

Petroleum Engineering / Geomechanics

<i>Expertise</i>	Petroleum Geomechanics / Petroleum Engineering
<i>Education</i>	Ph.D. (Mining Engineering), 1989 MSc. (Mining Engineering), 1983 B.S. (Mining Engineering), 1981 University of Missouri-Rolla, Rolla, Missouri
<i>Honors & Awards</i>	Special Recognition Award, 2008: Eldfisk II Geomechanics Evaluation Special Recognition Award, 2007: Hydraulic Fracturing Stimulation School Special Recognition Award, 2006: Frontier Well Stimulation and Recruiting SPE Distinguished Lecturer 2003-2004 Phillips Technical Achievement Award, 1999: Ekofisk Subsidence Modelling Team Phillips Special Achievement Award, 1993: Formation Completion Task Force
<i>Affiliations/Memberships</i>	Society of Petroleum Engineers: Chief Editor, SPE Solids Injection Monograph (2005 - Present). Member: Program Committee, SPE ATW: Pore Pressure and Stress (2007); SPE Drilling & Completion Director Selection Committee (2006); Program Committee, SPE Forum: Well Failure (2006); SPE Monograph Committee (2005 - 2009); SPE Drilling & Completions Subcommittee (2005 - Present); SPE Annual Technical Conference Well Completion Committee (1990-1994). Local SPE Section Officer (2000-2002). Joint Chalk Research (JCR): Program Administrator (1996-1999). Project Leader: Deformation-Related Well Performance in Fracture Chalk (1997-1999); Compaction and Surface Subsidence (1993-1996). Member: Joint Chalk Research Geomechanics Expert Panel (1993 - Present). API: Member, Subcommittee for Long-Term Conductivity of Proppants (1991-1993)

Professional Experience

2009 - Present	Itasca Houston, Houston, Texas, Chief Engineer
1989 - 2009	ConocoPhillips (COP)
2002 - 2009	Principal Geomechanics Engineer, Wells Technology, Houston, Texas
2000 - 2002	Senior Principal Reservoir Engineer, Prod. Technology, Bartlesville, Oklahoma
1999 - 2000	Senior Reservoir Engineering Specialist, Prod. Technology, Bartlesville, Oklahoma
1997 - 1999	Senior Reservoir Engineering Specialist, Phillips Norway, Stavanger, Norway
1995 - 1997	Senior Reservoir Engineer, Phillips Norway, Stavanger, Norway
1993 - 1995	Associate Reservoir Engineer, Phillips Norway, Stavanger, Norway
1989 - 1993	Staff Reservoir Engineer, Prod. Technology, Bartlesville, Oklahoma
1988 - 1989	Southern Illinois University, Carbondale, Illinois Visiting Assistant Professor of Mining Engineering
1987 - 1989	New Mexico Institute of Mining & Technology, Socorro, New Mexico Assistant Professor, Mining Engineering
1982 - 1987	Haas & Associates Consulting, Rolla, Missouri Rock Mechanics Testing Laboratory Assistant
1982 - 1987	University of Missouri-Rolla, Rolla, Missouri Rock Mechanics Teaching Assistant
Summers 1984/1985	Rochester & Pittsburgh Coal Company, Indiana, Pennsylvania

Project Experience

Geomechanics: Led ConocoPhillips' geomechanics efforts in performing world-wide geomechanics evaluations and provided geomechanics support for world-wide completions/stimulation and drilling operations (Qatar, Indonesia, UK, Norway, USA (Alaska), Canada, Australia and Venezuela). Provided training on wellbore stability, hydraulic fracturing and completion technology for both new-hire and experienced engineers. Performed world-wide cuttings reinjection (solids injection) evaluations and provided on-going support for solids/waste disposal operations. Supported reservoir characterization efforts (particularly, geomechanics-related) for world-wide COP operations including geological characterization (fault/fracture geomechanics) and flow-model development (implementation and analysis of model compressibility issues).

Subsidence: Led and coordinated subsidence technical service and research within ConocoPhillips, co-venturers and external research firms. Communicated subsidence developments with co-venturers and Norwegian authorities. Developed and updated subsidence forecasts and risk analyses for the Ekofisk and Eldfisk Fields, evaluated field data for determination of causes and trends in subsidence, performed field compressibility evaluations and led subsidence and compaction forecasting efforts.

Project Management: Project Administrator for the Joint Chalk Research (JCR) Phase 5 Research Program, a 17-mmNOK joint industry program of investigation into improving recovery and operations of chalk reservoirs. Coordinated project groups for the geomechanics projects under JCR 6, drafted project descriptions and contractor modifications and contracts. Served as the lead technical liaison between ConocoPhillips and the JCR group.

Water Handling: Led the review team investigating produced-water handling for Phillips' PL018 fields and determined solutions to new regulatory restrictions.

Teaching / Mentoring: Served as Principal Instructor for the COP Global Wellbore Stability Course; Co-Instructor for the COP Well Stimulation Course and a Principal Instructor for the Completion Skills Development Program and Completions/Geomechanics at the COP Engineering Academy. Mentored young/new-hire engineers in petroleum geomechanics and well stimulations. Served as Assistant Professor for graduate- and undergraduate-level courses in mining engineering including undergraduate-level courses in surface mining and mine development, mine ventilation, introduction to mining and mechanics of materials and graduate-level courses in strata control/subsidence.