TANYA ANN MATHEWS

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OBJECTIVES

Seeking a full-time petroleum engineer position where I can apply my professional and research skills in a challenging environment to contribute to the field of energy and sustainability.

EDUCATION

DOCTOR OF PHILOSOPHY   *Expected: May 2024*
Petroleum Engineering   *GPA – 4.0*
Texas A&M University, College Station, TX

MASTER OF SCIENCE   *May 2021*
Petroleum Engineering   *GPA – 3.88*
Texas A&M University, College Station, TX

BACHELOR OF TECHNOLOGY   *May 2019*
Petroleum Engineering, Major Upstream   *CGPA – 7.38*
Pandit Deendayal Petroleum University, Gujarat, India

EXPERIENCE (TECHNICAL)

Greentown labs   *March 2022 – March 2023*
Energy Innovation fellow
Served as a student liaison between Texas A&M and other prominent Texas colleges, MIT, and Greentown Labs. to create a powerful, student-driven entrepreneurship ecosystem in Houston.

Texas A&M University
Research Assistant   *Since Oct 2019*
I work on innovative and solution-driven projects that aim to reduce the environmental impact of everyday petroleum activities.

Baker Hughes, a GE company   *June 2018-July 2018*
Intern, Kuwait
Developed drilling fluids and conducted laboratory tests on the same to record rheological properties.

Khuff General Trading and Contracting Company   *June 2017 – July 2017*
Intern, Kuwait
Completed training on hydraulics in downhole completion, inflow control devices, and expandable systems.

SKILLS

- Laboratory experience: Core flooding, Flow Assurance, water treatment, and EOR.
- Software proficiency: ComboCurve, Excel, MS Office, Spotfire, PHDwin, Petrel, Eclipse, MATLAB.
- Soft skills: Effective written and verbal communication, troubleshooting, and analytical problem-solving skills.

COMPLETED PROJECTS

- Defended my dissertation on a project to investigate the effectiveness of evaporative cooling in treating high-TDS produced water due to hydraulic fracturing in the Permian Basin.
- Worked on a project with Wolfcamp shale samples and flowback water samples from Southern Midland, Permian Basin, to analyze rock-water interactions between the two through core flood simulation and other analytical procedures such as ICP-MS, IC, and SEM. This was done to check whether the injection of flowback water into the formation would deteriorate hydraulic fracturing efficiency.   *Since Oct 2021*
- Worked on a project with Chevron to check the recovery of heavy oils using Biodegradable solvents by conducting several core flood experiments with solvent and steam injections (EOR). The organic solvents tested were designed to reduce environmental damage and operating costs. The following experiments were carried out:
  - ➢ Design, assembly, and operation of thermal, immiscible, and chemical EOR experimental setup.
  - ➢ TGA/DSC experiments to determine the composition of oil samples.
  - ➢ FTIR and viscosity tests to characterize oil, solvent, and water samples   *Jan 2020 - Jan 2021*

PUBLICATIONS

- Mathews, T.A., Cortes, J.A., and B. Hascakir. "Evaluation of Environmentally Friendly Green Solvents for the Recovery of Heavy Oils." *Paper presented at the SPE Improved Oil Recovery Conference, Virtual, April 2022*.
- Mathews, T. A., Hopwood, W., & Hascakir, B. (2022). "Reinjection of Produced Water with high salinity after applying a Novel Treatment Method." *Paper to be presented at the SPE Annual Technical Conference and Exhibition, 3 - 5 October 2022 in Houston, Texas, USA, SPE-210206-MS*
- Mathews, T. A., Augsburger, N., Lefers, R., Hopwood, W., & Hascakir, B. (2023). Exploring Innovative Applications of Evaporative Cooling for High TDS Produced Water Treatment. *SPE Journal* (**Revision returned and submitted**)
- Mathews, T. A., Azzu, P., Hascakir, B., Unlocking Sustainable Solutions: Exploring Terpene-Based Green Solvent for Enhanced Oil Recovery, ***Submitted*** to Geoenergy Science and Engineering.