IVAN C ALDANA

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OBJECTIVE

Petroleum engineer with 5 years of experience in the Oil & Gas industry, seeking a fulltime position in the US in reservoir engineering-simulation-petrophysics-data analytics roles.

EDUCATION

Texas A&M University, College Station, TX
PhD student in Petroleum Engineering, GPA 3.78/4.0, Expected Graduation: December. 2023
Dissertation: Production Forecasting of Unconventional Wells in Presence of Stress-Sensitive Permeability Field.

Texas A&M University, College Station, TX
Master of Science in Petroleum Engineering, GPA 3.75/4.0, Class of 2019.

Universidad Surcolombiana, Neiva, Huila, Colombia
Bachelor of Science in Petroleum Engineering, GPA 3.9/5.0

WORK EXPERIENCE

Texas A&M University, College Station-TX **Jan 2021-Current**
Graduate Research Assistant in the Department of Petroleum Engineering

- Developed a semi-empirical proxy model for decline curve analysis and reserves forecasting, using MATLAB resulting in a match between simulation and proxy model of +/- 10 %.
- Proposed a modified RTA methodology for bilinear flow of unconventional wells capturing conductivity losses during first days of production.
- Proposed a modified RTA methodology to interpret linear flow of unconventional wells under stress dynamic permeability.
- Accomplished experimental work to test the capacity of a sorbent material to capture carbon from the atmosphere, achieving complete assembly of the core-holder, pressure transducers, DAQ system successfully; As a result, working capacity of the sorbent is around 8% (Unpublished).
- Graded the undergraduate class reservoir petrophysics and the graduate class petroleum project evaluation and management including homework's, quizzes, midterms and lab reports.

Texas A&M University, College Station-TX **Sep 2017-May 2019**
Graduate Teaching Assistant and Grader in the Department of Petroleum Engineering

- Published a conference and Journal Paper on a novel methodology to determine poro-elastic coefficient, pore volume and pore compressibility simultaneously from pulse pressure information, measured on shale rock samples using a core-holder. The work was patented.
- Performed petrophysics laboratory experiments for academic purposes including fluid density, viscosity and interfacial tension; Core porosity, permeability, fluid saturation, grain size distribution measurements, among others.
- Instructed and graded the laboratory section of the undergraduate course reservoir petrophysics to 40-60 students per semester. Both Routine (RCAL) and special (SCAL) core analyses, as well as fluid properties analyses were performed.

FRONTERA ENERGY (FORMER PACIFIC RUBIALES ENERGY), Bogotá, Colombia **Apr 2014-Aug 2016**
Petrophysicist I

- Monitored well logging operations during 2014-2015 drilling campaign in the oilfield, producing quick look interpretations within the first hours of real-time operations, for the completion of appraisal and development wells. This involved direct collaboration with wellsite geologist and company man in the field.
- Interpreted around 150-200 wells drilled in Upper Magdalena Valley, Putumayo and Llanos Basins-Colombia, producing the main rock properties for reservoir's static model.
- Applied multivariate regression analysis, neural networks to improve permeability models, calibrated against core data reducing prediction errors by 20-30%

PUBLICATIONS

- **US-PATENT. 202103729914A1. "**A method for estimation of fluid storage capacity of rock samples and other porous materials under effective stress".
- **LA-Urtec Paper-3970129 "**A√K method with dynamic Hydraulic Fracture conductivity under closure stress**".** Ivan C. Aldana, I. Yucel Akkutlu (Texas A&M, 2023).
- **Urtec Paper-3862595 "**Bilinear Flow Analysis of shale gas wells with dynamic hyd. frac. conductivity**".** Ivan Aldana, Yucel Akkutlu, John Lee. (Texas A&M, 2023).
- **SPE Paper SPE-195552-PA** "A laboratory method for estimation of storage capacity of rock samples under effective stress". Ivan C. Aldana, Santos, Laura, I. Yucel Akkutlu (Texas A&M, 2021).
- **SPE Paper SPE-195552-MS** "A laboratory method for estimation of storage capacity of rock samples under effective stress". Ivan C. Aldana, I. Yucel Akkutlu (Texas A&M, 2021).
- **SPE Paper SPE-171142-MS "**Understanding the movable oil and free water distribution in heavy oil sands", Llanos Basin, Colombia; U. Bustos (Schlumberger), G. Salazar, I. Aldana (Pacific E&P).
- **Undergraduate Thesis:** "Petrophysics model for the evaluation of Quifa Norte Block wells, Pacific E&P". Categorized "Meritorious Thesis" (U. Surcolombiana, 2012).

SKILLS-SOFTWARE

Reservoir Simulation: Computed Modeling Software (CMG), Familiar to ECLIPSE-INTERSECT (SLB), T-nav, PVT-Sim.
Pressure and Rate Transient Analysis: Familiar to Kappa Saphir.
Petrophysics: Interactive Petrophysics (IP), Familiar to Techlog (SLB) & Petroworks (Openworks).
Hydraulic Fracturing: STIMPLAN, Familiar to GOHFER, RESFRAC, FRACPRO.
Petroleum Economics: Familiar to ComboCurve, PhDwin and Aries.
Data Analytics and visualization: Familiar to Spotfire, Python: Pandas, Numpy, Matplotlib packages. Scikit-Learn.
Others: Microsoft Office suite (Word-Excel-PowerPoint-Access), VS-code, Spyder, Jupyter and Google Collaboratory, Github.
Programming Languages: Python, MATLAB, Familiar to Macros with VB in Excel, R, Java. and C++.
Languages: Native Spanish, Fluent English.

AWARDS/SOCIETIES/EXTRA CURRICULAR ACTIVITIES

TAMU Petroleum Engineering Msc. student paper contest: 2nd place in first round out of 2. Winners advance to regional qualifiers.
COLCIENCIAS/COLFUTURO Scholarships: Selected for scholarship for both masters and doctoral studies during 2017-2019; 2022-2023.
OU-Universidad Surcolombiana Academic Exchange Program: Selected for abroad studies in Petroleum Engineering during 2009.
SPE Society of Petroleum Engineers: Active Member since 2008-2013 & 2017-current.
SPWLA, Society of Petrophysicist and Well logs Analyst: Active Member since 2017.