

KEITH J. JAGIELLO, Ph.D.
Petrophysicist/Geoscientist



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EDUCATION

- Petrophysics, Amoco Petrophysics School, 1999
- Ph.D., Geology, UCLA, 1991
- M.S., Geology, Arizona State University, 1987
- B.S., Geology, Northern Illinois University, 1985

PROFESSIONAL PROFILE

Dr. Jagiello is an exploration, production and operations petrophysicist/geoscientist with 27 years industry experience. He has well-rounded skills critical to conventional and non-conventional reservoir characterization and field studies as well as prospect generation and evaluation. These include petrophysics, log analysis, structural geology, and fractured reservoir analysis. Moreover, he has used his integrated skills to explore, conduct field studies and build petrel reservoir models for simulation in basins worldwide.

PROFESSIONAL EXPERIENCE

PETRO DATA INTEGRATION, LLC: Littleton, Colorado, U.S.A

(2004 – Present) **Managing Director and Senior Consultant**

Consultant in petrophysics, geology and seismic interpretation with advanced specialties in integrated field studies, reservoir characterization and structural geology.

- **US- Denver-Julesburg Basin** (Wyoming & Colorado) – Processed over 5000 wells for a regional study of the Niobrara and Codell formations to high-grade exploration potential and acquisition opportunities. Calibrated logs to core and investigated thin bed and by-passed pay opportunities.
- **US – Permian Basin** – Developed petrophysical models and processed over 100 wells to understand regional unconventional reservoir/fluid trends.
- **US – Eagleford/Austin Chalk** – Developed petrophysical models and processed over 100 wells for various acreage evaluations. Integrated geological and engineering data and computed volumetrics.
- **US – Greater Green River Basin** (Wyoming & Colorado) – Calibrated petrophysics to core data and conducted field-oriented evaluations in tight gas reservoirs in the Wamsutter area and Pinedale Anticline. Work included calibration of petrophysics, special core analysis, resistivity inversion modeling, fluid substitution modeling and analysis of cased hole logs in multiple fields. Data was integrated with production and

seismic to identify pay intervals in fresh water-bearing sand, build reservoir models and determine production strategy. Highly involved in drilling and operations.

- **US - Williston Basin** - Calibrated petrophysics to core data and conducted regional and prospect-oriented evaluations of the Bakken, Three Forks, Red River and Gunton formations. Involved in operations planning and specialty core and log acquisition for variable lithology low permeability reservoirs and thin bed pay. Results were used to high-grade areas for future acquisition and determine drilling strategy on company acreage.
- **US – Anadarko Basin** – Low resistivity pay and radioactive tight sand petrophysics in the Granite Wash. Tight sand and carbonates in the Kansas City, Marmaton, Cherokee, Atoka, Miss. Lime, Woodford and Arbuckle Formations. Efforts included petrophysics, fracture analysis, multi-mineral modeling and mapping salinity changes both laterally and vertically over a thick reservoir section in a regional area. Results were used to high-grade acreage acquisition and implement a development plan.
- **US - Paradox Basin** - Calibrated petrophysics to core data and conducted field-oriented evaluations. Built reservoir models in Petrel for producing fields to determine volumetrics and production optimization.
- **US – Uinta Basin** – Calibrated petrophysics to core data and conducted field-oriented evaluations in oil reservoirs in various fields and stratigraphic intervals. Work included calibration of petrophysics, special core analysis, resistivity inversion modeling and analysis of cased hole logs. Data was integrated with production and seismic to identify pay intervals in oil-wet sands and determine production strategy.
- **US - Gulf Coast** - Integrated geoscience and petrophysical study of carbonates and sands in the Smackover and Norphlet Formations, State Line Field, Mississippi and BlackJack Field, Florida. Petrophysical and geological field study of the Chocolate Bayou Field, Gulf Coast Texas. Efforts focused on identifying bypassed pay opportunities and building reservoir models in Petrel for volumetrics and simulation.
- **Argentina** – Petrophysical and geological analysis of carbonates in the Quintuco Formation in the Loma La Lata field, Neuquen Basin.
- **Colombia** – Petrophysical analysis and evaluation of wells in the Middle Magdalena Basin for various carbonate and clastic reservoirs. Some studies involved a fracture component.
- **Venezuela** – Petrophysical and geological analysis of the Orinoco heavy oil belt. Work included depth converting seismic and building a reservoir model in Petrel for volumetric sensitivities.
- **Trinidad** – Petrophysics and petrel reservoir study of the Brighton Field turbidites (>300 wells). Also conducted seismic interpretation, structural modeling and built a full field reservoir model in Petrel to identify bypassed pay, workover opportunities, exploration potential and volumetrics. Also conducted petrophysics (2000 wells+) and geoscience studies in other fields and plays in both the onshore shallow reservoirs and deep water fairways. Highly involved in drilling and operations.
- **Belize** - Petrophysical and geological analysis of the Yalbac carbonate and Hillbank clastic sections of the Spanish Lookout and Never Delay fields. Extensive calibration to core data.

- **Russia** – Petrophysical calibration of Russian logs to modern western log suites in various oil and gas fields in the Western Siberian and Pricaspian Basins for exploration and development. Developed normalization and calibration techniques. Modelled Russian induction and lateral resistivity logs. Verified petrophysics results with core and CMR data. Reviewed property distribution in a static reservoir model.
- **Kazakhstan** – Petrophysical calibration of Russian logs to modern western log suites in gas fields in the Pricaspian Basin. Identified potential bypassed pay and exploration opportunities.
- **Ukraine** - Petrophysical calibration of Russian logs to core and modern western log suites in a tight gas sand. Work was used to high-grade zones and areas for development.
- **Hungary** – Petrophysics on wells in the Pannonian Basin.
- **North Sea** – Integrated petrophysical and geoscience studies of various fields and reservoirs in the Dutch, British and Norwegian sectors of the North Sea for multiple clients and operators for both exploration and production. Work was used as input for volumetrics and/or reservoir simulation as well as developing production and exploration strategies. Worked on the 2007 UKCS exploration round. Processed 100's of wells in the Viking Graben, Central Graben, Moray Firth and East Shetland areas. Generated prospects and evaluated acreage for exploration potential. Participated as a petrophysicist in the Asgard redetermination study (2006).
- **Algeria** – Evaluation of reservoir models and volumetrics in anticipation of equity determination in the Berkine Basin. Work included validation and integration of petrophysics, geoscience and modeling for TAG-I and Devonian reservoirs. Provided petrophysical and geoscience support for field development. Utilized Petrel for development work and building reservoir models. Highly involved in drilling and operations.
- **Nigeria** – Various integrated petrophysical and geoscience studies in the onshore and offshore Niger Delta. Identified bypassed pay and drilling opportunities. Monitored drilling operations.
- **Oman** – Exploration potential and petrophysical study of fractured carbonates in the Natih/Shuaiba reservoirs.
- **Gabon** – Depth conversion using Petrel and structural interpretation of subsalt plays in offshore Gabon.
- **Australia** – Conducted a study integrating geology, petrophysics, core, seismic and engineering data to develop a deposition model for the Golden Beach reservoir sands in the Gummy Field of the Gippsland Basin. Built a reservoir model in Petrel and ran volumetrics sensitivities.

INTERNATIONAL RESERVOIR TECHNOLOGIES, INC.

(1999 – 2004) **Senior Consultant**

Worked on oil and gas field studies in the:

- United States – Greater Green River, Piceance, Williston & Anadarko Basins
- Venezuela - Maracaibo and Maturin Basins including the Furrial trend

- Colombia – Upper and Middle Magdalena Basins
- Algeria – Berkine Basin
- Oman
- Kuwait

Projects involved integrating data and conducting petrophysical/geologic studies in order to advise the client of the best way to delineate the field and improve production. Also conducted petrophysical studies on well logs and make recommendations on how best to complete the well. Work was conducted in our office in Lakewood Colorado.

AMOCO EXPLORATION & PRODUCTION CO.

(1989 – 1999)

- Worked on regional exploration projects and field development in Venezuela, Italy, Colombia and Argentina.
- Italy - Regional field studies and exploration/prospect level analysis of structural geology, reservoir development and petrophysics in the southern Apennines.

PROFESSIONAL SOCIETIES

AAPG, SPWLA, SPE, DWLS, RMAG

LANGUAGES

- **English** - Fluent
- **Spanish** - Advanced conversational, capable of technical discussions and presentations
- **Italian** - Conversational
- **French** - Reading comprehension

SPECIAL COMPUTER SKILLS

- UNIX & PC computer skills – Extensive experience
- Geolog Petrophysical Software – Extensive experience,
- Terrasciences Petrophysical Software – Extensive experience,
- Petrel – Intermediate experience building reservoir models & volumetrics
- Geographix Prizm – Extensive experience
- Landmark Seisworks (2D & 3D), Stratworks, Petroworks and ZMAP+ - Extensive experience.
- PST neural nets (NNLAP) and SP & Resistivity inversion modeling – Extensive experience,
- Kingdom Seismic – Beginner to intermediate experience
- Microsoft office software packages – Extensive experience,

PUBLICATIONS

Jagiello, Keith J. (2014) Petrophysical Interpretation of the Northern Pinedale Anticline Field, Sublette County, Wyoming; in Pinedale Field: Case Study of a Giant Tight Gas Sandstone Reservoir, AAPG memoir 107, p. 417-442.

Billingsley, R.L., Henry, M.W., Smith, L.K. and Jagiello, K.J. (2005) Utilization of a Regional Water Chemistry Database to Improve Formation Evaluation and Reservoir Simulation in Low Permeability Reservoirs of Southwest Wyoming, in AAPG Hedberg Conference "Understanding, Exploring and Developing Tight Gas Sands" Vail Colorado, April 28, 2005.