IHS PETRA®
Integrated Software and Delivery Tools to Advance Your E&P Workflow
The 3D Visualization Module is designed to give geologists, engineers, technologists and geophysicists the ability to produce a complete three-dimensional view of their PETRA projects.

The Advanced Volumetrics Module provides you with both deterministic and probabilistic methods to calculate hydrocarbon recoveries based on well-established industry correlation and models.

The Production Group Plot enables you to analyze trends, devise depletion strategies and manage reservoirs. Its intuitive interface makes it easy to display monthly production information for a set of wells.

The Map Module provides the base for producing customizable map displays. Easily load, edit and display cartographic information to assist in reservoir analysis and location picking.

The Directional Well Module provides a new interface to improve your horizontal and directional drilling workflows. Edit gridded surfaces along horizontal wellbores, quickly plan wells and load drilling data, and analyze well performance.

The Advanced Volumetrics Module provides you with both deterministic and probabilistic methods to calculate hydrocarbon recoveries based on well-established industry correlation and models.

The Log Correlation Module is designed to increase the speed and ease with which you pick tops across a basin or play.

The Cross Section Module provides the base for producing customizable cross section displays, in addition to rapid editing of information and production of stunning graphical outputs.

The 3D Visualization Module is designed to give geologists, engineers, technologists and geophysicists the ability to produce a complete three-dimensional view of their PETRA projects.
Streamline interpretation, optimize play analysis, and make confident decisions using IHS PETRA

Geologist
- Scope area of interest
- Integrate well, log and seismic information
- Target drilling and recompletions

Geophysicist
- Interpret seismic horizons
- Integrate with geology
- Evaluate new opportunities

Drilling Engineer
- Derive surface & profile plans
- Analyze planned borehole paths
- Perform cost estimates and analysis

Reservoir Engineer
- Identify recompletion & drilling opportunities
- Optimize production and recovery
- Analyze reservoir trends

Completion Engineer
- Model completion performance
- Provide technical specifications & operating instructions
- Optimize completion & workover designs and operations

Production Engineer
- Evaluate separation of produced fluids
- Monitor downhole flow control
- Maximize profitability

Technologist
- Load information
- Verify and quality check information
- Collaborate on project development

Petrophysicist
- Understand reservoir properties
- Perform well, core & log analysis
- Build reservoir models
- Evaluate reservoir models

Manager
- Assess strategy
- Manage risk
- Ensure compliance
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<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Related Tools</th>
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<td>How do I effectively and efficiently analyze and manage vast amounts of information and build accurate models?</td>
<td>PETRA’s direct connection to IHS information enables you to download multiple sources of IHS information for immediate use in PETRA and other IHS applications. It also ensures that you have the most up-to-date information available. Within PETRA, utilize the Map, Log Correlation, Cross Section and 3D Visualization Modules and more to model and analyze your area(s) of interest.</td>
<td>Well &amp; Production Information, Drill Stem Test Information, AccuMap, Enerdeq Browser, eTriever, LOGarc</td>
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<td>How can I develop a short list of “hot” areas and develop prospects and operating strategies?</td>
<td>Identify top producing areas and production thresholds in your area of interest with Well and Production information from IHS. Then, use PETRA’s Decline Analysis functionality and the new Directional Well Module to study stimulation strategies.</td>
<td>FieldDIRECT, PowerTools</td>
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<td>How can I plan for the future production and depletion of my reservoirs?</td>
<td>Analyze trends, devise depletion strategies and manage reservoirs using PETRA’s Group Production Plot and Decline Curve Analysis modules. Calculate hydrocarbon recoveries based on established industry models using PETRA’s Advanced Volumetrics module.</td>
<td>FieldDIRECT, PowerTools, Well &amp; Production Information, Well Log Information, Interpreted Formation Tops</td>
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<td>How do I quickly evaluate seismic data in a geological context?</td>
<td>The PETRA, PetraSeis and GeoSyn integrated geological and seismic solution enables workflow collaboration, allowing you to easily access and view digital log data, generate and export synthetics, and even perform uncertainty analysis and modeling to refine your seismic interpretations.</td>
<td>PetraSeis, GeoSyn, Well Log Information</td>
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<td>How do I quickly evaluate a prospect?</td>
<td>Use Production information to determine initial reserves. Estimate future declines, determine reservoir pressure, and map ultimate recoverable gas, cumulative gas and gas decline rates using PETRA’s Decline Analysis, Volumetrics and Map modules. Create a template for wells in an evaluation area that share common analysis needs, speeding up the evaluation process for multiple leases. Rapidly calculate and graph interest percentage, net expense, and revenue.</td>
<td>PowerTools, IHS Well &amp; Production Information, AccuMap, Enerdeq Browser</td>
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<td>How can I compare and contrast all coalbed methane basins to understand production rates and evaluate future potential?</td>
<td>Use IHS coal, production and operator information to study daily output, well productivity and estimated contribution to the overall supply picture of coalbed methane basins.</td>
<td>PowerTools, Well &amp; Production Information, AccuMap, Drilling Wire on the Web, Coal Information</td>
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<td>I need to benchmark production for tight gas sand reservoirs and see what kinds of treatment plans have enhanced production.</td>
<td>Characterize production performance of key reservoirs as benchmarks. Evaluate specific well performance after treatment types.</td>
<td>PowerTools, Well &amp; Production Information, PERFORM</td>
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From prospecting to completion, energy critical information and analytical tools you can count on

PETRA is a unique solution for data management, manipulation, visualization and integration of geological, geophysical and engineering data. You can quickly visualize results using mapping, cross-sections, seismic interpretations, log plots, cross-plots, production and reservoir analysis and 3D visualization.

PETRA also features direct links to the following IHS applications.

• AccuMap®
• Enerdeq Web Services (U.S. Well & Production database, International Well database)
• eTriever™
• GeoSyn™
• Information HUB™
• LOGarc™
• PetraSeis™
• PowerTools®
• Enerdeq Browser

Build your PETRA project using IHS energy critical information

IHS Well Information
• Access a database of more than 3.5 million current and historic well records easily via PETRA and other applications, including exclusive data not available through other agencies.
• Rely on continuously updated information including well header, formation tops, logs run, completions, production tests and more to ensure the highest level of currency.

IHS Raster & Digital Well Log Information
• Access extensive log information, including over 2 million depth-registered raster images, more than 300,000 digital logs and over 13 million curve feet per month added through digitizing.
• Accuracy is verified at each step of the loading process, ensuring compliance to API and LAS standards by comparing digital logs to raster well logs of hard copies.

IHS Production Information
• Access and integrate production information with IHS Well Information within days of receipt from the source regulatory authorities to ensure the highest level of currency.
• Obtain production figures for all fluids, operation hours, injection records, ratios and cumulative values.

IHS Directional Survey Information
• Use IHS Directional Survey Information to determine potential productivity, pressure, permeability and extent of oil or gas reservoirs or formations in open well bores.
• Understand the wellbore path from surface to reservoir, particularly for unconventional plays and when using interpretation software such as PETRA.

IHS Interpreted Formation Tops Information
• Use to map gross geologic structures within a consistent stratigraphic framework for an entire basin.
• Increase your knowledge of depositional environments.
• Validate new and existing prospects against an unbiased dataset and in a regional context.
Enhance your PETRA workflow with integrated decision-support tools

Direct Connect
Direct Connect enables you to seamlessly connect to and automatically populate or update your projects with IHS information, providing you with the most current information in your specified area of interest. Information currently available via Direct Connect includes:

- Well and Production Information
- Directional Surveys
- Digital and Raster Well Logs
- Grid and Culture Information

PetraSeis
Tightly integrated with PETRA, PetraSeis is a Windows-based seismic interpretation and display tool, providing 2D and multi-volume, multi-survey 3D functionality within a single PETRA project. PetraSeis boosts productivity by providing a suite of seismic interpretation and display tools with an intuitive user interface and a workflow that supports an iterative process for quick, quality results. (Global)

GeoSyn
Powerful, cost effective and easy-to-use, GeoSyn is a synthetic generation, cross-plotting, AVO analysis and 2D modeling package designed for geoscientists. Quickly move from information access and viewing, to analysis, to exporting synthetics and 2D models into PETRA. GeoSyn enables you to test multiple scenarios to achieve the best results, and continues to incorporate important new functionality for geophysicists including cross-plotting and enhanced cross sections designed specifically for geologists. (Global)

AccuMap
AccuMap provides desktop access to numerous up-to-date databases, including land, well, pressure, production, pipelines, core, reserves and logs for the Western Canadian Sedimentary Basin and Frontier areas, as well as Montana, North Dakota and Wyoming. Information from AccuMap can be exported directly into PETRA to perform in-depth analysis of well-centric data. (Canada & U.S.)

Enerdeq Desktop
Enerdeq Desktop is a mapping and browsing application designed to improve business results with access to integrated information for further analysis. (Canada & International)

Enerdeq Browser
IHS Enerdeq® Browser enables you to quickly access the information you need for any E&P specialty. In just a few minutes you can map, query, browse, and export the most current U.S. data. PETRA features a direct link to Enerdeq Browser, enabling you to streamline workflows, have the most current data required and make business decisions faster. (U.S.)

eTriever
eTriever is a web-based application that makes it easy to quickly query and browse the most up-to-date Canadian E&P information available, directly from the IHS Information HUB. eTriever now provides direct export functionality of well information to PETRA, allowing you to perform in-depth analyses using advanced tools. (Global)

LOGarc
LOGarc is a well information management system, powerful enough for your enterprise, yet easy enough for everyone in your organization to use. LOGarc offers a simplified workflow, meaning you can seamlessly integrate well log information with existing in-house mapping and analysis tools like PETRA. Concurrent access to multiple disparate databases from any location with Internet access is another feature that makes LOGarc a flexible management system. (Global)

PowerTools
PowerTools is a powerful, cost effective and easy-to-use analytical tool for evaluating reserves and economics. Evaluate lease and well production performance with decline curve analysis capabilities. PowerTools also includes multiple lease and well displays, and simultaneous display of multiple forecasts. Add volumetrics calculations and pressure analysis to your evaluation to enhance your reserves interpretation and provide more complete results. PowerTools is linked directly to PETRA, meaning you can create or add projects directly from a PETRA database into PowerTools and export multiple PowerTools results to zone table cases in PETRA. (U.S.)

FieldDIRECT
FieldDIRECT is a field-to-office service that captures daily field production information and stores it in a secure server for you and your team to analyze immediately, allowing you to gain insights into trends and identify and remedy production slowdowns. FieldDIRECT provides graphs, pivot tables, variance reports, monthly and daily allocated production reports at well, field and project levels, as well as data on gauges, meter readings and pressures. FieldDIRECT has a direct connection to PETRA, allowing geologists, engineers and business and operations manager to conduct historical trending, analyze ROI on workovers and perform reservoir analysis. (U.S.)

*Canadian information only
PETRA Customer Care

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User Forum: http://ihscommunity.com/energy
Web: www.ihs.com

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