#### PROFESSIONAL EXPERIENCE

#### Petrotechnical Resources Alaska, LLC 2015-present

# Sr. Drilling Engineer for Methane Hydrates Development for DOE/USGS/NETL/JOGMEC (2016-present)

- Performed Front End Loading (FEL) engineering and contributed to multiple other technical disciplines for a multi-year project with the industry's leading-edge research team to drill, complete, produce, operate and monitor the world's first long term (1-2 years) methane hydrates production and monitoring wells.
- Performed drilling engineering planning for the Hydrate-01 well prior to BPXA agreeing to
  operate and execute this well. Role changed to one of recommendation, oversight, data and
  project assurance.
- The Hydrate-01 well was drilled in December 2018. All primary objectives were met including significantly new and first-time attempted acquisition methods.

### Sr. Drilling and Completions Engineer ---- ASRC Exploration -- Placer #3 Well (2015-2016)

- Performed the drilling and completion engineering functions while working in a newly created small team (10) to plan and drill the first well drilled by ASRC Exploration LLC.
- Prepared, executed, evaluated, and provided recommendations to leadership for product and service supply based on RFP creation and responses including ice roads/pads, living camp space, all materials, logistics.
- This team executed and delivered the well significantly under budget and schedule during the short arctic winter season.
- Performed the lead role representing ASRC Exploration LLC to the native villages of Nuiqsut and Utqiagvik (previously known as Barrow) for community and regulatory discussions/presentations.

## **BP Exploration PLC 2006-2015**

#### Drilling, Completion and Intervention Discipline Capability Manager & Lead (2012-2015)

 Record-setting pace for recruiting, hiring, development, competency assessment and global deployment of drilling, completions and interventions of the team internally and globally.

## Bly Report Project Team – Operational Decision-Making Processes (2011)

- Led a team assessing operational decision-making processes of BP's highest priority global drilling teams.
- Accomplished project with reduced resources, ahead of schedule, below budget, and favorable results.

# Operations Drilling & Completion Engineer – Anchorage, AK. (2007-2010)

Responsible for planning and drilling wells, technology assessment, organizational technical development.

- Planned, Drilled and Completed horizontal and multi-lateral wells in Prudhoe Bay.
- Taught the rotary drilling team about drill bits and solid expandable casing products.
- Rotary drilling "discipline lead" for development of college graduate new hires ("Challengers").

Sr. Drilling Engineer – Exploration & Production Technology Group - Houston, TX. (2006-2007) Responsible for project management and global technical service support for solid expandable casing technology, drilling optimization and drill bit selection.

- Trained BP operations teams in the most effective uses for this new technology.
- Planned and implemented expandable casing commercial installations.

# WEATHERFORD INTERNATIONAL, INC 2002-2005

Business & Applications Development, Expandable Casing, - Houston, TX.

Responsible for product and project planning, implementation, and installation.

- Project management of product development with joint technology development customer partners.
- Led a project team which planned and implemented expandable casing commercial installations.
- Created, implemented and led product training programs for the domestic sales team.

## SMITH BITS, Division of Smith International, Inc. 1994 - 2002

<u>Drilling Optimization Engineer - Houston, TX (2000-2002)</u>

Responsible for leading BP Exploration's "Mad Dog" deepwater Drilling Performance Team.

- Developed a business tool to optimize Drill Pipe Selection for drilling operations.
- Developed and obtained internal support for a drilling plan which delivered a 58% reduction in drilling time and a cost savings of \$5 million.

# "In-House" Drilling Optimization Engineer at Vastar Resources - Houston, TX. (1998-2000)

Provided drilling optimization recommendations while performing product development.

• Generated "win-win" outcome with \$2 million in operational savings for the customer, over half as recurring savings while achieving first place in 1999 bit market share for Smith Bits with this customer.

# "In-House" Drilling Optimization Engineer at BP "Shared Services Drilling" - Anchorage, Alaska (1996 - 1998)

Provided drilling optimization services bit and BHA recommendations, training, benchmarking, establishing commercial incentives, and product development.

- Generated \$5.7 million in recurring annual savings via bit optimization and downhole motor matching (60 wells/year) in Prudhoe Bay field while mitigating risks of bit failure.
- Developed product and directional drilling techniques responsible for \$2.0 million of customer savings in four 12 ¼" intervals at Niakuk ERD wells as described in SPE paper #50557.

# Drill Bit Technical Sales - New Orleans, Louisiana (1994 - 1996)

- Responsible for selling PDC and roller cone bits to assigned accounts, several being inactive customers.
- Accepted sales account responsibility with a new employer, new product line, and in a highly relational
- selling environment. Succeeded by building relationships, friendships and fulfilling customer needs for
- proper product selection and thorough service.
- Top PDC Bit salesman in the USA in the first half of 1996, prior to being selected for my next assignment.

#### SECURITY DBS /SECURITY DIAMOND /BAKER HUGHES /HUGHES DIAMOND 1985 - 1994

Business Development Engineer - SECURITY DBS (1992 -1994)

New function developed after merger with DBS, and was responsible for developing products, market and alliances for emerging bit technologies in coiled tubing drilling, slim hole drilling, and hard rock drilling, and attending and presenting at technical conferences.

- As part of the leadership team we prepared a strategic plan for the integration of the Dresser Security and the Baroid DBS
  organizations to enhance business post-merger.
- Generated new business revenue stream based on the development of bit cutting structures that controlled vibration and enhanced bit stability in hard rock drilling.
- Developed alliance with Halliburton for coiled tubing drilling (SPE paper 27438).

#### Engineering Manager - SECURITY DIAMOND PRODUCTS (1990 - 1992)

Responsible for metallurgical engineering, product design and development, patent review, quality assurance, and customer satisfaction criteria during a period of rapid growth.

- Initiated, completed, and passed the first audit of the API Q1 quality program, and started the ISO 9001.
- Created a Product Engineering group to develop fundamental product design criteria and correlation to bit performance.
   Anti-Whirl technology was licensed from Amoco. Three patents were issued to the team, one personally. The success of this team propelled revenues to a new plateau.

## Hughes Tool Company's Technical Advisor to - BAKER HUGHE'S INTEGRATED SOLUTIONS (1989 - 1990)

New function created by the corporate Drilling Group VP to establish an integrated team responsible for key customer integrated performance drilling contracts based on risk/reward sharing.

- Drilled 12 horizontal wells demonstrating customer optimization, while enhancing Hughes revenues.
- Created and presented the 2-day SPE Short Course "Horizontal Drilling" nationwide.

# Product Manager - HUGHES DIAMOND PRODUCTS (1989)

New function created to focus the product line development and meet share & profitability objectives.

• Performed a worldwide market assessment, implemented market driven pricing, and created a database for standardization of product performance reporting.

# Manager Applications Engineering, Diamond Drill Bits - HUGHES DIAMOND PRODUCTS (1988 - 1989)

New function created when Baker acquired Hughes Tool. Responsible for budgeting, hiring and placing five engineers worldwide, and training the predominantly roller cone bit sales force to sell diamond drill bits.

• Created the premier five-day diamond drill bit technical training course in nine weeks. Trained 200 global salesmen and managers in 12 months, increasing revenues 100%-145% in each region in the first year.

# Diamond Drill Bit Applications Engineer, - HUGHES DIAMOND PRODUCTS (1985 - 1988)

TRI-MAX CORPORATION PDC Drill Bit Field Sales, Noble, Ok. 1984-1985
HYCALOG Diamond Drill Bit Field Engineer, Oklahoma City, Ok. 1980-1983
MUSTANG FUEL CORP. Natural Gas Pipeline Engineer, Oklahoma City, Ok. 1978-1980
SCHLUMBERGER Open Hole Logging Engineer, Deep Hole Dist., Woodward, Ok. 1977-78