



## CLAUDE M. (MIKE) RIGHTMIRE

Petroleum Engineer

B.S. – Biological Sciences, University of Alaska

B.S. – Petroleum Engineering, Texas A&M University

After graduation, Mr. Rightmire joined ARCO Alaska as an Operations Engineer with responsibility in the Kuparuk Field, Alaska. In Alaska, he managed up to four multi-well drill sites designing and implementing well operations procedures that included hydraulic fracture stimulations, gas lift design and operation, production logging, and pressure transient testing. In 1987, he moved to the Kuparuk Reservoir Engineering group where he designed and coded a surface facility model for integration with a full-field numerical simulation of the Kuparuk reservoir. In 1989, Mr. Rightmire transferred to the Reservoir Development group at ARCO Oil and Gas Company's Research and Technical Services facility in Plano, Texas. He co-authored ARCO's training manuals and engineering guidelines for secondary recovery reservoir and operations engineering. He developed engineering software for evaluation of waterflood performance. His duties included planning and conducting many internal ARCO engineering training courses.

Mr. Rightmire moved to a newly formed Environmental Technology group at ARCO Exploration and Production Technology in 1992. As a Senior Research Engineer, he coordinated work schedules and managed budgets for several properties during assessment and remediation activities. He examined several reservoir depletion plans using gas and water displacement processes, participated in the evaluation of waterflood redevelopment opportunities in Russia and China, and provided reservoir engineering support and well planning studies for redevelopment of the Rhourde El Baguel Field in Algeria. Mr. Rightmire conducted recovery mechanism studies for the newly discovered Alpine Field in Alaska. This work included developing an equation-of-state for Alpine fluids and then conducting compositional pattern simulations to evaluate the performance of various oil recovery schemes.

Mr. Rightmire transferred back to the Environmental Technology group in 1997, which later spun off to form ARCO Environmental Remediation, L.L.C. His specialized technical contributions involved evaluation and management of economic risk and uncertainty. Mr. Rightmire developed statistical descriptions and discounted cash flow models using Monte Carlo methods to evaluate remediation scenario selection, engineering uncertainty, and cost and return variation.

In June 2004, Mr. Rightmire joined the staff of Pinnacle Technologies as a Senior Engineer and Project Manager. At Pinnacle he lead project management and key technical support for reservoir monitoring projects on thermal, EOR, and waterflood recovery processes. These projects integrated surface tiltmeter and microseismic data acquisition systems to identify reservoir volumetric changes and provide production event monitoring. He also managed microseismic and surface tiltmeter hydraulic fracture mapping projects in oil, non-conventional gas, and ultra-low permeability gas reservoirs. He also conducted studies comparing proppant for Pinnacle's parent company Carbo Ceramics Inc.

In December 2007, Mike Rightmire joined the staff at Forrest A. Garb and Associates. Mr. Rightmire is a Senior Petroleum Engineer leading reservoir and reserves studies for the firm.