DAVID R. HARGIS, PhD, RG

SUMMARY OF EXPERIENCE

Professional experience in hydrogeology and geology since 1969. President and Chief Executive Officer of Hargis + Associates, Inc. since 1979. Manages, supervises, and provides technical guidance for professional staff of hydrogeologists, engineers, chemists, regulatory specialists, and environmental scientists for a wide range of projects throughout the United States. Provides expert advice to clients on groundwater resource availability and development, as well as soil and groundwater contamination issues involving PRP identification; sources, timing, fate, and transport of contaminants; cost allocation; and remediation of soil and groundwater.

EDUCATION

- Ph.D., Hydrology and Water Resources, University of Arizona, Tucson, Arizona, 1979.
- M.S., Geosciences-Hydrology, University of Hawaii, Oahu, Hawaii, 1971.
- B.S., Geology, University of Hawaii, Oahu, Hawaii, 1969.

PROFESSIONAL AFFILIATIONS

- American Geophysical Union
- American Society for Testing and Materials
- American Water Resources Association
- American Water Works Association
- Association of Ground Water Scientists and Engineers
- International Association of Hydrogeological Sciences
- San Diego Association of Geologists
- Society for Mining, Metallurgy, and Exploration

PROFESSIONAL REGISTRATION

- Registered Geologist, Arizona, 1977
- Registered Geologist, California, 1983
- Registered Geologist, Virginia, 1984

EXPERIENCE RECORD

1979 to Present	President and Chief Executive Officer, and Principal Hydrogeologist, Hargis + Associates, Inc., San Diego, California.
1987 to 1990	Instructor, Hazardous Materials Management Certification Program, University of California at San Diego.
1974 to 1979	Hydrogeologist, Harshbarger & Associates, Inc. Consultants in Hydrogeology and Water Resources, Tucson, Arizona.

1973 to 1974	Teaching Assistant, Department of Geology, University of Arizona, Tucson, Arizona.
1972 to 1973	Geologist, Union Oil Company.
1972 to 1973	Hydrogeologist, Harshbarger & Associates, Inc., Consultants in Hydrogeology and Water Resources, Tucson, Arizona.
1971 to 1972	Research Associate, University of Arizona, Tucson, Arizona.

REPRESENTATIVE PROFESSIONAL ASSIGNMENTS

Soil and Groundwater Contamination Studies

- ▷ Provided direct oversight and management of Remedial Investigation/Feasibility Study (RI/FS) investigations at Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Superfund sites in California, Arizona, and Texas, including Lockheed Corporation/ San Fernando Valley NPL Site, Burbank Operable Unit, Burbank, California; Montrose Chemical Corporation, Torrance, California; General Dynamics/U.S. Air Force Plant No. 4, Fort Worth, Texas; Hughes Aircraft/ U.S. Air Force Plant No. 44, Tucson, Arizona; and Beckman Instruments Site, Porterville, California. Negotiated approval of RI/FS work plans on behalf of PRPs with USEPA and state regulatory agencies; evaluated, analyzed, and presented results of investigations; and prepared evaluations of remedial action options.

- ▷ Assessed, analyzed, and presented opinions as an expert witness to various clients and PRP Groups on Superfund and complex environmental projects involving soil contamination and regional groundwater contamination from aerospace, electronic, chemical, and pesticide manufacturing operations at sites throughout the United States.

- ▷ Evaluated the occurrence, characteristics, and mobility of DNAPL in alluvial and fractured hard-rocks at sites throughout the United States.

- ▷ Provided technical guidance and supervision for an RI/FS involving soil and groundwater contaminated with chromium at the Marley Cooling Tower Company Site, Stockton, California.

- ▷ Planned and directed a site investigation involving soil and groundwater contaminated with pesticides at two state Superfund sites near Bakersfield, California, for Brown & Bryant, Inc.

- ▷ Designed and supervised environmental monitoring programs for CERCLA and Resource Conservation and Recovery Act (RCRA) sites, power plants, mining companies, and various industrial facilities in California, Arizona, and Texas.

- ▷ Provided expert technical review and critique of RI/FS investigations performed by a USEPA contractor at the Stringfellow Superfund Site, Riverside County, California.

Groundwater Supply and Development _____

- Conducted geologic mapping and reconnaissance for a hydrologic study in central Colorado for industrial water supply.

- Evaluated complex surface water-groundwater interactions in north central Nevada for a major mining company to evaluate the effects of mine dewatering and water disposal on water levels and water quality on wetlands and ranch land.

*Remedial Design and Implementation*_____

- Designed reclamation wellfields to recover groundwater contaminated with metals and VOCs for industrial facilities located in California and Arizona.

- Designed injection wellfields to dispose of treated effluent for industrial facilities located in California and Arizona.

- Designed a DNAPL recovery system at the Montrose Chemical Corporation Superfund Site in Torrance, California.

*Cost Allocation/Litigation Support/Expert Witness Testimony*_____

- Provided technical support and expert witness testimony during depositions and jury trial for recovery of costs for environmental impairment at an industrial site from a major insurance carrier for Hughes Aircraft Company in the Los Angeles area.

- Provided technical support and expert witness testimony during depositions and jury trial for cost recovery from various insurance companies for FMC Corporation concerning hydrogeologic conditions and the nature, extent, and timing of soil and groundwater contamination at six sites involved in pesticide formulation and manufacturing across the United States.

- Provided technical counsel and litigation support for negotiations with DTSC and PRPs during litigation involving a state Superfund site in Fresno, California. Evaluated the nature, extent, timing, and potential sources of soil and groundwater contamination and also methods to allocate costs for remediation.

- Compiled the site history and timing of facility operations and chemical use data for each PRP; prepared historical land use maps; presented technical graphics to legal counsel; and formulated and presented a cost-allocation strategy at a bench trial in Federal District Court for a Superfund site in California.

- Provided technical support to legal counsel in tort suits, property diminution issues, and trespass issues related to regional groundwater contamination plumes. Provided expert opinions; prepared expert reports; and provided expert witness testimony in these types of matters in State and Federal courts.

PUBLICATIONS

Leonhart, L.S., D.R. Hargis, and A. Forrest, 2002. "Wet Water vs. Paper Water: Groundwater Management in Southern Arizona, A Case Study." Abstract accepted for presentation at the IAH International Conference on Balancing the Groundwater Budget. May 12-17, 2002. Darwin, NT, Australia.

Niemeyer, R.A., M.A. Palmer, and D.R. Hargis. 1993. "Extraction Well Design for DNAPL Recovery." Proceedings of the 7th National Outdoor Action Conference on Aquifer Restoration, Groundwater Monitoring, and Geophysical Methods, pp. 193-206. National Groundwater Association, Dublin, Ohio, May 25-17, 1993.

Niemeyer, R. A., M. A. Palmer, and D. R. Hargis. 1992. "An Innovative Well Design for DNAPL Recovery from the Saturated Zone." Poster Presentation, Aquifer Restoration: Pump-and-Treat and the Alternatives. Las Vegas, Nevada, September 30, 1992.

Leonhart, L.S. and D.R. Hargis, 1990. "The Hydrogeologic Character of Sedimentary Interbeds in Flood Basalts" in Proceedings of the International Conference on Groundwater in Large Sedimentary Basins, H. Ventriss, editor; Australian Water Resources Council Conference Series No. 20, July 9-13, 1990. Perth, Australia.

Hargis, D. R. 1982. "Field Investigation of Transport of Volatile Organics." Proceedings of the Deep Percolation Symposium, Scottsdale, Arizona. October 26, 1982; Arizona Department of Water Resources Report No. 4.

Harshbarger, J. W., and D. R. Hargis. 1981. "Hydrology and Mining in the Tucson Area." Mining Engineering 33(11): June 1981.

Hargis, D. R., and C. A. McCauley. 1981. "Results of Acidizing Water Wells in Arizona." Water Resources Bulletin June 1981.

Hargis, D. R. 1980. "Application of a Digital Computer Model to Mine Dewatering Design." Minneapolis, Minnesota: Paper presented at the fall Meeting and Exhibit, Society of Mining Engineers of AIME, October 22-24, 1980.

Hargis, D. R. 1979. Analysis of Factors Affecting Water Level Recovery Data. Ph.D. dissertation, University of Arizona, Tucson, Arizona.

Hargis, D. R., and J. W. Harshbarger. 1975. "Non-Laminar Flow Head Losses in a Production Well Field." Paper presented at 1975 fall Meeting of American Geophysical Union, Hydrology Section, San Francisco, California.

Hargis, D. R., and F. L. Peterson. 1974. "Effects of Well Injection on a Basaltic Ghyben-Herzberg Aquifer." Groundwater 12(1)4-9.

Peterson, F. L., and D. R. Hargis. 1973. "Subsurface Disposal of Storm Runoff." Journal - Water Pollution Control Federation 45(8): August 1973.

Peterson, F. L., and D. R. Hargis. 1971. "Effect of Storm Runoff Disposal and Other Artificial Recharge to Hawaiian Ghyben-Herzberg Aquifers." Honolulu, Hawaii: University of Hawaii, Water Resources Research Center; Technical Report No. 54.

Hargis, D. R., and F. L. Peterson. 1970. "Artificial Recharge Practices In Hawaii." Honolulu, Hawaii: University of Hawaii, Water Resources Research Center; Technical Report No. 43.