

SADAM HUSSAIN

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LinkedIn: www.linkedin.com/in/Sadam-Hussain-Reservoir-Engineer

Google Scholar: <https://scholar.google.com/citations?user=izIDK9gAAAAJ&hl=en> (11 Publications)

Willing to relocate (if necessary)

Reservoir Simulation | Reservoir Management | Field Development Planning | Water Flooding & EOR | Well Testing | Production Optimization | Unconventional Reservoirs | CCS/CCUS | Hydrogen Storage | Communication | Problem Solving

KEY CAREER QUALIFICATIONS

- Experienced in both compositional and black-oil simulation for both sandstone and carbonate reservoirs, including modeling of CO₂ and hydrogen storage in saline aquifers and depleted oil and gas reservoirs.
- Experienced in reservoir management, field development, hydraulic fracturing, reserves evaluation and project economics
- Experienced in unconventional (Tight Sands) reservoir development and hydraulic fracturing.
- Experienced in pressure and rate transient analysis.
- Experienced in waterflooding design, management and CO₂-EOR.
- In-depth technical knowledge of industry standards, regulations, and guidelines to enhance NPV and hydrocarbon recovery.

EDUCATION

DOCTOR OF PHILOSOPHY (PhD) IN PETROLEUM ENGINEERING 2028

Hildebrand Department of Petroleum and Geosystems Engineering in The University of Texas at Austin (GPA: 4.0/4.0)

MASTER OF SCIENCE IN PETROLEUM ENGINEERING 2021

Mewbourne School of Petroleum & Geological Engineering in The University of Oklahoma (GPA: 3.90/4.00)

BACHELOR OF ENGINEERING IN PETROLEUM & NATURAL GAS ENGINEERING 2012

The Mehran University of Engineering and Technology Jamshoro (GPA: 3.80/4.00)

PROFESSIONAL EXPERIENCE

United Energy Pakistan Limited, Karachi, Pakistan (Formerly, BP Pakistan) Nov 2021 – Jan 2024

Senior Reservoir Engineer

- Maximized recovery of oil/gas production by 5% from mature fields by including infill/development wells using integrated reservoir performance evaluations and field reviews. Added 5 MBOEPD production and 3 MMBOE reserves in the company's portfolio.
- Built and history matched reservoir simulation models of 4 brown oil and gas fields, resulted in multiple development and production optimization opportunities.
- Single point authority (SPA) of field development and hydraulic fracturing for Tight gas field development
- Played an integral role in chemical EOR (In-situ CO₂ EOR) and CO₂-EOR pilot project selection based on sector modeling and integrated asset modeling.
- Performed waterflooding diagnostics and optimization and increased water injection from 2000 BPD to 5000 BPD.
- Quality checked SCAL data for reservoir simulation models and EOR schemes
- Modeled equation of state (EOS) for analytical and reservoir modeling of a mature gas condensate field.
- Attained company's production targets by implementing data-driven optimization plans.
- Mentored junior and trainee reservoir engineers on different reservoir engineering aspects.

Pakistan Oilfields Limited, Rawalpindi, Pakistan Sep 2013 – Nov 2021

Reservoir Engineer

- Oversaw FDP analysis for a heavy oil field while conducting reservoir management and surveillance using industry standards by integrating static and dynamic data, significantly improving hydrocarbon recovery and NPV.
- Built and updated analytical and numerical well tests, including EOS/PVT modeling.
- Performed reservoir characterization of a mature gas condensate tight carbonate reservoir by integrating pressure transient analysis and material balance models for field re-development resulted in two rig-workovers.

- Performed rate transient analysis of HPHT gas condensate wells/reservoirs for field development and reserves evaluation.
- Led reservoir simulation project of waterflooded dual-porosity/dual-permeability light oil reservoirs for EOR potential, found attic oil and enhanced field production by 1700 BOEPD
- Expanded the recovery volume through EOR techniques screening for mature assets.
- Led and coordinated PVT, SCAL, and QC laboratory measurement programs. EOS Modeling
- Played an active role in supervising SBHP, PSP, SNL & HPT, DST, PBU, and coiled tubing well interventions, achieving targets per the company's HSE policy.
- Served as the technical subject matter expert, offering assistance for mechanical earth modeling (MEM) research and training apprentice engineers on reservoir engineering workflows and procedures.

ACADEMIC EXPERIENCE

University of Texas at Austin, United States **Jan 2024 – Current**
Graduate Research Assistant, Reservoir Simulation Consortium

- Modeling hydrogen storage in depleted gas carbonate reservoirs including advanced physical processes such as diffusion, dispersion and geochemical reactions.
- Modeling CO₂ storage in saline aquifers with pressure management to keep caprock integrity and avoid faults reactivation.

University of Oklahoma, United States **Aug 2019 – May 2021**
Graduate Research Assistant, Reservoir Simulation & EOR Group

- **Thesis:** In-situ CO₂ EOR: A Kinetic and Recovery Performance Study
- Modeled and history matched in-situ CO₂ (ICE) EOR laboratory experiments by incorporating urea hydrolysis user-defined chemical reactions using CMG STARS.

TECHNICAL SOFTWARE SKILLS

- **Integrated Asset Modeling and Production Optimization:** PROSPER, MBAL, GAP, Pipesim (Advanced)
- **Pressure and Rate Transient Analysis:** Saphir & Topaz (Kappa Workstation), HIS Harmony Forecast & Reservoir (Advanced)
- **Reservoir Simulation & PVT Modeling:** Eclipse, Intersect, PVTi, Petrel (RE), IMEX, GEM, STARS, tNavigator (Advanced), ResFrac (Intermediate)
- **Python:** Scikit Learning, Unsupervised & Supervised Learning, Data Visualization (Intermediate)
- **MS Office:** Word, Excel, PowerPoint

LEADERSHIP & HONORS

- **SPE Water Life Cycle & Strategy Technical Section** **2024 – 2026**
Director (Publications Sub-Committee)
- **UT Graduate Excellence Fellowship** **2024**
Cockrell School of Engineering at The University of Texas in Austin
- **Event Co-Ordinator – Petroleum Graduate Student Association (PGSA)** **2024 – 2025**
Hildebrand Department of Petroleum and Geosystems Engineering in The University of Texas at Austin
- **Team Leader Student Consultant – Longhorn Impact Fellowship of Texas (LIFT)** **2024**
McCombs School of Business
Global Sustainability Leadership Institute (GSLI) in The University of Texas at Austin
- **3-Times Spot-Recognition Awards (SRA) for enhancing asset production and reserves** **2021 – 2023**
United Energy Pakistan Limited
- **Fulbright Degree Scholarship – Master of Science in Petroleum Engineering** **2021**
Mewbourne School of Petroleum & Geological Engineering in The University of Oklahoma
- **General Secretary – SPE Mehran Student Chapter** **2011**
Mehran University of Engineering and Technology, Jamshoro, Pakistan