

## **CADY L. JOHNSON**

### **EDUCATION**

University of Nevada, Reno: Ph.D., Geology and Hydrology/Hydrogeology, 1982  
Oregon State University: B.S., Geology, 1976

### **DOCTORAL DISSERTATION**

"Correlation and Origin of Carnotite Occurrences in the Southern Nevada Region", 1982. Carnotite  $[K_2(UO_2)_2(VO_4)_2 \cdot 3H_2O]$  associated with a pre-Colorado River geomorphic surface was evaluated through a combination of geologic reconnaissance, geochemical modeling, and natural analogue studies. The preferred interpretation is that the carnotite formed by evaporation of shallow groundwater prior to incision of the Colorado River and lowering of the regional saturation level.

### **PROFESSIONAL CERTIFICATIONS**

Certified Nuclear Testing Equipment Operator #11671  
Certified Infrared Thermographer (Level III) #3156  
Airline Transport Pilot, Rotorcraft/Helicopter #530385654  
Certified Flight Instructor, Rotorcraft/Helicopter #530385654CFI  
Airframe and Powerplant Mechanic #530385654

### **PROFESSIONAL HISTORY**

Petroleum Helicopters, Inc., Pilot, 1998-date  
Papillon Grand Canyon Helicopters, Pilot, 1997  
Woodward-Clyde Federal Services, Senior Project Hydrogeologist, 1991-1997  
Helicopter Services of Nevada, Pilot/Mechanic, 1990-1991  
Mifflin & Associates, Inc., Associate/Hydrogeologist, 1986-1989  
Desert Research Institute, Assistant Research Professor, 1985-1986  
Coffey & Partners Pty. Ltd., Senior Hydrogeologist/Geochemist, 1984  
Intera Environmental Consultants, Staff Consultant, 1983  
Bendix Field Engineering Corp., Geologist & Research Geoscientist, 1979-1982

### **REPRESENTATIVE EXPERIENCE**

Dr. Johnson has over 20 years of full-time professional experience as a hydrogeologist.

Currently, he divides his time between flight operations as an emergency medical services (EMS) pilot with AirEvac Services (a subsidiary of Petroleum Helicopters, Inc.) in Phoenix, and activities

related to the Calpine Project. He relocated temporarily to fly for the National Science Foundation in Antarctica in 2001.

Dr. Johnson served for over five years as Senior Project Hydrogeologist in the Yucca Mountain Site Characterization group of Woodward-Clyde Federal Services in Las Vegas. In this position he was responsible for integration of field activities from numerous technical disciplines, including development of staff positions on fluid-flow modeling and issue resolution strategies. The Site Characterization Program is a ten year effort to assess the suitability of Yucca Mountain, Nevada, as the host environment for a high-level radioactive waste repository.

Previously, Dr. Johnson worked as a consultant to the Nevada Nuclear Waste Project Office while employed with Mifflin & Associates, Inc., a private consultancy, and with the Desert Research Institute (University of Nevada System). Additional duties at these positions included water quality and water resource evaluations for utility companies and the mining industry, and occasional graduate-level teaching assignments.

He was employed as Senior Hydrogeologist/Geochemist with Coffey & Partners Pty. Ltd. in Sydney, Australia, and contributed to a variety of mine dewatering, environmental, and corrosion-related evaluations. As a Staff Consultant with Intera Environmental Consultants in Houston, he contributed to performance assessment modeling of regional ground-water flow at candidate salt-repository sites in Texas and Louisiana, and to evaluations of the validity of ion-activity approximations at high ionic strengths.

At Bendix Field Engineering Corp., he contributed to three (3) quadrangle evaluations for the National Uranium Resource Evaluation (NURE) Program, and was Principal Investigator on the Las Vegas NTMS Quadrangle Evaluation. He designed the ground-water monitoring network for the Monticello Facility under the Uranium Mill Tailings Remedial Action (UMTRA) Program, and conducted interference tests and modeling analyses using production wells to evaluate aquifer parameters.

Dr. Johnson is an experienced professional pilot, rotary-wing flight instructor, and a licensed airframe and powerplant mechanic. As a Certified Infrared Thermographer, he has used modeling analyses to develop a thermal-barometric time constant for barometric pumping in the vadose zone near Yucca Mountain. The properties under study will govern the modes of heat and moisture redistribution in the partially-saturated rock above a nuclear waste repository.

## **PUBLICATIONS**

Hurley, B. W., Johnson, C. L., Cupp, G. M., Mayerson, D. L., Dodd, P. A., and Berg, J. C., 1980, Uranium Resource Evaluation, Reno Quadrangle, Nevada and California: U. S. Dept. of Energy Open-File Report PGJ/037(81).

Johnson, C., and McKay, W. A., 1981, Influences of the Miocene Horse Spring Formation on

Groundwater Quality in the Southern Nevada Region: Proceedings of the 10th Annual Rocky Mountain Ground-Water Conference, Laramie, Wyoming, p. 55 (Abs.).

Johnson, C., 1981, Structural History of the Great Basin: in Bender, Gordon L. (ed.), 1981, Research Handbook on the Deserts of North America; Greenwood Press, Westport, Conn. (a division of Congressional Information Service, Inc.).

Johnson, C. and Glynn, J., 1982, Uranium Resource Evaluation, Las Vegas Quadrangle, Nevada, Arizona and California: U. S. Dept. of Energy Open-File Report PGJ/F-1211(82).

Johnson, C. and Kearl, P., 1982, Hydrologic Measurements: in BFEC Technical Measurements Staff and Mary Gerry White, 1982, Review of Selected DOE Remedial Action Field Measurement Procedures for the Summer of 1982; U. S. Dept. of Energy.

Luning, R. H., Penley, H. M., Johnson, C. L., and Dotterer, F. E., 1981, Uranium Resource Evaluation, Kingman Quadrangle, Arizona, Nevada and California: U. S. Dept. of Energy Open-File Report PGJ/137(81).

McKay, W. A. and Johnson, C., 1981, Hydrogeochemistry of Fault-Related Thermal Springs in the Black Canyon-Hoover Dam Area, Nevada and Arizona: Proceedings of the 10th Annual Rocky Mountain Ground-Water Conference, Laramie, Wyoming, p. 56 (Abs.).

Johnson, C., 1990, Infrared Imaging at Yucca Mountain: Evidence of a Potentially Disqualifying Condition (Abs.): in Minimizing Risk to the Hydrologic Environment, American Institute of Hydrology.

#### **CONSULTING REPORTS (Sole Author or Major Contributor)**

Intera Environmental Consultants, 1983, Data Evaluation and Recommendation for Performance Assessments of the Preferred Site in the Palo Duro Basin; Regional/Local Geochemistry, Report TR-24, April 1983, pp. 35-42.

Intera Environmental Consultants, 1983 Second Status Report on Regional Groundwater Flow Modeling for the Palo Duro Basin, Texas; Report TR-31, October, 1983, 85 p.

Intera Environmental Consultants, 1983, Second Status Report on Regional Groundwater Flow Modeling for Vacherie Dome, Louisiana.

Coffey and Partners, 1984, Vickery Joint Venture-Vickery Coal Project-Interpretation of Vickery Hydrogeochemical Data; Report H131/1-AA, June, 1984, 35 p.

Coffey and Partners, 1984, Broken Hill Proprietary Co. Ltd. - Proposed Bloom Caster Development - Geotechnical Report; Hydrogeological Design Parameters, Report N1940, August, 1984, pp. 4-8.

- Coffey and Partners, 1984, Feez Ruthning and Co./Alpair Pty. Ltd. - Proposed Cattle Feedcot - Felton East; Hydrogeological Assessment, Report B13374/1, September, 1984, 29 p.
- Coffey and Partners, 1984, Denham Coal Management, Gordonstone - A to P 389C Hydrogeological Assessment, Report H138/1, September 1984.
- Coffey and Partners, 1984, Morgan Talbot and Assoc. Pty. Ltd. - Hydrogeological Assessment Lot 3 DP556345 - Falconbridge, Report H141, 1-AA, November, 1984.
- Coffey and Partners, 1985, Woodcutters Joint Venture - First Status Report on Trial Dewatering, Woodcutters Mine, N. T.; Report H122/5-AA, January, 1985.
- Coffey and Partners, 1985, Woodcutters Joint Venture - Second Status Report on Trial Dewatering, Woodcutters Mine, N. T. (includes statement of monitoring strategy); Report H122/5-AB, February, 1985.
- Coffey and Partners, 1985, Woodcutters Joint Venture - Permeability Testing at Tailings Impoundment Site, Woodcutters Mine, N. T.; Report H122/5-AC, February, 1985.
- Coffey and Partners, 1985, Gordon Robilliard & Assoc./Baulkham Hills Shire Council, Hydrogeologic Assesment, Lot 1DP 550165 and Portion 379, Parish of Nelson; Report H146/1-AA, February, 1985.
- Coffey and Partners, 1985, Radio Transmission Engineering Pty. Ltd., Corrosion of Buried copper at 2SM Antenna, Homebush, N. S. W.; Report S7549/1-AB, March, 1985.
- Johnson, C., 1986, Nevada Power Company-Reid Gardner Pond Monitoring Study: Desert Research Inst. Water Resources Center, Unpubl. Rpt., July, 1986, 49 p.
- Johnson, C., and Brick, C., 1986, Construction, Development and Testing of the NPC "Mesa Wells" EH-2 and EH-2A: Desert Research Inst. Water Resources Center, Interim Rpt. Dated July 31, 1986, 19 p.
- Johnson, C., Mifflin, M., Johnson, R.J., and Haitjema, H., 2001, Hydrogeologic and Groundwater Modeling Analyses for the Moapa Paiute Energy Center, Nevada.: Mifflin & Assoc. Inc., January, 2001.
- Mifflin, M. D., Johnson, C. L., and Johnson, R. J., 1989, Hydrogeologic Assessment - Upper Muddy River Valley, Nevada: Mifflin & Assoc., Inc., February, 1989.