

ROBERT GRAHAM KNOLL
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Overview

As an independent consultant, Mr. Knoll acts as senior technical advisor on both domestic and international upstream projects. Duties include developing and delivering customized technical training programs, authoring technical manuals, well and project design and field operations counsel, and delivering internal asset team workshops for operators and service providers globally. Mr. Knoll also provides senior technical counsel for numerous "Joint Industry Projects" (JIP), and Government funded studies and technology demonstration projects.

Up till April 2007, all this activity was done under the auspices of Maurer Technology (MT), a wholly owned subsidiary of Noble Drilling in Houston. Since that time Mr. Knoll has reverted employment status back to that of a fully independent consultant. Most recently, his main pursuits were: acting as technical team leader for a major independent exploiting a deep gas-condensate Austin Chalk asset in east Texas with complex wells; as technical advisor for independent operators: one exploiting a heavy oil asset in Canada, a second exploiting the Fruitland Coal CBM asset in New Mexico, and a third active in central China. Over the last 4 years, acting as founding board member of a Native owned O&G entity active in the TAT reservation, holding approximately 1,000,000 acres of Bakken, Three Forks tight-light oil in North Dakota, U.S.A.

CAREER SUMMARY

Thirty five years of drilling project design and management, marketing, production, R&D, and technical training experience; featuring six years overseas in offshore exploration and development drilling, four years drilling engineering in the Arctic and offshore Eastern Canada, four years senior drilling and completions engineering in heavy oil and conventional oil and gas in western Canada. Activity over the last twenty years has been conducted primarily for MT and focused on new technology, technical training, and product and services marketing, horizontal/complex, multibranch, CBM and MPD drilling and completions technology applications globally.

**MAJOR
ACHIEVEMENTS**

- Mr. Knoll has been an independent consultant on drilling projects globally providing technical counseling and “second opinion” oversight to operators and state-owned entities since 1987. Recent projects included acting as “expert witness” on drilling tool patent litigation dealing with novel well designs and special stimulation technologies; others involved providing technical counsel on a “pilot” CBM project in central china, and a horizontal well exploitation program in central Siberia.
- Mr. Knoll has been delivering a world renowned 5-day asset team cross-training program on complex (horizontal) well technology since 1991. This course, which is continuously updated with real field experience, has been delivered over 260 times globally with constantly excellent reviews. The program originated from the DEA-44 Horizontal Well Technology JIP of the late 1980s, then was placed in the Petroskills offerings from 2000 till April 2007. The program is now commercially offered in global locales by various training entities including Schlumberger/NExT, AAPG, PTTC, Midland College and others.
- Mr. Knoll was the longest standing Board Member and Compensation Committee Chair of a publicly traded energy trust oilfield service company (Wellco), traded on the TSE (Toronto Stock Exchange). During the summer of 2004, Mr. Knoll acted as Interim CEO for the trust as a new executive team was being assembled. The Trust was sold in March 2008.
- One recent project was the design and execution of three novel Managed Pressure Drilling (MPD) horizontal oil well projects for Independent operators. Two shallow sand applications in Illinois (5,000’ TVD), the other in a deep Monterey Shale application in California (10,000’TVD). The first of these was a “Demonstration Well” partially funded by the U.S. DOE (Dept. of Energy).
- Recently developed and updated Well Control Manual and training/accreditation program for Canadian Regulators, Operators and Contractors active offshore East Coast Canada, both platform (surface) and MODU (deep water) settings. Currently sits on the MPD advisory committee of the SPE/IADC.
- Developed and presented a series of technical seminars, “Keys to Advanced Exploitation Technology Applications in Marginal Settings”, across the marginal basins throughout the U.S. for the PTTC under DOE funding.
- Functioned as coordinator for a multidiscipline international technology exchange co-operative JIP (DEA-44) of unprecedented success in the industry. Responsibilities included international marketing, generating detailed well analysis, delivering forums and technical schools, conducting technical audits of horizontal/complex well field developments, project management and well design consulting, etc.

- Produced and hosted an international technical forum for the global industry every second year in Calgary during the period 1987 to 1995, focused on novel and sophisticated upstream technologies.
- Acts as moderator for multibranch forums and workshops for international operators and has represented the DEA-44 Canadian Operator Group at TAMAL (Technology for the Advancement of Multilateral Technology Meeting).
- Progressed successfully from a maintenance laborer position to Offshore Installation Manager (OIM) position in the global offshore drilling industry.
- Authored and delivers numerous technical and management training programs to the industry. Over 260 courses have been delivered globally over the last 17 years in 28 countries. Sponsoring bodies include technical organizations (SPE, AAPG, DOE, CIM, etc.), major international and state operating entities (Chevron, Texaco, Marathon, Petro-Canada, PEMEX, Petronas, ADNOC, etc.), and major service providers (Halliburton, Weatherford, Smith, Schlumberger, etc.).
- Provides consulting services for technically advanced asset team projects (floating production development — offshore CANADA, deep gas development — Cook Inlet, Alaska, commercial SAGD well design, cost analysis and operational programming — Suncor, Calgary, etc.).
- President of two independent corporations, independent board member of a publicly traded O&G service trust company.

CAREER EXPERIENCE

**1987 - Present H-TECH. PETROLEUM CONSULTING INC.
 AWC HOLDINGS INC.
 President**

Formed and operates a consulting firm specializing in novel technology applications to optimize oil and gas production.

1983 – 1987

HUSKY OIL
Senior Drilling/Completions Specialist
Calgary, Alberta

Counseled all Exploration and Production groups on special drilling and completions aspects on various high profile projects. Coordinated and managed various drilling related new technology research and development projects, lab and field trials, etc.

Senior Technical Advisor
Lloydminster, Saskatchewan,
Organized and supervised a drilling engineering department for all heavy oil and enhanced oil recovery drilling projects.

Senior Drilling Engineer, Senior Project Engineer
Halifax, Nova Scotia; St. John's, Newfoundland.

Supervised drilling engineering staff during operations of the Mobile Offshore Drilling Unit (MODU) Bow Drill III – offshore Newfoundland.

Coordinated and implemented all drilling engineering and geo-technical aspects of final design, unit construction, commissioning and maiden operations of the MODU Rowan Gorilla 1.

Functioned as Relief Installation Manager during drilling of deep Exploration wells.

1980 - 1983

DOME PETROLEUM
Calgary, Alberta

Senior Drilling Engineer

Coordinated and supervised drilling engineering activities on board Dome operated drill ships in the Beaufort Sea.

1974 - 1980

SEDCO INC.
Halifax, Nova Scotia; Scotland; South East Asia

Progressed through ranks of maintenance laborer to driller on MODUS and production platforms in South China Sea, North Sea, offshore Africa and East Coast North America.

Supervised refitting operations on offshore rigs in ship yards in Spain, Scotland, and Malaysia.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

CIM; SPE; Merchant Marine Officer, Republic of Liberia (First Mate License).

PUBLICATIONS

Contributing author to SPE; Founding Director of CIM Horizontal Well Special Interest Group; author of DEA-44 School and Well Planning Manual, DEA-44M Management School; co-author of DEA-67 Coiled-Tubing School, DEA-101 Under balanced Technology School. Short courses — “Horizontal Technology for Geologists”, “Horizontal Technology for Petroleum Engineers”. Numerous editorials for petroleum advisor, Oil & Gas Journal, JCPT (Journal of Canadian Petroleum Technology), etc.

EDUCATION

B.Sc. Geology, St. Francis Xavier University, 1974
Nova Scotia

REFERENCES

Available on request.