Curriculum Vitae

PHILIP R. GRANT, PG

Professional Qualifications

Phil Grant has over thirty-five years of combined experience in the fields of environmental consulting, underground injection, ground water hydrogeology, geophysical surveying as well as oil and gas exploration and development. His experience has been obtained through project management of numerous injection well and ground water projects, by working as a consultant to private industry, through the management of exploration and development departments of several independent oil and gas firms, and by instructing both collegiate and industrial courses in energy resources and environmental geology. He has worked on projects in Texas, New Mexico, Louisiana, Arkansas, Mississippi, Illinois, Ohio, West Virginia, California and Oregon.

Mr. Grant has managed the development of state hazardous and non-hazardous waste injection well permit applications, and federal "no-migration" petitions. He has been responsible for developing all aspects of the permit and petition applications, including subsurface mapping, waste front modeling, compatibility testing, developing operating parameters, area of review determination, and fulfilling all applicable state and federal regulatory requirements.

Mr. Grant has designed, performed and interpreted the data from numerous geophysical surveys at hazardous waste facilities throughout the Gulf Coast. He has extensive experience in the interpretation of Gulf Coast and West Texas seismic surveys. He has additional experience in soil and groundwater sampling. He also has substantial experience in the preparation of in-situ uranium mine permit applications and production area authorizations, including the delineation of the subsurface geology and aquifer characterization through hydrologic testing and analysis.

Mr. Grant has been actively involved in the evaluation of several hazardous waste storage facilities in and around salt domes along the Gulf Coast. He has performed extensive geologic mapping and interpretation related to the feasibility of storage at these sites. Mr. Grant has mapped and been involved in the drilling of deep geologic prospects for the petroleum industry. As part of this work, he has evaluated the geology during and after drilling through the use of the geophysical logs, whole and sidewall cores, drillstem tests and reservoir testing.

Education

B.S., Biology, Wheaton College, Wheaton, Illinois; 1975

M.S., Geology, Washington State University, Pullman, Washington; 1980

Experience and Background

1992-Present Project Manager/Senior Geologist
Terra Dynamics Incorporated, Austin, Texas.

Specific experience includes:

- Preparation of Texas Conservation on Environmental Quality (TCEQ) Class I injection well permit and permit renewal applications and associated technical reports.
- Preparation of U. S. Environmental Protection Agency (USEPA) "No-Migration" Petition applications for Class I hazardous injection wells.
- 3-Dimensional finite differential flow and transport modeling, of hazardous constituents in a confined ground water system.
- Reservoir analyses and preparation of TCEQ and USEPA annual fall-off test reports.
- Interaction with and response to; regulatory agency requests related to permit and petition issues.
- Planning and performing field investigations of subsurface geologic and hydrologic conditions at active and proposed waste disposal site facilities.
- Preparation of fault and lineament studies at hazardous waste treatment facilities.
- Preparation; of mine permit and permit area authorization applications for in-situ uranium mine facilities.

1987-1992 Geologist, IT Corporation, Austin, Texas.

Specific experience included:

- Preparation of technical reports in support of permit/petition applications for hazardous and nonhazardous waste injection wells in Gulf Coast and west Texas, Ohio and Illinois.
- Preparation of yearly reservoir pressure status/analysis reports for injection wells.

- Geologic investigations of deep and shallow aquifers at commercial waste disposal site facilities.

- Development and the implementation of remedial investigations at a commercial refinery sites.

- Geophysical: survey design, data collection and interpretation. These include magnetometer, conductivity, surface resistivity and gravity surveys. Survey tasks included locating buried landfills, drums and cylinders, well casings and contaminant plumes.

1984 - 1987 Consulting Geologist, Austin, Texas.

Specific experience included:

- Consultant; to industry, government, individuals and schools in areas of oil and gas prospect origination and developmental drilling, groundwater and hydro-environmental assessments, and economic feasibility studies.

1982 - 1984 Senior Geologist, Clark Exploration and Production Company, Inc., Austin, Texas.

Specific experience included:

- Responsible for coordination of exploration effort with management and supervision of geologic staff. Duties included prospect generation and presentation, submittal evaluation, geologic staff training, drilling program development, wellsite geology. Experience included:

- Prospect generation along the Texas Gulf Coast (Wilcox, Yegua, Jackson, Vicksburg and Frio trends).

1980 - 1982 Staff Geologist, TDC Exploration, Inc., Austin, Texas.

Specific experience included:

Areas of responsibility included Edwards, Wilcox and Frio trends (upper Texas Gulf Coast), Austin Chalk trend (Central Texas), Woodbine trend (east Texas), and Devonian Shale production (West Virginia and Ohio). Duties included:

- Regional trend studies
- Prospect generation

- Farmout evaluation
- Wellsite geology

Registrations/Certifications

State of Texas, Professional Geoscientist No. 1338
Commonwealth of Kentucky, Professional Geologist No. 1161
State of Washington, Geologist No. 1892

Professional Affiliations

American Association of Petroleum Geologists
Houston Geological Society
South Texas Geological Society

Publications

Grant, Philip R., 1980, "Limestone Units Within the Triassic Wild Sheep Creek Formation of the Snake River Canyon," Unpublished Master's Thesis, Washington State University, Pullman, Washington.