

John J. Interval, P.G., C.P.G.
Professional Petroleum Geologist
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CAREER SUMMARY

Results oriented *Professional Licensed and Certified Petroleum Geologist* with a proven background of prospecting, drilling, presentation, oral and written communication skills. Specializing in Appalachian Basin Log Interpretation and Correlation, Geological Mapping, Developmental and Exploratory Geology Prospect Generation, Evaluation and Presentation. Also proficient in Production Management, Well Completion Design and Well Reserve Analysis.

PROFESSIONAL EXPERIENCE and ACTIVE CLIENTS

Penn Production Group, LLC.
Co-owner and Geologist
Pittsburgh & Indiana, Pennsylvania
2017 – Present

Support to everything technical.

Co-originator of target concept of reservoir, reserves, economics, and business model. Did not develop the model in a vacuum, but together in collaboration with geologist-geophysicist-petroleum engineer Peter Hatgelakas and the CEO, Mark Thompson. We preceded CNX in the deep shale model concept of our principle target by months as documented by internal reports generated. Recent deep wells have proven the model concept correct.

Technical concepts Peter and I have developed in our shale model remain highly confidential as closely held intellectual secrets for PPG. Such concepts will ensure additional reserves recovered for PPG wells alone. Based on competitor quarterly releases to stockholders, PPG is at least 5 years ahead of in understanding of play 'petrophysical reservoir mechanics', and completion design strategies.

John Interval Geological Consulting Services, LLC
Bridgeville, Pennsylvania
Licensed and Certified Professional Petroleum Geologist (2004-Present)

ACTIVE CLIENTS:

DORSO, LP
Wexford, Pennsylvania
Staff Geologist (2004-2007)
Director of Geology (2007- Present)

Huntley & Huntley, Inc.
Monroeville, Pennsylvania
Consulting Geologist (2010 to Present)

Clearfield Energy Services, LLC
Houston, Texas
Executive Vice President of Geology and Geosciences
Unconventional Shale Geologist, Partner (2010-Present)

Vintage Land Holdings and Operating, LLC
Kittanning, Pennsylvania
Chief Geosciences Officer
Unconventional Shale Geologist (2016-Present)

Oil and Gas Management, Inc.
Mount Pleasant, Pennsylvania
Staff Geologist (2005-Present)

Active regional working familiarity with all Devonian and Ordovician Unconventional Shale Plays (Burket/Geneseo, Marcellus and Utica Shale's) and all tight sandstone, siltstone and carbonate plays (Conventional) in the Appalachian Basin. Also, working familiarity with the Permian Basin in West Texas and the Bakken Shale Play in North Dakota and Montana.

Also acted or acting as an independent consultant for:

Nabors Completion, Production and Services Company
Southpointe, Pennsylvania
Geological Consultant for Appalachian Basin
Interpreter of OPTV Log Imager (2010-2015)

CNX Gas Corporation
Pittsburgh, Pennsylvania
Primary Geological Consultant for Appalachian Basin
Shallow Drilling Activities (2008 –2015)

Petroleum Geologist for Nabors Completion and Production Services Company performing log interpretations, dip directions, Rose Diagrams, and fracture orientations for clients. Other clients included Washington Energy, L&S Well Services Inc., Snyder Brothers, Mid-East Oil Company, Equitable Resources (EQT), Great Lakes Energy Partners L.L.C.(Range Resources), Gallatin Fuels Inc. and Phillips Production Company (XTO) as a prospect generator and regional location evaluator performing geological, completion engineering, and reservoir engineering duties. Evaluating, preparing and presenting prospects for landowner groups and oil and gas companies interested in selling assets to potential buyers. Represented several Law Firms as a geological expert witness.

KIS OIL and GAS CO. LLC
Co- Founder/Partner (2004-2007)

Primarily responsible for initially funding, generating and presenting geological oil and gas prospects to private investors with the intent of showing merit for drill site selections for investing in Private Partnership opportunities. Responsible for providing geological prospect generation, initial drilling prognosis and casing settings. In addition, mapping and identifying primary productive targets and providing completion merit for zones encountered subsequent to drilling. Prepared frac designs and developed production schemes.

Developed and presented logic and reason for undeveloped Unconventional Resources within the guidelines of the Appalachian Basin Stratigraphic Scheme into several logical reasons to divide the Geological Targets into separate sellable prospects within the same geographical area due to depth and completion procedures as well as separate production histories. In addition, provided ongoing economic models while deriving coal and non-coal drilling areas. Prospects and selling strategies proved very successful. Company sold primary deep and shallow holdings separately according to my strategies in 2008.

Kriebel Resources, Clarion, PA
Director of Geology (1997-2004)
Chief Geologist (1992-1997)
Staff Geologist (1991-1992)

Responsible for generating all developmental and exploratory projects while managing existing drilling programs within the Appalachian Basin. Background experience includes Mississippian through Ordovician Age Reservoirs throughout the Appalachians. Instruct department of geologists and cartographers on both developmental and exploratory efforts to assemble viable prospects into saleable presentation form and propose finished prospects to potential investors. Also responsible for well completion design and well production management.

Geological Accomplishments:

- Initiated and directed cartography department and initiated Geographix Computer System while creating geological sequence stratigraphy models of Lower Mississippian, Upper Devonian and Middle Devonian Systems. This mapping scheme has generated 700 drilled developmental gas wells of commercial quality while discovering several New Field Extensions that has generated 2,000 additional locations to date. The geological mapping scheme had doubled the company's area of operations into 75 active and diverse prospect areas. The mapping scheme has also geologically and economically high graded each area that has resulted in an organized effective leasing strategy creating focus, harmony and continuity between the Land and Geology Departments.
- Provide annual geological prospectus to show justification of well site selections.
- Provide year round geological presentations to individuals, groups of investors and potential investors conveying an opportunity of joining a partnership offering diverse production drilling targets that are economically, geologically and geographically viable.
- Made special presentations to a variety of corporations and municipalities including but not limited to: Sony Corporation, Westinghouse Electric Company, Arnold Palmer Airport, St. Vincent's College, successfully convincing them to allow our company to exploit gas reserves in sensitive geographical areas, subsequently providing economically successful projects while accomplishing production predictions within 1% of pre-drilling expectations.
- Instrumental in securing and executing successful joint ventures and farm out locations from major utilities including but not limited to: Consolidated Natural Gas, Peoples Natural Gas, Carnegie Natural Gas, National Fuel, Equitable Gas Company.

Well Completion & Reservoir Management Accomplishments:

- Applied analytical geological principles of statistical well completion data and created a well completion design based on the historical success of past producing wells. This study has led to the creation of new chemicals developed by Superior Well Services (CW-2K) that simulates successful "Slick Water" frac jobs that were used in most successful producing tight sands wells in the Appalachian Basin.

Superior's product has been simulated by every service company used in the Appalachian Basin.

- Responsible for designing all well completions.
- Provide annual individual well reserves.
- Developed technique to put wells on production curves that are used to accurately predict feed rates for production nominations.
- Created and published Pressure=Permeability Theory that through well charts, a language between management and field operations was created clarifying internal production goals and the methods necessary to insure success and repeatability.

Combined Geological, Completion & Reservoir Management Accomplishments:

- Proficient at presenting logical solid statistical analogies that graphically depicts and compares the working relationships between geology, completion and reservoir engineering that enables me to give objective perspective between the three entities. This skill has allowed me the ability to maximize production potential in the most economical and effective manner. This insight comes from being responsible for all three aspects of a successful drilling project. 1.) Sound geological mapping principles and interpretation. 2.) Sound completion techniques that ensure repeatability and continuous analysis. 3.) Sound reservoir management skills, which is the final phase of ensuring a repeatable successful production model that can be used to project similar success into new areas.
- Assimilating these skills has given me unique insight and the ability to understand the geological principles that apply to sound and accountable completion and reservoir management practices.

Meridian Exploration Corporation, Pittsburgh, PA Staff Geologist (February 1988-September 1991)

Responsibilities included a complete research and gathering of all geological data pertinent to area of interest and subsequent prospect development. Mapping responsibilities included selection and evaluation of potential drill sites. Actively involved in prospect activity throughout the Appalachian Basin including Mississippian Reservoirs of Southern West Virginia, Devonian and Silurian Reservoirs of Pennsylvania and New York, Devonian Reservoirs of Central and Northern West Virginia, and Ordovician Reservoirs of New York.

Key Contributions:

- Provided successful exploratory and developmental prospects throughout New York, Pennsylvania and West Virginia.
- Responsible for all well site geological duties.
- Working familiarity with geological surveys in Pennsylvania, New York, West Virginia, Ohio and Kentucky.

John F. Kennedy Grade School, Washington, PA
Substitute Science Teacher (November 1987-February 1988)

Responsibilities included teaching academic courses to elementary students. Prepared objectives and outlines for courses of study and assisted in developing curriculum. Prepared, administered, and corrected tests; kept attendance and grade reports.

EDUCATION

California University of Pennsylvania, California, PA
Bachelor of Science Degree 1986
Major: Geology
Major QPA: 3.35/4.0 scale Overall QPA: 3.15/4.0

I.C.M. School of Business, Pittsburgh, PA
Certified in Electronic Data Processing 1981

CERTIFICATIONS, MEMBERSHIPS & ACCOMPLISHMENTS

- Pennsylvania Licensed Professional Geologist #PG-000673-G
- Georgia Licensed Professional Geologist #PG-001762
- AAPG Certified Petroleum Geologist #5848
- Served as Professional Geological Consultant to State Report on “State of the Oil and Gas Industry in Rural Pennsylvania” for California University of PA (2002-2004)
- Honorary Member of Sigma Gamma Epsilon
- Multiple Published Newspaper Editorials on the Oil and Gas Industry: *Patriot News, Harrisburg, Pa.; Pittsburgh Post Gazette, Pittsburgh, Pa.; Scranton Times Tribune, Scranton, Pa.; Observer-Reporter, Washington, Pa.; Tribune Review, Pittsburgh, Pa.; Johnstown Tribune-Democrat, Johnstown, Pa.; Philadelphia Inquirer, Philadelphia, Pa.; Guest Petroleum Geological expert on KDKA Morning Radio answering questions on Gas Shale Plays in Pennsylvania.*
- Member of Pittsburgh Association of Petroleum Geologists
- Active Member of American Association of Petroleum Geologists
- Member of California University Geology Club

• **Marcellus Shale II**

Friday, March 25, 2011

9:00 a.m. to 4:15 p.m.

6.0 Substantive

PACLE Approved

Moderator: John Caputo

Speakers: John J. Interval, P.G., C.P.G.(Petroleum Geologist), Carl J. Carlson (Range Resources), Walter A. Bunt, Jr. (K & L Gates), Amy L. Barrette (K & L Gates), Alfred H. Lander (Law Offices of Greco & Lander, P.C.), Donald J. Balsley, Ronald T. Conway (Conway Law firm, LLC), Gary L. Sweat (Sweat Law Office). Please contact the Institute for complete biographies.

This Seminar is being presented for practicing attorneys who are or expected in the future to be representing landowners, companies engaged in the natural gas extraction, storage, piping, or related water filtration businesses, or government bodies faced with regulation concerns.

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CLE Seminar Entitled "Geology for Lawyers: "The Marcellus Shale Phenomenon."

Seminar Date: Friday, May 20, 2011

Seminar Time: 9:00 a.m. to 12:15 pm.

Seminar Location: Cal U Southpointe Center

Event Description:

The Institute for Law and Public Policy at California University of Pennsylvania will present **Geology for Lawyers: The Marcellus Shale Phenomenon** from 9 a.m.-12:15 p.m. May 20 at the Cal U Southpointe Center in Canonsburg, Pa.

The seminar is approved for continuing legal education by the Pennsylvania Continuing Legal Education Board.

Presented by petroleum geologist **John J. Interval**, the seminar aims to show the economic merit of Pennsylvania Sequence Stratigraphy, with emphasis on the Marcellus Shale and its place within the stratigraphy of Pennsylvania.

Marcellus and Utica Shale for Lawyers

CLE Seminar

Friday, August 19, 2011

Bayfront Convention Center

1 Sassafras Pier

Erie, PA 16507

Moderator: John A. Caputo
9:00-10:15 AM Various Aspects of Shale Geology, Its Progress, and Its Future Potential.

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- . 2012: Repeated Seminars of 2011.
- . 2014: Associate Member: (AIMA) International Institute of Minerals Appraisers.