

Unconventional Oil and Gas



NSAI 

NETHERLAND, SEWELL & ASSOCIATES, INC.



NSAI 

One of the **most respected** names
in independent reserves reporting

NSAI 

Preferred by companies
who need **reliable results**

NSAI 

Quality at
a **competitive price**

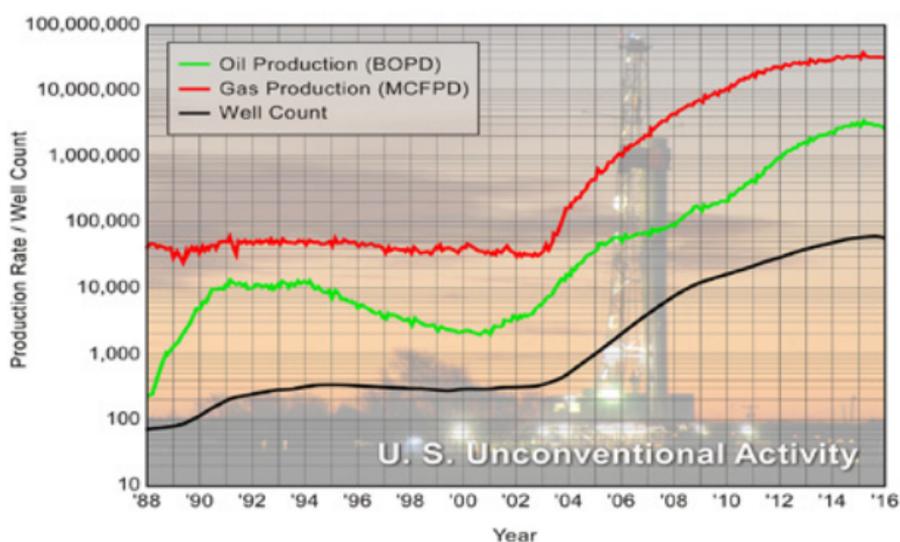
NSAI 

Expertise in
Unconventional Oil and Gas

Unconventional developments have experienced explosive growth in recent years and have become an increasingly important source of oil and natural gas in the United States. Netherland, Sewell & Associates, Inc. (NSAI) has developed its expertise over the past decades by working with numerous clients, from the early exploration phase through the development phase, who are active in all major unconventional plays. We understand the technological and economic drivers behind this growth, the complexities unique to each play, and the uncertainties in estimating producible volumes. Our team can lend its judgment and expertise, based on thousands of hours of relevant experience, to any evaluation.

We have been involved in projects in all major unconventional plays in North America, including the Avalon, Bakken, Barnett, Eagle Ford, Fayetteville, Haynesville, Mancos, Marcellus, Montney, Muskwa, Niobrara, SCOOP, STACK, Utica, Wolfcamp, and Woodford, and in emerging unconventional plays worldwide. Our insights are delivered on the lease, local, and regional levels. NSAI maintains a regional mapping system and a public production database system for several of the major unconventional plays and has developed type curves grouped by area, operator, and completion type.

Our team will work with you to quantify your reserves and resources, optimize your development strategies, and identify your expansion opportunities. And, when it comes to financing or acquisition and divestiture activity, you can trust that an evaluation by NSAI will be highly respected by the industry and financial community.



Typical Scope of Work

Depending on the project needs, our scope of work may include:

- Performance assessments of historical production, including primary completion and refrac evaluations, drainage studies, pipeline volume studies, and estimation of recovery for offset producers
- Comprehensive geologic and petrophysical assessment of the rock including identification of competent frac barriers and additional conventional pay zones
- Geologic support for prospect development and mineral acquisition
- Interpretation of seismic data to identify presence of karsting and faulting
- Recommendations for acquiring core data and laboratory testing procedures as well as interpretation of free gas, total organic carbon (TOC), and isotherm data
- Independent reserves and resources assessments, including economics
- Vertical and horizontal well drilling and completion design, including stimulation and flowback procedures
- Design of development programs intended to maximize reserves base and asset value

Selected Productive Unconventional Clients

We have worked for clients ranging from small independent operators to major national oil companies, as shown in a partial list below:

- American Energy Partners
- Chesapeake Energy Corporation
- Consol Energy
- Encana Corporation
- Exco Resources, Inc.
- Felix Energy, LLC
- Gulfport Energy Corporation
- Hilcorp Energy Company
- Noble Energy, Inc.
- Petrohawk Energy Corporation
- Pioneer Natural Resources
- Rice Energy
- Shell Oil Company
- Southwestern Energy Production Company
- Talisman Energy Inc.
- The Williams Companies, Inc.

U.S. Unconventional Plays



Unconventional Experts

- Bob Barg** – Reservoir Engineer – Dallas
- Randy Green** – Reservoir Engineer – Dallas
- Shane Howell** – Geoscientist – Houston
- Bill Knights** – Geoscientist – Dallas
- Neil Little** – Reservoir Engineer – Houston
- Rick Talley** – Reservoir Engineer – Houston

Additional Unconventional Experience

- Caney** – Arkoma Basin, Oklahoma
- Llandovery** – Baltic Basin, Poland
- Ohio** – Appalachian Basin
- Pierre** – Raton Basin, Rockies
- R.E.M.** – Cooper Basin, Australia
- Toolebec** – Galilee Basin, Australia
- Tuscaloosa Marine** – Louisiana and Mississippi
- Vaca Muerta** – Neuquen Basin, Argentina
- Valkeri** – McArthur Basin, Australia

Because of our commitment to independent evaluations, the NSAI name is highly respected by both the energy and financial communities. By applying sound judgment and methodology, our shale team is able to assess the project requirements, interpret the data, and provide top quality results.

Our clients get the NSAI name and our team of experts. We think they get the very best.



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