



BONNIE S. PERCY, P.E.

Qualifications

Registered Professional Engineer skilled in practical reservoir engineering, hydrology, environmental engineering, numerical simulation, pressure transient analysis and as an expert witness for state hearing.

Education

- B.S., Chemical Engineering, Texas A&M, 1980

Professional Certifications

- Registered Professional Engineer (Chemical)
 - Texas #63158
 - Wyoming #6360
- OSHA 29 CFR 1910.120 (40-Hour Course), February 2006
- Annual 8-Hour Refresher, May 2008

Professional Memberships

- Wyoming Geological Association (WGA)
- Society of Petroleum Evaluation Engineers (SPEE)
- Society of Petroleum Engineering (SPE)

Professional Career

Gene R. George & Associates, Inc.

2001-**Current**

Groundwater Engineer, Reservoir Engineer

- Managed unitization projects for secondary and tertiary recovery programs.
- Presented exhibits and served as expert engineering witness at hearings before WOGCC.
- Prepared permit applications and provided expert witness testimony to the WOGCC for over 50 Class II water disposal wells in Natrona, Fremont, Sweetwater, Campbell and Sublette Counties, Wyoming.
- Analyzed pressure fall-off tests using Pressure Transient Analysis (PTA) for annual WDEQ monitoring reports.
- Prepared in-depth engineering reports for five trial cases involving mineral/land disputes.
- Determined reserves and forecasted production for various coal bed methane properties in the Powder River Basin using isotherm/volumetric analysis methods in analogy to typical well/decline methods.

Power Resources Inc.

1996-2000

Hydrologist and Reservoir Engineer

- Conducted hydrologic testing of the Wasatch Formation and permitted three new well fields at the Highland Uranium Project developing a total of 3.5 Million pounds of Uranium reserves. Supported development, operations and restoration at the Highland Uranium Project with wellfield design and balancing, hydrologic modeling and pressure transient analysis.
- Provided technical support and operations design for the Gas Hills Project Permit Application and the Ruby Ranch Project Permit Application which have 25 Million pounds of Uranium reserves in the Wasatch and Ft. Union Formations.

- Supported development, operations and restoration at the Highland Uranium Project with well field design, well field balancing, hydrologic modeling, and pressure transient analysis.

Maxim Technologies, Inc. (*Huntingdon, Chen-Northern*)

1992-1996

Environmental Engineer

- Conducted numerous Phase I ESAs of oil and gas, commercial, light industrial and residential properties including review of NPDES permits, SPCC Plans, compliance issues and norm surveys.
- Managed Phase II ESAs including two site investigations for Conoco, Inc. for the releases of refined petroleum products from pipelines. The projects involved waste, groundwater, soil and air sampling and analyses, determination of contamination extent, recommended improvements in chemical handling procedures, assessment of natural attenuation and evaluation of applicable remediation alternatives.
- Served as the interim environmental coordinator for Black Thunder Mine, Thunder Basin Coal Company, a subsidiary of ARCO, Inc. Responsibilities included tracking, collection, storage, and shipment for disposal of hazardous waste, used oil and waste grease generated at the mine using RCRA and DOT guidelines.

Oryx Energy Company (*Sun Company, Inc.*)

1980-1992

Reservoir Engineer

- Developed five Morrow and Atoka deep gas discoveries utilizing pressure transient analysis, material balance P/Z and volumetrics. This resulted in the drilling of 10 wells at 1.5 million dollars each; eight were producers.
- Testified as an expert witness at hearings before the New Mexico Oil Conservation Division. Served on technical committees for three proposed secondary units.
- Prepared feasibility studies to implement secondary recovery projects or infill drill existing projects. Coordinated development of two new waterfloods, including pattern optimization and the drilling of 30 secondary recovery wells. Monitored existing water floods, recommending recompletions, pattern changes and injection rates as needed. Evaluated injection performance using pressure fall-off testing and injections profiles.
- Supervised four reservoir simulation engineers while concurrently performing simulation projects. Conducted one-on-one training of new simulation engineers as well as coordination and support of companywide simulation workstation training.
- Performed a reservoir study of a \$10 million gas cycling project in the Dakota formation of Wyoming using a compositional simulator in support of technical committee objectives.
- Predicted the waterflood performance of eight proposed waterflood projects in Oklahoma, Texas and offshore using Nolen's VIP, a black oil simulator.
- Simulated steam injection for heavy oil in California using SSI's THERM, a thermal model. Doubled recovery by recommending a change from cyclic to continuous steam injection.

Continuing Education

- Unconventional Gas Reservoirs: Shale, CBM and Tight Gas, SDSMT, 2009
- Equation-of-State Phase Behavior Simulation (CO₂), CMG, 2008
- Petrophysical Analysis, LESA, 2007
- Reservoir Simulation, CMG, 2006
- Reciprocal Productivity Index, PSI, 2002
- Fundamentals of Groundwater Geochemistry, NGWA, 1998
- Visual MODFLOW, NGWA, 1997
- Bioremediation Engineering Design and Applications, 1994
- Bioventing Principles, Applications and Case Studies, 1994
- AHERA Asbestos Inspector/Management Planner, 1993
- 40-Hour OSHA Training CFR 1910.120, 1992
- Hazardous Materials/Waste Management Certification, OSU, 1992
- Water Flooding: Performance, Predictions and Surveillance, Smith and Cobb, 1990
- Well Test Analysis, Ragahvan 1985, and Oryx 1990

- Numerical Simulation, JS Nolen & Associates, 1988

Publications

- Percy, Bonnie. *Hydrology and Permeability Testing in the Fort Union Case Study of the H-Wellfield, Highland Uranium Project, Wyoming*, 1999, WGA Guidebook Coalbed Methane and the Tertiary Geology of the Powder River Basin, Wyoming and Montana, pp. 141-153.

Litigation History

Expert reports for the following trial cases over the last seven years were provided by Mrs. Percy (none of which necessitated testimony in trial):

- *Sunoil Ltd. v. Big Snowy Resources, L.P. et. al.*, In the Supreme Court of British Columbia, Docket No. S141392 (2014)
- *BP America Production Company v. Southland Royalty Company LLC*, Wyoming Third Judicial District Court, Sweetwater County, Wyoming, Docket #C-17-313-J (2018)
- *ADH Energy Investments, LLC and Peak Resource Management, Inc vs. Massif Oil & Gas LLC and MCL1 Oil and Gas Wyoming LLC*, Wyoming Sixth Judicial District Court, Campbell County, Wyoming, Civil Action No. 37766 (2019)
- *Robert T. Watt and Robert V. Watt, et al vs. True Oil, LLC*, Sixth Judicial Court, Crook County, Wyoming Civil Action No. 8637 (2020)
- *Anadarko vs. Dennis A. Black, et al*, Office of Administrative Hearings (OAH), State of Wyoming, OAH Docket #18-083-055, which originated at the WOGCC as various dockets including WOGCC Docket #309-2018.