

## EXPERIENCE

2017 - Present Lokimox (Plano, Texas USA) - Managing Director  
2022 – 2022 Delek Logistics (Dallas, Texas, USA) – Vice President  
2011 - 2017 Saudi Aramco (Dhahran, Saudi Arabia) - Consulting Engineer  
2009 – 2011 Spectra Energy (Houston, TX USA) - Principal Engineer  
2008 – 2009 Williams Midstream (Houston, TX USA) - Risk Engineer (Contract)  
2006-2008 EPCO Inc. (Houston, TX USA) - Pipeline Integrity Engineer  
1998-2007 Prodont Inc. (Edmonton, AB Canada) - President and CEO  
1998 – 1999 Brown Corrosion Services, Inc. (Houston, TX USA) - Project Engineer  
1996 - 1998 Metal Samples Company (Munford, AL USA) - Corrosion Engineer  
1994-1996 Caproco (1987) Ltd. (Edmonton, AB Canada) - Engineering & QA Manager  
1992-1994 RAE Inspection Service (1979) Ltd. (Edmonton, AB Canada) - Engineer

## EDUCATION

MBA (2011) - Athabasca University, Athabasca, AB Canada.  
BSc Metallurgical Engineering (1993) - University of Alberta, Edmonton, AB Canada.

## ***Professional Registrations and Memberships***

Professional Engineer – Alberta (PEng 52586), Texas (PE 128726), California (PE MT2007), Tennessee (PE 124766), Illinois PE (062.073780), Louisiana PA (PE.0046490), European Union (Eur Ing 33089), and International Professional Engineer (Int PE), and Asia Pacific Economic Cooperation Professional Engineer (APEC PE)  
Chartered Engineer – Ireland (CEng 469508)  
Certified Welding Inspector (CWI 21123051) – The American Welding Society (AWS)  
Member Association of Professional Engineers and Geoscientists of Alberta (APEGGA)  
Member Engineers Ireland (EI)  
Member Institute of Asset Management (TheIAM)  
Associate Member National Academy of Forensic Engineers (NAFE)  
Member American Society of Mechanical Engineers (ASME)  
National Member Society of Professional Engineers (NSPE)  
Member American Welding Society (AWS)  
Member American Society of Nondestructive Testing (ASNT)

## PUBLICATIONS AND PRESENTATIONS

*Direct Resistance Measurement Corrosion Probe*, US Patent Number 7,034,553. United States Patent and Trademark Office (USPTO)  
*Integrity Management at Saudi Aramco*, Banff Pipeline Workshop 2013 Banff, Alberta, Canada  
*What is Asset Performance Management*, Best Practices in Pipeline Operations & Integrity Management 2012 Manama, Bahrain  
*Engineering Ethics*. ASME South Texas Section, December 2019, Houston, TX USA  
Expert Opinion on Pipeline Release CPF 3-2006-5044H. USDOT/PHMSA.  
Expert Opinion on Pipeline Equipment Failure CPF 3-2009-5022. USDOT/PHMSA.

## **EXPERT WITNESS CASE HISTORY**

- 2020 Bruce v. Chattanooga Gas Company, et al. (Gas Utility Management)
- 2020 EXCO Resources v. Williams Pipeline (Railroad Commissioned Gas Utilities)
- 2020 Hatten v. Enterprise Products Company, et al. (Utility Worksite Safety)
- 2021 Enterprise Products, L.P., et al. v. Axis Pipe & Tube (Pipeline Manufacturing Quality Control)
- 2022 Christopher Bryson. et al. v. Blossman Gas, et al. (LP Gas Safety)
- 2022 ICSID Case ARB/19/27 CTIP Oil & Gas International v. The Arab Republic of Egypt
- 2022 LMH Lane Cabot Yard Joint Venture v. HNTB Corporation and Jacobs Engineering Group
- 2022 LMH Lane Cabot Yard Joint Venture v. Massachusetts Bay Transportation Authority
- 2023 Estate of Shawn Bull v. Port Enterprises Ltd., et al. (Welding)
- 2023 Michael Green v. Century Asphalt, et. al (Welding)
- 2024 Farhad Rahmani v. Northtown Auto Center GP, LLC (Propane Handling)

## **MAJOR ENGINEERING PROJECTS**

*Alaska Pipeline Project*, USA (2017-2018): Managed arctic condition piping modifications and inspection protocols.

*Privately-Owned Refinery Project*, USA (2017-2018): Engineering lead for pilot assessment of Alkylation Unit and Crude Processing Unit that included optimization of on-stream inspection and risk-based inspection programs.

*Gulf of Mexico FPSO*, Mexico/USA (2018-2019): Provided integrity assessment as part of an overall assessment of the FPSO.

*Karan-6 Offshore Platform*, Arabian Gulf (2011-2012): Performed comprehensive asset integrity management system assessment.

*Abqaiq Plant*, Saudi Arabia (2011-2012): Performed comprehensive asset integrity management system assessment and oversaw system deployment.

*Khursaniyah Train 4*, Saudi Arabia (2013, 2015): Performed comprehensive asset integrity management system assessment.

*Juaymah Gas Plant*, Saudi Arabia (2013-2014): Performed comprehensive asset integrity management system assessment and oversaw system deployment.

*Midyan Gas Plant*, Saudi Arabia (2016-2017): Performed comprehensive asset integrity management system assessment.

*Berri Gas Plant*, Saudi Arabia (2014): Performed comprehensive asset integrity management system assessment and oversaw system deployment.

*Riyadh Refinery*, Saudi Arabia (2015): Oversaw asset integrity management system deployment.

*Udhaliyah Gas Plant*, Saudi Arabia (2016): Oversaw asset integrity management system deployment.

*Yanbu Refinery*, Saudi Arabia (2016-2017): Oversaw asset integrity management system deployment.

*Abqaiq-Bahrain Pipeline*, Saudi Arabia and Bahrain (2012): Provided assessment of pipeline for asset integrity management and replacement, including authoring on-stream inspection procedures, governance for risk-based inspection procedures, and developing systems for risk model pilot.

*Department of Transportation Integrated Audit*, USA (2011): Established and installed a centralized integrated risk and assessment planning system while upgrading integrity programs.

*Corporate Pipeline Risk Model*, USA (2007, 2009-11): Developed assessment planning process to integrate with corporate geographic information systems, data models, and risk models. Ensured compliance and access to critical data as well as maintaining and updating the corporate pipeline risk model.

## **WORK AUTHORIZATION**

Canada - Citizen (Canada)

European Union - Citizen (Ireland)

United States of America -Permanent Resident (Green Card)

## **SUMMARY OF EXPERIENCE: MANAGEMENT**

Over ten years of senior/executive management in multiple organizations.

Responsible engineer and permit/firm holder for three organizations in Canada and the USA.

A proven quality and excellence system developer and assessor using global standards.

Budget, planning, and P&L responsibility for small and large organizations

Experienced in the management, supervision, mentoring and development of junior technical staff.

## **SUMMARY OF EXPERIENCE: ENGINEERING**

Senior team member for asset management/integrity standards and system development at multiple organizations based on international codes, standards, and regulations.

Senior team member for PSM application based on OSHA and global best practices.

Experienced with the development and implementation of technical procedures and work instructions.

Project management experience that includes onshore and offshore asset development.

Developed and patented technology for measurement of downhole and alkylation unit corrosion.

Design team member for mechanical tools for the oil industry and process equipment.

## ***Midstream (Pipeline)***

Over ten years of operator experience with liquid and gas pipelines.

Management and oversight of integrity management programs at multiple organizations in three countries, including development of system manuals and update of legacy systems.

Created integrated integrity planning processes using geospatial data systems for workflow management to eliminate manual spreadsheets and build in controls and approvals.

Developed and managed risk models for multiple pipelines, including proof of concept use to enable organizations to use this for assessment planning and anomaly scheduling.

Led multiple failure investigations covering corrosion, stress corrosion cracking, fatigue, unsupported spans, and welding issues; responsible for PHMSA decisions for the company after failure of LFERW pipelines that avoided all negative actions.

Experienced with audits that include regulatory, safety, quality, and excellence elements.

Experienced with technical pipeline evaluation using industry standards (e.g., ASME B31G, BS7910) and advanced engineering processes including assessment method selection, anomaly scheduling, pressure cycle analysis, strain-based modeling of defects, MAOP validation, and live welding.

## ***Downstream (Refining, Gas Processing, Chemicals)***

Asset management and integrity management system development and implementation, including optimization of work processes.

Operational excellence system development and assessment.

Development and implementation of on-stream inspection and risk-based inspection programs.

Field inspection of facilities for integrity.

Failure investigation lead for incidents in multiple countries.

***Offshore***

Subject matter expert for offshore and subsea facility assessments in the Arabian Gulf.

Subject matter expert for integrity for deep water Gulf of Mexico assets including FPSO, semi-submersible, and pipeline.

Subsea design for Gulf of Mexico pipeline gathering, transmission, and riser assets.

Subject matter expert for configuration and implementation of shallow water Gulf of Mexico assets.