#### **AYMAN GAZAWI**

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# **Energy Leader**

An innovative and accomplished chemical engineer with 20 years of experience in facility engineering, process engineering, production operation, preventative maintenance, asset integrity, corrosion management with extensive experience in flow assurance. Acknowledged for strong interpersonal communication, technical competency, ability to motive employees, and exceeding goals while achieving quantifiable results.

#### **EXPERIENCE SUMMARY**

- Power generation
- Asset & Operation Integrity
- Chemical & Corrosion Management
- Hydrogen Pipeline, & Electrolysis
- Production Engineering
- Facilities Engineering
- Process Engineering
- Carbon Capture, CO2 Flood, & CCUS

- Flow Assurance
- Tankless Design
- Commissioning, startup, and ops
- Separation and piping design
- Rotating equipment
- Hydrogen Processing & Delivery
- NACE MR 103 and 175
- API 650, 519, 520, 521, 618, 510
- ASME 31.3, 31.8, BPV Sec IX

#### PROFESSIONAL EXPERIENCE

# **BKV CORP, DFW, TX**

## Feb 2024-Present

Facilities Engineer Advisor, Technical Resource Organization: Advisor to Chief Technology Officer, and Chief Development Officer. Supporting projects (\$15 MM to \$250MM plus), directly managing 40+ engineering contractors, and establishing standards and guidelines for the whole organization.

- Providing FEED, Engineering Construction, Startup and training for CCUS projects (carbon capture (including treatment), compression, processing, pipeline transportation, and CO2 injection). Working with multiple teams on CCUS project proposals.
- Providing engineering support for existing 1500 MW combined cycle such as water treatment, corrosion management, ITPM. Also working on potential high level confidential projects mainly related to co generation combined cycle. Providing engineering support on multiple power generation post combustion carbon capture.
- Providing engineering support for existing CO2 facilities (troubleshooting and optimization)
- Providing flow assurance corrosion engineering support for upstream and midstream assets including CCUS
- Providing process, and facility engineering support for upstream separation and midstream assets (pipeline, compression, amine treating, RO, and dehydration)
- Training junior & senior engineers and managers on CCUS, process, and facility engineering.

Devon Energy, OKC, OK

Nov 2022-Feb 2024

Senior Staff Facilities Engineer: Supported Executive Vise President on identifying efficiencies in the organization and developed a plan to mitigate losses and recover lost product. Established guidelines and standards for the whole organization to assist in company growth:

- Providing engineering design and support for sour surface facilities.
- Establishing corporate standards for sour facility design.
- Providing corrosion management support
- Providing asset and operation integrity support
- Leading failure analysis and providing recommendations
- Designing facilities fit for flow assurance to minimize chemical cost.

# Diamondback Energy, Midland, TX

**April 2021-Nov 2022** 

Senior Staff Facilities Engineer and Flow Assurance: Directly worked with executive leadership team Chief Operating Officer and other VP's identified over \$800MM in loss product due to separation inefficiencies, established plan and guidelines to mitigate losses

- Designed, constructed, and operated 85000 BFPD tankless facility with NGL capture, eliminating CO2e emissions.
- Developing facilities standards for vessels, pumps, valve, tanks, piping and other associated surface facilities.
- Providing flow assurance technical expertise for surface facilities from wellhead to tank battery such support includes:
  - Flow Assurance monitoring and assessment (corrosion, paraffin, scale, solids)
  - Corrosion management thru chemical treatment, mechanical cleaning, material selection, and coating
  - Providing chemical treatment for vessel cleanout
  - Upgrading vessel design for ease of access and cleaning.
- Mentoring junior and senior facilities engineers to design, optimize and operate surface facilities.
- Providing process engineering support for surface facilities emissions (CO2, and CH4).
- Providing day to day engineering support to trouble shoot and resolve surface facilities issues.
- Conducting NGL recovery feasibility study to minimize emissions and increase revenue.
- Establishing asset and operation integrity program to minimize LOE, minimize production downtime, minimize emissions, and increase revenue.

Enhanced Recovery Partners, Irving, TX

May 2019-Dec 2022

Hydrogen Advisor and Director (Feb 2020-Dec 2022): Worked closely with Chief Executive

Officers and VP's to establish new hydrogen transportation methods and worked closely
with private equity firms to raise capital funding

- Evaluating different hydrogen production/generation with SMR focus and CO2 capture.
- Evaluating surface and subsurface hydrogen storage technologies
- Designed hydrogen pipeline for delivery from any source to all end users ranging from 1 mile to 500 plus miles
- Developed asset and operation integrity program for hydrogen pipeline network
- Evaluating Electrolysis and BioMASS 240 tons/day hydrogen production capacity

# Petroleum Engineering Advisor (May 2019-Feb 2020)

• Provided EOR engineering support on wolfcamp shale, Delaware, & Bakken

- Provided production engineering on well monitoring, downhole diagnosis, chemical treatment, formation remediation, surface facility design/operation, and Artificial Lift.
- Provided engineering support on corrosion management, solid management, and produced water management.
- Provided full facilities engineering support: design and operation of flowback, flowlines, pipelines, tank batteries, solid management, and salt water disposal.
- Focused on flow assurance, chemical audits, and corrosion management in the US lower 48

# PIONEER NATURAL RESOURCES, Irving, TX Sonier Staff Operation Engineer Permiss Pagin

2010-May 2019

- Senior Staff Operation Engineer, Permian Basin Team (2018-2019)
  Provided EOR engineering support on wolfcamp shale
  - Advised and support production engineering on well monitoring, downhole diagnosis, chemical treatment, surface facility design/operation, and Artificial Lift.
  - Assessed vertical program and implement production optimization projects
  - Provided corrosion engineering management for Permian Basin.
  - Consulted on mechanical integrity on all assets
  - Mentored junior and senior engineers on production engineering support such as well intervention, downhole diagnostics, artificial lift, and surface facilities.

# **Senior Staff Operation Engineer, Pioneer Corporate Engineering** (2015-2018)

- Engineered special projects on all the company assets to increase EUR of existing wells by 25% to 40% at a minimal capital cost and reduced LOE.
- Managed flow assurance by evaluating and implementing a comprehensive chemical program throughout Eagle Ford, Permian Wolfcamp, and Permian vertical, plus other assets (downhole and surface operations).
- Developed asset and operation integrity program for the entire company.
- Mentored junior and senior engineers on production engineering support such as well intervention, downhole diagnostics, artificial lift, and surface facilities.
- Provided technical leadership on Corrosion and Flow Assurance.
- Mentored Pioneer's supervisors and managers on engineering projects and technical challenges.

#### Staff Operation Engineer and Completion Engineer, Eagle Ford Shale (2012-2015)

- Flow assurance management evaluated and implemented a comprehensive chemical program thru out Eagle Ford operations (downhole and surface operations).
- Developed asset and operation integrity program.
- Established and lead Re-Frac program
- Reviewed existing completion performance and provided new design to improve production

#### Sr. Operation Engineer, Eagle Ford Shale (2010-2012)

- Provided production engineering support on well intervention: workovers, cap string installations, logging, coil tubing, and Artificial Lift installation.
- Provided production engineering support on well monitoring, downhole diagnosis, chemical treatment, surface facility design/operation, and Artificial Lift.
- Designed, and constructed over 300 miles of flow lines, and over 350 surface facility equipment. Mentored field personnel and engineers on operation of such facilities.
- Completed Eagle Ford Re-Frac pilot program. Worked on initial completion optimization.
- Led Eagle Ford chemical program team and corrosion program

# CONOCOPHILLIPS EXPLORATION & PRODUCTION

2006-2010

**Upstream Engineer** 

Senior Facilities Engineer, Permian Basin CO2 & Water Flood Field, Odessa, TX (2008-2010)

- Provided engineering support and design for: production facilities, CO2 and water injection facilities, and CO2 Injection Plant.
- Provided engineering support and design for well testing and chemical treatment.
- Evaluated downhole pumping units thru MOC process, PHA's, & well reviews
- Provided engineering support for injection and production wellheads.
- Assisted in troubleshooting engineering issues, and supporting operation and maintenance personnel on day to day operational problems.

# Plant Engineer, San Juan Basin, Farmington, NM (2007-2008)

- Provided engineering design and support for a fractionator and gas processing plant.
- Led and participated in PHA'S (process hazard analysis), insuring all activities and projects complied with PSM (process safety management).

### **Upstream Engineer, San Juan Basin, Farmington, NM (2006-2007)**

- Provided analysis on reservoir properties for conventional tight gas reservoir wells.
- Analyzed production on conventional tight reservoir and coal wells.
- Developed project management process for work over wells (Recompletion)

SCHLUMBERGER 2005-2006

# Field Engineer, San Juan Basin, Farmington, NM

 Worked in Well Cementing Services, provided cement design and procedures for vertical and directional new drills. Supervised all field operations for Coal Bed Methane & conventional wells

#### **UNIVERSITY OF AKRON** – Akron. Ohio

2004-2005

# **Research Engineer at the Chemical Engineering Department**

- Completed research on binary molecule interaction using quantum mechanics.
- Supervised chemical distillation lab, mentored students on lab equipment.

#### **EDUCATION**

- Master of Science, Chemical Engineering, The University of Akron, Akron, OH
- Bachelor of Science, Chemical Engineering, The University of Akron, Akron, OH
- Polymer Engineering Specialization in Chemical Engineering, The University of Akron
- Green Belt Six Sigma

#### **CONFERENCES & PAPERS**

- Presented at SPE North America Unconventional conference about Shale Re-Frac
- Presented Shale Drawdown Management at two SPE events
- SPE, NACE, and ANST Member
- Secretary of NACE Standard STG 31 (Corrosion & Scale Inhibitors)
- Vice Chair- 2019, Flow Assurance Management at NACE
- Vice Chair of Shale Flow Assurance at AICHE-SPE
- Vice Chair 2020 at NACE Flow Assurance TEG 202 X