

Erwin Melis, PhD, PG

Senior Hydrogeologist

emelis@shomaker.com

Dr. Melis has more than 10 years of experience as a field geologist and has been working for JSAI for about 8 years. Dr. Melis is a Project Hydrogeologist with JSAI and has a broad range of experiences which include, geologic mapping, well construction oversight and systematic geologic interpretation.

Water Resource Development: Characterization of geologic and hydrogeologic data for areas in the Rocky Mountains, the Colorado Plateau, the Cordilleran, and the central United States leading to well siting recommendations, evaluation of groundwater supply, investment potential, litigation support, and evaluation of groundwater-in-storage for new developments.

Groundwater Flow Modeling: Development of site-specific groundwater flow models to evaluate groundwater supply, support environmental permitting, groundwater drawdown, and inflow calculations for trenching.

Permitting: Technical support with permit applications submitted to the New Mexico Office of the State Engineer related to exploratory, replacement, and monitoring wells. Technical support with permit applications submitted to the New Mexico Oil Conservation Division related to Salt Water disposal and injection wells.

Water Supply Well Projects: Developed exploratory, production and monitoring well designs and aided in technical well drilling specification development (as technical support for the Project Engineer) for water supply projects, brackish water supply projects, and wells completed in artesian aquifers with well casing diameters of up to 16-inches and depths up to 2,000 ft. Management of water supply well projects (as technical support for Project Engineer), including management of well drilling, completion, development, test pumping, and pumping schedule management to minimize adverse water quality issues.

Geologic, Hydrologic, and Environmental Field Services: Water quality sampling, soil sampling, and bedrock sampling, streamflow measurements, pumping tests, and oversight of drilling and construction of water supply wells and monitoring wells. Geologic mapping, fracture orientation mapping, and airphoto interpretation resulting in the production of geologic maps and cross-sections in support of hydrogeologic evaluations. Site evaluations in support of well placement as well as to map recognized environmental conditions (Phase I according to ASTM E1527-13). Environmental Site Assessment (Phase II according to ASTM E1903-97 (reapproved 2002) in support for Real Estate transactions.

Groundwater Monitoring: Directly involved with the completion of more than a dozen shallow boreholes and monitoring wells utilizing casing advance and auger drilling methods for verification of environmental impacts, depth to water, unsaturated zone thickness, and sub-surface geology for among others, the New Mexico Environment Department, the Environmental Protection Agency, the New Mexico Oil Conservation Division and the California Board of Water Resources.

Expert Testimony: Dr. Melis has provided expert witness testimony at the Lincoln County Planning and Zoning meeting, the Bernalillo County Commission meeting, and the Rio Arriba County Commission meeting.

2611 BROADBENT PKWY NE, ALBUQUERQUE, NM 87107
505-345-3407 • www.shomaker.com

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WATER-RESOURCE AND ENVIRONMENTAL CONSULTANTS

EDUCATION

Ph.D., Geology, 2006
University of Maine, Orono,
Maine

M.S., Geology, 2001
New Mexico Institute of Mining
and Technology, Socorro, NM

B.S., Geology *cum laude*, 1996
University of Massachusetts
Amherst, MA

REGISTRATIONS

Professional Geologist,
California, No. 8870

American Institute of
Professional Geologists,
Certificate No. MEM-0937

AFFILIATIONS

American Water Resource
Association, (AWRA)

National Ground Water
Association (NGWA)

Geological Society of America
Member of Structural Geology &
Tectonics Division

*Phi Beta Kappa, the academic honor
society - Member of (elected May 1996)*