exhibit was then marked for identification as State's Exhibit No. 23.)

MR. MORROS: I am going to have Mr. Brownfield of the staff of the Division of Water Resources and Mr. Jim Harrill of the staff of the U. S. Geological Survey sworn in at this time, and we'll go through these exhibits one by one and give you a summary and an explanation of what they represent, what they illustrate.

Okay. Mr. Brownfield, maybe you could stand and be sworn first, please?

(Jerry Brownfield was thereupon duly sworn by Mr. Danner.)

MR. MORROS: Would you state your name for the Court Reporter?

MR. BROWNFIELD: Gerald Brownfield.

MR. MORROS: Mr. Harrill, would you state your name for the Court Reporter and stand and be sworn, please?

MR. HARRILL: James R. Harrill.

(James R. Harrill was thereupon duly sworn by Mr. Danner.)

MR. MORROS: Okay. Mr. Brownfield and Mr. Harrill, perhaps you could start, Mr. Brownfield, with Exhibit No. 15, which is the enlarged plat of the Diamond Valley Basin illustrating water level contours in April of 1966?

MR. JERRY BROWNFIELD: Okay. What we have attempted to do is to by these maps and charts is to make a visual representation of what the water table has been doing in Diamond Valley since development began. The first exhibit here, 15, shows the outline of the Diamond Valley Drainage Basin in full, with the valley fill material here as the white, and the dark area is the bedrock. Now, also what we have got here is water table contours for 1966 shown in orange, and they are 10 foot contours and the elevation of the contours is measured from sea level datum. What we also have on the map is areas where we have approximate contour levels, where we don't have enough information to actually say this is where it goes, but the contours are taken from water level measurements we have made in '66, and then we plotted out the contours between the different measured points from wells. What happens, the water moves at right angles, or perpendicular to these contours, generally in the direction of north to the flat out here, the alkali flat.

Okay. Going on --

MR. MORROS: Jerry, Mr. Brownfield, excuse me, maybe

for the purposes of clarification, I believe that is the exhibit that has the location of these hydrographs on it?

MR. BROWNFIELD: Right.

MR. MORROS: Perhaps, Mr. Camboa, could you come up here for a minute? Maybe you could just hold this exhibit up for Mr. Brownfield so he can indicate and explain what the hydrographs represent? For the record, we are now referring to, for comparison purposes, State's Exhibit No. 15, and State's Exhibit No. 19.

MR. BROWNFIELD: Okay.

UNIDENTIFIED PERSON: Can you hold that up higher?

MR. BROWNFIELD: Okay. Can you see it?

MR. MORROS: Can you see it all right now?

MR. BROWNFIELD: Okay. These are hydrographs of typical wells in the basin, and each one, and generally what I have done, I have taken them from the south end of the basin and gone north, so we have four wells with the water level measurements over the years from 1965 to 1981. The scale on these, the vertical scale on this one, one inch equals two feet, or one space equals one foot. This is one space equals two foot, and one space equals one foot again, so what we have done in each one of these, the location being, like the first one, is down here in Township 20 North, Range 53 East. The next one in Township 21 North, Range 53 East. The next one being in Township 22 North, Range 54 East, and the next one being in Township 23 North, Range 54 East. They

are basically typical of the wells as you go in a direction north of what is happening to the water table in those wells in 1965 to 1981. You can see they have gone on a decline from 75, 76, we have got a sharper decline in the water level measurements.

MR. MORROS: Mr. Brownfield, I think additionally those hydrographs not only identify the location of the wells, but I believe the owners of these wells based upon the best information we have available to us, do they not?

MR. BROWNFIELD: Right. On each one of these we have got the location by quarter quarter, section, plus the owner of the well, plus the ground elevation, the well data, and of course, the depth of the water through the years measured.

MR. MORROS: The other exhibit I spoke of earlier was Exhibit 22, the Diamond Valley Water Level Data, contains additional hydrographs. We merely selected these four hydrographs for illustrative purposes here, but we do have additional hydrographs on additional wells within the valley with the same information contained thereon.

Okay. Proceed, Mr. Brownfield.

MR. BROWNFIELD: You want to put this one up too?

This is the water level contours for November of 1981, last fall. And of course, the explanation of the basin is the same, the bedrock is the same, we have the water level contours, elevations by 10 foot again.

MR. MORROS: Excuse me, Mr. Brownfield. This is Exhibit No. 16?

MR. BROWNFIELD: Right. Exhibit No. 16. They are 10 foot water level contours as shown on the map, and where approximate, we have them dashed, and if you can see here that there is some fenced areas, this line of contours is fencing, and we have like a fence contour. What is happening there is we have a depression where the water, as I explained on that one, the water generally, the ground water is generally moving toward the north, and these local areas here we have depressions in the water table and the water in all directions is moving perpendicular to the lines, and as you can see in this area, it is generally moving as you go around in all directions toward the center of these depressions. Okay. That is the contours for 1981.

Let's move on to the next one.

MR. MORROS: Okay. That would be Exhibit No. 17, the enlarged plat of the Diamond Valley illustrating approximate net decline in water levels in the Diamond South Sub Area.

MR. BROWNFIELD: Right. This is 17. This particular map shows the approximate net water level decline in the water table it's from 1950, which is basically a pre-pumping era, to 1966, and the yellow here shows the decline, the minimum decline of zero to five feet in the water table, moving up, we have illustrated the five to ten feet of the

decline in the water table in green, and then the red indicates greater than ten, but less than fifteen. So the total decline from 1950 to 1966 was somewhere between ten and fifteen. This is the boundary of where we could draw a line, past there we have no influence on the water table due to pumpage.

UNIDENTIFIED VOICE: Would you repeat your last statement there?

MR. BROWNFIELD: Okay. The area, as far as our measurements are concerned --

MR. MORRIS: Just a minute, just a minute, Jerry. In order for the Court Reporter to get this transcript down, if you can just hold your questions. Just make a mental note of the exhibit, and we'll come back to it and answer any questions you may have. Okay? If you want the responses to your questions in the record, there's no problem with that. I just thought that a little recess at the conclusion of this presentation might help the people. They can come forward and look at these exhibits a little closer.

Okay. We are referring to Exhibit No. 18 now, State's Exhibit 18?

MR. BROWNFIELD: Right. This is Exhibit No. 18, and here we have an illustration of the approximate net decline of water levels from 1967 to 1981, the fall of the year in both cases, 67 fall to fall of 1981. The particular colors demonstrate the drop in water table from 1967 to 1981

in the various areas. Starting out at the edges, we have the brown indicating a drop in that period of time from zero to ten feet. Okay? The orange goes from ten to twenty feet. Then you come to the green, which is twenty to thirty feet drop in the water table. The blue being 30 to 40. The red, 40 to 50, and then two small areas here of greater than 50 feet drop or decline in the water table from the period 1967 to 1981, and these again are obtained from records of well measurements that we have made for that period of time. Okay.

Starting at the top on Exhibit No. 19, we have the irrigated lands in thousands of acre feet. This scale here is thousands of acre feet, and this scale here is time and years from 1965 to 1981. Each one of these blocks illustrates how many acres were irrigated in those years, like here it's '65, which is 7600 acres, to '81, which was approximately 25,000 acres of ground that is actually irrigated when we went out in the field and did an estimate on it. So you see that from '65 there is a general increase of irrigated acres in the valley. These periods where we show no bar graph are areas where we did not make measurements or we did not come out and do a survey on the land to find out how many acres were being irrigated.

The next chart is taking -- is again the same thing, we have got a scale, vertical scale of pumpage now in thousands of acre feet, compared to time and years. This goes along with this chart up here. What we have done is made

an estimate of how much water was used to irrigate this amount of acreage, and we have used a conservative figure down here as shown in the orange of 2.1 acre feet per acre to come up -- we have taken these number of acres and multiplied that by 2.1 acre feet per acre and come up with a pumpage of thousands of acre feet for each one of these years. Okay? Now, that 2.1 figure was the average, using 2.5 for alfalfa, acre feet per acre, and 1.6 acre feet per acre for grain. We just added the two together and came up with an average of 2.1 and multiplied that by the number of irrigated acres and here we come up with an estimated pumpage on the ground. Okay. This is a total duty figure of how much water is put out on the ground to irrigate that acreage.

Again, there is a space here where we are just taking it from here. There was no information so we are unable to make an estimate on pumpage. Now, the additional added parts on these bars show duty of 3 acre feet per acre. In other words, we have just taken the acreage here and multiplied by 3 acre feet and come up with the thousands of acre foot pumped on the basis of 3 acre feet.

One of the things you might be interested in here is in 1977, the net pumpage exceeded the perennial yield of the basin of 30,000 acre feet. From 1977 on, what we have done there, the net pumpage, we have said that using 2.1 acre feet per acre we say if you took 75 percent of that and said that is consumed by the crops, the rest evaporated, and then

the quarter of it or the 25 percent is recharged back into the ground, so since '77 net pumpage has exceeded the perennial yield.

All right. Now, I explained part of these hydrographs which basically show a decline in the water level in the wells, these typical wells, and which are typical of all wells in the area, and they show a declining water table, which one could expect with the increased pumpage that it would decline. Okay. Now, the next chart here, you come up with the average water table decline in the major pumping areas from 1967 to 1981 by township and range. We have Township 20 North, Range 53, we have the number of wells that is reported or measured in that particular township and range, then we have taken all the measurements, added them up, come up with an average decline. Okay. That was the water table in those areas. 28.2 feet in Township 20, 53 East. 29.8 feet in Township 21 North, Range 53 East. 31.2 feet in Township 21 North, Range 54 East. 22.1 feet in Township 22 North, Range 54 East. 23.7 feet in Township 23 North, Range 54 East. Now, these are, as I said, an average of all the wells that are in those particular townships and ranges and for a year we are coming up with approximately, oh, 1.7 to 2.2 feet per year from that period of 1967 to 1981, and the average of all those wells, in all the wells put together.

MR. MORROS: I think there is one more, Mr. Brownfield, and that is number 23, Exhibit No. 23.

MR. BROWNFIELD: Okay. This is Exhibit No. 23, and what we have got here is the amount of irrigation water rights that were approved in Diamond Valley from 1951 to 1979. The vertical scale is again in thousands of acre feet allowed, and the horizontal scale is time and years from '51 to '79, and you can see it was very few rights were issued until 1959, and there was a great increase in '60, '61, and kind of levelled off. This is the actual demonstration of how much water rights were issued by the State Engineer's Office in the basin from '51 to '79.

MR. MORROS: Thank you, Mr. Brownfield.

Mr. Harrill, perhaps we could get a brief description from you concerning Exhibits 21 and 20, and the Diamond Valley water level data that was compiled by the USGS that is represented by Exhibit No. 22?

MR. JAMES HARRILL: Exhibit No. 20, and that is a reconnaisance series report that was prepared by the U. S. Geological Survey, this was a study that was done during 1962, and it represented then an initial appraisal of the water budget and the ground water supply of the Diamond Valley area. It was done using the readily available data and based generally on reconnaisance-type techniques, because the low level of pumping at that time had not created a very significant stress upon the ground water system, so the main significance of this report is that it does much to document the initial conditions that existed in the valley either prior to

development or in the very early stages of development, and it also generates the initial quantitative estimates of the ground water supply of the basin.

Exhibit No. 21 is a somewhat more detailed study that was performed approximately four years later. About the same time this reconnaisance series report 6 was undertaken, the level of development and pumpage in Diamond Valley began to increase and after a period of four or five years there was enough information to generate some cause and effect data. There had been some stress on the ground water system, and consequently a more detailed and somewhat more quantitative effort was made to go in and essentially conduct a re-appraisal of the magnitude of the ground water budget in the basin. The results of this particular study indicated that the ground water budget was estimated to be about 30,000 acre feet per year. This, approximately 8 to 9000 acre feet per year represented inflow from the general area of the Garden Valley to the northwest Diamond Valley and supported much stream discharge along the western side of the basin. The remainder of the water budget was generated from precipitation which fell within the area.

I would point out that Exhibit 15, which is the map showing the water level contours as of April, 1966, was derived from information developed in Bulletin 35, and also the exhibit which shows the net change in water levels for the period 1950 to 1966, is essentially the illustration of what

is published in Bulletin 35 and is presented in the enlarged form just to give some continuity to the information that Mr. Brownfield developed concerning the state of the system today.

MR. MORROS: On Exhibit No. 22, Mr. Harrill, maybe you could -- and that's the computer data -- perhaps you could make a few comments as to what is contained in that information?

MR. JAMES HARRILL: Exhibit 22 is essentially a listing of information on water levels that we had available. There are two types of information contained in Exhibit 22. The first represents essentially a series of computer print-outs and computer-generated hydrographs of water level information that we have stored in our watstor data base, which is a data base operated by the U. S. Geological Survey to store water resource information.

This information is shown in Exhibit 22 and the two groups of print-outs, one of them shows a series of hydrographs similar to the four selected ones that are entered as formal exhibits. Another presentation of information is essentially a tabulation of water level information, which condenses the data in tabular form. Also contained in Exhibit 22 is the initial listing of approximately 3,000 individual water level measurements that are made by the State Division of Water Resources over the period of time roughly from about 1963 to essentially the present. These are the measurements that people have been making in the spring and fall of each

year. This spring we obtained copies of the data file cards that are on file in the Elko office, had the data keypunched and the initial listing of this information are included in Exhibit 22.

In particular, this is the information that we will probably do some further checking and proofreading on, especially the quality of some of the Xerox copies that we were working with, did not carry through very well, and there are some places where we were unable to read specific values. Those will be corrected over a period of time.

MR. MORROS: Thank you, Mr. Harrill.

Do you have any additional comments on any of the other exhibits that you would like to make?

MR. HARRILL: I think perhaps one comment in looking at the particular exhibits, the two exhibits which show the net change, it might be significant to look at the northern limit of change and compare one map to the other. By looking at it, I believe you will notice that the northern limit of change has moved to the north as time proceeds.

That is the only comment I would like to make at this time.

MR. MORROS: Okay. That would be in reference to these two exhibits over here, Exhibits 17 and 18?

MR. HARRILL: Exhibit 17 and Exhibit 18.

MR. MORROS: Thank you.

I think at this point, if you would like, we can

just recess. It's about 18 minutes to 2:00, and until 2:00 o'clock, and you people are welcome to come forward and take a closer look at these exhibits, and you may develop some questions that you will want answered, so we'll stand in recess until 2:00 o'clock.

(The hearing was thereupon recessed from 1:40 o'clock, p. m. until 2:00 o'clock, p. m.)

MR. MORROS: Okay. We'll be back on the record.

Mr. Gamboa has been passing around a tablet here. If anybody hasn't placed their name and address and an indication whether they are a property owner in Diamond Valley on this, I would appreciate it. There is no requirement to do it, but I would appreciate it if anybody has it, if they will, and if anybody hasn't, raise their hand and they'll get it over to them.

One question that was put to me during the recess was what is this hearing all about. I thought I had made a brief statement at the beginning -- well, I'll explain it in a little more detail.

There is two things that brought about this hearing. First, it is a concern by the Division of Water Resources, the State Engineer's Office, over the continued decline of the ground water levels in Diamond Valley. When power was introduced, electrical power was introduced into the Diamond Valley, I believe it was in 1972 or 73, initially we noted a substantial increase in the number of irrigated acres and

we have been concerned since then that the declines that we are now witnessing or that we have been observing are going to reach the point where in some areas that water table is going to drop to a point where economically the users are not going to be able to pump it. Economic survival, I guess, is one reason.

The other reason is a letter from Mr. Thompson, who is the owner of the Thompson Ranch on the northeast part of the valley there, above the concentrated area, and I don't know how many people here are familiar with Mr. Thompson's concern. Let me indicate to you that the springs on Mr. Thompson's ranch, based upon measurements that we have taken and the U. S. Geological Survey has taken, the springs showed a flow of something over a thousand gallons per minute back in, I believe it was 1966, isn't that correct, Mr. Harrill?

MR. HARRILL: They go back as far as 1965.

MR. MORROS: Let me get one more exhibit out here.

On March 10, 1982, Mr. Harrill and Mr. Brownfield and a gentleman, or two gentlemen from the BLM made a field trip up to the Thompson ranch area in Diamond Valley. The purposes of that field trip were, number one, to try and locate all of these shot holes, these geophysical holes up there that apparently were the subject of artesian flows. Number two was to visit Mr. Thompson's ranch and his springs and talk with Mr. Thompson in response to a letter that he had written to the State Engineer on February 25, 1982. In the

report that Mr. Harrill prepared as a result of that field trip, the indications of the flows on the Thompson spring or Thompson ranch springs were in 1965 the springs were flowing approximately a thousand and fifty gallons per minute. In October of 1981, they were measured on October 3rd of 1981, they were flowing 30 gallons per minute, so that indicates that the flows have diminished in excess of 90 percent.

In order to give you a clearer perspective of Mr. Thompson's concern, I'm going to read his letter into the record.

The letter is dated February 25, 1982. It is addressed to the State Engineer, Division of Water Resources, in Carson City.

"Dear Sir:

"As I was writing this letter as a follow-up on our conversation last January, I received a call from Jerry Brownfield about the meeting with the BLM concerning the flowing seismograph test holes. As I stated to you on the telephone, I have been trying to get these plugged for close to ten years, including complaining verbally twice to your Department in 1976.

"We both know, as you stated in our telephone conversation, that these are only part of the problems. As far as I am concerned, you better do something quick about the major cause, namely, the

large number of wells pumping out water in excess of the recharge. I have had a number of geologists on this property the last few years and I have questioned them about my springs so I am not talking from an uninformed point of view, but then you don't have to be a geologist to have enough sense to figure out where this water went. These holes are already drying up so common sense tells you there is another cause.

"There are seven new wells going in on ground in the DLE area that hasn't been in production for years, if ever. If it ever was, some of it was close to 20 years ago. There isn't, I repeat, enough water for the present wells. Few people like to be forced into becoming nasty, but we both know you are stalling and avoiding facing up to shutting wells down. The loss of these springs represents two-thirds of the value of my property and I have every right to be angry. We are talking about hundreds of thousands of dollars.

"Let us look at what you people have done: First you underrated the flow rate of both my springs and the Shipley Hot Springs, then you predict they will eventually dry up because of over-allocation by your office of the recharge system through well irrigation in the DLE area. Then you never even

returned to measure the flow of these springs, at least mine, from the time that report came out in 1966 until the present. You expect me to believe your statement that this oversight was due to lack of funds? Frankly, I think we who own these springs have been set up, and now I suppose I'm expected to believe your office is on top of solving the problem. The cause of the water situation in Diamond Valley is too many wells pumping too much water. You know that, I know that. Practically every irrigator in the valley knows that. The problem is your office failing to do something about this problem before these new wells are drilled and the others start pumping.

"This year is no doubt the first time in recorded history, if ever, these warm springs of mine froze over, and as far as I'm concerned, your Department is guilty of gross negligence and the damage done to my property."

and it is signed T. M. Thompson. That's Exhibit 12.

That, along with what I just explained to you, is the reason for this hearing here today.

Now, everybody had an opportunity to take a look at these exhibits, so we'll try to field any questions you may have. I would appreciate it if anybody has a question, if

you would stand up and identify themselves for the record and then we'll try to respond to the questions. At this point, I would just ask you to ask questions related to the exhibits, if there is any clarification you want on these exhibits. We'll get into the area of testimony when we have completed this.

So who is first?

MR. DONALD PALMORE: My name is Donald Palmore and I reside and have a farm in Diamond Valley. From that letter it sounded like that everyone knows why the spring is drying up. My question is, do you know why the spring is drying up? In other words, I have heard oldtimers say there are springs in the mountains drying up that they have never seen dry, and this has happened this last year in areas that are not in Diamond Valley.

MR. MORROS: Well, Mr. Palmore, in response to your question, let me read my response to Mr. Thompson into the record, okay? This is Exhibit 14, State's Exhibit 14.

Letter dated April 14, 1982:

"Mr. T. M. Thompson,

Eureka, Nevada.

"Dear Mr. Thompson:

"This will acknowledge receipt of your letter of February 25, 1982, concerning the springs located on your ranch in Diamond Valley. My understanding is that you have been furnished with a copy of the

report of James R. Harrill of the U. S. Geological Survey reflecting the field investigation that was made by members of the staff of the Division of Water Resources, Bureau of Land Management, and Mr. Harrill. The results of the field investigation of March 10, 1982 indicate preliminary findings that reflect the decreased flow in the springs on the Thompson ranch are a combination of sustained pumpage from irrigation wells in the south Diamond Valley, discharge from unplugged geophysical drilled holes,' or 'shot' holes, as everybody calls them, within the valley, and the drought periods that have occurred in the Diamond Valley area during the last ten years, noticeably the 1976-1977 drought. This lack of precipitation has had a substantial effect on surface discharge areas throughout the area and in other areas of the state. This office will attempt to determine and identify the persons or parties responsible for the geophysical holes that are free flowing in the basin, and further pursue administrative and legal action to have those holes properly plugged!"

Just before we left, or I left the office Friday, I understand that there is now an operation going on in the northern part of Diamond Valley where some of those holes are being plugged, apparently by the parties who were

responsible for drilling them originally.

Continuing with the letter:

"In response to your request for curtailment of pumping on the patented land in the southern Diamond Valley, a public hearing will be set as soon as possible for the purpose of receiving testimony and evidence related to the effects of the pumping on the ground water and surface water resource. You will be notified of the time and place of the hearing.

"In addition, we will set up a monitoring program of periodic flow measurements of the large springs and selected smaller springs within the valley and correlate this with our existing monitoring of ground water levels within the concentrated area of pumpage.

"In researching the records of this office, it has been determined that the water sources on the Thompson ranch are subject to undetermined claims of vested right, as reflected by proofs of appropriation 01114, 01115 and 02845, 02846 and 02847. These claims have not been adjudicated under the provisions of Chapter 533 of Nevada Revised Statutes. Therefore, the limited extent of the validity of these rights are undetermined at this time. The State Engineer is precluded under the law from

distributing water under unadjudicated rights, and until such time as adjudication is accomplished, full effect and extent of the decreased spring flow on your water rights is undetermined."

And it is signed by myself as state engineer.

MR. PALMORE: That answers the question.

MR. MORROS: Okay. Anybody else?

MR. EVERETT GROTH: Could I ask Milton a question?

MR. MORROS: Well, if Mr. Thompson is going to testify, that's fine, but I don't want to get into that right now. Just right now, any questions you may have related to these exhibits for clarification purposes and the two exhibits I read into the record, I think, were in response to questions that have been asked. Could you identify yourself for the record?

MR. EVERETT GROTH: I'm Everett Groth and I drill wells in the valley and I'm also a rancher, but he said his flow was 30 gallons in October --

MR. MORROS: We measured the flow at 30 gallons.

MR. EVERETT GROTH: Was it October of 1980 -- What was it in October of 1980?

MR. MORROS: '81.

MR. EVERETT GROTH: What was that flow in 1980?

MR. MORROS: I don't believe we have a measurement in 1980.

MR. EVERETT GROTH: The water level in the upper

valley was no different in 1980 than 1981.

MR. MORROS: We had measurements in '65, '66, '81 and '82. We had no measurements in between that time, as indicated by Mr. Thompson in his letter.

MR. EVERETT GROTH: Okay. Now, also the upper valley has a water temperature of 53 or 54 degrees. Okay. I understand his water temperature is 63 degrees. What's warming that water?

MR. MORROS: Okay. Maybe we can get into that later. Do you have any questions related to the exhibits?

MR. EVERETT GROTH: Well, yes, but --

MR. MORROS: We'll respond --

MR. EVERETT GROTH: I would like to know what is causing that, particularly where there is that difference in temperature.

MR. MORROS: We'll try to respond to your question after we get through these exhibits, because I want to receive these exhibits into evidence, unless somebody has got some questions for clarification, so I'll get back to you, Mr. Groth, okay? Does anybody else have any questions regarding the exhibits? This gentleman? Could you identify yourself?

MR. ROBERT BURNHAM: My name is Bob Burnham and we have ground here in the valley. I prepared an affidavit which somewhat refutes the lower chart that you have there, which reflects a part of the family operation. It appears that your

measurements, and I believe it was stated, that water measurement was taken in the fall of the year. Approximately a month ago my son and I went to the north end and it was a time when we started up our north wells, the well that is immediately one half mile to the east, which is the bottom chart on your Exhibit 19, reflects there has been a decided decline in the water level of that well. I wish to state that our actual measurements over the period since 1964, I believe was the year, to date, that is absolutely inaccurate insofar as the spring water measurements each and every year.

This gentleman helped me for several years, Everett Groth, and I think he too will testify that the static water level in that well has not declined three feet since that well was dug until this spring. It has been pumped, open discharge, sprinkler lines, and we have water in our cattle with that well.

The well that is immediately to the east of there half a mile, this year when we started it pumped more in water pressure than it ever has pumped, indicating that the supply to that well is as good, if not better, than it ever has been since it was drilled, and I'm here to testify that is a misstatement of the truth, sir, and here's my affidavit.

MR. MORROS: All right. We'll receive your affidavit into evidence, Mr. Burnham, and we'll mark it as Burnham Exhibit No. 1.

Any objection from anybody to receiving this

affidavit into evidence?

(There was no response.)

MR. MORROS: The exhibit will be received into evidence.

(The affidavit of Mr. Burnham was then received into evidence and marked Burnham Exhibit No. 1.)

MR. MORROS: Anybody else? Would you identify yourself?

MR. JOE RAND: I'm Joe Rand and I have a farm in the valley. I wonder if you would explain how and when you test these wells? On a yearly basis, the same day, and so forth?

MR. MORROS: We don't actually run any well tests. We make water measurements. We try to make them at some time in the spring and at some time in the fall for comparison purposes on the effects of pumpage.

MR. JOE RAND: On the same day?

MR. MORROS: Well, no. Sometimes it's difficult to cover the whole valley on the same day, and it's also based on the availability of our staff.

MR. JOE RAND: Well, approximately?

MR. MORROS: Yes. We try to.

MR. JOE RAND: Well, there is a variation as to when the pumping starts.

MR. MORROS: No. We understand that, and this data is subject to that interpretation too.

Any other questions?

MR. JAMES ARNOLD: My name is Jim Arnold. I have land in Diamond Valley. Last year someone from your office came and measured my wells and at that time had some documentation, and I don't know whether it was this gentleman or someone else, but he showed me that the decline in my well was about five feet since '75. I do recall that.

My second question is, is there any way of measuring the amount of water that is lost from these shot holes?

MR. MORROS: Well, in response to your question, we have not made any attempt to measure the amount of water that is lost from the shot holes. What we are concerned with right now is getting those shot holes plugged so that there is no water running from them. I understand that there was supposed to be a representative from the Shell Oil Company here today. I don't know if -- Okay. Maybe, perhaps when we get into a little testimony, maybe this gentleman can inform us on what Shell Oil Company is doing concerning these holes, and then perhaps that will answer your question.

MR. JAMES ARNOLD: And the third part of my question is, is it conceivable those holes could be a major cause of the problem that you are discussing right now?

MR. MORROS: Mr. Harrill, maybe you can respond to that question?

MR. HARRILL: I think it would probably depend on both the location and the depth of the hole. Generally, you

know, if you look at a shot hole in the same way that you would look at a flowing well or pumping well, the drawdown close to the well is quite large, but as you move away from the well, the draw down decreases in a cone-shaped fashion, which is kind of related to the square of the distance away from the well. In other words, the drawdown due to a particular well drops off rapidly as you move away from the well and there is a rather broad cone, but when you get at some distance not too great away from the well, the depth of that cone of depression is moderate or small, and in regards to the effects of shot holes, for a shot hole to have a major effect it would probably have to be located in the near vicinity of the spring. The further away you get from the spring, the less likely you are to have a major effect. Very probably there is a minor effect because under confined conditions, the cone of depression caused by a flowing well or pumping spreads out over a large area.

Does that answer your question at all?

MR. JAMES ARNOLD: It does.

MR. MORROS: Anybody else?

MR. WILFRED BAILEY: My name is Wilfred Bailey and I have a ranch --

MR. MORROS: Excuse me. Would you repeat your name again?

MR. WILFRED BAILEY: Wilfred Bailey. I have a ranch in the north end of Diamond and farm up here in the farming

area.

From what I gather here, why you have a decline in the water, and I was wondering where we have all these wells on the MX that they propose to drill? Are you figuring on letting them do so?

MR. MORROS: We haven't made a decision on those applications. Those applications are now going through the mandatory statutory process. We have to receive those applications and we have to publish them in a local newspaper once a week for five weeks and then there is a 30-day protest period. Until that protest period is completed, the State Engineer is not in a position to take action one way or the other, but in view of the circumstances involved here, I can assure you they will be looked at very closely.

MR. WILFRED BAILEY: Another question I have is, as I understand, and I see the decline in the water in the north end, but when they do poke these holes down with the seismograph, I can't understand all the pressure in the water they get. If everybody is getting the same decline, why is there so much pressure in any new hole that is established down there?

MR. MORROS: Can you field that one, Jim?

MR. HARRILL: I think in terms of a new hole, in other words, the process of the well flowing actually decreased the pressure in the immediate vicinity of a well, so that when you poke down a new hole, you have the more or

less undisturbed pressure, and it may have been uniformly lower, you know, to some degree over the entire area, but the effects of the gradual uniform change are probably quite a bit less than what you would get when you actually drill a shot hole and get flow directly from a well in a given area.

MR. BAILEY: Don't some of these wells actually blow the concrete right out from the pressure, from when they have been plugging them, and they just flow out around and tremendous pressures under there?

MR. HARRILL: I haven't been involved in the plugging operation, so I really couldn't answer that.

MR. GEORGE BROWN: My name is George Brown and I have a ranch in the north end. I have seen wells where they did flow out around the cement. It's right down there on the north end of the Thompson ranch.

MR. MORROS: Okay. Thank you. Anybody else?

MR. LEONARD CORSENTINO: Leonard Corsentino. We own a farm down in the valley. Isn't it -- These springs, does it actually come from ground surface water if they are coming from the surface waters, in that case the flow would flow off the top of the ground. Aren't they more artesian like these shot holes are? I know we did in Denver with quite a few wells, and a fellow went out a mile and a half from us and must have tapped that. At one time the water flowed ten feet in the air, and they tapped down and that water table is now 600 feet, but I mean, they tapped the pressure. We had other

ground surface wells and it didn't affect those at all. So there are two separate sources of water, so the pot holes could affect that artesian pressure where ground water may not affect it at all; is that correct?

MR. MORROS: I think I have indicated Mr. Harrill has indicated in his field investigation that it is our preliminary conclusion that the artesian flows that have been released by those shot holes are affecting the flow of those springs. I don't think there is any question about that. To what extent I don't know. I don't know whether you have any further comment, Jim, on that?

MR. HARRILL: I would say the springs flow because of artesian pressure, because to make the water flow above land surface you have to have artesian pressure.

MR. MORROS: Anybody else? Yes, sir?

MR. MATTHEW MORRISON: Matt Morrison. I have a farm in Diamond Valley.

What I would like to know, when they opened Diamond Valley for farming they had projected an amount of water to be used for every piece of land being farmed. What I would like to know is what the projection was if every piece of land was being farmed and irrigated, what was the projection of water and have we reached that projection point, and if not, what is it?

MR. MORROS: Well, I guess in response to your question, initially, I'll refer you to Exhibit No., I think

it's 22 -- 23. The furthest one over there. You can see the major portion of the water rights that were issued in Diamond Valley were issued in that period, and it is difficult for me to see because of this angle, but in the period 1959 to 1962, as I recall -- '60, '61, that was when the DLE program was active. There was, and I'm going to be very candid, there was a tremendous amount of pressure put on the State Engineer's Office to issue permits, far in excess of what we had identified at the time was the perennial yield, and not only Diamond Valley but other ground water basins. There were several reasons for that. First of all, we didn't have the information that we have available to us now. Neither one of these reports that are indicated by Exhibit No. 20 and Exhibit No. 21 were available to us at the time. We had a preliminary indication of what the perennial yield was in that ground water basin, and to further define perennial yield, that is the amount of water that can be withdrawn from a basin on an annual basis and on a sustained basis without having an economic or long term effect on the resource.

There was a large failure rate on the DLE's initially, when that program first started. Taking a piece of raw desert land and developing it into a workable farm took a lot of money. I don't think I have to tell anybody in this room that. But the ownership on a lot of these properties out there changed four or five or six times.

In other ground water basins attempts to develop

the land and prove up on those desert land entries just flopped completely. Railroad Valley was a good example. We issued a large number of permits in Railroad Valley. Right now the existing water rights in Railroad Valley are far less than the perennial yield.

Diamond Valley, on the other hand, was the exception. The amount or the number of the water rights that were issued were far in excess of the perennial yield of that valley, and that is the problem we are faced with right now, because up until power became available in Diamond Valley, the actual pumpage, even though there was a large amount of water represented by water rights, the actual pumpage under those water rights was substantially less than the perennial yield, but that has changed.

MR. MATT MORRISON: What you are saying, it was grossly underestimated?

MR. MORROS: No, no. I'm saying that what is happening right now in Diamond Valley was predicted. You'll find it right in this report. It was predicted in 1968. Mr. Harrill, when he came out with this report, predicted the conditions that exist in Diamond Valley right now, almost to the "f," but unfortunately, when this report came out, as a result of a product of the cooperative program that was formed between the Division of Water Resources and the Geological Survey to develop hydrologic information in these ground water basins, that program was initiated in 1962, and unfortunately

when the report and the information became available to us many of the permits had already been issued and they were issued on the basis of four acre feet per acre. Now, it's pretty obvious to us in our pumpage inventories that in most cases, and I'm sure that the short growing season in Diamond Valley has a lot to do with it, that there is not four acre feet per acre being pumped, actually being pumped, but the permits that are indicated over there indicate a duty of four acre feet per acre.

MR. MATT MORRISON: They knew that every section would require four wells, and some of these sections were in Diamond Valley that were open under the Homestead Act, didn't they have an estimation of how much water was going to be drawn for every parcel and piece of land that was under crop?

MR. MORROS: We had some preliminary estimates at the time and I am merely reflecting to you my knowledge of the record. We had preliminary estimates of, you know, a specific amount of water that would be available on a perennial yield basis out in Diamond Valley, because the policy, very frankly, the policy was in order to fully develop that resource, there had to be an overcommitment made. Now, as I indicated to you before, Diamond Valley is more the exception than the rule in the other valleys. Right now in Railroad Valley, initially during that same period of time we issued permits in Railroad Valley also in excess of the perennial yield. Now we are back to the point where there is additional water available for

appropriation under these new DLE applications that are being filed, but we are going to approach it a little differently. We are going to require well spacing and we are going to stick with the perennial yield this time so the same situation doesn't develop.

MR. MATT MORRISON: The chart is a little bit misleading. It shows the drastic draw-down after 1961 or so, but you see, a lot of people were here on speculation and a lot of land wasn't being farmed to the degree it is today.

MR. MORROS: I realize that.

MR. MORRISON: So the water wasn't used as much as it was today.

MR. MORROS: I realize that. Maybe we can get into that. The gentleman here, Mr. Plaskett?

MR. WALTER PLASKETT: Walt Plaskett. I live in Diamond Valley. I have a question on your exhibit and that is you have given the numbers on the exhibits of perennial yield?

MR. MORROS: The perennial yield is identified in the report.

MR. PLASKETT: And you refer to perennial yield, annual withdrawal, and changing water tables. What work have you done to correlate these three sets of numbers? I'm sure you have done some. Do they correlate back, does the decline that you see in the water table correlate back to your known numbers or estimates? You have got a known number, a pretty good known number on withdrawal. You have an estimate, but

nobody knows really what the recharge is, but based on estimated recharge, the known use and the known status, do those numbers correlate in your mind or is the table going down faster than it should according to those numbers or less fast?

MR. MORROS: Well, I don't know whether it's going down faster than it should or slower than it should. Based upon the predictions that were made in the hydrologic studies, the water table is declining because of pumpage in excess of the perennial yield.

MR. PLASKETT: I know. Do you understand my question?

MR. MORROS: I don't know whether I do.

MR. PLASKETT: Well, you have got the figures --

MR. MORROS: If you are saying have we correlated all this information and what is represented on these exhibits is a result of a correlation of all that information, yes.

MR. PLASKETT: Do the numbers correlate is my question. You have a basin that is capable of holding "X" number of gallons of water and we are putting in so much water and we are taking out some of it. It would be tough for me, but I assume for your engineers not so tough to determine whether or not this table is going down at a rate that correlates back to input and output, or is it going down slower than those numbers should, or is it going down faster? This should give some veracity to the numbers, to correlate

one to the other.

MR. MORROS: All right. I think the rate of decline is going to vary. The actual rate of decline is going to vary dependent upon how much water you withdraw from the ground water basin each year. Now, as the exhibits indicate, the amount of withdrawal has been increasing each year, so the rate of decline, there is no question in my mind that rate of decline and those zones of depression are going to increase too. You don't disagree with that, do you, Jim?

MR. HARRILL: No. I might address what was done in Bulletin 35 as a partial answer.

MR. MORROS: Go ahead.

MR. HARRILL: One of the things we more or less did in more or less checking the estimates we made in 1966 was to compute the volume of this, you know, cone of depression, and then using the character of materials, that is, information on the amount of water that would drain out of a certain type of material, so we were able to compute a volume of material that was drained and get a finite volume of water which we then compared to the pumpage. Those checked, not exactly, but within a reasonable -- by reasonable, maybe ten or fifteen or twenty percent, with the types of, you know, generalized information we are talking about, but they did check and compare to a reasonable degree with one another. With the data that was put together there, I don't believe, I didn't, I just furnished the data, and I think what you see here is

an initial compilation of data without a detailed and elaborate study to compare all the inflows and outflows. Jerry, would you agree?

MR. BROWNFIELD: Yes.

MR. HARRILL: Does that help answer your question?

MR. PLASKETT: You have not really tried to relate input and output to change in status. You have just put together the base numbers, is that right?

MR. MORROS: Well, what do you identify as input and output?

MR. PLASKETT: The input number is what you call perennial yield.

MR. MORROS: Okay. That's a number, a firm number, 30,000 acre feet in Diamond Valley.

MR. PLASKETT: That's your firm estimate?

MR. MORROS: That is based upon the information we have available to us, the best information we have available to us, we have a firm perennial yield number of 30,000 acre feet. That's a lot of water --

MR. PLASKETT: I'm not making myself clear, I don't think. If you assume that we have a perennial yield of 30,000 acre feet and we withdraw 70, is the static water table going down at a time of year when you measure it in coordination with that? Do those numbers work?

MR. MORROS: Well, I think -- I understand what you are saying now.

MR. PLASKETT: Let's assume that the answer would be, with 30,000 in and 70,000 out, that the static should fall one foot a year. Is it falling 6 inches a year, or what?

MR. MORROS: Well, that depends on the total area in the ground water basin and the amount of water you have in storage, what we call transitional storage. You may have several billion acre feet or several hundred thousand acre feet in storage, and maybe Mr. Harrill could explain that principle to you better than me.

MR. HARRILL: Yes. I guess in terms of doing this kind of a calculation, this input and output was done in relationship to the exhibit, which shows the net change between 1950 to 1966. In other words, there was a volume in storage depletion, there was an average annual input on the order of 30,000 acre feet per year, and there was a net decrease in storage of ground water, and that compares on about the same level as the magnitude of pumping, you know, the total accumulated pumping during that period of time.

MR. PLASKETT: Okay. I just have one other question that I have here --

MR. MORROS: Let me -- Mr. Plaskett, we'll see that you get a -- I don't know whether you have a copy of this, the red report here, Exhibit No. 21?

MR. PLASKETT: I think I have.

MR. MORROS: Okay. If you do, then I would refer you to the explanation given on available ground water supply

on pages 56 and 57, and I think that will explain to you in detail the ground water budget theory, you know, the withdrawal --

MR. PLASKETT: I understand. I understand the theory.

MR. MORROS: But it will also indicate to you the storage depletion that is involved in this too. The rate of decline is going to be dependent on, you know, how fast you deplete that storage.

MR. PLASKETT: That was part of my original question. Assuming the size of the basin, and I think one other question, and I hope it's a short one, and that is, there were early years in which the withdrawal was less than you firm estimate of 30,000, and still during those years, I assume from the numbers I have seen, I think I'm right, you do show a lowering water table even in years prior to the point in time when 30,000 acre feet was withdrawn, there were a number of earlier years in which I recall when some of this fresh water was pulled out, and if your 30,000 is right and they were, say, pumping 20 and still water tables went down in a number of areas for some time there, is there any information as to why that happened?

MR. MORROS: Well, Mr. Harrill has indicated he can respond to your question, Mr. Plaskett.

MR. HARRILL: Yes. There is more or less of a theory that applies generally to all the valleys in the state,

and the general theory is that over a period of time the continued recharge has essentially filled the basin, but that there is an amount of water on an average basis that is discharged from the low areas in the valley. In here the springs and the areas of shallow ground water around the playa at the north end of the valley, that discharges 30,000 acre feet a year, and with no pumping, of course, you have 30,000 acre feet per year coming in and 30,000 acre feet per year going out, and you know, everything is in balance. However, if you started pumping and you pumped in some place that you didn't turn off any of the discharge, and for example, say you pumped 1,000 acre feet per year, then you still would have an average rate of recharge of 30,000 acre feet per year, but the discharge would be 30,000 acre feet per year of naturally related ground water discharge plus your 1,000 acre feet per year pumping, and until such a time as the pumpage has caused a cone of depression that gets down into the area of natural discharge and turns off a thousand acre feet of discharge, there is going to be water withdrawn from storage.

Does that help answer the question?

MR. PLASKETT: Does that mean that if our recharge could somehow be more than 70,000 that we might not have gotten there yet? If we can assume for a few seconds your 30,000 is wrong, we might still be in that state of flux?

MR. HARRILL: The system will be in a state of flux

probably for several generations or longer. Because of the location of pumping, you know, being 12 to 15, or maybe a maximum of almost 20 miles, you know, north -- or south of the area of natural discharge, there is a very long period of time involved for the effects to work their way north, and consequently, the system will not be in equilibrium for many, many years, but the fact there is or is not storage depletion occurring isn't an indication necessarily of the exact level of the water budget or the exact level of pumping.

MR. PLASKETT: Thank you.

MR. MORROS: Anybody else have any further questions on the exhibits?

MR. EVERETT GROTH: Can I ask a question again? I think we're talking about two different things here, back to Mr. Thompson's spring, and I don't think that is really --

MR. MORROS: Well, I think we better get to that later because his spring, other than the location of Mr. Thompson's ranch on some of the exhibits --

MR. EVERETT GROTH: Does he have a water -- What's his water status? I don't see it on the chart there. Is it ground level or is it --

MR. MORROS: Well, we will indicate that we have made some, I believe the closest point of measurement that we have made, as far as the ground water table goes, to Mr. Thompson's spring location, I'm trying to recall -- Jerry?

MR. BROWNFIELD: Okay. We have got a USGA monitoring

well in Section 17, which is approximately 2½ miles from his springs.

MR. MORROS: And we have measured the flow in the spring, and we will continue to.

MR. GROTH: Is there a water well close to his place, close to the spring, or within a couple of hundred feet?

MR. MORROS: I don't know if he has. If he does, he doesn't have a water right for it.

Any other questions?

MR. DON MORRISON: My name is Don Morrison. I live on Section 10 in Township 21. I have a domestic well and it's approximately 112 feet deep. The well is set between 80 and 85 feet, and we have never had that well go dry, and occasionally I have had to pull it --

MR. MORROS: Okay. Mr. Morrison, you can testify -- I want to get past these exhibits so I can get them into evidence.

MR. DON MORRISON: Well, I thought that would be an indication in accordance with your question.

MR. MORROS: If anybody has any other statements they want to make, please hold them until we get these exhibits into evidence, and then we'll take testimony from everybody on a one by one basis. This gentleman right here?

MR. JAMES MOYLE: My name is Jim Moyle, I live in Diamond Valley. According to your map and geology of the

thing, is there more water in, say, the second hundred feet of the valley than there would be in the first hundred feet, as far as comparison to, say, 300 feet? A lot of times when I hear people drilling wells, they claim they didn't get to the good water until they reach, say, 120 feet, and I believe that it has been a long time since I read the red book you refer to, but I believe that report was done on the first hundred feet of elevation in the valley. Can anyone respond to that? Is there more water below a hundred feet?

MR. MORROS: Well, since it was Mr. Harrill's report, he can respond to that.

MR. HARRILL: The analysis of, you know, the driller's materials and the composition was done on the upper 100 feet of saturated material, yes. The reason we didn't go too much below that is because initially most of the wells were less than 200 feet deep, and there were only a few wells that were deeper, and there was not enough evenly distributed information to make an aerial comparison of, say, the second hundred, you know, feet of saturation, or third hundred feet of saturation. In a general sense, with the exception of possibly some areas where there is some zones of clay in certain, you know, at certain depths, the general character doesn't seem to be too greatly different between the upper 100 to the bottom of 200 feet. However, an individual well, you may hit a productive zone of gravel in any individual well and get a high yield, you know, at differing

depths throughout the valley. Does that answer your question.

MR. MOYLE: Well, so you are saying there really isn't much difference as far as if we take the first 300 feet.

MR. HARRILL: I haven't analyzed the first 300 feet, so I couldn't answer you and say they are the same. The analysis I made was made on the upper 100 feet, so in terms of what was actually done, that is all I did.

MR. MORROS: Anybody else? Now, just in relation to the exhibits now, please?

MR. CLAY COOPER: I think it is.

MR. MORROS: Okay.

MR. CLAY COOPER: I'm Clay Cooper and I irrigate in Diamond Valley. What is the elevation of these seep holes in comparison to the water level back up south of us? Is there a relationship there?

MR. MORROS: Well, I don't know. Jerry, maybe you can respond to that question? You're closer to the exhibits.

MR. BROWNFIELD: Okay. You have got approximately 5770 feet where the water is approximately at the surface of the ground down at the playa.

MR. CLAY COOPER: What was the elevation again?

MR. BROWNFIELD: 5770. Okay. Now, where did you want to know about the elevation?

MR. CLAY COOPER: It's 5810 here.

MR. BROWNFIELD: Okay. 5800, that's 30 feet. 5800 is 30 feet from where the water table is there at the bottom

end.

MR. MORROS: So your gradient, your slope or your gradient is from north to south.

MR. BROWNFIELD: Yes. So the water is actually higher here than it is here by, say, 30 feet, dependent on where you are, of course.

MR. CLAY COOPER: But it will continue to seep out until the water level in this valley gets to that level, to this lower level, the 30 feet? The 30 feet will still continue to seep out?

MR. BROWNFIELD: The water is running, yes, down this direction, as far as movement goes. I pointed out before it goes perpendicular to the contours, and that's the contours in the fall of '81 right there of the wells we measured, and the water movement is perpendicular to those.

MR. CLAY COOPER: But the contours would be higher, I believe they are, in the spring than they are in the fall?

MR. BROWNFIELD: Yes, right. You'll have a difference there. What it was, we didn't have enough information on our spring of this year to be able to plat up what is happening. We only had it in the major pumping areas here, and we need it for the whole valley to be able to draw it up for the spring, so we used the fall measurements of last year, but it will shrink. Like this shrinks back, I platted this up and it shrinks back, this area shrinks back because, you know, you haven't pumped since the fall here, and it will shrink

back a little bit with the amount of recharge coming in replacing what has been pumped out, but it doesn't go clear back in like this here where we have had the measurements in '66.

THE REPORTER: What was his name again?

MR. MORROS: This gentleman here? The last gentleman that spoke there, could you give us your name again, please?

MR. CLAY COOPER: Me?

MR. MORROS: Yes, please?

MR. CLAY COOPER: Clay Cooper.

MR. MORROS: Clay Cooper. Let's see, I saw a hand. Okay?

MR. KENNETH STENTON: My name is Ken Stenton and I farm in Diamond Valley.

MR. MORROS: Charles Stenton?

MR. KENNETH STENTON: Kenneth Stenton.

MR. MORROS: Kenneth Stenton.

MR. KENNETH STENTON: According to what I hear, to the best of your knowledge, we have got 30,000 annual acre feet of flow into the valley, and likewise I think I heard earlier with all the permits issued, how many feet is going to go out, and also, on my particular lower property, my water table has went down 16 feet in 16 years. North end of the valley.

MR. MORROS: Thank you.

MR. STENTON: Can you answer that question about that?

MR. MORROS: Well, the amount of water that is going out, based upon our pumpage inventory last year, which indicates around 70,000 acre feet was pumped, and of that amount approximately three-quarters of it is consumed and about 25 percent was returned to the basin as what you might call secondary recharge due to the irrigation activities.

MR. STENTON: How many feet a year is actually going down now, do you figure, at this point?

MR. MORROS: Well, pumpage, as I explained before, the pumpage rate keeps increasing. The amount taken out keeps increasing every year, which in effect will have an effect on the rate of the decline, and also, depending on what areas, the heaviest pumping is concentrated in, your rate of decline is going to be reflected at a higher rate in those areas than at other areas, so it's difficult to answer your question. That is why we prepared these exhibits to show the net declines.

Any other questions related to the exhibits now?

Okay, this gentleman here?

MR. DON PALMORE: Don Palmore again. All your exhibits are painting, I think, a very scary picture.

MR. MORROS: Believe me, we wouldn't be here if we didn't feel it was a scary picture.

MR. PALMORE: On my permit when I recently got it,

it said to allow for a reasonable lowering of the water table. What is a reasonable lowering of the water table? I hear other people in other areas pumping water 500 feet, a thousand feet --

MR. MORROS: Can you afford to pump water from 500 feet?

MR. PALMORE: No, I can't. On alfalfa, but --

MR. MORROS: Then an economic pumping lift probably would qualify as a reasonable lowering of the water table, provided that the lowering of that water table did not adversely affect more water rights, and that, of course, is Mr. Thompson's problem with the declining flows in his springs, but we'll get to that.

Okay. Let me see if anybody else has another question, sir? The gentleman in the back?

MR. KENNETH STENTON: Yes. My name is Ken Stenton, and with respect to your exhibits, on your letter in response to Mr. Thompson's letter, perhaps I didn't hear properly or something, but could you expound upon that point where you mentioned his rights and what their standing was, according to your office?

MR. MORROS: Well, our records reflect that Mr. Thompson has filed proofs of appropriation for the springs or the surface water sources on his lands. The law, or the procedure that is set out under the statute allows anybody to file a claim of a vested right, and that is what these proofs

represent. And to further define what a vested right is, it indicates the use of the water was initiated prior to 1905 in a case of surface water. There are other dates in the case of ground water that relate to 1913 and 1939, but the use of that water was initiated prior to a certain date. In the case of surface water, March 25th, I believe, 1905. I would have to refer to the law. And there has been a continuous use of that water since.

Now, the procedure that is set out under the law requires, it's a kind of two-part procedure. The first part is an administrative responsibility that the State Engineer has to carry out in making preliminary findings as to the validity and the limited extent of those rights. Once you get to a certain point, which is called an "order of determination," then you move into the district court and the State Engineer becomes an officer of the court and the determination is completed by the district court up to the point where a decree is issued by the district court, and that specifically sets out the limit and extent of those water rights, and without going into, you know, intimate detail on every step that has to be followed in that procedure, until that procedure is completed and until it has the approval of the court, those rights represent claims, undetermined claims of vested right.

MR. KENNETH STENTON: In other words, at this point in time is it your interpretation Mr. Thompson's claim is invalid?

MR. MORROS: No. I said it is an undetermined claim. I did not say it was invalid. It may very well be valid, but until that procedure is completed and that determination is made, then it has the status of being an undetermined claim of a vested right, but as I said, again, that does not mean that it is invalid. It may very well be valid.

Any other questions?

Okay. I'm going to indicate that State's Exhibits 1 through 23 are received into evidence.

(State's Exhibits Nos. 1 through 23 were then received into evidence and so marked.)

MR. MORROS: I wonder if the gentleman from Shell Oil, we might head off a lot of questions as to what the disposition of some of those shot holes up there may be. Maybe the gentleman from Shell Oil would have no objection to being sworn and possibly tell us what Shell Oil is doing to correct some of that problem up there. Again, do you have any objection to that, sir?

MR. J. R. FREEMAN: None whatever.

MR. MORROS: Okay. If you would stand and raise your right hand, perhaps we could get you to come up and sit at the table here?

(J. R. Freeman was thereupon duly sworn by Mr. Danner.)

MR. MORROS: Would you state your name?

MR. J. R. FREEMAN: My name is Bob Freeman. I work

for Shell Oil Company, Rocky Mountain Division operations.

MR. MORROS: Maybe you could come up here and have a chair.

MR. FREEMAN: Thank you.

MR. MORROS: And we'll look you right in the eye.

MR. FREEMAN: Appreciate that. My wife had me moving furniture over the weekend.

Mr. Chairman, I'm going to have to plead somewhat ignorant due to the fact that I first heard of the problem Friday last when I called Mr. Brownfield. My area of interest before that was in the Williston Basin.

I would also like to establish that my company is not the only one that has done seismic in the valleys.

MR. MORROS: We realize that.

MR. FREEMAN: Okay. It is also my understanding from the short time that I had Friday after talking to Mr. Brownfield that there has been an ongoing project on Shell's part in plugging some of the holes, but I don't know to what extent.

MR. MORROS: Okay. We know that there is, in fact, we did license a well driller recently for the purposes of running an operation in Diamond Valley to accomplish the plugging of some of those holes out there, and I'm not sure whose employ he is in. Is he working for Shell Oil Company? Our understanding was that he was working for the BLM.

MR. FREEMAN: It is my understanding, Mr. Chairman,

that we have had an employee, I'm not even sure who the contractor is that is working on our behalf plugging the holes.

MR. MORROS: Okay. At the present time?

MR. FREEMAN: Yes.

MR. MORROS: There is one large hole out there my staff, along with Mr. Harrill from the USGS identified that has a substantial artesian flow out there. In fact, I think, as I recall, Mr. Harrill and Mr. Brownfield indicated that there was a soggy area out there somewhere around a hundred acres; was that correct?

MR. BROWNFIELD: Appeared to be.

MR. MORROS: Which would indicate there was a substantial amount of water being discharged from that particular hole. Do you have any knowledge of whether Shell Oil intends to plug that particular one?

MR. FREEMAN: At the moment I don't. I would assume that since we have people in the field that that will be considered, yes.

MR. MORROS: Okay. I would assume Shell is able to identify the holes that they are responsible for?

MR. FREEMAN: I would assume so from survey notes and other data from our field crews.

MR. MORROS: Does anybody else have any questions of the gentleman from Shell Oil?

I believe there was a question from one of the people.

MR. KEVIN BUCHANAN: You know and he knows. How about the rest of us?

MR. MORROS: Now, wait a minute. Hold it for a second. Do you want to identify yourself for the record?

MR. KEVIN BUCHANAN: Kevin Buchanan.

MR. MORROS: Okay.

MR. BUCHANAN: You know and he knows what he's talking about. How about the rest of us? We don't.

MR. MORROS: We are talking about the shot holes out in the north end of Diamond Valley.

MR. BUCHANAN: Why don't you explain this to us? I don't know what you're talking about. Maybe everybody else does.

MR. MORROS: There were some geophysical holes that have been drilled in the north end of Diamond Valley over the years for the purposes of mineral exploration, oil exploration, I assume.

MR. BUCHANAN: Why don't you explain, you know, his presence and what you're talking about to everybody else? I don't know. I mean, maybe I'm in the dark.

MR. MORROS: Well --

MR. BUCHANAN: So go ahead and do that.

MR. MORROS: We have been attempting to get those holes plugged because they are flowing water. They have artesian head on them. They are not water wells. They were drilled for the purposes of mineral exploration, oil exploration,

gas exploration, too, as far as I know, and the parties responsible we are attempting to contact for the purpose of getting the holes plugged because we think the release of water, those artesian flows are partly responsible for the diminishing flows on those springs in the north end of the valley.

MR. BUCHANAN: I know that.

MR. MORROS: Okay. This gentleman is from Shell Oil Company and he was not required to be here by the State Engineer. They indicated that they would have somebody here at the hearing for the purposes of reading into the record what action Shell Oil Company is taking to plug the holes they are responsible for in the north end of the valley. Okay?

MR. BUCHANAN: Okay. So what's the big discussion between you two? Why don't you present the discussion?

MR. MORROS: He's testifying into the record. Now, what you are saying is you can't hear him back there? Is that what your problem is?

MR. BUCHANAN: That's correct. I can't.

MR. MORROS: Okay.

MR. FREEMAN: I apologize then.

MR. MORROS: Then why didn't you say that in the first place and I wouldn't have went through all this?

MR. BUCHANAN: How in the hell was I supposed to be able to hear him when he was speaking to you?

MR. MORROS: All right. We'll have him turn around so you can hear him. I didn't know what your problem was.

MR. FREEMAN: I want to apologize. I'm sorry. I thought everyone could hear.

MR. BUCHANAN: Looked like a private discussion to me.

MR. MORROS: It wasn't a private discussion, I can assure you.

MR. BUCHANAN: Dang sure looked like it.

MR. MORROS: Okay. If you will proceed?

Did you have anything further to add?

MR. FREEMAN: No, other than --

MR. MORROS: Well, for the benefit of this gentleman, maybe perhaps you could just repeat a description of what action Shell Oil is taking to plug those holes?

MR. FREEMAN: Yes. Since we became aware of the flowing holes, we have had an ongoing project to attempt to plug those holes and it is my understanding, and I told the Chairman, that I first learned of this problem personally this last Friday, having worked in the Williston Basin prior to being notified that I should come out here, and as I said, it is my understanding that there is a contractor that is working for Shell attempting to take care of the matter at the present time.

MR. MORROS: Okay. Anybody else have any questions. Thank you. Appreciate your -- Wups, excuse me for

a moment. This lady here?

MRS. JANE MOYLE: My name is Jane Moyle from Diamond Valley. What agency would be responsible for requiring that those wells be capped? Before a decision is made by the Division of Water Resources in determining where the problem comes from, who would be responsible for the capping of these wells and uncapping of these wells or irrigation pumping?

MR. MORROS: Well, let me respond to that in this manner: We don't intend to make any decision in this matter until such time as we have made every effort to get as many of those wells plugged as we can up there to see what the effects of capping those wells are going to have on those spring flows. Okay?

MRS. JANE MOYLE: And what agency is responsible for requiring they be capped?

MR. MORROS: If there is a wilful waste of water, the State Engineer is, but we can not preclude the drilling of those holes for the purposes of mineral or for oil or gas exploration, and that is probably where the problem lies right there.

Okay. This lady here?

MRS. MARI KEPHART: I'm Mari Kephart from Diamond Valley. My impression is, is Shell Oil going to cap holes that Shell Oil did not produce?

MR. FREEMAN: That is, as I understand it, there is

some controversy at the present time. We do feel responsible for those holes that we drilled, but you know, being in the business of trying to make a little profit, we don't feel like we should be responsible for the holes that other contractors or oil companies drilled.

MR. MORROS: I can indicate that we are going to pursue this as much as we can to identify the parties that are responsible, and if necessary, issue administrative orders for the plugging of those holes. If those are not responded to, then we will take legal action against the parties involved.

MRS. MARI KEPHART: You will?

MR. MORROS: The State Engineer will, right. As it relates to those holes where there is water flowing to the surface.

MRS. MARI KEPHART: You can guarantee me all those will be capped?

MR. MORROS: I'm not going to guarantee you, no. Yes, sir?

MR. BUCHANAN: How will we know which holes belong to Shell Oil Company and which holes belong to other companies?

MR. MORROS: Well, that's what we are trying to find out. Now, some of those holes were drilled over twenty years ago.

MR. BUCHANAN: Well, some were drilled last year too.

MR. MORROS: I realize that. That is what we are trying to run down.

MR. BUCHANAN: How will we know?

MR. MORROS: Well, we are trying to run that information down now. We are working with the BLM and if they issued --

MR. BUCHANAN: When you run the information down, how will you get it to us?

MR. MORROS: Well, it is our responsibility to see the holes are plugged. If you want, if you are interested in that information, then, you know, all of our records are public records. You are welcome to come into the office any time if you want to inquire about it.

Yes, sir?

MR. FLOYD KLINDT: Floyd Klindt. When these companies do this testing like Shell and the various companies, do they have to get permits to do that, and is their work -- Can't think of the term, but you get a record of it, is what I'm saying?

MR. MORROS: Well, under the Nevada Water Law, they certainly have to get permits if they are drilling water wells, but as far as the mineral exploration and gas and oil exploration, there is no requirement from the State Engineer's Office unless there is, you know, an actual diversion or appropriation of water involved, but I assume there are other, especially the federal agencies, when you are functioning out on

federal lands, you have to receive approvals from them and others, I would assume. I don't know.

MR. KLINDT: I figured you were. I just wondered if we might have a law --

MR. MORROS: The State Engineer's jurisdiction only extends to the water-related matters.

MR. FREEMAN: BLM does have to permit it if the well is private in all cases.

MR. MORROS: Okay. This gentleman here?

MR. MATT MORRISON: Matt Morrison, Diamond Valley. Was there negligence involved when they first drilled these wells and they attempted to fill basketballs with earth and plug those wells, were they negligent in not capping these things right after they were drilled?

MR. FREEMAN: I really can't answer that. As I said, Friday was the first I heard of the problem at all.

MR. MATT MORRISON: Is it possible some of that water might be also going down into another strata instead of coming to the surface since they are deeper holes?

MR. FREEMAN: Not having any expertise in that, we would have to ask the hydrologist or someone with a little more expertise than I have.

MR. MORROS: This gentleman here?

MR. MILTON THOMPSON: Milton Thompson of Diamond Valley. I can answer some of these questions on the holes that Shell drilled --

MR. MORROS: Well, I'm sure that you want to testify, Mr. Thompson, so maybe we can get to it. Unless you have a specific question?

MR. MILTON THOMPSON: No. I was going to explain something. Anyway, these lines are quite prominent that Shell drilled and they indicated to me last winter when they came back in prior to the storms hitting, they were in plugging and they were in the process of plugging and they hit too much mud, and as far as these big holes in the north end of the valley, when they drilled those they dried up another big hole, so it's flowing out of their hole now.

MR. MORROS: Okay. Thank you. Thank you very much.

MR. FREEMAN: Thank you, Mr. Chairman.

MR. MORROS: Well, Mr. Thompson, I guess I'll ask you if you want to testify?

MR. MILTON THOMPSON: Well, as long as this doesn't become a witch hunt. You have all the photographs.

MR. MORROS: No. I want to indicate to everybody, this is going to be conducted in an orderly manner. Mr. Thompson will be allowed to give his testimony and if he wishes to respond to questions, that will be up to him.

MR. DANNER: Will you stand and be sworn?

TESTIMONY OF

THEODORE MILTON THOMPSON,

who, coming forward to testify, having been duly sworn, testifies as follows:

MR. MORROS: State your name for the record?

MR. THEODORE MILTON THOMPSON: Theodore Milton Thompson.

MR. MORROS: I'll let you proceed in whatever manner you want, Mr. Thompson.

MR. THOMPSON: As I indicated to you last September when I initially contacted you, my spring flow had decreased severely, and I had suspected it since the fall of 1978, when I had the first chance to get somebody out there in August of 1978 --

MR. MORROS: I don't think these people can hear you. You are going to have to speak up a little. I'm sure that is why the hands are all raised.

MR. THOMPSON: I had the county agent come up and test my spring flow last August, because I had noticed a severe decrease in the flow. Since 1978 or 77, I have only been able to irrigate half my meadows, and the meadows themselves have dried up severely, and the Diamond Springs area has dried up almost entirely, in the Willow Field area has dried up completely.

MR. MORROS: These are separate spring areas on your ranch?

MR. THOMPSON: Yes. And all the springs behind me on the BLM land, if you go back, and I had aerial photos of all this taken in 1946, there are close to 88 springs out there have dried up, and counting Diamond Springs area, that

is over a hundred, and then you go across the valley and you get to the Romano Ranch, that dried up, and that used to be a swampy area also.

When my spring stopped flowing, I contacted your office, and Mr. Brownfield came out and he looked over the situation and then you came out again on March 10th, if I remember correctly.

MR. MORROS: If you could keep your voice up a little bit? I know these people in the back of the room have a tough time hearing you.

MR. THOMPSON: Now, where do I go from here?

MR. MORROS: Okay. Your question is, what action--

MR. THOMPSON: Well, I would like to state this pertaining to the springs that dried up: You have spent a considerable amount of time here on these shot holes. Now, I contend that the amount of water that has dried up in my springs, the springs on the flat, on the Brown ranch and Romano ranch, plus the amount of flow that has decreased from the Shipley Hot Springs, far exceeds the amount of flow out of these shot holes. I would say over fifty percent of them dried up. We are not just talking about my spring, as everybody seems to be erroneously pointing out here, that it was my springs only. It's the whole north end of the valley is drying up.

MR. MORROS: Did you have anything further, Mr. Thompson, that you wanted to add?

MR. THOMPSON: Well, I have a lot of pictures taken back as far as 1946.

MR. MORROS: Okay.

MR. THOMPSON: My springs.

MR. MORROS: If you would like to enter them into the record as exhibits?

MR. THOMPSON: I also have moving pictures, but some of these I don't have copies of and I hesitate to give them to you at this time.

MR. MORROS: Okay. We can leave the record open for the purpose, if you want to make prints of those pictures, you can. The only problem I have is that somebody, you know, may want to view those exhibits.

MR. THOMPSON: Well, I'm willing to present them here if you have some way to show them.

MR. MORROS: Not the moving pictures, we can't.

MR. THOMPSON: No, but I have slides.

MR. MORROS: Oh, no, we don't have any method for doing that. We didn't anticipate there would be a need for a projector. Otherwise we would have brought it along.

Do you have anything other than the pictures?

MR. THOMPSON: No, I think the pictures speak for themselves.

MR. MORROS: There is probably some people out there in the audience, I guess, that would like to ask you some questions. I am certainly not going to require that you

respond to them. That is up to you.

MR. THOMPSON: I would be willing to answer questions as long as, as I say, as long as it doesn't turn into a witch hunt. I have 2700 acres down there that has dried up on me. I think if there is anybody in this valley damaged it's me.

MR. MORROS: I'm going to indicate to everybody, then, that as long as Mr. Thompson is willing to respond to the questions, that's fine. I have no objection to it. But I want this done in an orderly manner. If it gets out of hand, I am going to cut it off. Okay?

This gentleman here?

MR. JAMES ARNOLD: Jim Arnold. I am mindful of his letter, but I would like to pose a question to him, if I may. Specifically, what is it that you suggest that we do, we irrigators? I'm irrigating 640 acres.

MR. THOMPSON: Well, you guys can blame this all on me --

MR. ARNOLD: No, I'm not.

MR. THOMPSON: No, I'm just saying hypothetically --

MR. MORROS: Now, please, don't talk over each other, because you make it difficult for the Court Reporter.

MR. THOMPSON: However, there are a lot of old water rights in this valley, and I think if I'm not mistaken, you have concluded in that red report there that eventually this valley would dry up, and didn't you state in that red

report too that my spring and the Shipley Hot Spring would eventually dry up?

MR. MORROS: The report refers to the decline of flows in those springs as pumpage increases, yes, it does.

MR. THOMPSON: All right. Now, all right, say I go without any water I might as well, sooner or later you people are going to start drying each other's wells up, which you are already doing, you all know that. When is it going to stop?

I have one of the oldest water rights in this valley, adjudicated or not, and it can be taken to court and adjudicated, but it's there. It isn't something that is imaginary. It's there. And my place has dried up. I don't even have cow feed on my native meadows any more. It has gone to brush, which their photographs indicate.

I do have a copy of a picture I took of the Diamond Springs area, which I took last year, which I'll enter at this time. Those people that are familiar with that area --

MR. MORROS: Do you want this entered as an exhibit?

MR. THOMPSON: Right. I can testify to that, where that picture was taken, there is brush growing right now.

MR. MORROS: For the record, would you indicate at what time this picture was taken? Is it indicated on the back? July of 1971?

MR. THOMPSON: Right.

MR. MORROS: Let's mark this as Thompson Exhibit

No. 1.

(The photograph was then marked as Thompson Exhibit No. 1.)

MR. THOMPSON: And going back to my own springs, my own springs presently, when Mr. Gamboa took the last measurement, what was the last measurement, Mr. Gamboa?

MR. MORROS: Well, he's not under oath. I'll have to put him under oath.

MR. THOMPSON: Anyway, my spring, it almost completely stopped. Last year when it was flowing, it was actually flowing 23.9 gallons a minute. That was six foot below the old level where we used to irrigate from the pipes. The pipes are still in the existing levees, so there is no question about it. I even have the old wooden pipe, the old original one is still in some of it, and right now I'm irrigating four foot below the old bottom of the pond, and I'm getting very little water at all. I estimate I'm getting around five or six hundred gallons, if that, at night, and Mr. Gamboa didn't have time to come by, but I suspect it has been dropping steadily the past three days. I don't know, but just looking at it running out the pipe, it looks like it's dropping.

MR. MORROS: Does anybody else have any questions? Yes, sir? Will you identify yourself for the record?

MR. ROBERT BURNHAM: My name is Bob Burnham. I believe that it could be testified that possibly Milt's

source of water also could be described as alluvial sources. I personally am acquainted with a type of situation in Utah where this very same thing happened. I think we can all verify that the last two years have been very unusually dry as far as our mountain snowpack, as far as the replenishment of what should be his alluvial water source. Water normally doesn't run uphill and when the water from a subterranean source, I think, could be expected to mix with alluvial source, which have two different principles --

MR. MORROS: Well, Mr. Burnham, I don't know whether you are making a statement or addressing a question?

MR. ROBERT BURNHAM: Yes, I would like to outline a background and see how it would apply to Mr. Thompson's situation.

MR. MORROS: As long as it relates to a question, that's fine.

MR. ROBERT BURNHAM: Okay. If Mr. Thompson's source of water is from an alluvial source, the subterranean water pressures do not have a measurable effect on his alluvial source of water, and if the last two or three or several years of mountain snowpack has been down considerably, which I think we all understand and have seen and there are records to that effect, the alluvial source recharge is less and this would have more effect on Milt's springs than the subterranean water supply I think under all circumstances.

MR. MORROS: I think the question, Mr. Thompson,

do you feel that the pumpage in the south end of the valley or the shot holes or lack of precipitation has had the most effect on your springs?

MR. THOMPSON: Now you are laying me open for something that could cause -- What are you talking? You want an opinion from me?

MR. MORROS: Well, no. If you don't want to answer the question, just say so.

MR. THOMPSON: It is my understanding my water and the Shipley Hot Springs, the Tap Creek and Shipley Hot Springs are termed deep circulating water. It is warm water and hot water that comes from deep, it has to have pressure to bring it up, and the pressure on that original report you made in '62 indicated there was a flow down through the middle of the valley. Is that not correct?

MR. MORROS: I believe so.

MR. THOMPSON: And that flow has stopped. So therefore there is no pressure to make my water come up any more. It may be going into a channel in the center of the valley. It's probably still coming up, but down deep. That' my opinion.

MR. MORROS: So your opinion is that channel is being interfered with by the pumpage in the south end of the valley?

MR. THOMPSON: I think you people have concluded it has been dried up and the flow rather than going north is

now reversed and coming from the north to the south.

MR. MORROS: Any other questions from anybody for Mr. Thompson? Did you have anything further you wanted to add, Mr. Thompson?

MR. THOMPSON: I would say from the indication of those --

MR. MORROS: Just a minute. I think one gentleman here has a question. Would you give your name, please?

MR. EVERETT GROTH: Everett Groth. What do you attribute the difference in temperature for the valley water and yours?

MR. THOMPSON: That's just what I got, that's all.

MR. GROTH: I mean, if the upper pumping is drying up your springs --

MR. THOMPSON: I just got through saying that, that my water is termed deep circulation of water. It comes from deep, but it is brought to the surface because it can't go anywhere else, but now it can go somewhere else. It is going into an empty channel somewhere else.

MR. GROTH: I have driven a lot of wells in Diamond Valley --

MR. THOMPSON: I'm not going to get in an argument, Mr. Groth.

MR. GROTH: I'm not going to argue. I just wanted to state a point. At 400 feet there is a clay there, and it extends another 400 feet, according to the oil wells. Also

there is a clay bank separating your side of the valley from the center of the valley, from where your spring is. We have drilled four or five dry or straight clay holes up as high as 400 feet deep in that clay bank. There's nothing there. And the deepest well that we have in the center of the valley is about 403 feet deep, and the oil well there on Walt's place, there is clay from approximately 400 feet to 800 feet.

MR. PLASKETT: Fifteen hundred.

MR. MORROS: Now, please -- Please, gentlemen. The Court Reporter has no way of getting your remarks into the record because he doesn't know who you are, so please, if you have something to say, wait until this gentleman is through and then raise your hand and we'll get you, but let's get it into the record. This has got to be a clear record.

MR. GROTH: If your water you figure comes from deep, I can't see how water in the middle of the valley would get down and push yours up.

MR. MORROS: Did you want to respond to that, Mr. Thompson?

MR. THOMPSON: I don't think -- I think I already did.

MR. MORROS: All right. Fine. The gentleman in the back?

MR. WALTER PLASKETT: Walt Plaskett. I don't know what Shell would give you, but it might determine some answers as to what would be -- That would be the two logs of

the wells they drilled in their two areas out there about a year and a half ago now. They were both drilled quite deep, and I don't imagine they would have too much problem getting you information on the top two or three or four thousand feet. They might be rather jealous of the rest of the information, but at least on my property there is substantial clay bank from four to 1600 feet deep, and I suspect they wouldn't be reluctant to give that information up to the state.

MR. MORROS: Okay. Thank you. Anybody have any further questions of Mr. Thompson? The lady?

MRS. RUTH BROWN: My name is Ruth Brown. Milton Thompson has a ranch which consists of three ranches along the mountains of the Diamond Mountains. I think except for that home ranch with the irrigation springs, it is considered a run-off ranch, and I would like to ask Milton, and the last five years, how many years has he used that runoff water for all of those fields which are all north of the home ranch for irrigation as it was done in the old days when I was a girl?

MR. THOMPSON: I'll respond to that. The last year I had any runoff in the Diamond Springs area was 1975. That was it. Almost non-existant, and it has been non-existant since. The other one I have had, which has been called the Moule Ranch and the Davis Canyon area, and I have not had the money. For a few years I was out of the state and I didn't have the money to do it, and I have not had the money since.

MRS. RUTH BROWN: Thank you. We have a spring on

our ranch which is much smaller and it --

MR. MORROS: Well, excuse me, Ma'm, are you --

MRS. BROWN: Across the valley about twelve, fifteen miles, about twelve miles as the crow flies, from Milton's ranch, and when we close our spring up, up at the head of the irrigation pond, when we close it down it puts out very little water, fills up with water in that pond, but when it's empty, like running out a head of water, it runs its normal flow, and I wonder if his is the same?

MR. THOMPSON: I will respond to that. That is what initially brought this whole thing about. I lowered the level of my pond last year four foot below its old original level with a backhoe and I got 615 gallons a minute. When Joe Marion came out on May 22nd, 1972, in that same area, at that same spot, and it wasn't as low, it was four foot higher, I had 2057 gallons a minute with a 24-hour test, which this lady will testify to if she has to, because she was aware of that test.

MRS. BROWN: On your measurements, your official measurements which are here today, were they taken with your pond full or empty?

MR. THOMPSON: They were taken on one side, with it full.

MRS. BROWN: Thank you.

MR. MORROS: What year was that again, Mr. Thompson?

MR. THOMPSON: That was in 1976, May 22nd. That was

on the old original channel.

MR. MORROS: Yes. The gentleman in the red shirt? Your name, please?

MR. MILFRED BAILEY: Milfred Bailey again. I'm 52 years old -- will be. I'm 51. I have lived --

MR. MORROS: We'll mark the record with a star.

MR. BAILEY: And on the big Shipley Spring in Diamond Valley down there we live three miles from there, and to my knowledge it has never varied, and the Sadler Brothers owned it -- When did they leave that? Anyway, he's still alive, he's still alive in Elko, and he will verify it never ever varied in his time, and on my spring, it is to my knowledge it has never varied yet. I don't know whether it will or not, but so far it never has.

MR. MORROS: You are referring to Shipley Hot Springs now?

MR. BAILEY: Yes. Uh huh.

MR. MORROS: Our indications are, and I think Mr. Harrill made a point of this in his report, that he noted in his report that it was significant that between 1977 and 1981 there appeared to be no significant decrease in the flow at Shipley Hot Springs.

MR. BAILEY: But was it ever measured or is this just an estimate?

MR. MORROS: Well, no, it was measured. It was also measured -- It was measured in 1965, '66,'67,'77 and '81,

those years.

MR. BAILEY: Who did the measuring of that?

MR. MORROS: USGS, as far as I know. Maybe Mr. Harrill could respond to that?

MR. HARRILL: Yes, I could respond to that. The measurements in 1965 and 66 were made by myself or a gentleman by the name of Bob Lamke, who wrote the section on the surface water resources of Diamond Valley. It appeared in this report. We used one of the standard U. S. Geological Survey current meters and went around and picked up all of the discharge that we could find from all of the various points of overflows to the spring ponds. The measurement in 1977 was made by Mr. Carroll Schorer, who is one of the engineers who works in our office, and the measurement in 1981 was made by Mr. David Wood, who is a hydrologic technician at our office.

MR. BAILEY: In making this measurement now, they have different levels that the pond discharges from, and when they pull the one gate subject to another one, why it would have had to have been flowing several days in this one particular one to get the exact measurement. Was that considered in this measurement?

MR. HARRILL: The measurement was made by going to the site and making the measurement in a fairly short period of time, and if you had changed the board, you know, and your pond level was at a certain height, it would reflect the

height of the pond at that time. There is not information on the five or six measurements available to relate the pond height at each measurement, and the discharge, no, it was the physical discharge coming out of the pond at the time it was measured.

MR. BAILEY: Because I think the height of the discharge, you do get a little different flow as you go up. I know that's what they did at the ranch.

MR. HARRILL: That's correct. It will turn itself off eventually.

MR. BAILEY: Correct. The weight of the water will restrict some of the flow, and I just wondered how accurate these were that you took and how much time.

MR. HARRILL: We did check. We made sure no one pulled any planks while we were out there, and we checked to see if, you know, that the pond has been stable, or if there had been changes in the last day or so. Beyond that there was not a detailed measurement. There was not a reference mark set somewhere on the head gate or something like that, and measurement made down to the pond surface at that time.

MR. MORROS: Anybody else?

MR. THOMPSON: I would like to bring this report up. I have a copy of this report somewhere.

MR. MORROS: That report has been entered into the record.

MR. THOMPSON: There is a picture here of the

Shipley Hot Springs, and that the discharge is reported to be about 15 cubic feet per second. That was February of 1962 and I believe the last measurement on the Shipley Hot Springs was around 2,000 gallons.

MR. MORROS: Twenty-five hundred seventy.

MR. THOMPSON: Well, there has been a measurement made since.

MR. MORROS: Okay. Anybody else have any questions of Mr. Thompson?

(There was no response.)

MR. MORROS: Thank you, Mr. Thompson. We appreciate your appearance.

Just one thing for the record: Your position as set out in your letter to me of April 14th of 1982 has not changed then?

MR. THOMPSON: No.

MR. MORROS: Okay. Thank you.

MR. THOMPSON: I still do not have any water.

MR. MORROS: I realize that.

Is there anybody else that wishes to testify?

MR. KENNETH STENTON: Yeah.

MR. MORROS: Do you want to come up to the front here then and we'll swear you?

MR. KENNETH STENTON: Kenneth Stenton. My question relates to the testimony more than anything else.

MR. MORROS: Okay. Why don't you come on up here?

MR. KENNETH STENTON: I don't have testimony at this time. My question was, as I understand the notice of the hearing, you were going to accept additional testimony for a period of some fifteen days?

MR. MORROS: Additional written testimony after the hearing for an additional fifteen days, that's right.

MR. STENTON: Okay. I assume anybody or an interested party to this hearing can send that?

MR. MORROS: Oh, absolutely.

MR. STENTON: For instance, myself, if I care to have a written statement, I can submit it in fifteen days?

MR. MORROS: That is exactly what the notice provided for, yes.

MR. STENTON: Okay. Thank you.

MR. MORROS: I thought you wanted to testify.

MR. STENTON: I just wanted to make sure that was clear.

MR. MORROS: Could we have your name just for the record?

MR. STENTON: Kenneth Stenton.

MR. MORROS: Anyone else?

MR. LEONARD CORSENTINO: Could I just make a statement?

MR. MORROS: Certainly. Why don't you come up and we'll put you under oath and you can state it right into the record.

MR. CORSENTINO: I really don't have that much.

MR. MORROS: Believe me, my purpose for this is that I don't know what action the State Engineer is going to have to take in this matter, and I don't want it to be said that, you know, you people didn't have your opportunity to say your piece, that's all.

MR. DANNER: Would you raise your right hand, please?

TESTIMONY OF

LEONARD CORSENTINO,

who, coming forward to testify, being duly sworn, testifies as follows:

MR. DANNER: Will you state your name, please?

MR. CORSENTINO: Leonard Corsentino. How do you feel, Ken?

I just wanted to make a statement. It would seem, I have seen a lot of applications in the paper on new water permits being under investigation or published, and it seemed to me any new water applications would be denied. I mean, of a new source, not a transfer of water, but just the new applications of federal or my other sources.

That's all I have.

MR. MORROS: Okay. Well, I would draw your attention to the orders that were entered into the record as exhibits, and those orders do, I think, address your concerns to a certain extent, although the State Engineer does have the

authority to declare preferred uses. In view of the situation, why I think we are going to be --

MR. CORSENTINO: I think like it has been mentioned too I can appreciate Milt's problem, and I think we all feel the same way, maybe, but I really feel that it could be another -- We're talking two different water sources. One is artesian, either, like he mentioned, coming from the mountains or another pressure source, so I think before we start cutting people off with the investments they have also, that that be investigated more, and I really feel that the pot holes -- I'm not trying to poke -- It's easier to poke at you, you know, but I really feel when you tap into a pressure system, and that has happened, I seen it in Denver, we still had our ground water, it didn't affect it at all, but when you went down, we drilled 1100 feet deep, it did tap that artesian water and it did make a difference. So for whatever that's worth.

MR. THOMPSON: Can I say something?

MR. MORROS: Certainly, Mr. Thompson. You're still under oath.

MR. THOMPSON: I had a log of these shall wells. Most of them on the flat were a hundred feet deep, and on the mountain side, on the alluvial fan they were around ninety. Some of them didn't go that deep because they couldn't get through the rocks.

MR. MORROS: Let's take about a five minute break

here and give our Court Reporter a little rest.

I have got, I think, a few questions that I would just like to throw out when we come back into session and see what the response will be. I can only indicate to you that we feel, and this is based upon the technical information that we have available to us, our experience in this area, that the problem may not be critical right now, but if pumpage continues to increase and those water tables continue to decline, absent Mr. Thompson's problem, I think every water user in this valley sooner or later is going to be faced with a terrible strain on his income as related to pumping costs. You are going to get to the point where you have reached that economic pumping lift. How far can that water table decline and how much can you deplete it or mine this ground water basin without getting to the point where you can't afford to lift that water any more, so if you have got any suggestions as to any alternatives that we might look at or any suggestions as to what action the State Engineer should take concerning Mr. Thompson's problem, maybe we can take a few minutes and think about it, and when we reconvene, and let's take ten minutes, and perhaps in ten minutes somebody will have something to say.

(The hearing was thereupon recessed from 3:40 o'clock, p. m. until 3:55 o'clock, p. m.)

MR. MORROS: We'll be back on the record.

Mr. Thompson indicated that there was one other thing he wanted to testify to, so I'm going to allow him to

come up. I would like you, Mr. Thompson, you are still under oath.

MR. THOMPSON: Right. There is an important item in my respect that I forgot --

MR. MORROS: If you could keep your voice up as much as you can so they can hear you?

MR. THOMPSON: This is pertaining to my pumping. We used to pump out of our springs and I forgot to mention that completely, and you have the picture of us doing it right here.

In the early 70's I had that same pump and I went open discharge. Whether it's true or not, we could find out from the manufacturers, but the manufacturer, or I mean, the people that sold us that pump told us it would pump 2000 gallons a minute open discharge. I put it on that spring in the early 70's, open discharge, and that spring alone handled it.

In 1973 my mother and I purchased an electric pump and it was designed to pump a thousand gallons a minute with a 35-foot head, and we put it in our north spring, and that north spring about practically handled that pump all by itself. It wouldn't completely, but very near would do it, and at the present time that north spring is probably flowing around a hundred gallons a minute at the very most.

MR. MORROS: Okay. Thank you.

Anybody else want to testify?

MR. WILFRED BAILEY: I would like to ask you a question.

MR. MORROS: Your name again for the record?

MR. WILFRED BAILEY: Wilfred Bailey. Okay. In the Thompson situation where water is depleted, would he have the privilege of drilling a well? Would you give him the right to go ahead and drill a well today?

MR. MORROS: Well, I think under the present situation if Mr. Thompson was to file an application for a well, I think we would have to give it serious consideration, but one suggestion that has been made to the State Engineer is that, you know, we do have an artesian basin fund here in Diamond Valley, which the property owners are solely responsible for, and I'll preface my remarks about that fund with one additional remark: Contrary to popular belief, that money does not go into the general fund, it does not go into the state tax coffers. That money is kept in a separate account, in a separate fund, and it is expended only in Diamond Valley. Okay?

One suggestion that has been made to attempt to provide Mr. Thompson with some relief, because I don't think there is any question that the pumpage is having some effect on those springs. We identify this. Mr. Harrill identified this in his report long before it occurred, predicted it was going to occur, and hydrologically I think all three of the things that are mentioned before are contributing to the

diminished flow in Mr. Thompson's spring, and I don't know how receptive Mr. Thompson would be to the Basin Fund providing the funds to drill a well at that spring site. I don't think it would have to go too deep. Obviously the water would have to be pumped, but I suppose that is one alternative. There appears to be a general concensus, and the people that are going to suffer the most by these declining water tables are the people that are sitting in this room. If you people want to continue on with these present pumping levels to see what develops in this basin, as far as these declines go, I think some consideration is going to have to be given to some relief to Mr. Thompson because I think he has a legitimate complaint. I don't think the State Engineer's Office has been negligent, as asserted in his letter, but I do think that he has got a firm foundation for his complaint. Yes.

So that's an alternative, but I would have to get some indication from the people here whether they would want to follow that alternative or not. I don't know exactly what the cost would be, but I suppose we could look into it.

MR. THOMPSON: Can I say something?

MR. MORROS: Yes. I was going to give you an opportunity to respond to that.

Okay. Let me allow Mr. Thompson to respond to what I have just said, what my response was to the question, and then we'll get to this gentleman over here. You can go ahead.

MR. THOMPSON: We realized that our ranch was drying

up for a number of years, but as long as our main spring held up we didn't want to say anything because we knew it would cause a lot of problems. I'm in complete sympathy with the people who have spent hundreds of thousands of dollars putting in new ground. However, that doesn't alleviate the fact I have suffered tremendous loss here. A well isn't going to help because most of my land is native meadows and it's not the type of ground that is conducive to irrigation, sprinkler or otherwise, and we are not talking merely about the loss of my springs. Back when we bought that ranch our springs weren't that much used because our meadows were so wet from one end of the ranch to the other, and our problem was too much water, which I have pictures here in bogs, we had bogs all over our ranch. Diamond Springs area was the big bog. We put up hay there every year, even in the driest years in the 50's. So the well wouldn't really help that much because there is a certain amount of aesthetic value to that spring and that reservoir, and if you drill a well it's just going to make matters worse and sooner or later these people, like I stated in my testimony up here, they are going to be pumping each other off, sooner or later, which you just indicated, and also, you know, the Shipley hot springs is drying up, or the artesian flow is decreasing, as Mr. Harrill stated in his report, that hasn't decreased, but it hasn't increased.

MR. MORROS: I don't disagree with you one bit. I

think this would be just an interim measure. I think this problem is going to continue and it's just a matter of what is going to be done about it.

This gentleman over here? Could you state your name, sir?

MR. ED ANDERSON: Ed Anderson. What I would like to know, the water department, do they figure on metering these wells or are they figuring on pulling the junior permits? You admit you have got a problem, you're going to have to take care of it. The bottom line is, how are you going to take care of it? Are you going to meter the wells, everybody, or are you going to stop junior permits, and how do you go about participating the junior permits, the ones that are now, or what?

MR. MORROS: The law requires if any regulation is imposed it be done on the basis of priority.

MR. ANDERSON: Priority?

MR. MORROS: So as to your question, the most junior permits would have to be regulated first.

MR. ANDERSON: And then let me go a little farther than that. A few years ago you sent out a letter to all farmers in Diamond Valley, "If your water was protested or in jeopardy, to call for a junior permit." Some people did and some people didn't. A lot of people are still running under the old permit that the water should have been taken away or was no good. They should have called for junior permits.

Now, how are you going to -- Are you going to back up and catch these old permits or each farmer is going to fight each farmer?

MR. MORROS: Well, as you well know, there were some water rights that were forfeited out here in the mid-70's, after some lengthy hearings and some findings by the State Engineer. Subsequent to that, the State Engineer issued an order allowing those persons that had lost their rights through forfeiture to apply for and receive permits to replace those forfeited rights with the understanding that they were the most junior rights in the valley. If regulation is necessary and curtailment is necessary, then those rights would be the first ones we could curtail, yes, to regulate it.

I don't know whether you are relating to other water rights that may be subject to a finding of forfeiture that have not been subject to that determination yet or not. My understanding is that most of the rights that had been forfeited, that those determinations had been made. Now, what you are telling me is there are still other rights out there that might be forfeited?

MR. ANDERSON: Oh, most of them. Most of them.

MR. MORROS: All right. The last session of the legislature passed a new law or amended the existing forfeiture law to provide a mechanism whereby anybody who felt his right was in danger of being forfeited could apply to the State Engineer for an extension of time on that forfeiture.

There are certain provisions in that law that mandate that the State Engineer look or consider certain reasons for asking for extensions of time, economic conditions, natural disasters, this type of thing. But he is not restricted to just those considerations.

I hope that I am getting around to the purpose of your question. If there are people out there in the valley who it would be their intention not to pump or not to irrigate under their water rights, but they feel they have to do it because they don't want that right to be forfeited, if they were to apply to the State Engineer for an extension of time, I would be hard pressed -- I don't want to predetermine action, but in this case I am going to indicate to you, I would be hard pressed not to consider granting them an extension on that forfeiture in view of this situation.

MR. ANDERSON: Well, but my question, the Water Department, if they started pulling junior permits and they would have to do something, the Water Department is not going to go out and immediately reduce the old permits that didn't call for junior permits? In other words, it's going to be neighbor against neighbor. In other words, if you know his permit isn't no good, then it's going to be left to neighbor to neighbor to do it, not the Water Department.

MR. MORROS: Well, what you are saying is, if the State Engineer indicated that your neighbor or you were going to have to curtail pumping under your permit, but you knew

your neighbor had not used his and that it was probably subject to forfeiture, you are going to feel obligated to request the State Engineer to make a determination on that; is that what you are saying?

MR. ANDERSON: In other words, if I'm sitting here, I got two junior permits, and I got twenty people around me that should have had junior permits, now, I'm not going to let you take my water away without taking these people away. I mean, I would like to be equal. If we have got to cut back, cut back, but I want everybody to be the same.

MR. MORROS: Is there anybody else?

MR. ANDERSON: This is quite a problem if you got more than one junior permit.

MR. MORROS: I understand. I understand what you're saying now. It's just the only difference between your permit and his permit is that yours has been subject to a finding of forfeiture and his hasn't, but you feel it has been forfeited and so he should have the same standing as you.

MR. ANDERSON: The Water Department gets out there and every farmer will send out a letter stating if their water was in jeopardy or they figured he was in jeopardy, for them to call for a junior permit.

MR. MORROS: Yes. Okay. That was just prior to the order that was issued that indicated that after a certain day it wouldn't do you any good to file, because we wouldn't issue you a permit anyway.

Now I understand what you're saying. Okay. This gentleman here?

MR. LLOYD MORRISON: My name is Lloyd Morrison.

MR. MORROS: Excuse me for just one minute. Does anybody else want any official testimony they want to put into the record?

Mr. Plaskett?

MR. WALTER PLASKETT: Yes.

MR. MORROS: Did you want to testify?

MR. WALTER PLASKETT: Well, it's all going on the record?

MR. MORROS: Well, do you want to testify under oath?

MR. WALTER PLASKETT: Yes.

MR. MORROS: Let me get through that and I'll come back to you, okay?

Got to answering all these questions again and forgot about the witnesses.

MR. DANNER: Will you please raise your right hand?

TESTIMONY OF

WALTER PLASKETT,

who, coming forward to testify, being duly sworn, testifies as follows:

MR. MORROS: State your name for the record?

MR. WALTER PLASKETT: Walt Plaskett. I'm only 50 -- 60, by the time we get --

MR. MORROS: I don't think in the years of our acquaintance, Mr. Plaskett, at least I have never noted there has been any problem with your voice carrying, so I won't indicate to you to speak as loud as you can.

MR. PLASKETT: She can't hear you now.

I want to address several areas.

One thing that really bothers me about all of your numbers is that you take your static water table numbers, spring and fall, and I don't pump any water in the spring and fall. The only numbers that matter to me is how low the water table pulls down in the middle of the irrigation season.

I would request that you obtain Joe Marion and Dave Terrell, our County Extension Agents, the information that they have picked up, I think over six -- maybe someone knows? How long have they had the recording draw-down graphs? I think six or seven years.

MR. MORROS: Mr. Gamboa indicates we have already got them.

MR. PLASKETT: One of those recorders is in a well in about the middle of my west half of Section 1, about a half a mile north of Eleventh Street, in behind Joe's house. It does bounce up and down year round as these numbers do, but for about the last five years that graph has bounced in the middle of the summer between about 111 and 116, and it is not a downward trend. These numbers are not -- I swore to tell the truth, but these numbers are somewhat hazy, but they are

essentially one year, say five years ago, it may have been 111, then 112, and then 114, and then back to 112. That's the good news. And then back to 115, and then back to 114. The load in that general area has not changed. Joe Rand moved in and he put his load on it and mine has been pretty well established, and the general withdrawal load in that area where that graph has been has not changed, it has not increased. I'm sure had that graph been put in there before that load was stabilized and in those earlier years, it did show a change as another well was drilled and another set of wheel lines or another pivot was put in, the following summer it did show lower at the midsummer static, but once the load stabilized, some four or five years ago, it has not shown a downward trend. I want that to be a part of this record. I think a lot of the downward trend the people are seeing all over the valley is because you have got a neighbor that has added a well or you have added a well or you have started pumping a well that sat idle for a number of years, and I personally am not about to put up a "For Sale" sign until I see this midsummer static, and that's what we have to pay for, that's where we have to pump from, from there down, when I start seeing that number go down dramatically from summer to summer with a constant local load, then I'm going to get nervous, and I'm not nervous today. I hope I never will be.

Five years of no significant decline to me is important.

The other thing, the economics of pumping from different depths that Mr. Morros referred to, and as we all know, Mt. Wheeler has effectively doubled our pumping depth in the last several years. If their rate had stayed the same we could now be pumping, the average well out here has a total dynamic head, a total lift and pressure requirement of between 250 and 300 T.D.H., and only about 150 to 180 of that is the lift of the water, and the rest of it is fixed for pressure and pipe losses.

If the power rate had stayed the same, we could be pumping from 400 feet today with no more cost. If the price of hay last year had not gone down $20 a ton on five ton hay, we would have all made $100 an acre more. That's two and a half times your pumping bill. You can pump from two and a half times as deep and make the same money.

The fourteen feet in fourteen years is nothing to what the Mt. Wheeler board and hay market is going to do to us -- not the board, but the cost of power.

(Laughter.)

MR. MORROS: I was going to say, you're on the board.

MR. PLASKETT: Well, we get blamed for it.

I would just like to -- Pete kind of asked for an expression, and is there anybody here that really thinks they have got a problem with their water? I mean, we know that Milt has got a problem, but I mean, as far as the pumping

irrigators. Does anyone think that the static level that you are having to pump from and your pumping level is an immediate concern to you economically, from what you have seen in the last five or ten years, do you see a trend that you think is going to put you out of the pumping business?

MR. MILTON THOMPSON: Walt, can I ask a question?

MR. MORROS: Okay. I just want the record to show in response to Mr. Plaskett's question, there was no indication from the audience of an affirmative response.

MR. THOMPSON: Can I say something?

MR. MORROS: Mr. Thompson?

MR. THOMPSON: Well, we all know you're in the well drilling business.

MR. PLASKETT: Right.

MR. THOMPSON: How many wells have you had to drill in the last year on the same sites?

MR. PLASKETT: For other than myself? For other people?

MR. THOMPSON: Right.

MR. PLASKETT: How many, Everett? All of them we drilled --

MR. EVERETT GROTH: What was the question?

MR. PLASKETT: He wanted to know how many wells have we had that were replacement wells?

MR. MORROS: Mr. Groth -- Wait a minute. Wait a minute.

MR. PLASKETT: I'll give the number after Everett gives it to me. Is that satisfactory?

MR. MORROS: Let's go off the record for a second.

(Short off the record.)

MR. MORROS: Ready to go back on the record?

MR. PLASKETT: Okay.

MR. MORROS: We are back on the record now.

MR. PLASKETT: The question was, how many wells have we drilled as replacement wells for old wells, and I believe in the last three years, approximately twenty.

MR. MILTON THOMPSON: Now I have a further question. How many of them are due to casing collapse and how many are due to lack of water?

MR. MORROS: Want to go off the record again?

MR. PLASKETT: No, I can only --

MR. EVERETT GROTH: Yeah, go off the record.

MR. MORROS: All right. We'll go off the record for a minute.

(Short off the record.)

MR. MORROS: We'll go back on the record.

MR. PLASKETT: I'll cover part of it. Tell me where we were. I said we did approximately twenty wells, replacement wells, in three years.

MR. MORROS: And I think the question Mr. Thompson had was as to how many of those wells were due to lack of water or required to be deepened, and how many were due to

collapsed casing. As I recall, that was your question.

MR. MILTON THOMPSON: Or whatever?

MR. PLASKETT: Specifically I only remember one, and that was a very recent one. That was a casing that had collapsed and come in, and the pump would not go in and out of the well freely any longer, so the owner elected to redrill the well. A number of the replacement wells have been done because of severe iron bacteria and I think calcium encrustation, problems with iron content in the gravel pack that was used in sealing off those wells. A good many of them that were replaced were way too shallow when they were first drilled. Some of the replacement wells were relocations from center wells, from corner wells to center wells for pivots, et cetera.

I don't know of a case that we probably could not have gone back in and with the right gravel, the right screen, drilled the well the same depth as the old one was, and given them a usable well. I think this would be true in most all cases. They have elected to go deeper because they will pump cheaper, I mean, this is my feeling, this is what I believe to be true.

Any other questions?

You don't like the answer?

And the other point you mentioned, the fund to drill Milton a well, well, the irrigators are not the only beneficiaries of this water use. I would hate to add up how

many dollars Plaskett Irrigation has sent to the State of Nevada in sales tax and how much we have all paid the county in property taxes on this irrigated farm land, and if there is to be a funding of a well, I think all of those that have shared in the glories and the dollars should participate in the spending.

MR. MORROS: Okay. Are there any questions of Mr. Plaskett? This gentleman had a question. Would you state your name for the record?

MR. LLOYD MORRISON: My name is Lloyd Morrison. I live in Diamond Valley. I would like to know, if we stopped pumping, how long would it take for the water level to come back to the point where it would, say, renew or revive Milton's well or Milton's springs and marsh?

MR. MORROS: Did you want us to --

MR. LLOYD MORRISON: I would like to direct that question to the hydrologist.

MR. HARRILL: In terms, in terms of an absolute time, I really wouldn't know how to estimate it. One of the things that happens during the process of pumping, if there are clays in the area, and there are clays on the east side of the valley, some water comes out of storage on a one time basis, and there is sometimes a rapid recovery under those circumstances, but then again, as soon as you turn the well back on it's a very rapid decline and down to the general level it was when the pumping stopped. I don't have the

infomation to make any kind of a prediction in terms of an absolute time.

MR. LLOYD MORRISON: Would you say it would be a matter of months?

MR. HARRILL: It may be a matter of years. You're talking about the original magnitude of discharge?

MR. LLOYD MORRISON: That's really what I was interested in.

MR. HARRILL: Yes. I don't know for sure, but it may very well be measured in years instead of months.

MR. MILTON THOMPSON: If I could, I can testify to what the Exxon geologist told me and what other people told me last year.

MR. MORROS: Okay, Milt. Why don't you come on up? You might as well fully develop this record. You're still under oath.

MR. MILTON THOMPSON: It will be hearsay, but I can tell you what he told me. Exxon came through in the spring and then they came back with a consultant, and I asked him about it, and he told me that most likely in my lifetime I would never see that water again, and the rest of the team laughed and they said, "It sure isn't hard to figure out where your water went," and then there was a team came by shortly after them and they were younger, and they laughed and they said, "Well, you'll probably see your water again if you had some real good wet years in a cow," which I'm

inclined to believe the Exxon man.

MR. MORROS: Okay. Thank you.

There is another gentleman some place that wanted to testify. I guess it was the gentleman that asked the question. Oh, Mr. Groth? Your statement before when we were off the record was extremely interesting. Maybe we can get it on the record?

MR. DANNER: Would you state your name for the record, please?

MR. EVERETT GROTH: Everett Groth.

MR. DANNER: Would you raise your right hand?

TESTIMONY OF

EVERETT GROTH,

who, coming forward to testify, being duly sworn, testifies as follows:

MR. MORROS: Have a seat.

MR. EVERETT GROTH: Now, you want me to testify as to the --

MR. MORROS: Well, the statement you made, some of your observations, and I guess opinions which I think are pertinent on our issue here.

MR. EVERETT GROTH: Okay. In about 1975 I re-drilled what I called my north well and I drilled out my own casing. When I pulled it out it was all corroded over, the bottom fifteen feet came out in one section, had a bottom plug in it. There was no fill in the inside, it was full of

water, and there were about fifteen little holes where the water seeped out, and that's why the wells are going bad. It wasn't because the water table is going down.

MR. MORROS: You are saying that the perforations --

MR. GROTH: The perforations, the water is not getting in the well.

MR. MORROS: Okay.

MR. GROTH: I would like to make one other statement I think I made to you during the break. In Diamond Valley we have drilled one, two, three, four dry holes. These dry holes run through in Range 54 East, through Sections 32, in that line, which is about two miles out in the Valley from the east mountain. On Mr. Burnham's place we drilled one well in the Southeast Quarter of Section 29, in the center of that quarter. It was 299 feet. There was no gravel, if I remember right, I haven't looked at the log since I drilled it, at about 150 foot level there was quite a bit of fine black sand and all the rest of that well was strictly clay. Okay. Straight west of that well in the very southeast corner of Section 30, there's a 475 foot well drilled by Glen Haddox in 1966. It was filled back to 307 or 317 feet, because it was straight clay from that area down. Okay. Two years ago we drilled another dry hole for Mr. Burnham and it was in the center of the Northwest Quarter of Section 29 and the Range on that is 54 East, in Township 23. It was drilled 383 feet deep and it was straight clay all the way down.

In about 1973, I imagine, '74, somewhere there, we drilled another one in Section 32 in the center of the Northeast Quarter, in Township 22, for Mr. Burnham, and it was drilled 327 feet deep. It had five feet of gravel in about 280 feet, around the 280 foot level. All the rest of that hole, from the very top to the very bottom, is straight clay. All the wells that we drill out in the middle of the valley we run into clay at about 400 feet. Like up in Township 21, and less than that, in the 350's or so in Township 23. So my contention is there is a clay bottom. The oil well on Walt's place, which is in the Northeast corner of Section 1, Township 21, Range 53, there is an oil well. It goes into clay about 400 feet and stays in there 16 or 1800 feet deep, so my contention is that valley has a clay bank that separates the water on the east mountains from the center of the valley, and also a clay core, a clay floor, which could be as high as 1200 feet deep.

MR. MORROS: Are you saying effect that clay strata acts as a barrier, precluding any interference with Milt's water?

MR. GROTH: I don't think water can go through. In fact, we have drilled several areas and when you drill them out, you get a chunk of that clay out that is plum dry in the center. There is no water in the center of the clay chunk.

MR. MORROS: So it would follow then, the declining

flows at Mr. Thompson's spring, based upon your testimony, there are other factors that are responsible?

MR. GROTH: Well, it could come from stratas underneath the 1200 foot layer, it could come off the mountain or under the mountain. As far as I can see, the 14 degrees in temperature, it has to be coming from deep, and I can't see how water from a 400 foot level could go down and be heated and cause pressure and bring it back up.

MR. MORROS: Okay. Since you are directly involved in well drilling in Diamond Valley, what do you think is going to be the effect on that water table out there over all if pumping continues at its present level or increases above its present level?

MR. GROTH: Well, I don't agree with all your graphs, like a CPA can make your income tax show anything you want, and so can your graphs. The simple reason, your graphs you are basing it on a time when the bathtub is full, very little water coming out of it, and your last one, which would be in 1981, you based it on after the whole valley had been pumped all summer, in the fall of the year instead of the spring of the year when it's recharged. One particular well I know, which would be in the southeast corner of --

MR. MORROS: Mr. Groth, our graphs are based on the comparison from year to year. Now, regardless if we compared it in the springtime or in the fall, or whatever time we compared it, it would reflect a change in that water table on

a year to year basis, would it not? I didn't mean to interrupt, but I had to interject that.

MR. GROTH: Well, you know that the static water level has got to be low after all these pumps have pumped all summer.

MR. MORROS: Well, okay, but say we made a comparison at the end of the summer of the year?

MR. GROTH: That would be fine if it's spring --

MR. MORROS: If you made a comparison, say, at the spring in one year and the end of the summer in the next year, you are definitely going to have some effect.

MR. GROTH: That's what you have basically done. That is what your graphs show. That is what you have done. Am I right?

MR. MORROS: Well, I don't want to get into an argument with you, but I am going to let Mr. Brownfield respond to that because I think it's an important point, because that's not what we have done.

MR. BROWNFIELD: The chart over there, Exhibit -- Okay. This is Exhibit 13. This compares the fall of '67 with the fall of '81. You're talking about the same time of the year. This one is the same type of situation. You are comparing the same time of year as far as how the was then compared to what it was on like --

MR. MORROS: Those are net declines. In other words, cumulative declines, if a graph, if you were to have a graph

that showed each year, then you would have a comparison on a year to year basis, but those exhibits represent the net decline with that entire span of time.

MR. GROTH: Okay. But where does your readings taken this spring fit in there? What does your graph look like using this spring's reading?

MR. MORROS: Well, it might look different.

MR. GROTH: Well, there was nobody pumping in 1966--what, 20, 25 wells?

MR. MORROS: That's the point. That is why we make the comparison.

MR. GROTH: But then it doesn't matter if that is pumped down in the summer, if it recharges back in the spring. If every spring when you start, if every spring when you start your well, the same height, basically the same as the year before, you have no decline.

MR. MORROS: Okay. But those two exhibits demonstrate a difference in water tables over -- a net change in water tables over a period of years. They don't demonstrate a net change in the water table between spring and fall, or fall and the following spring after recharge has occurred. These two exhibits represent the net, the total decline in those water tables from 1966 to 1981.

MR. GROTH: And how much is that now?

MR. MORROS: It's shown right there. It just depends on what area we are talking about. We have attempted

to show what the decline has been, and color-coded the areas out. The effect has changed, that water table has declined, and the effect has changed, and how much influence each one of those cones of depression has on specific areas changes, you know, and you have to take into account the geology, the strata, and everything else.

MR. GROTH: I came to this valley in 1966 and one of those wells in the north end, which lays in Section 29, Southeast Quarter of the Southeast Quarter, was standing about six feet. This spring that same well was standing at twelve. That shows me there is a 12-foot drop in the water table at Diamond Valley.

MR. MORROS: There is a 12-foot drop in that particular area, but if you will look at the exhibits, they will show you that in certain areas there is a 10-foot drop, in certain areas there is a 20-foot drop, and in certain areas there is more than a 50-foot drop, but those exhibits will clearly indicate to you that those cones of depression of more than 50 feet are now starting to develop in areas of heavy concentrated pumping. Very small, very small influenced areas right now, but I would venture to say that if pumping continues at its present level, they are going to expand. That is the point. That's why we're here.

MR. GROTH: I see.

MR. MORROS: Now, you have every right to disagree with that theory. I'm not saying that you don't, and that is

the purpose for getting your comments into the record.

MR. GROTH: My only disagreement really is, your last readings taken on that graph was taken last fall right after heavy pumping, compared back to 1966 when the bathtub was full, and I don't think it's a fair comparison.

MR. MORROS: We were attempting to show the difference between now, the same time and year, the difference between now and '66. I don't know how else you would do it.

MR. GROTH: Are there any wells in this valley 50 feet lower now than they were in 1966 in the spring reading?

MR. MORROS: Obviously there are in certain areas.

MR. GROTH: Are they spring readings or last fall's readings?

MR. BROWNFIELD: These are fall readings, fall of '81, on the decline map.

MR. LLOYD MORRISON: Which exhibit number?

MR. BROWNFIELD: Number 18. And it shows the difference between the fall of '67 reading on a particular well, and the difference between that and the '81 reading of the same well, so you are looking at that difference, is what you're looking at.

MR. GROTH: Okay. Now, do you have a graph that compares the spring of '66 to the spring of '81?

MR. BROWNFIELD: Well, I took the measurements we made in the spring of '82. Okay. We have some measurements made in '82 in Township 21, 53, and I believe, I would have to

look through the report, but I believe the worst decline between '66 and '82 spring measurements was 49 feet, where we got 57 feet in the worst conditions from fall to fall. We still had the cone of depression in Township 21, Range 53, but it has shrunk back a little bit.

MR. MORROS: Which would indicate there is approximately an eight foot difference, which the recharge would be responsible for.

We don't argue with the theory that each fall when that pumping shuts down, when the growing season is over, that the water table is lower than it is in the spring when you start out. There is no question about that, and it stays down there until you start getting some recharge and your precipitation starts infiltrating into that alluvium, but there is no argument there. Heck, yes, you get a difference in your ground water level every spring and every fall, and a lot of it is dependent on how much precipitation you get. Last year we had a lousy year statewide as far as snowfall and snowpack and the recharge was probably minimal, as far as I know. I think you people out there in this area had damn little snow on those mountains the first of March, first of April last year. This year it was a little better, so you will probably get a little more recharge.

MR. GROTH: That's all I want. Thank you.

MR. MORROS: I don't know whether these people have any questions they want to ask.

MR. MILTON THOMPSON: I have something to add to what Everett said. He has been talking about that clay bank in there. I believe you have shown in one of these books, you have a map that shows those clay banks?

MR. HARRILL: That's correct.

MR. THOMPSON: Okay. In Section 34, east of where Everett is talking about, and an elevation of 5330, there was a flowing artesian well. That dried up in the early 60's, or mid-60's, and in Section 22, elevation at 5316 feet, there was another flowing well. That dried up at the same time.

An oil well he referred to has an elevation of 5324, which is lower than the first flowing well I mentioned. And they are about, what, two miles to the east of the area you're talking about?

MR. GROTH: Which oil well, Walt's?

MR. THOMPSON: No. The first one. I think it would be Bob Burnham's?

MR. GROTH: No, I'm not referring to that well.

MR. THOMPSON: But you're referring to the same clay dike, to the east of you, you get out of that clay bank, and into rocks and gravel again.

MR. GROTH: Because you go off the clay bank.

MR. THOMPSON: And the owner of the old Magini Ranch, there's a windmill at 5349 in Section 10, and it was dry when he got there, and he pulled the pump and I think he told me, I can verify this, I believe he told me there was ten foot of

suction, and he had to put on 30 foot of pipe to get into some water.

MR. MORROS: Any further questions for Mr. Groth?

MR. MATT MORRISON: I got a question. In all of the wells you drilled --

MR. MORROS: Could you state your name for the record?

MR. MATT MORRISON: Matt Morrison, Diamond Valley. In all the wells you drilled and in this hearing we are having today I haven't heard any Diamond Valley farmer, except for, I think, Ken Stenton, say that they noticed a drop in the water tables, a significant drop. Have you in your wells, you have been here a long time, have you heard from any of the other farmers that they have had a substantial drop?

MR. GROTH: I have never heard anybody say that.

MR. MATT MORRISON: That they had a drop in their wells?

MR. GROTH: I have never heard anybody say a significant drop. I have been inquiring into that monitor well they have there on Walt's place. It doesn't change very much up and down. Don Morrison told me one time, I think his well was drilled in what, '64?

MR. MILTON THOMPSON: One drilled in '60 and one in '62.

MR. GROTH: That north well, when we redone it and he put his pivot on it, he told me -- which the pivot was on

there last year, and when we put the pump in the static leve when we went to put that pump in, was one foot lower than the day he drilled it because he had the records.

MR. MATT MORRISON: Does anybody know of any drop in the water table at all, and if they have, what is it, in the wells in Diamond Valley? That are, you know, in crop production? I mean, I haven't heard anybody from the audience say they have had any significant drop of water in their wells. Is it because everyone here is new or -- Seems to me if there was a problem, you would hear a lot of people saying their water is dropping in their wells. How come they haven't?

MR. MORROS: Did you have any response to that question, Mr. Groth?

MR. GROTH: Nobody. I haven't heard a single complaint.

MR. MORROS: Excuse me. You have to state your name for the record.

MR. DON MORRISON: Don Morrison. I have noticed a considerable drop in my water table during the pumping time, but in the spring of the year -- I have a gauge and I have been gauging it every year except this year, and I didn't gauge it this year, but it has been varying four and five feet, than when I had it drilled. On a correction, it was '63 on one and '64 on the other, when I had that new well drilled.

MR. MORROS: This gentleman back here have a question?

MR. KENNETH STENTON: Yes. My name is Ken Stenton. I heard you talking about the significant drop. I don't feel that 16 feet is a significant drop in surface water. Out of that same well I'm talking about, I checked in 1966 and 1931, and I know for a fact it was down 16 feet. I had to redrill that well two years ago. It was running 300 gallons, and when I redrilled it and cased it and had it gravel-packed properly, it came out 4000 gallons, and I can pump it about 70 feet now, where before it was 125 feet I was pumping off 300 gallons, so it's a matter of how the well is drilled in that case.

MR. MORROS: Mr. Burnham, did you have your hand up? I thought somebody else did?

MR. LLOYD MORRISON: Lloyd Morrison. It's obvious that you guys measured drops, is that correct?

MR. MORROS: Well, that is what we have been trying to tell you.

MR. LLOYD MORRISON: Somebody had to measure these drops that they are pointing to, that this man was pointing out, and your name is?

MR. BROWNFIELD: Jerry Brownfield.

MR. LLOYD MORRISON: That Jerry Brownfield is pointing out to us. He has pointed out a 45-foot drop in one area. What well was that? Who owns that property?

MR. BROWNFIELD: Well, I'm not sure. I could go back through the Exhibit 22 and find it, but --

MR. LLOYD MORRISON: Is that only one well or in

the area?

MR. BROWNFIELD: Well, you see the area, you saw the exhibit. I don't know, 13 there, and you have got some areas that are greater than 50, which may represent two wells, and then you have an area that is down 40 to 50. That may represent 20 wells.

MR. LLOYD MORRISON: I see.

MR. MORROS: The area of decline indicates 50 feet or more at this point is very small, there is no question about that, that cone of depression is very small.

MR. LLOYD MORRISON: I would like to hear the owners verify that. You know, it would kind of help and lend validity to the argument here.

MR. MORROS: I agree with you. I'll be with you in a minute.

All right. Go ahead. State your name for the record?

MR. RICHARD KEPHART: I'm Dick Kephart and I own the East Half of Section 16, which is a 50-foot drop. Okay. We started that well four years ago after extensive testing, and it was at 104 feet. We were pumping a thousand gallons at 35 pounds. We are still pumping at 104 feet a thousand gallons at 55 pounds. And it's the 50-foot drop, but it has never dropped.

MR. MORROS: It is indicated in the zone where the 50-foot drop is.

MR. KEPHART: It is the zone.

MR. MORROS: Well, okay.

MR. KENNETH BENSON: My name is Ken Benson. I pump a well immediately adjacent to Dick Kephart's, right in that zone. I can only claim three years' experience on that well, and I have redrilled that well to replace corroded casing in there, and that's probably the most efficient well I have. I have two others. I pump from about 107 feet and I pump approximately 1200 gallons a minute to a wheel line, and in my three years' experience there I have had no difficulty.

MR. MORROS: Okay. I think you're all through, Mr. Groth. Apparently these other people just want to make statements. Yes, Ma'm?

MRS. JANE MOYLE: I'm Jane Moyle. I would like to know how much consideration have you given to Everett's statements that sometimes the water level is not depending on the water level, but it's the condition of the well?

MR. MORROS: Well, the reason we are developing this transcript is to give consideration to anybody that wants to provide the input. I'm not going to indicate to you that I'm going to make any decision today, because I'm not.

MRS. JANE MOYLE: No, but have you been aware of that, though? Has there been any consideration given to that theory?

MR. MORROS: Well, we will give consideration to it, yes.

MRS. JANE MOYLE: But there wasn't when these talks were going on?

MR. MORROS: You know, the only conclusion I can draw at this point, everybody seems to be quite content and happy with the situation in Diamond Valley with the exception of Mr. Thompson whose spring has diminished considerably. At this point that is the only conclusion I can draw, but let's continue on here.

Anybody else want to testify? Would you like to testify, sir?

MR. JOE RAND: Yes, I guess I would.

MR. MORROS: Well, why don't you come up and get sworn in?

MR. DANNER: State your name, please?

MR. JOE RAND: My name is Joe Rand.

TESTIMONY OF

JOE RAND,

who, coming forward to testify, being duly sworn, testifies as follows:

MR. JOE RAND: I have a place in Pine Valley that had springs maybe comparable to what Hilt had, but anyhow I went in there and they drilled for oil and as they were drilling one of the main springs at the house, there was a dramatic drop-off, and the implication was the water had found another channel there. One of these wells became an artesian well, and I just put that forth as maybe an indication that these

artesian wells are largely responsible for the dropping of the wells higher up on the side of the valley.

I do know this happened in that one instance, so I thought I would mention that.

MR. MORROS: Mr. Thompson?

MR. MILTON THOMPSON: I believe he's referring to an oil well and we were referring to a hundred foot hole here.

MR. MORROS: Yes, the shot holes, yes.

MR. JOE RAND: I do not know how deep the oil -- the rig was when this happened and I don't know whether they were drilling when the water just dropped suddenly in the spring, but it was attributed to the drilling, the loss of water in the spring, that's all I have.

MR. MORROS: Thank you. Mr. Burnham, did you want to testify?

MR. ROBERT O. BURNHAM: Just a question, sir.

If we would like to put together some thoughts from everybody here, may we submit something in writing to your office, sir, and have it a part of this meeting?

MR. MORROS: Absolutely. I would like very honestly for the record, and it's important this go into the record, because next year if somebody gets into trouble out here and comes running into my office and says, "Look, my neighbor's well, the water tables are dropping, why in hell haven't you done anything about this?" I want to be able to go back to that record and say, "Because when I went out there to do

something about it, they told me they didn't have any problems." Okay? So what I would like to see from the property owners in this valley is a formal statement to that effect, that they don't feel that the water tables have declined to the point where it is going to create any economic hardship for them whatsoever.

MR. ROBERT O. BURNHAM: Would you like to have these in ten, fifteen or twenty days?

MR. MORROS: Well, how soon do you think you can have them? I'll give you whatever time you feel that you need. But that's still not going to solve Mr. Thompson's problem.

MR. MILTON THOMPSON: From your statement there, it appears you have solved the problem.

MR. MORROS: No, I haven't. I am indicating to them for the record I want an indication of what their feelings are about the declining water tables here in the valley.

MR. MILTON THOMPSON: But you keep referring to my problem, and you know, it's not just me that is losing the water.

MR. MORROS: That's what we're talking about here, Mr. Thompson. You say that these people have a problem. These people say they don't have a problem.

MR. MILTON THOMPSON: I'm referring to the other springs on the other side of the valley too.

MR. MORROS: Well, the contention is that the pumpage is not responsible for those declines. I'm not saying

that I have drawn any conclusion. I am just saying according to the testimony they have given.

MR. MILTON THOMPSON: Well, my point is, I don't want to put all this on my shoulders.

MR. MORROS: I have no intention of putting it all on your shoulders. It is pretty obvious that we have been concerned about what has been developing here, otherwise we wouldn't have this information readily available either, and I think in view of the fact your first correspondence with me was back in March or April --

MR. MILTON THOMPSON: September.

MR. MORROS: Of last year?

MR. MILTON THOMPSON: September it was.

MR. MORROS: Okay. You know, we didn't just generate this stuff overnight.

Mr. Brownfield is going to indicate, I guess, the well that indicates the 50-foot, in excess of 50-foot decline?

MR. BROWNFIELD: Right. I have got one in Township 21 North, Range 53 East, Section 16. And in the -- Let's see, it's the Southeast -- the Northwest of the Southeast, and I have got 50.3 feet from the fall of '67 to the fall of '81.

MR. KEPHART: How many feet?

MR. BROWNFIELD: 50.3. The owner is Inez --

MR. KEPHART: Johnnie Woods.

MR. BROWNFIELD: We show it as Inez, I believe. Yes,

that's the 64.

MR. LLOYD MORRISON: Read the legal description once more?

MR. BROWNFIELD: Okay. It's in the Northwest of the Southeast Quarter, Section 16.

MR. LLOYD MORRISON: There's no well there. The well is in the Southwest of the Southeast.

MR. GAMBOA: Southwest of the Southeast, right.

MR. BROWNFIELD: Okay. I have got another one. Township 21 North, Range 53 East, Section 22, and it's in the north -- or south, southwest, Northeast of the Southwest, and it had a 57.2 feet decline from a fall measurement in 1967 to a fall measurement in 1981.

MR. EVERETT GROTH: Can I get that legal description?

MR. BROWNFIELD: Okay. It's the south -- Let's see. It's the Northeast of the Southwest.

MR. EVERETT GROTH: That's Section 22?

MR. BROWNFIELD: Section 22, Township 21 North, Range 53 East.

MR. EVERETT GROTH: I can account for that, for the simple reason that the first well you measured is on 180 feet deep.

MR. MORROS: Mr. Groth, identify yourself for the record?

MR. EVERETT GROTH: I'm Everett Groth. That particular well in 1966 was an 180-foot well and that present

well right now is a 250-foot well and the top perforations are pretty low. You're not getting that top water sitting on that bedrock in that old well.

MR. MORROS: I don't understand what you mean.

MR. GROTH: Okay. We rebuilt the particular well two years ago? South well? Very south well.

MR. MORROS: Wait a minute, gentlemen. Wait a minute, hold it. We can't record a conversation going on across the room, that's all there is to it. We'll go off the record for a minute and you gentlemen go ahead and discuss it.

MR. GROTH: It doesn't matter. Two years ago we redrilled that well. It was 180 feet of wonder, and it was sitting on a clay seal. We redrilled that well, and I don't remember how high we perforated that. Pretty low. It's almost down to that 180-foot, and it is sealed off down to there, so all you're measuring now is the water strata underneath that clay. You're not measuring that top water which was measured in the 1966 measurement. Do you get what I'm getting at?

MR. MORROS: I think so.

MR. DICK KEPHART: Can I ask him a question?

MR. MORROS: Certainly. Will you identify yourself.

MR. DICK KEPHART: That well in Section 16 was measured in 1966 and again in '81 only?

MR. BROWNFIELD: No, no. They have been measured, and I can't say for sure because I don't have the record before

me, but basically those have been measured on a yearly basis.

MR. KEPHART: There is no way they could have measured that well in the last four years because we put the pump in and you couldn't get a measuring device in it unless you pulled out 110 feet of pump and motor and base.

MR. BROWNFIELD: I can look at the record. It would take a while to get it out of here, but --

MR. MORROS: That's all right, Jerry. I don't think it's important. His remarks are in the record. We can spend all afternoon here looking through the records for these measurements. Yes?

MR. DON MORRISON: Would he have the measurements on my well?

MR. MORROS: Could you just for the record, your name?

MR. DON MORRISON: Don Morrison.

MR. MORROS: We didn't bring all of the records, you know, the yearly records, our field notes, and stuff like that we did not bring with us today, no.

MR. DON MORRISON: Well, I'll testify about my well.

MR. MORROS: Okay. Come on up and we'll swear you in then.

MR. GARNER: State your name for the record?

MR. DON MORRISON: Donald E. Morrison.

TESTIMONY OF

DONALD E. MORRISON,

who, coming forward to testify, being duly sworn, testifies as follows:

MR. DONALD E. MORRISON: I had my two wells drilled on the West Half of Section 10, Township 21, Range 53 East. One of them was drilled in '63, I believe, and the other, I believe, was drilled in '64, and they were drilled 182 feet, perforations put in the last 40 feet of the well. In, I believe it was 1976 or 77, I thought I was having trouble with one of my wells and so I had another well drilled to 412 feet, and when the pump man pulled the pump out of the well to put it over into the new well, they found that the bowls had slipped or else they were put together wrong, and I never had been pumping an adequate amount of water, and I went ahead and put the pump in the new well and I -- Excuse me. I took the measurements, and the measurement was almost the same in both wells, but when I pumped out of the deeper well I didn't have the draw-down that I did in the smaller well, but I forget just what the variance was, but I think it was like 10 or 12 feet to start with, but later on in the season as I pumped, why my first well that I pumped usually would go down more but the new well I drilled, the water table didn't drop as much.

On my north well, it was drilled in the early 60's, and it seemed to pump a sufficient amount of water, so I didn't have it redrilled, and recently we put a surface sprinkler on it and as near as I can tell at the most critical

time of the summer, it pumps from 123 to 125 feet, but then every spring when I start up, I did up until this spring, I would check my water table, and it had never varied over four or five feet over the period of the years in the spring of the year.

MR. BROWNFIELD: I have his record. The one well in the spring of '66 to the spring of '82 was a drop of 31.7 feet is what we recorded. The other well dropped 30.8 feet from the fall of '67 to the fall of '81, so around 31 feet.

MR. DON MORRISON: Now, in the summer when I'm pumping it does go down, but in the fall -- or in the spring, before I start up in the spring, I haven't had those drastic measurements, and if this is a cone that we are pumping out and measuring, my domestic well should have went dry every year, and it has never went dry because it's set at about 80 feet.

Occasionally I put a new pump in it, I think I put three new pumps in it and every time I pulled it you can see the water mark above the pump, and it has always been 10 to 15 feet above the pump, but during the pumping season we do pump down.

MR. MORROS: Oh, we're aware of that, but there is going to be a difference in the net levels during the pumping and non-pumping season. Thank you.

Anybody else want to testify?

MR. LEONARD CORSENTINO: Leonard Corsentino. Just

as a point of reference, it might be interesting on the charts if you had a spring, say, marked in red or different colors, because if you take an average, it depends on when you took it, fall, maybe or spring, maybe, so it might be interesting if you would chart it in different colors, spring and fall.

MR. MORROS: Okay. We'll take administrative notice of your comments.

Yes, sir?

MR. LLOYD MORRISON: Lloyd Morrison. I would like to ask Mr. Brownfield, does it hinder the measurements in wells if there is an excessive amount of oil in the well? Does that make it harder to read a well, the depth?

MR. MORROS: Maybe you ought to talk to our man that does most of the reading.

MR. LLOYD MORRISON: Does this contribute to --

MR. MORROS: Mr. Gamboa?

MR. LLOYD MORRISON: Does this contribute to inaccurate readings?

MR. GAMBOA: It certainly can, and accurate pumping levels too.

MR. MORROS: Yes, sir?

MR. WILFRED BAILEY: I would like to ask you a question.

MR. MORROS: Your name for the record?

MR. WILFRED BAILEY: Wilfred Bailey. Is all of

the Diamond Valley considered in the water basin?

MR. MORROS: The drainage area, what is defined as the Diamond Valley Ground Water Basin encompasses the entire area that naturally drains into the basin, yes.

MR. BAILEY: In other words, the full valley is subject to the same rules as the pumping area up here?

MR. MORROS: We just have a certain area in the valley designated, and that's the area where the withdrawals are occurring. Obviously, we don't have too much trouble with the site of Diamond Peak and stuff like that as far as irrigation wells.

MR. BAILEY: If I was to apply for an application to drill a well on the ranch down there, would I have a good chance of getting it or am I in the water basin?

MR. MORROS: I can't pre-determine action on any application you might make. You mean, would it be subject to denial on the basis of being in the ground water basin?

MR. BAILEY: Yes.

MR. MORROS: Under the present status of the basin, as far as the orders that have been issued by the State Engineer, yes, absolutely.

MR. BAILEY: I would be denied?

MR. MORROS: If it was in a designated portion of the basin, yes.

MR. BAILEY: Well, that wasn't my question. Am I in the designated basin where I'm located at the ranch at

Diamond Valley?

MR. MORROS: Yes. I would assume you are. I don't know exactly where your ranch is located.

MR. HILTON THOMPSON: When you designated, you came back and designated the whole valley.

MR. MORROS: That's right. We came out with an amended designation.

MR. WILFRED BAILEY: My other question is, on the Sadler Ranch, they had what they called the Indian Camp and they irrigated a 40 acre pasture there for a number of years, and at the time that Loudes bought the ranch, about that time, they came through there and they drilled a well and it flowed. It was down below where they irrigated, where there was water coming out, and they drilled a seismographic well right below that, and it got quite a flow out of it. Then just at the time they sold out from Sadler's to Loudes, right in that time there, and so then they didn't do anything about that for a year or two, and when Sobel bought the place, he asked me if I thought he should plug that or go ahead and irrigate from it, and I suggested that they should plug it because it was going to restrict his flow up above, and so they plugged it and lost the flow up above and also lost that one there, and he asked to drill a well to replace that and it was denied him. Isn't that true?

MR. MORROS: I just don't have the record in front of me. I wouldn't even want to respond to the question unless

I have the record in front of me. You know, we have literally thousands of water rights, and off the top of my head I can't --

MR. BAILEY: But it just re-routed that water that was in the seismograph hole and didn't bring it back either.

MR. MORROS: You know, I don't question that may well be true, but I don't have the entire record before me and all the denials and everything else that occurred in Diamond Valley. I don't have that kind of retention capability.

Anybody else?

MR. MILTON THOMPSON: Yes.

MR. MORROS: Mr. Thompson?

MR. THOMPSON: On this particular statement Mr. Bailey made, I believe that ranch out there faces the same thing I do. That water was not adjudicated and that spring was not adjudicated either and he would have to go into court and adjudicate that and they would just have to say that he'd lost it.

MR. MORROS: There definitely is a problem with an unadjudicated source because we just don't know what the limited extent of the right is until that adjudication process is completed.

Yes, sir? Could you identify yourself?

MR. DON PALMORE: I would just like to testify if I could, please?

MR. MORROS: Come forward. Always glad to have another one up here.

MR. DANNER: Will you state your name for the record, please?

MR. DON PALMORE: Don Palmore.

TESTIMONY OF

DON PALMORE,

who, coming forward to testify, being first duly sworn, testifies as follows:

MR. DON PALMORE: I'm going to have to go back and rely on some talk that the oldtimers that I have heard, because I have only been here 23 years, they talk about years when we had a heavy snowpack regularly and irrigated out of creeks. I lived in Southern California before I came here and it can go for 30 years, but then when you get that wet spell all the reservoirs that were dry fill up again. What I'm suggesting is that probably if we get a spell of wet years and we fill back up again, then that will take care of us for another 15 or 20 years, and by then I won't have to worry about it and probably you won't have to either.

MR. MORROS: I hope not.

MR. PALMORE: I'm speculating, but then it is possible it could go the other way. Maybe we are going to have 20 more dry years, but at this time I don't feel like we have a substantial drawdown problem, although I will admit I measure in the spring time, that's the only measurement on

one well and over the last three years my water is almost stabilized. The surprising thing there is that up until the early 70's, I was virtually the only one pumping. I'm over in Township 22 North and 54 East, in Section 23. I'm east of the clay bank. During the years I was virtually the only one pumping, my water was declining yearly, and I was worried, for the last four or five years the pumping has become very heavy in that area, and we had less declining of the spring measurement during the dry years with hardly any runoff than we had previously, and since the heavy pumping took place, than we did previously, so what I'm getting at, then Mr. Thompson testified his spring is decreasing.

Now, I'm on the northeast side, virtually the last well northward. There is a couple of wells between my place and Mr. Thompson's along the east side of the valley. If my static table comes back to -- It was 38 feet three years ago, and I just checked, it was 38½ feet three years ago, and it was 40 feet, and this was around the first of May when I checked that water. What I'm wondering, if my water table hasn't changed in three years, that pressure from that point northward along that east side of the valley, why would that spring then -- Can't see that that really has any bearing on what that spring is doing, is all I'm saying. So what I am saying there is, I think that certain areas of this valley, even during the dry season, the water table is stabilized, and if we do have a series of wet years, I don't know if it

will ever come back as high as it was, but I don't feel like at this time, if it stabilizes and stays at the point where it is, as far as me pumping, that is going to be a problem. I can see that if we don't have some wet years or if it continued to decline, in another 20 years or 10 years, even, we could have a problem, but I don't see how we are going to know until we pump it substantially to the point where it becomes uneconomical for us to do so.

MR. MORROS: But once you reach that point, it may be too late to do anything about it, as it may be too late to do anything about Mr. Thompson's spring right now. Mr. Thompson, I think, has a question.

MR. MILTON THOMPSON: We are all aware you have a real spectacular well, said you can listen to your water going by, but how many wells do you have?

MR. DON PALMORE: I have three wells, and I'm referring to a well I pump about a thousand gallons a minute out of.

MR. THOMPSON: You also have a well with a junior permit on it?

MR. PALMORE: No -- well, depends on what you say about junior. I don't have any well with a junior permit.

All I'm saying is that at this point, I am pumping one well from about year before last it was 53 feet, and I didn't check it last year. That's my pumping level, so I wouldn't say that's substantial. I have a couple of real old

well permits that I don't think because my water is 50 feet that I should cut down somebody from pumping water. If it was 200 feet and we're all going broke, then I think the question comes back again.

Then I would like to ask one question if I may: I have heard, and this is hearsay evidence that I'm talking about now. I have heard many oldtimers, several, state the springs are going dry in areas around the country that they have never seen dry in their lifetime. I'm talking about people 60, 70 years old. If this is true, might it not be affecting Mr. Thompson's spring, and should we endeavor to get some of those people to write testimony to your office?

MR. MORROS: Well, I don't know. Maybe Jim might want to comment on this. I think any time you go through a dry cycle that there is, or at least it has been our experience, you know, that springs and certain surface waters sources dry up. You know, they are not associated with any effects of pumping in any particular area, because pumping just simply isn't there. Most springs, especially springs up off your valley floors, up on your alluvium and up in the mountains, you know, where they discharge out of fractures in bedrock and everything up there, are pretty well dependent on water that percolates down through from snow and rain and moisture and when you don't get that, obviously a lot of them lose their source of supply.

But I think you can put all of these springs probably

in different classifications. I think in the case of Mr. Thompson's spring, his sources of supply are probably from deeper sources than you might classify some of these, I guess you could call them mountain springs.

Jim, you might want to make some comment along those lines?

MR. JAMES HARRILL: Yes. I think springs in the mountains are much more subject to stresses due to climactic situations than some of these deeper springs where you get the warm water, just suggests a deeper path of circulation, that they may tend to average out a series of dry years and wet years and be more constant. I have heard people talk about the uniformity of spring flow over a number of years in some of the other springs, not necessarily Thompson spring, but some of the other springs in the valley that these warmer springs with the deeper pattern of flow, it may take a very sustained dry period or very sustained wet period to have an influence on them in relationship to the influence that a shorter wet period or dry period might have on a hot spring.

MR. DON PALMORE: I would have one more comment, is last year I think probably we pumped -- I have been pumping a lot of years, and last year was probably the longest pumping season in Diamond Valley. We pumped 20 to 30, and maybe 40 days longer than average, so that may have been one of the things that caused these excessive draw-downs in the fall.

MR. MORROS: One of the things this whole area has been experiencing in the last -- well, since 1971, is below average precipitation, and you know, we don't have any snow courses in the Diamonds here that we can measure. The nearest data we have is out of the Ruby Mountains and the Kingston Creek, Big Creek area, over by Austin, but just an indication, since 1971, up through 1982, there has been one, two, three, four, five, six, seven, eight, nine years that have been below average on precipitation.

MR. DON PALMORE: That's all I have.

MR. MORROS: I'm sure that partly accounts for a lot of those springs drying up.

Anybody else want to testify?

MR. JAMES MOYLE: I would like to ask a question. My name is Jim Moyle. In the event the State Engineer would decide the water was overdrawn and curtailment of the permits should be started, those permits being title to property in this area particularly carry a lot of debt, I was wondering if the State Engineer pulled the permits, if they are also going to take the debt?

MR. MORROS: Not on our salaries, we're not.

So, we fully understand the economic impact of something like that.

MR. MILTON THOMPSON: I have a question pertaining to the evidence to be submitted later. Do you people have all the old aerial photos of the USGS of the valley? I would

just as soon not part with mine.

MR. MORROS: Well, if we don't have them I'm sure they are available to us from the USGS.

MR. THOMPSON: The 46 photos show the dramatic -- along with the 73 photos, show the dramatic decrease in the flow of water.

MR. MORROS: I believe our Elko office probably has the most recent set of aerial photos of that area, don't you?

MR. GAMBOA: I can get that, yes.

MR. MORROS: You mean for comparison purpose on what happened to your natural meadowland area there that has been under the influence of that spring?

MR. THOMPSON: The 73 aerial, you can also see the amount of hay I put up on that ranch.

MR. MORROS: Okay. Is there anybody else?

I have got one last question here before we recess, and I indicated in a notice for this hearing that if we concluded taking testimony at this afternoon's session, that we would recess until 7:00 o'clock tonight to give any people that couldn't attend this afternoon's session the opportunity to testify tonight, so we will be back here at 7:00 o'clock.

I am going to put a question to you and I would like you to respond to it by raising your hands. Is there anybody in this room that feels that the existing pumpage in Diamond Valley is creating any adverse effect on their water

rights?

MR. ROBERT BURNHAM: I would like to respond to that.

MR. MORROS: No, I just want a show of hands. I just want to get an idea.

MR. ROBERT BURNHAM: I would like to comment on that.

MR. MORROS: Okay. You can make a comment after. Does anybody respond in the affirmative to that?

MR. LLOYD MORRISON: My name is Lloyd Morrison. I would like to make a statement.

MR. MORROS: Well, let me just finish this and then I'll be glad to hear your statement.

MR. LLOYD MORRISON: I don't quite understand. You mean -- Would you rephrase the question, please?

MR. MORROS: Okay. We have entered several exhibits into the record here today which indicate that the pumpage in Diamond Valley is starting to -- is in fact affecting the ground water levels in that valley to the point where the State Engineer is concerned that continued pumpage at these rates or at increased rates that are represented by those water rights that can be exercised will have adverse effects on not only the ground water basin, but let's say it will have adverse effects on the senior rights in that basin, so for the purposes of an indication from you as to whether the State Engineer should regulate the pumpage in Diamond Valley,

does anybody in this room feel it is necessary at this time for the State Engineer to regulate the pumpage at Diamond Valley? Raise their hands? Are you raising your hand to say yes?

MR. LLOYD MORRISON: Yes. I'm concerned. I want you to know that I am concerned about my water. I am concerned in the fact that --

MR. MORROS: Could you just state your name for the record?

MR. LLOYD MORRISON: Lloyd Morrison.

MR. MORROS: Let's just get an indication here. There were only two hands raised, yours and Mr. Thompson's. Two more in the back. That's four. Anybody else? Five.

MR. LLOYD MORRISON: Your statement is too broad. It makes it sound like we are not concerned. I am as concerned with --

MR. MORROS: No, I am saying, do you feel that that regulation should be instituted now? I'm not saying that at some time in the future you could possibly change your mind or the conditions can change in that valley that would cause you to change your mind. I am referring to right now. Do you think it is necessary for the State Engineer to go in there and regulate pumpage right now? In view of the information we have presented here to you today?

MR. LLOYD MORRISON: In view of the information today, I feel the information is not totally accurate, and

based on the information presented, I can not make a decision.

MR. MORROS: Okay. So you are in that category of "None of the above," I guess.

MR. MILTON THOMPSON: Why don't you ask two other questions: How many of them have old water well permits and how many of these so-called new junior permits?

MR. MORROS: Well, I don't know where you would draw the line on that.

MR. THOMPSON: Well, I think that would be a good indication of why nobody raised their hands for it.

MR. MORROS: Okay. You're saying everybody in this room has senior water rights so they would respond in the negative to the question?

MR. THOMPSON: I'm saying a lot of them are junior water rights.

MR. MORROS: Well, I don't know where you draw the line there between the junior and senior water right.

MR. THOMPSON: I think there's a good conclusion to be drawn just from my own situation.

MR. MORROS: But not a ground water right?

MR. THOMPSON: Oh, yes, I have one, that I have never picked up on.

MR. MORROS: Mr. Plaskett?

MR. WALTER PLASKETT: I would like the record to show you have what, four people that raised their hands?

MR. MORROS: I'm not sure.

MR. PLASKETT: I think they should be identified and state whether or not they are landowners and irrigators or not. There are still a lot of people in this room, just to clarify the record.

MR. MORROS: Okay. I don't think that's an unreasonable request. Let me think about it for a minute.

MR. PLASKETT: Well, your question was posed to irrigators, "Should I, as a State Engineer" to the irrigators, "start to curtail now the pumpage," and you're asking the irrigators, I think, or if they are not irrigators, then state what their problem is.

MR. MORROS: Okay. I understand what you're saying now. Yes. I was directing my question to the people that hold existing water rights, the irrigators, or whatever you want to call them, yes, and I don't know whether those people that raised their hands do hold existing water rights in the valley or not. The gentleman in the back of the room?

MR. DON MORRISON: Well, there are some of us in the room that are maybe not irrigators, but some of us have water rights that would be under a risk, and maybe we should have the right to vote on it.

MR. MORROS: What you are saying, you don't hold an irrigation right?

MR. DON MORRISON: We don't hold an irrigation right but we hold a water right. I don't remember who else it was

that raised their hand. I guess it was this gentleman right here?

MR. JERRY SESTANOVICH: Don Morrison kind of said my feelings on it.

MR. MORROS: You feel the same way he does, then? Could you state your name for the record?

MR. JERRY SESTANOVICH: Jerry Sestanovich.

MR. JAMES ARNOLD: My name is Jim Arnold. I probably could make a better and more intelligent decision if we had a comparison of this map showing the shaded areas in, say, April, to be able to compare. It could well be that you had 1500 acres being irrigated on the chart No. 19, and it could well be that you are irrigating 20,000 acres that is depicted in Exhibit No. 18, but if we have the same amount, with the minor exceptions of Mr. Kephart's well, if we have the same amount of recovery every year, then I don't think we have a problem. Incidentally, I have senior water rights, at least I'm told I do, and if anyone were concerned, I'd be concerned, but I check my wells and I have relied on other people who have given me information, and according to them, my water table in the spring is down about five feet since 1975.

MR. MORROS: Okay. Yes, Ma'am?

MRS. EARLINE STENTON: Earline Stenton. I would like to say one thing, as far as junior and senior numbers, it's a great big joke in Diamond Valley and everyone here,

I'm sure, will agree with me if they will be honest.

MR. MORROS: All right. Thank you.

Any further testimony?

MR. LEONARD CORSENTINO: Leonard Corsentino. I think on the same question, I don't think we ought to let a lot more, like Exxon, come in and start pumping a lot more water.

MR. MORROS: I understand that.

MR. LEONARD CORSENTINO: Because when you cut off a junior number, the first one, like a lot of people mentioned here, there's going to be a huge problem and it's going to be a lot of loss, to add any more to that would be chaotic too, so I think you know what I'm saying.

MR. MORROS: Yes. Yes, sir?

MR. JOE RAND: My name is Joe Rand. Would you, if you curtail these numbers, would you contemplate a complete cut-off, or partial, or so forth?

MR. MORROS: Well, I don't think I have got much choice under the law. I suppose that if all the water right holders in the valley came up with some kind of a voluntary program, that would be the only alternative. Otherwise, the curtailment has to be in conformance with the law, which requires that the rights be regulated on the basis of priority.

MR. RAND: Total, right?

MR. MORROS: Now, if I had, say, five or six water rights that were of the same priority and it was only

necessary to regulate to the extent that maybe half of the water that were represented by those rights, then you might say, "Well, we'll regulate 50 percent on each one," but I think that would be the only exception.

MR. MILTON THOMPSON: May I ask some questions pertaining to something similar to Exxon which had me upset last year, when the MX people came in here and applied for a lot of water. I believe it stated, if I remember correctly, in that '62 report, that they theorize that our recharge system comes underground all the way from Monitor Valley through Devils's Gate, and that's the area that Exxon -- I mean, not Exxon, but the MX people applied for well permits on, which you granted.

MR. MORROS: We never granted one single permit for MX.

MR. THOMPSON: It was advertised in the papers.

MR. MORROS: That is what I tried to explain to you before.

MR. MILTON THOMPSON: Well, that was my question, were they granted permits?

MR. MORROS: There's one way you want to get my dander up, it's to accuse me of granting permits for MX. That is not true. I'll go under oath. There were no water rights granted to the United States Airforce on behalf of MX. Those applications, in fact, are still pending. The Airforce has assured us they will make a decision on the disposition

of those applications soon, but if they don't, I'm going to make the decision for them.

MR. MILTON THOMPSON: I had heard from hearsay that you people stated you were going to let them out, and I say it's hearsay. You're going to let them out because you had no proof it was our recharge system, and if I'm not correct, it is stated in that '62 report that is part of our recharge.

MR. MORROS: There is inter-connection, I think, most ground water basins in the state. You know, basins adjacent to each other, there is inflow and there is outflow, and I think that Mr. Harrell's report identifies some inflow through the Devil's Gate area, either inflow or outflow, I don't remember.

MR. JAMES HARRILL: There is inflow in the order of several hundred acre feet.

MR. MORROS: But there is also a substantial amount of natural recharge in the adjacent basin.

MR. MILTON THOMPSON: I don't remember which map I was looking at, but I remember there was a theorized area, coming through Newark Pass, Garden Valley and Devil's Gate. I would think you would take a very dim view on anything they applied, even theorized, that there might be some water comin in there.

MR. MORROS: Not if they could capture the natural recharge in that ground water basin. Are you talking about interfering with the ..

MR. MILTON THOMPSON: I'm talking about these permits that are pending.

MR. MORROS: Those are applications that are pending, not permits. Get the right terminology. The Airforce's MX applications are just that, applications. They are not permits. I understand the point you are trying to make. Okay. We'll take note of that too.

Yes, sir?

MR. DON MORRISON: Don Morrison. I was wondering, would there be some way that, I think we're all neighbors, and I seem to get along with all my neighbors real well; would there be some way that us as a community could form some kind of a team or something to check all the wells at, say, just before they start pumping next year, or something like this?

MR. MORROS: Well, we would be very receptive to all the help we can get, believe me.

MR. DON MORRISON: Because this really concerns me. Your records there show technically my domestic well should have been dry for the last seven or eight years, and I would like, if it's all right, and if the water board would accept it, for us to form a group or a committee within the neighborhood and go around and check and try to get a real good check on these wells just before they start pumping in the spring.

MR. MORROS: Maybe we could get together and discuss this a little further. At least Mr. Gamboa can get

together, and that would be helpful, there is no question about it. Any time we can get additional assistance, both myself and Mr. Katzer, who is the Chief of the U. S. G. S., in view of the budget crunches and the fact the dollar is not going as far as it used to, we are still getting the same dollars, why we'll take any of that, any help we can get. I think you agree to that, don't you, Terry?

MR. TERRY KATZER: You bet. We sure would.

MR. MORROS: Okay. I think everybody is just about pooped out with the questions and the answers, and the dialogue, so we are going to stand in recess until 7:00 o'clock. That should give everybody a chance to get a bite to eat.

(The hearing was thereupon recessed at 5:30 o'clock, p. m.)

EUREKA, NEVADA, MONDAY, MAY 24, 1982,
7:05 O'CLOCK, P.M.

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MR. PETER G. MORROS: All right, we'll be back on the record. I don't see any unfamiliar faces here from earlier this afternoon.

Mr. Burnham, you indicated that you would have something to add when we reconvened concerning a request that the hearing be recessed for a period of time to allow the people here in Diamond Valley to better evaluate the data that we presented here today?

MR. ROBERT O. BURNHAM: Yes, sir. Virtually that same thing. And Mr. Chairman, I would like to make that as a motion, if I may. Mr. Jim Arnold was unable to come back here this evening and asked if I might for him, at least, and the rest of us, ask whether or not it would be proper and right to recess the meeting for as much as 90 days for all who are here to digest the material, and in the interval of time present such written material as they might also wish and any other thing that might come before them, as far as additional material evidence, that it also could be properly submitted, and at such time as that elapsed time had passed, another meeting be scheduled, and that we be allowed to come and again be heard.

MR. MORROS: Okay. My concern is, these exhibits we have introduced, I discussed the reproduction of these

exhibits with my staff because I don't think you can make a proper evaluation unless you have got this material available to you, and I don't know whether Mr. Thompson has got any objection to recessing this thing --

MR. MILTON THOMPSON: Well, I think it's just prolonging the agony and I would like to add, you know, I'm still under oath, and Jerry Brownfield will back this up, when I was taking him around to show him the springs and how badly they dropped off, I took him to an area called the Willow Field and there were fourteen head of dead cattle in that hole. The water had dropped so low it broke off the rim and they drowned, and I don't know how many was there, but I'm still missing thirty-five head of cattle. I lost a total of thirty-eight head in those water holes last summer, and this is a severe economic loss to me.

MR. MORROS: I realize that. But again, I'll ask you, do you have any formal objection to recessing this hearing?

MR. MILTON THOMPSON: Well, I just stated that I think -- Listen, I don't like this, but hell, I understand their problem, but I'm sure Mr. Burnham knew as soon as the word got around that my spring had dried up, you were aware of that?

MR. ROBERT BURNHAM: No, until it came out, I hadn't heard too much about it, no, sir.

MR. MORROS: I assume Mr. Burnham is speaking on behalf of --

MR. ROBERT BURNHAM: Now, just for myself, and Jim asked if I wouldn't say a word before we closed this evening.

MR. MORROS: So you are not representing then the rest of the people that are in attendance at the hearing earlier?

MR. ROBERT BURNHAM: No, sir.

MR. MILTON THOMPSON: Well, that's my point. I think it's just prolonging the agony. We know what is happening and there is no question about it. I'm a little concerned why you didn't bring out more of those photographs of the area springs drying up and so on.

MR. MORROS: Well, I think really, Mr. Thompson, I think that obligation is yours, to present that type of evidence. Now, we made the field investigations out there, we have tried to come over here and present what we consider a good summary of the information that we have available to us.

MR. MILTON THOMPSON: Yes, but you guys are the ones that took the pictures.

MR. MORROS: I realize that, and they are public record, and we probably could have hauled a couple of truck loads of records over here for the purpose of introducing them into evidence, but you have got a responsibility to establish the record here too, you know. You have submitted a letter of protest and I'm not saying that that letter is not a valid letter of protest on your behalf.

MR. MILTON THOMPSON: Well, you have had them, so I presume you still have them. I was just wondering why you didn't present them.

MR. MORROS: We still have them, yes. We do have them in our file and if it will help --

MR. MILTON THOMPSON: I don't know. I could have gone out there and taken duplicates of them myself.

MR. MORROS: Well, we didn't bring them with us. They are public record in our office, and I certainly am not going to ignore them. There have been, you know, field investigations made out in that area and there are reports of those field investigations which we did introduce into evidence.

MR. MILTON THOMPSON: I think in that particular instance a photograph would be worth more than a thousand words.

MR. MORROS: Well, like I say, some of the responsibility of providing some of this evidence lies with you, in view of your letter, and what you contend is the adverse effects on your water source. I don't know. Like I say, we have a substantial record on Diamond Valley, and short of introducing that entire record into the record of this hearing, it is a public record in the State Engineer's Office, and at any hearing, administrative notice is taken of the fact the State Engineer will utilize that record in any decision he makes.

MR. MILTON THOMPSON: You are considering these photographs?

MR. MORROS: Oh, absolutely. I have seen the photographs, I have read the reports.

MR. MILTON THOMPSON: I guess my point is, is there any point in going out and taking duplicates of them?

MR. MORROS: No, no. We have the photographs. Yes, they are on record.

MR. MILTON THOMPSON: This is my point. You said it was up to me.

MR. MORROS: No, I said additional evidence is up to you.

MR. MILTON THOMPSON: Right. I have that. I didn't want it turned over where you might have a copy of them.

MR. MORROS: Okay. If your only concern is whether I will consider whatever evidence is provided in those photographs, I can assure you I will.

MR. MILTON THOMPSON: I'm more concerned why you didn't, because a lot of people don't realize the extent of what those springs dried up, and with those big mounds, they completely dropped into a hole. That would have been a pretty graphic illustration of what is happening there.

MR. MORROS: All right. Well, in relation to your request, Mr. Burnham, I realize that there has been a substantial amount of evidence presented here today, especially in the form of the State's Exhibits, so I think I am going to

recess the hearing for a period of 60 days, approximately 60 days. Now, when we recess the hearing we will do so in the same manner that we set the time and place for this hearing, and that is by publication in the local newspapers, and I hope that you people will pass that on to the other people that didn't come back tonight, because it's a pretty substantial burden to notify every single water right holder in Diamond Valley individually. So we will attempt to reset the hearing approximately 60 days from now, and concerning these exhibits now, maybe you could poll your people and if there is any desire to have copies of these exhibits, we will provide them to you. It will take us at least a week to reproduce the large graphic exhibits, but we can provide them to you.

MR. ROBERT BURNHAM: Okay. Thank you.

MR. MORROS: Yes, sir?

Would you identify yourself for the record?

MR. KENNETH STENTON: Kenneth Stenton, farmer in Diamond Valley. I would like to have a copy of that 82 Geological Survey. I have the 67, but didn't you mention there is an updated one?

MR. MORROS: You mean this report here? This is the updated report.

MR. KENNETH STENTON: Yes. I have one just like that, but it's the 65, I believe it is, or 67.

MR. MORROS: This one is dated 1968. This was

Exhibit No. 21. There was a previous one in '62, as I recall.

MR. KENNETH STENTON: I have that one. There's one after that.

MR. MORROS: We can provide you with a copy of this.

MR. KENNETH STENTON: Well, I already have it.

MR. MORROS: There is nothing after this, to my knowledge.

MRS. EARLINE STENTON: There was supposed to be one.

MR. MORROS: Are you referring to Mr. Harrill's field report of the investigation or the field inspection they made at Mr. Thompson's ranch?

MR. KENNETH STENTON: No. I thought there was another geological survey, updated one, with all this stuff?

MR. MORROS: No.

MR. KENNETH STENTON: Much newer than '67.

MR. MORROS: Most of the information that is illustrated on these exhibits have been developed by our field measurements and pumpage inventories.

MR. MILTON THOMPSON: This report is included as part of the record?

MR. MORROS: Which report?

MR. MILTON THOMPSON: This one you just held up?

MR. MORROS: Oh, yes. It's in as an exhibit.

MR. MILTON THOMPSON: The entire thing?

MR. MORROS: The entire thing, right. Yes, sir?

MR. LEONARD CORSENTINO: Leonard Corsentino. I'm

still a little confused of what you are going to decide. What is Milton really asking for? I'm a little confused in this. I mean, what are you really asking for, Milt? Someone mentioned a well, you didn't want that, but what are you going to judge on? What is going to happen or what is he asking for?

MR. MORROS: Well, maybe Mr. Thompson could respond to that.

MR. MILTON THOMPSON: I think I can answer that. I'm a little surprised at the question, really, but however, like I stated up there when I was up there, even if you don't do anything for me, sooner or later you people are going to start eating each other up. You are just prolonging the agony here. You are going to have the Sadler spring is already gone, and Shipley Hot Springs, and there's a lot of money behind that outfit and there's going to be trouble when that starts if he continues to drop off. It is already less than half of what the reported pumpage or the outflow used to be.

MR. LEONARD CORSENTINO: At this point in time though, I still -- What can he do now?

MR. MILTON THOMPSON: Well, we more or less concluded, if you guys don't want to believe it, but I believe it, and judging from their charts, the pumpage is far exceeding the recharge rate. You're mining the water here. Pretty soon you are going to pump the whole thing dry. Back

in 1962 or 3 the late Dr. Richard Larsen from the University of Nevada, he spent years out here, he told me at that time they had over-allocated Diamond Valley, and that was in 1962 or 3, and I told him at that time, I says, "Well, heck, they got a test hole down there, they haven't shown any change in the last few years," and he used two hands and he said, "That's right," he said, "Right now Diamond Valley is pumping water from this valley, and as soon as they get that drawn down, then the whole thing is going to start going down," and that is what happened. We have depleted that reservoir that is drawn out of somewhere else, and now they're drawing right under the valley. I think these people have more or less stated the same thing here earlier.

MR. LEONARD CORSENTINO: So you're asking to cut it down?

MR. MILTON THOMPSON: Unless they cut back on the amount of pumpage to bring back the stuff, and the amount of pumpage, you're going to be eating each other up. You're just going to destroy the whole community completely. It's just a matter of time. You know that and I know that. Just avoiding it. The final outcome is what you're trying to get around.

MR. MORROS: Okay. Ma'm, could you identify yourself?

MRS. JANE MOYLE: Jane Moyle. I hear what you're saying, yet it sounds to me that it's a question of time, and

I don't think any of us are trying to ignore it. We recognize there is a problem and a very dangerous potential problem that, you know, we're sitting on a time bomb here. What we want is a little bit of time to try to deal with the problem without having to, you know, have half the farmers in Diamond Valley, you know, go down the road. I think what Leonard is asking is in order for us to buy this time, what is it that will solve your problem that exists now?

MR. MILTON THOMPSON: Well, my ranch dates back to 1860, so I'm the oldest ranch in the valley, and I'm sitting down there right now with 2700 acres with no water. I haven't even got cow feed because my meadows are grass that demand a lot of water. These old ranches were situated on the naturally irrigated, sub-irrigated meadows. That is what my whole ranch is, the whole thing. Even my native meadows on BLM land dried up.

MRS. JANE MOYLE: But you said yourself in the hearing earlier this afternoon that you weren't convinced if we did discontinue pumping that was going to restore your springs?

MR. MILTON THOMPSON: I heard what the Exxon geologist said.

MRS. JANE MOYLE: You said you believed him.

MR. MILTON THOMPSON: I said I'm inclined to believe that. That is what I said.

MR. MORROS: Well, I don't think we're going to

gain any more ground by bantering this back and forth. I think there has been enough testimony and evidence presented here today certainly to occupy the time at least of some individuals for the next 60 days.

Do we have a clear understanding now of the procedure we are going to follow? At the end of 60 days from today, I will set another -- I will set the time and place for a continuance of this hearing. It will be in recess until that time.

MR. MILTON THOMPSON: Are you going to continue taking water measurements?

MR. MORROS: Absolutely. And we will continue to take measurements on your springs and the other surface water sources up there too.

MR. GAMBOA: That's what he meant.

MR. MORROS: Well, my response refers to both the ground water measurements and the surface water measurements, definitely, yes.

MR. MILTON THOMPSON: I think one of the big things it was stated in here that Shipley Hot Springs was going down, but it just started varying, and that's probably going to be one of the main things, the money there. We know what happened to it, and if it's true they are only flowing 2000 feet now, it's going to increase over the summer, and they have the money behind them.

MR. MORROS: We'll be making measurements, and

Ralph, I think you intended to make measurements monthly during the summer, didn't you?

MR. GAMBOA: Of course, I have measured Shipley Hot Springs twice.

MR. MORROS: Okay. We will continue to make measurements at least monthly through the summer.

MR. MILTON THOMPSON: In other words, I don't agree with you, but I see your point, and I'm not really opposed. I see what you're trying to do. You're trying to let them get through another season, but I think come this fall they're going to see the point. I think you know that.

MR. MORROS: That may well be.

Okay. Nothing further before this hearing, then, we will recess until further notified by the State Engineer's Office.

(The hearing was thereupon concluded and closed at 7:30 o'clock, p. m.)

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REPORTER'S CERTIFICATE

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This is to certify that I, Harold Krabbenhoft, a Certified Shorthand Reporter, was present at the time and place the foregoing proceedings were had and taken, at Eureka, Nevada, on Monday, May 24, 1982; that I did report the same fully and truly in Stenograph writing to the best of my ability; that thereafter I caused my said Stenograph writing to be transcribed into longhand typewriting, and the foregoing pages, beginning at the top of page 1, through line 17 of page 164 hereof, plus 6 index pages, constitutes a full, true, correct and complete transcription of my said Stenograph writing.

Dated at Carson City, Nevada this 27th day of June, 1982.

Harold Krabbenhoft, Certified Shorthand Reporter, CSR 325.