

ROBERT A. SEDIVY

Applied Geosciences and Environmental Management Section
Environmental Science Division
Argonne National Laboratory

Education:

Graduate Studies	University of South Carolina, Hydrogeology, 1993-1995
M.S.	Georgia Inst. of Tech, Geophysical Science/Geochemistry, 1979
B.S.	Case Western Reserve University, Geology, 1977

Professional Experience:

1995-present	Hydrogeologist Environmental Science Division Argonne National Laboratory
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Direct and participate in the on-site characterization, monitoring, and remediation of contaminated sites under USDA program sponsorship. Interpret and integrate hydrogeologic, geologic, geochemical, and physiographic data to develop conceptual and numerical models of ground water flow and contaminant transport within complex hydrogeologic systems. Apply these models to the investigation of remedial and water-supply alternatives, and present technical recommendations to program sponsors. Investigate and develop innovative remedial technologies for implementation at program sites.

Summary of Previous Experience:

1993-1995	Univ. of South Carolina, Columbia, S.C.
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Research Assistant Professor, Earth Sciences and Resources Institute. Developed groundwater flow and contaminant transport models of complex hydrogeologic systems to support government-sponsored programs. Developed and presented courses on hydrogeologic site characterization and numerical groundwater modeling. Conducted geologic, geochemical, thermal history, and petroleum generation modeling studies of hydrocarbon basins under funding from private industry sponsors.

1991-1992	British Petroleum (UK) Research Center Sunbury-on-Thames, Surrey, England
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Team Leader, Applied Geochemistry Group, Exploration Technology Branch. Supervisor to fourteen analytical laboratory staff. Budgeting, scheduling, and technical review of all geochemical analysis activities on behalf of BP Exploration, UK and International. Developed and implemented geochemical characterization programs for exploration and production sites, in

conjunction with geological and geophysical staff. Developed and implemented a user-friendly, geochemical database system containing information on over 65,000 petroleum.

1988-1991 BP Exploration (UK), London, England

Exploration Geochemist, Frontier and International Div. Responsible for definition and integration of geochemical studies as part of exploration effort, assigned to Middle East, West African, and producing regions. Carried out depositional history, thermal history, and petroleum generation and migration studies for diverse structural and sedimentary provinces. Assisted in technical risk assessment for the evaluation of prospective exploration and development targets. Developed hydrocarbon seal capacity and petroleum migration models for carbonate petroleum reservoirs of Abu Dhabi. Developed reservoir compartmentalization and petroleum phase prediction models for several U.K. North Sea oil fields.

1981-1988 Standard Oil Production Company (now BP America)
Cleveland, Ohio and Dallas, Texas

Petroleum Geochemist. Provided source rock and petroleum geochemical data analysis and interpretation for all U.S. exploration and production activities. Designed, developed, and maintained stable isotopic analysis laboratory; supervised lab staff and operations. Co-developer of novel, pyrolysis-stable isotope based oil-source rock correlation technique. Assisted in the development of laboratory and field techniques for the handling, geochemical, and petrophysical analysis of fluid-saturated cores collected under reservoir pressure.

1979-1981 Teledyne Isotopes, Inc., Westwood, New Jersey

Assistant Manager, Mass Spectrometry Services. Supervisor to six permanent technical staff. Carried out isotopic analyses of commercial and weapons-grade uranium and plutonium for commercial and government clients. Performed wet chemical and mass spectrometric analyses required for K/Ar, Rb/Sr, U/Pb, and Pb/Pb radioactive isotope geochronology operations. Interpreted and reported results on behalf of commercial clients. Designed and built high-vacuum sample handling and mass spectrometer systems for K/Ar dating.

Research Interests:

Development and application of numerical groundwater flow and contaminant transport models
Development of practical and cost-effective technologies for treatment of contaminated
groundwater systems