

EDUCATION

M. Sc.
Petroleum Engineering
University of Wyoming
2009

Master's degree
Integrated Reservoir
Management
Universidad Central de
Venezuela
Caracas, Venezuela
2003

B. Sc.
Chemistry
Universidad Central de
Venezuela
Caracas, Venezuela
1995

EXPERTISE

Reservoir Characterization

Reservoir/Thermal
Numerical Simulation

Heavy Oil Exploitation

Waterflood Recovery and
Enhanced Oil Recovery
(EOR)

Laboratory Experiment
Tests Design and Analysis

History Match

Production Forecasting
and Optimization

LANGUAGES

Fluent in English and
Spanish

ASSOCIATIONS

Society of Petroleum
Engineers

PROFESSIONAL HIGHLIGHTS

Reservoir Engineer with over 15 years of international experience in the Oil and Gas and Academia industries. Expertise in reservoir numerical simulation, waterflood recoveries and enhanced oil recovery (EOR) technologies including thermal recovery and chemical injection processes. Recognized for using strong analytical and communication skills to work effectively in a multi-disciplinary environment. Organized problem solver and independent creative thinker with a proven track record of success implementing new ideas, processes and technologies.

WORK EXPERIENCE

CONOCO PHILLIPS, HOUSTON, TX (2008–2015) SENIOR RESERVOIR ENGINEER

- Performed numerical simulation studies and analog reservoir analysis in order to determine recovery potential, predict reservoir performance, identify and evaluate technical opportunities for input in field development decisions for Thornbury (Canada).
- Identified potential operational strategies for short and long term production forecast performing reservoir numerical simulation sensitivity studies to determine and predict optimal production scenarios, increase and optimize fluid recoveries in order to improve project economics, enhance technology operation, maximize reservoir performance and make recommendations as necessary in support to business unit for pilot and field development implementations.
- History match to update reservoir model and to evaluate production and reservoir performance in order to better understand the process mechanism, the dynamic reservoir behavior, and optimize production strategies for Christina Lake area (Canada).
- Performed economic screening evaluations in support of potential operational predictions and optimized field development plan to demonstrate the techno/economic opportunity to implement an adapted and optimal recovery scenario.
- Inventor/Co-Inventor of two discovered patentable techniques to improve production and technology performance and optimized recoveries using a thermal solvent/steam hybrid EOR process. Patent Application Publication No. US 2015/0083413A1 and Patent Application Publication No. US 2014/0144627A1.
- Responsible for the coordination of safety trainings for teamwork members.
- Co-editor of an internal newsletter distributed within ConocoPhillips.
- Delivered technical presentations and participated in peer review meetings to transfer knowledges and experiences to senior management and team members.

UNIVERSIDAD DE CARABOBO, VENEZUELA (2003–2007) PROFESSOR

- Delivered lessons and instruction on general principles of chemistry and organic chemistry in both laboratory and theory topics for students of Chemistry and Biology Schools.
- Served as team member providing technical support in Oil projects.
- Participated as theses committee member.

PDVSA INTEVEP, VENEZUELA (1996–2003) RESERVOIR ENGINEER

- Provided technical expertise in the design, implementation and analysis of laboratory experiments in static (fluid-fluid and fluid-rock) and dynamic (core flooding) tests to identify and evaluate possible reservoir development strategies using waterflood and Enhanced Oil Recovery (EOR) processes including chemical flooding (alkali/surfactant/polymer), foam, water alternating gas injection (WAG) and other technologies (gels, tracer's injection) to support operational decisions, improve operations and enhance the recovery process for different conventional reservoirs in Venezuela.
- Provided technical support in the analysis and measurements of trace components sampling (oil and water), as part of reservoir monitoring program carried out to evaluate performance of the Alkali / Surfactant / Polymer Single-Well-Chemical Tracer (ASP-SWCT) field pilot test implemented in Maracaibo's Lake, Venezuela.
- Participated in a research study incorporating geology, reservoir properties, production operations information for conventional and heavy oil reservoir candidates in Venezuela to evaluate and identify the opportunity to implement an optimal Enhance Oil Recovery technology using the analytical models PRIZE and SWORD.
- Performed fluid water and crude oil sampling in Maracaibo's Lake and Bachaquero areas,

Venezuela.

- Performed laboratory tests and reservoir numerical simulation using CMG commercial reservoir simulator to evaluate the technical opportunity to implement electromagnetic heating (MW/RF) with the addition of hydrogen donors for the heavy oil "in situ" upgrading for Hamaca crude oil, Orinoco Belt area, Venezuela.
- Co-mentored summer students in reservoir numerical simulation and laboratory experiments in enhanced oil recovery techniques including thermal and chemical recovery processes.

SOFTWARE SKILLS

CMG 's Reservoir Simulation software, OFM, PETREL, PHDWin, Geochemist Workbench (GWB) Geochemical Model, Analytical Methods (PRIZE, SWORD), Microsoft Office suite.

PUBLICATIONS

- C. Ovalles, V. Rivero, A. Salazar. "Downhole Upgrading of Orinoco Basin Extra-Heavy Crude Oil Using Hydrogen Donors under Steam Injection Conditions. Effect of the Presence of Iron Nanocatalysts". Catalysts 2015, 5, 1-x.
- Salazar, Arelys. "Evaluation of Alkaline-Polymer formulations in Minnelusa Reservoir". Master of Science Thesis, University of Wyoming. Advisor: Dr. Vladimir Alvarado, 2009.
- Salazar, Arelys. "Conceptual Numerical Simulation for Heavy Oil "in situ" Upgrading using Electromagnetic Heating". Master's Thesis, Universidad Central de Venezuela. Advisor: Dr. Cesar Ovalles, 2003.
- C. Ovalles, V. Rivero, A. Salazar, F. Gonzalez- Gimenez, E. Jaimes. "Catalytic Upgrading of Heavy Oil at Bottom Well Conditions". Invited talk presented at the VI Venezuelan Chemistry Conference, Margarita, Venezuela, 2003.
- C. Ovalles, P. Rengel-Unda, J. Bruzual, A. Salazar. "Upgrading of Extra-Heavy Crude Using Hydrogen Donor under Steam Injection Conditions. Characterization by Pyrolysis GC-MS of the Asphaltenes and Effects of a Radical Initiator". Spring Meeting of American Chemical Society, New Orleans, Division of Fuel Chemistry Preprints, 2003