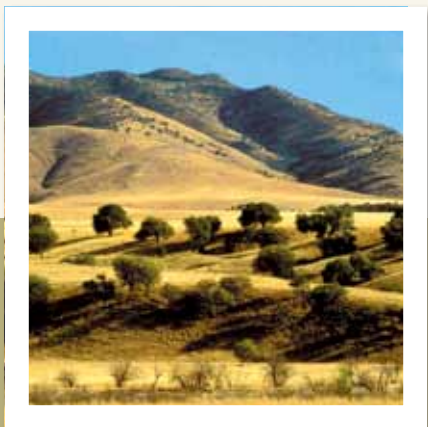


Reservoir Simulation



NETHERLAND, SEWELL & ASSOCIATES, INC.



NSAI 

One of the **most respected** names
in global petroleum consulting

NSAI 

Preferred by companies
who need **reliable results**

NSAI 

Quality at
a **competitive price**

NSAI 

Expertise in
Reservoir Simulation

Numerical reservoir simulation is a state-of-the-art evaluation tool that includes material balance, fluid flow, reservoir heterogeneity, well interference, wellbore hydraulics, and facility characteristics in its predictions of reservoir performance. Simulation can be a valuable tool to determine the best development plan for a new reservoir or to improve an existing field by understanding historical production behavior.

Experience has taught us that in order for reservoir simulation to be a useful evaluation tool, it must be implemented by an experienced, multi-functional team of geoscientists and reservoir engineers. The Reservoir Simulation team at Netherland, Sewell & Associates, Inc. (NSAI) is comprised of experts who have been working with simulation tools for over 15 years and have been evaluating reservoirs around the world for over 20 years.

Reservoir Simulation Experts

Dave Adams - Reservoir/Simulation Engineer - Dallas

Mike Beggand - Reservoir/Simulation Engineer - Dallas

Chris Tucker - Reservoir/Simulation Engineer - Dallas

Derek Newton - Reservoir/Simulation Engineer - Houston



Methodology

We use black oil and compositional models in our studies, and our experts are proficient with a variety of simulation software applications including Schlumberger GeoQuest's Eclipse® and Halliburton Landmark's VIPTM. No job is too large—our history match models have included fields with over 1,200 wells and 80 years of history. Be it a single-well evaluation, a mechanistic model, or a full-field history match, our experts are skilled in all aspects of reservoir simulation. And whether we are auditing an existing model, revising a client's model to improve results, or creating a completely new model, we tailor each evaluation to meet the client's needs. By working together, our team designs models with realistic reservoir characteristics that answer the questions central to a client's objectives. Our simulation projects have been used by clients to justify wells and injection projects—proof that the economic value of simulation work often greatly exceeds the required investment.

Selected Reservoir Simulation Clients

Our simulation clients include small independent oil producers, large international oil companies, and national oil companies around the world.

- Beech Hill Field, New York
- Pemex Exploración y Producción
- Northern Natural Gas Company
- Devon Energy Corporation
- BEB Erdgas und Erdöl GmbH
- ExxonMobil
- U.S. Department of Energy
- Plains Resources Inc.
- International Finance Corporation
- Anderson Oil & Gas Inc.
- AIG Financial Products Corp.
- Sonangol E.P.
- Hunt Petroleum Company
- Ras Laffan Liquefied Natural Gas Co. Ltd.



Selected Reservoir Simulation Projects

Our teams have been involved in projects all over the globe. The list below represents only a few of those projects.

- Cantarell Field, Mexico
- Jujo-Tecominoacán, Mexico
- Bermudez Field Complex, Mexico
- North Field, Qatar
- Elk Hills Field, California
- Goldenstedt-Visbek Field, Germany
- Aguaytia Field, Peru
- Redfield Gas Storage Field, Iowa
- Cunningham Gas Storage Field, Kansas
- Grayson Field, Arkansas
- Mobile Bay Field, Alabama
- Condor Field, Chile and Argentina

Our simulation projects have been used successfully in the following areas:

- Gas Storage Field Studies
- Expert Witness Testimony
- Field Development Optimization Studies
- Equity Redeterminations
- Production Rate Sensitivity Studies
- Project Finance Support
- Gas and Water Injection Based Secondary Recovery Project Evaluations
- Reserve Certifications

Contact NSAI today to arrange for a more in-depth presentation at a convenient time in your office. We will gladly show you how our Reservoir Simulation services may be tailored to your particular needs at a competitive price.

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



NETHERLAND, SEWELL & ASSOCIATES, INC.

Worldwide Petroleum Consultants

Offices in Dallas and Houston

Dallas 214.969.5401

Houston 713.654.4950

www.netherlandsewell.com

info@nsai-petro.com