

**Name:** Mufleh Idris, P. Eng. CEng.

**Designation:** Process and Concept Engineering Consultant - Oil & Gas

**Nationality:** Canadian

**Date of Birth:** 3 May1963

**Education:** - B.Sc. Chemical Engineering. Al Baath University, 1986  
- HAZOP Leadership

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### **HIGHLIGHTS OF QUALIFICATIONS**

- Highly motivated Professional with a wealth of experience in the oil and Gas fields developments. Demonstrating strong communication and team player skills. Maintain respectful relationships with stakeholders, relevant disciplines and contractors.
- Concept to Commissioning experience of more than three decades in Concept studies, Corporate Planning, Projects & Engineering including Techno-Economic Feasibility / BFD, FEED reports, Process design, DD, Evaluation of competitive technologies, and optimization.
- Held Technical Authorities for process engineering and Project Management, Review and approve process discipline deliverables for the new projects and existing plant modifications.
- Experienced HAZOP Leader and Competitive Scoping workshops facilitator.
- Developed project contracting strategy and project execution plan
- Responsible for the implementation and compliance of the process safety programs as well as the associated policies, procedures, and guidelines.
- Managed Plant Remanent Life Assessment (RLA)
- Participated in the Gas Plants Integrity Threat Assessment studies
- Substantial experience in existing plants optimization and debottlenecking and upgrade
- Familiar with various applicable Standards & International codes of Oil & Gas.
- Competitive Scoping Workshop facilitation
- Quality based screening
- Project Contracting Strategy workshop facilitation
- Value engineering workshop facilitation
- Coach and mentor discipline engineers

### **PROFESSIONAL MEMBERSHIP**

- Chartered Engineer (CEng) with the Institution of Chemical Engineers (IChemE).
- Member of the Association of Professional Engineers and Geoscientists of Alberta (APEGA), Canada.
- Member of the American Institute of Chemical Engineers (AIChE).

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## **PROFESSIONAL EXPERIENCE**

### **June 2007- June 2022: Petroleum Development Oman (PDO)**

#### **Lead Process/Concept Engineer**

Over the last 15 years, managed the oil and gas field development, concept engineering activities for multi-billion-dollar opportunities through identify & assess, feasibility and select phases of the opportunity realization process. This in development of reserves in conventional and unconventional gas and oil fields.

My Responsibilities included the following activities:

- Manage the conceptual studies for the new developments and optimize the scope of the projects for the oil and gas fields developments.
- Prepare the five years business plan for the gas production clusters, including project scope, schedule, CAPEX and economics. Present the five years business plan to the management for approval.
- Lead the supply chain management workshops to finalize the projects execution and contracting strategies
- Coordinate the preparation of the projects design philosophies including the operations, control & safeguarding and HSE philosophies.
- Lead the process safety studies, flow assurance, material selection, machinery selection, project urban plan studies.
- Liase with the subsurface and operations teams to identify, evaluate and optimize the projects scope and schedule.
- Participate in the project opportunity framing, concept identification, concept selection and PEER reviews, value engineering workshops.
- Member of the technical committee to approve the proposed modifications or upgrade for the existing gas plants.
- Participate in the process safety, Integrity Threat Assessment review for the existing gas processing plants.

Provide Process Technical Authority for conceptual, FEED and detailed design and commissioning phases for the following projects:

- Carried out the Conceptual Study for the Khulud tight/unconventional gas project, including gathering system, well head compression and gas processing facilities.
  - Managed the conceptual study for the Mabrouk Development of 16 mln Sm<sup>3</sup>/d of gas fields on fasttrack basis, and the
  - Managed the Condensate stabilization system revamp project including the condensate stabilizer modification and condensate pump export destaging
  - Lekhwair Gas plant project, with capacity of 3 MMSCMD with gathering system, MDEAa gas sweetening for CO<sub>2</sub> removal, TEG gas dehydration and gas export.
  - Saih Rawl Depletion Compression Second Stage (SRDC2) project, 4X7.5 MMSCMD compressors units with 19 MW duty each. Condensate stabilization unit modification.
  - Yibal Depletion Compression third stage (Y3DC) project, 3X6 MMSCMD compressors units with 13 MW duty each.
  - Yibal Depletion Compression Second stage (Y2DC) project, 4X6 MMSCD compressors unit with 13 MW duty.
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- Fahud South West field development, gas production capacity of 1.5 MMSCMD as early production facilities.
- FEED and Detail engineering for 0.5 MMSCMD Al-Huwaisah field development,
- Permanent well testing facilities Project, total of 9 well testing units to be installed in different gas fields.
- Haban Liquid Handling Project. Conceptual study, FEED and Detailed engineering for 5 MMSCMD The included dynamic simulation for the pipeline net work and proposed/install a slug control mechanism to improve the system availability.

#### **2004-2007 : Tebodin Consultants & Engineers – Seconded to Petroleum Development Oman (PDO)**

##### **Lead Process/Concept Engineer**

My Responsibilities included leading project process studies from the feasibility stage up to the commissioning phase for the following projects:

- Fahud Steam Injection Project (SAGD), Conceptual study for 18,000 tpd HRSG steam injection plant, including water supply, water disposal, water treatment, steam generation and oil production facilities.
- Thuleilat oil production station expansion project, Concept Selection, Basis for Design and FEED for 30,000 m<sup>3</sup>/d, including Free Water Knock out Tank, oil export pumps, Gas floatation tank (GFT) with micro-bubble package for water treatment unit and water injection pumps
- Qaharir oil production station expansion project, Concept Selection, Basis for Design and FEED for 8,000 m<sup>3</sup>/d, including Gas Flotation Tank with micro-bubble package GFT and of De-oiler Chemical Injection Skid.
- Maurid Expansion project, Concept selection, Basis for Design and FEED for 10,000 m<sup>3</sup>/d oil production and water injection for with Gas Flotation Tank for water treatment, water injection pumps, oil production gathering system and GRE oil production pipeline.
- Rahab field expansion, Concept selection and FEED for 10,000 m<sup>3</sup>/d oil production and water injection.

#### **2003 - 2004: Occidental of Oman Inc. Oman**

##### **Lead Process Engineer**

Provide process engineering support for the detailed engineering phase for 3 MMSCMD Northern Oman Gas Project. My responsibilities included:

- Manage the process and the interface activities with the EPC contractors, vendors and the existing facilities for the project.
- Review and approve the process engineering documents for the project, PFD, P&IDs, data sheets and equipment sizing, equipment selection.
- Participate in the design and HAZOP reviews
- Vendors proposals technical evaluation.

#### **2002 – 2003: ABB Lummus Global Nigeria Ltd. Port Harcourt, Nigeria**

##### **Lead Process Engineer**

Carry out process studies and process design activities for the following projects:

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- NGC Compressors stations Refurbishment Project for Shell Nigeria (SPDC).
- Water treatment and Re-injection project for Agip Oil Company.

**1997- 2002: SNC-LAVALIN Inc., Calgary, Alberta, Canada****Senior Process Engineer****Syncrude Canada, Upgrader Expansion Project (UE-1)**

Lead process engineer for two plants, the natural/fuel gas system and the flare system, duties included:

- Checking the suitability and capability of the existing equipment and piping, preparation of the heat and material balances, equipment specification sheets. Process Simulation by using HYSYS and Visual Flare, hydraulic analysis, PFD and P&IDs development as well as preparation of engineering design specification for each system.
- Participated in the PFD, P&ID and HAZOP reviews for both systems.

**Alberta Energy Company. OSPL project**

- As process engineer responsible for PFD and P&ID development for pipeline and the associated pump stations.

**Nanticoke Refinery SRU and ARU Expansion Project.**

- The project scope of work included the preparation of engineering design specification for the revamp of sulfur recovery unit and Amine regeneration unit.
- Responsible for updating overall material and utility balances, process simulations, hydraulic calculations, equipment and instrument data sheet, PFD and P&IDs development.

**Ain Dar Seawater Conversion Project, (ARAMCO)**

- Responsibility included PFD and P&ID development for Ain Dar seawater treatment plant and the associated pipelines for water injection.

**(1993–1996) Al Furat Petroleum Company, Omar Gas Plant, Damascus, Syria****Gas Plant Operations Engineer**

On this joint venture between the Syrian Petroleum Company and Shell International, the gas plant capacity was 180 MMSCFD including fractionation, refrigeration and dehydration units, 600 Km sales gas pipeline with 8 pressure reduction stations to supply the sales gas to the power plants. Responsibilities included:

- Responsible for over all supervision of day-to-day operations in all units.
  - Carry out P&ID review and HAZOP studies for plant expansion project, to increase the plant capacity from 140 MMSCFD to 180 MMSCFD.
  - Interface with engineering and operations personnel on related project.
  - Providing technical support, troubleshooting and problem-solving activities to the plant operations.
  - Participate in shutdown maintenance planning.
  - Coordinating the sales gas and LPG distribution with the consumers.
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**(1986–1993) Syrian Petroleum Company - Syria****Gas Plant operations Engineer**

The plant units included dehydration, DEA sweetening, refrigeration, fractionation and sulfur recovery. Responsibilities included:

- Evaluate various problems in process units and provide technical assistance for troubleshooting.
- Monitor plant operations, diagnose field problems and recommend cost effective solutions.
- Ensuring implementation of operation orders to achieve operation goals under safe operation conditions.
- Supervising plant start up and shutdown as per established operating procedure safely.
- Implementing and monitoring the company's safety plans and procedures.

**PROFESSIONAL DEVELOPMENT**

- HAZOP leadership and Management
  - E& P Economic
  - Lean Manager
  - Business Management Course
  - Project Management, conducted by (L.B. Noble Resource Management Ltd.)
  - Technical Communication conducted by (Cornwall communication Inc.)
  - Gas Conditioning and Processing,
  - Introduction to Surface Development
  - Corrosion Control and Oil Field Water Technology
  - Instrumentation and Automatic Control for Supervisors
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- **PHA - Project Reviews as Leader / Chairman:**

1. HAZOP Review – KGP OVC Replacement – PDO
  2. HAZOP Review - Middle Gharif On plot Condensate Facility modification
  3. HAZOP Review - Burhan West Core Area Development- PDO
  4. HAZOP review - Tayseer EDF Off-Plot Project - PDO
  5. HAZOP Review - Flah Gas Compressor By pass – SR CPP- PDO
  6. Design Review- Fahud Steam Generator Relocation
  7. HAZOP Review - Flare gas Recovery Project – CPP -PDO
  8. Design and HAZOP Review -Well Testing Facilities - PDO
  9. Retrospective HAZOP Review – Central Processing Plan - PDO
  10. Retrospective HAZOP Review – Government Gas Plant – PDO
  11. Retrospective HAZOP Review – Mabrouk Central Processing Facilities - PDO
  12. HAZOP Review – Mabrouk RMS Extension - PDO
  13. HAZOP Review - Condensate Recovery Maximization Plant
  14. HAZOP Review - Saih Nihayda Condensate Stabilization Plant - PDO
  15. Design and HAZOP Reviews - Lekhwair Gas Plant – PDO
  16. Design and HAZOP Reviews - SR CPP Depletion Compressors - PDO
  17. Design and HAZOP Reviews – GGP Depletion Compressors
  18. Design and HAZOP Reviews Workshops - Khulud Field Development - PDO
  19. Design and HAZOP Reviews for Yibal GGP - 4th depletion compressor PDO.
  20. HAZOP Review Condensate Coalescer Project- CPP -PDO
  21. HAZOP Review – Flare Ignition Project - PDO
  22. HAZOP Review – GGP Contro; System Upgrade- PDO
  23. HAZOP Review - Mabrouk Deep Phase 3- PDO
  24. HAZOP Review – GGP Rejuvenation Project - PDO
  25. Design and HAZOP Reviews – SNGP Turbo-expander/Re-compressor.
  26. Design Review - Fahud Compression Project FEED+DD
  27. Design and HAZOP Reviews- Al-Huwaisah Condensate recovery project, PDO.
  28. HAZOP Review – Well Head Control Panel - PDO
  29. HAZOp Review – Qaharir Gathering station
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