

# OCD EXHIBIT 1

JAMES L. BOLANDER, JR. P. E.

## SUMMARY OF QUALIFICATIONS

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- Over thirty-seven years of increasing responsibility as degreed petroleum engineer including Drilling, Production Operations, Reservoir Engineering and Gas Storage Operations. Management positions in Operations/Asset management, HS&E and operational technologies. Emphasis in East Texas, Gulf Coast onshore and offshore, Ft. Worth Basin, Arkoma and Appalachian Basin. Strong technical skills in completions/hydraulic fracturing design, production operations/artificial lift and reservoir engineering.

## CHRONOLOGY

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April, 2016 – Present	JLB Engineering, LLC – The Woodlands, TX
March, 2001 to March, 2016	Southwestern Energy Company – Houston, TX
March, 1997 to March, 2001	Mitchell Energy Corporation – The Woodlands, TX
November, 1995 to March, 1997	Columbia Gas Transmission Co. – Charleston, WV
July, 1984 to November, 1995	Mitchell Energy Corporation – The Woodlands, TX

## PROFESSIONAL EXPERIENCE

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### **JLB Engineering, LLC**

The Woodlands, TX

President

April, 2016 – Present

Independent Energy Standards (IES) – Technical Expert and Head of O&G Engineering for independent energy ratings-based company. Lead engineering team in risk management and technical assurance evaluations of well and facility operations for upstream and gas storage operations. (11/16 – 01/18)

Southwestern Energy – project lead to capture value of SWN's natural gas based on the company's operations and impact to the environment through programs such as freshwater neutral (ECH<sub>2</sub>O), reduction of methane emissions in operations and operational excellence. (04/16 – 12/17)

EDF - Work with StatesFirst initiative (collaboration of GWPC/IOGCC) to develop technical guidance document for use in natural gas storage operations. Update Model Regulatory Framework used in well construction regulatory analysis. Industry collaborative project on wellbore integrity regulations in Colorado. Update GWPC Well Integrity Elements with GWPC work team. Co-author with DPE on PNSA paper on data analysis of annular pressure to provide insight on wellbore integrity. (04/16 – current)

Mitchell Foundation – Industry representative on Permian Basin Engagement process for the Greater Big Bend Region Initiative (03/18 – 12/19)

New Mexico O&G Commission – Work with staff to develop updated natural gas waste regulations which were approved in March 2021 (05/2020 – 01/2021). Continue to work with OCD staff to implement the new natural gas waste regulations (04/2021 – current).

## **Southwestern Energy Company**

Houston, TX

Senior Vice President – Resource Development

April, 2012 to March, 2016 (Retired)

Lead Resource Development team comprised of HSE and Strategic Solution in identification and development of solutions for balancing economic, environmental and social impacts of our activities in areas that SWN operates.

- Develop and implement internal water initiative (ECH2O) to become water neutral in all operating areas by 2016.
- Develop and implement internal voluntary leak detection and repair program (LDAR) for all operating areas.
- Participate in multi-stakeholder methane monitoring technology development project.
- Company representative for UN CCAC Oil & Gas Partnership on methane reduction.
- Author of The Report for Oil and Natural Gas Sector Liquid Unloading Processes report in 2014 as a compendium of prior measurements and analysis of methane emissions and control technologies relating to liquid unloading and artificial lift technology.
- Participate in initial development and board for ONE Future coalition of gas companies on methane reduction activities
- Received REPSEA grant with CSI to develop improved methods of isolating wellbores during the construction process.
- Joint project with Rice University to develop a unique tracer for use in fluid systems using nano-particles.
- Participate in collaborative study with nine participating E&P companies, Environmental Defense Fund and University of Texas to measure methane emissions at natural gas well sites.
- Participate in collaborative study with four participating midstream companies, Environmental Defense Fund and Colorado State University to measure methane emissions from midstream operating sites.
- Participate in study to evaluate the life cycle of drilling, completion (hydraulic fracturing) and production effects to groundwater in the Marcellus Shale region.
- Developing an in-house process to evaluate the environmental and operational aspects of chemicals utilized in the hydraulic fracturing process.

Vice President – Health, Safety & Environmental

July, 2009 to March, 2012

Lead HSE Operations and Resource System teams in a pro-active approach to provide the vision and expectations for responsible management of company operations.

- Develop and implement safety and environmental programs for company operations
- Pro-active planning in safety and environmental initiatives in areas such as erosion control, contractor management and drilling & completion operations
- Member of industry / Environmental NGO group in the development of Model Framework for hydraulic fracture operations.
- Participate in industry hydraulic fracturing committee (AXPC) in working with GWPC in the development of chemical disclosure database.
- Participated as Theme Lead on Well Integrity at EPA Workshop Hydraulic Fracturing Workshop on Well Construction in March, 2011.

Vice President and Chief Operations Engineer

October 2008 – July, 2009

Support company-wide operations teams (drilling, completion and production) in the career development and support of engineering professionals and lead in the technological transfer of engineering data and processes across business units and geographic regions.

Vice President – Desoto Operations

March, 2007 – September, 2008

Lead Fayetteville Shale drilling, completion and planning teams in the development of the Fayetteville Shale in Arkansas. Responsibilities included management of drilling and completion activities, planning and development of the resource acreage and managing ~\$1.5B budget.

- Lead operations and planning teams in the efficient development of the Fayetteville Shale resulting in a production increase of 500MMCFD in 1.5 year timeframe
- Lead drilling team in multi-rig program (~20 rigs) significantly reducing operating days and drilling costs through continuous improvement processes such as directional drilling control and bit technology resulting in maximizing horizontal lateral length to effectively develop the Fayetteville Shale
- Lead completion team in continuous improvement of hydraulic fracture design which resulted in improvement in initial rates and reduction in costs due to reduction in use of fracturing additives.
- Lead Water Resource Team in the development of water source development in the Fayetteville Shale

Desoto Team Leader

July, 2005 – February, 2007

Lead East Fayetteville Shale asset team in planning and development of the Fayetteville Shale in the eastern region of SWN's acreage position.

- Lead multi-discipline team in the planning and design of multi-rig program to develop the Fayetteville Shale.
- Lead the drilling and completion planning efforts in design of the initial horizontal wells and slickwater fracturing designs in the eastern half of the play.

East Texas Team Leader

September, 2004 – July, 2005

Lead East Texas asset team in the development of tight gas resources in the Overton and Angelina River Trend

- Lead multi-discipline team in the planning and execution of multi-rig drilling program (7 rigs – max) in the Overton and Angelina River Trend fields
- Lead team in continuing to maximize performance in reducing drilling days, improve production rates while controlling well costs.
- Co-Author SPE Paper 95508 – “Integration of Microseismic Fracture Mapping, Fracture and Production Analysis with Well Interference Data to Optimize Fracture Treatments in the Overton Field, East Texas”

Senior Staff Production Engineer  
Staff Production Engineer

March, 2004 – September, 2004  
March, 2001 – March, 2004

Responsible for completion and production activities in the Overton and other oil and gas fields in East Texas and South Louisiana. Responsibilities include all phases of completion, workover and production operations specifically hydraulic fracturing, artificial lift design, pipeline/facility design and compression.

- Completion and production design for Cotton Valley and Travis Peak multi-rig development program.
- Developed “hybrid” hydraulic fracturing design for Cotton Valley tight sands improving initial rate and recovery by ~10-15%
- Design and install Overton gathering and compression system capable of handling +100 MMCF
- Implement artificial lift program in the Overton field installing velocity strings, plunger lift and capillary strings resulting in 10 – 15% improvement in gas rate (~1.5 MMCFD)

### **Mitchell Energy Corporation**

The Woodlands, TX

Staff Production Engineer II  
Staff Production Engineer I

August, 1998 – March, 2001  
March, 1997 – August, 1998

Responsible for various oil and gas fields in East Texas and the Texas Gulf Coast. Responsibilities include all phases of completion, work over and production operations specifically hydraulic fracturing, acidizing, artificial lift design, gravel packing, pipeline/facility installations and compression.

- Completion/Production Design for Cotton Valley Lime Multi-Rig Development Program.
- Acquisition Team member which successfully bid and acquired the Columbus Field in Colorado County, TX for +\$30,000,000.
- Development work on (25) wells in Columbus Field increasing production seven-fold (11,000 MCFD).
- Abandoned Block 189 Field located Offshore Galveston County, TX saving company \$500,000 by creating an onsite artificial reef in cooperation with the Texas Parks and Wildlife.
- Successfully Coilfrac two Wilcox Tubingless triple wells increasing reserves by 800 MMCF. Presented results at SPE Westside Study Group (SPE Paper 56467, Single-Trip, Multizone Fracturing Technique Using Coiled Tubing Proves Successful in South Texas)

### **Columbia Gas Transmission Co.**

Charleston, WV

Senior Storage Engineer

November, 1995 to March, 1997

Responsible for the monitoring of reservoir integrity and performance of five (5) gas storage fields (>1000 wells) completed in the Clinton sandstone in Northern Ohio. Duties included coordination of well testing program, storage team leader in design and implementation of deliverability improvement program and liaison with Gas Control and O&M personnel to optimize storage performance.

- Operated two (2) storage fields to their lowest volume in storage history while maintaining and in one field increasing field deliverability.
- Evaluate/Recommend deliverability improvement work on 140 wells in Market Expansion Plan.
- Launch initial phase in Storage Department to implement economics for use in well reconditioning and abandonment projects.
- Coordinate GRI Project in two (2) Ohio storage fields to determine reservoir damage mechanism in active storage wells.

**Mitchell Energy Corporation**

The Woodlands, TX

Staff Reservoir Engineer I	August, 1995 to November, 1995
Senior Reservoir Engineer	September, 1992 to August, 1995

Responsible for reserve and economic evaluations for projects requiring capital expenditures in MEC's North Texas Region including Colorado and Oklahoma properties. Responsibilities included preparation of acquisition and divestiture packages pertaining to MEC's leasehold, reservoir sand studies for more efficient development of properties and reserve and performance predictions for >500 wells for MEC's internal reserve report and SEC 10K reports.

- Responsible for the evaluation of six (6) property groups in North Texas non-core asset sales package.
- Evaluation engineer for the Caddo 3D survey area in Wise Co., TX successfully completing three (3) wells with booked reserves greater than three times the current average Caddo producer.
- Prepared exhibits and testified as an expert witness on numerous matters in Texas.
- Implementation of tight gas sand study of the Boonsville Bend Conglomerate resulting in approved application of +120,000 acres in Wise County, TX for certification as high cost gas wells for severance tax exemption resulting in approximately \$4,000,000 in tax credits.

Senior Production Engineer	August, 1991 to September, 1992
Production Engineer	August, 1988 to August, 1991
Engineer – Production	October, 1986 to August, 1988

Responsible for all phases of completion, work over and Production operations in East Texas and the Texas Gulf Coast. AFE preparation for production operation projects and new completions and presentation of capital budget.

- Redesign of fracture treatments in Madison County, TX – Subclarksville sand play resulting in a 20% production rate increase.
- Prepared siphon string economic feasibility study used to develop criteria for well selection process.
- Prepared study of critical flow rates for the effective liquid removal of gas wells resulting in successful installations of siphon strings and compression for increased gas production.
- Author of District Pumping Unit Design Manual.

Engineer – Drilling  
Drilling Technician  
Production Roustabout

January, 1985 to October, 1986  
August, 1984 to January, 1985  
July, 1984 to August, 1984

Responsible for preparation and monitoring of all aspects of drilling in East Texas, Gulf Coast (onshore/offshore) and Rocky Mountains including pore pressure prediction, mud design, casing and drill string design and bit hydraulics.

- Lead Drilling engineer for Midland District.
- Preparation of in-house drilling papers (Multiple Stage cementing; Use of Downhole motors in Directional Drilling and Mud Rheology and Bit Hydraulics).
- Study of the Madisonville Field, Madison Co., TX resulting in 25% savings in rig time and mud costs.
- Design and drill (3) offshore wells in state waters, Offshore Galveston Co., TX.

#### EDUCATION

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1981 - 1984 Louisiana State University  
*Bachelor of Science / Petroleum Engineering*

Baton Rouge, La.

#### PROFESSIONAL MEMBERSHIPS

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- Registered Professional Engineer in the state of Texas. Certificate No. – 75371
- Member of Society of Petroleum Engineers since 1981. Member No. – 079440-4