

Specialised studies with expert companies

IHS has carried out various technical studies with other companies in the North Sea, including Rock Physics catalogues, Petrophysical evaluations, Cyclostratigraphy Studies and Geopressure studies. Some of these studies are ongoing.

IHS / Ikon Science

- North Sea Central Graben Pressure Study (2004)
- Central North Sea Salinity Database (2007)
- Mid-Norway Pressure Study (2007)
- North Sea Viking Graben Pressure Study (2008)
- Roknowledge Moray Firth UKCS (2008)
- Deep Water Gulf of Mexico Lower Tertiary Pressure Study (2010)
- Barents Sea Pressure Study (2010)
- West of Shetlands Regional Pressure Study (2011)

IHS / Ikon Science & PGS

- North Sea Central Graben Pressure Study Phase 2 (2010)

IHS / ENRES International

- Triassic Cyclostratigraphic Study UK Central Graben (2004)

IHS

- Geological Review of East Timor

Benefits of using IHS subsurface data

- **Save Time** – dramatically reduce the time and money you spend sourcing and re-processing data.
- **Save Staffing Costs** – save the costs of employing experienced scientists on non-essential activities, such as sourcing data, or Quality Control work.
- **Safety** – anticipate and deal with potential drilling hazards, such as overpressure.
- **Save storage** – CD storage significantly reduces space, which, in turn, minimises storage and handling costs.
- **Peace of Mind** – incorrect decisions, can have serious ramifications. Our data gives you peace of mind because you know it is reliable, consistent and accurate.
- **Convenience** – all our products are desktop and ready.

Crucial questions IHS subsurface data can help you answer

- Where do I drill?
- Is it worth investing time and money in the region?
- Does this basin have the correct geological configuration of reservoir, source and seal?
- What is the reservoir continuity?
- Are the rock properties conducive to hydrocarbon production?
- What casing and mud program will I have to use to make the well safe to drill?
- How many different drill bits did offset operators use to drill their wells?
- Can I drill more rapidly and more cost effectively?

IHS ENERGY

International Subsurface Data Solutions

Reduce risk and increase your exploration efficiency with quality subsurface information

For more information

www.ihs.com/products/oil-gas-information/well-data/international.aspx

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Save money, save time with subsurface data from IHS

As one of the most comprehensive, accessible and up to date sources of quality international subsurface data, IHS offers major benefits in terms of improved analysis, reduced time searching for key information and most importantly, more accurate and profitable evaluation.

As part of our efforts to offer best in class services, IHS has standardised its processes for data capture and transformation. This ensures that all products conform to the same matrices, ensuring correctness, currency, completeness and consistency across our entire product range.

This guarantees data is delivered ready for the desktop, often on the same day as your request.

Original data – scanned images

No more hunting the library for paper well logs and reports!

Scanned images provide a quick, convenient and complete reference of the well operations, including all published well logs and reports. Explorationists and engineers can rapidly retrieve all well information for analysis such as information available from nearby wells, while data administrators benefit through storage costs savings and improvements in data access and security.

- Release agent for the UK and Irish Governments, both onshore & offshore data.
- Complete coverage of all released wells - onshore and offshore Exploration, Appraisal and Development.
- Complete well data coverage - all released well data compiled together.
- Consistently formatted - pdf reports and tiff logs, no more multipage pdf logs!
- Catalogued with tool type, depth range, scale and date - enabling you to quickly locate the right information.
- Sourced directly from the operator under our contracts with DECC and PAD

Value added data – well attributes

Mapping exploration plays or tying wells to seismic?

The key data you need to deliver the best subsurface interpretations.

Each attribute is consistently formatted in ASCII txt or MS XLS format to load directly into your workstation.

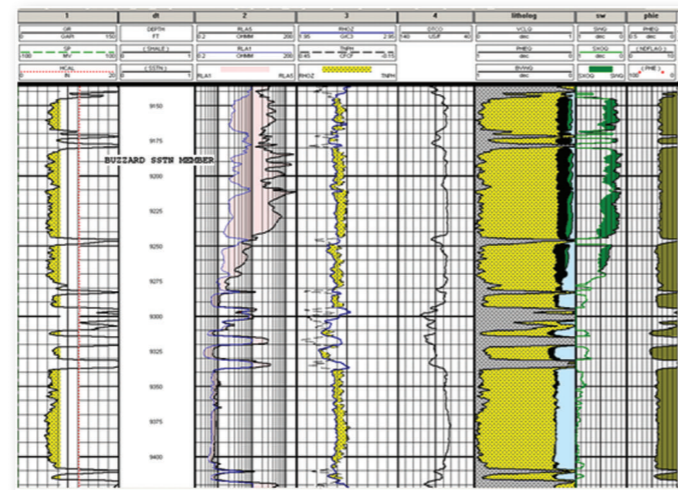
Digital well attributes provide all the key parameters regarding the well such as; location (Header), borehole path (deviation survey) stratigraphy (formation tops), rock velocity (Checkshot survey) and direct measurements of porosity and permeability (core analysis).

Integration of these attributes into your workflow will enable correlation of your wireline logs data with your seismic, constrain your petrophysical evaluations and bring ground truth into your interpretations.

Download direct to your desktop via IHS Lognet and reduce your lead times with instant access!

- Well Headers
- Deviation surveys
- Checkshot Surveys
- Formation tops
- Core Header, Analysis and Description

Merged Digital Wireline Logs

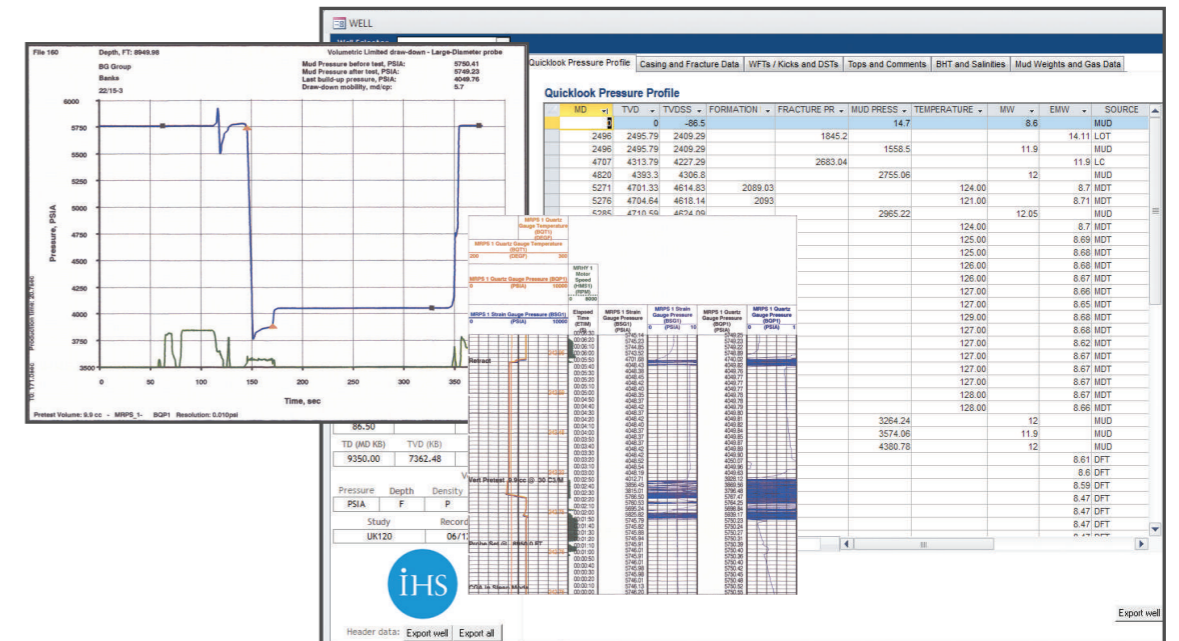


CPI- Computer Petrophysical Interpretation log of a well in UKCS

Today's powerful geological, petrophysical and geophysical interpretation software tools require high quality digital Wireline Log data to be used in the generation of well correlations, petrophysical analysis, and synthetic seismograms etc.

IHS takes raw Wireline curves from the operators and checks them for completeness against hard copy well data (Composite Logs, Final Well Reports and Wireline Logs). The data, which is subject to rigorous quality control procedures, is then merged at casing shoe points and edited to remove first reading and casing effects to produce a reliable standardised composite suite of digital wireline logs.

This depth corrected and correlated wireline data is delivered in a LAS format that can be immediately loaded into the full range of industry standard exploration software packages.



Screenshots of Pressure database and WFT test profiles for interpretation

Formation Pressure Database

The IHS database expands on the scanned images dataset by adding interpretation to fracture (FIT/LOT and Loss of Circulation) and formation pressure tests (Wireline, DST and Kicks), as well as mud pressures. The data goes through a rigorous QC process whereby each individual pressure test is re-interpreted, where the individual pressure test profiles are available. Additional information for formation pressure tests, such as mobility, test type, units, gauge and formation are also included. The benefits of this database are:

- data is in one central location
- all the wells have undergone the same QC procedures
- available in a consistent format ready to use
- functionality to export the data into excel

The product itself is delivered in an Access database, Excel spreadsheet or ASCII format.

Uses of this data include well planning, reservoir connectivity analysis, hydrodynamics, seal breach analysis, determination of fracture gradient and casing/mud programme design.

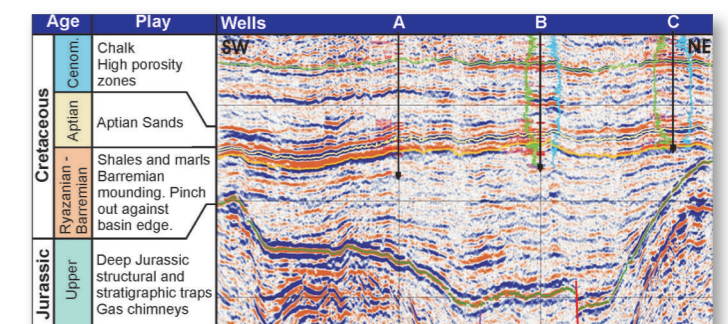
Seismic data

IHS are exclusive release agents for the Petroleum Affairs Division (PAD), Ireland, releasing digital SEG-Y Seismic data, as well as paper/film prints, for on and offshore Ireland. Digital SEG-Y is available for over 100,000 line km of 2D seismic shot in Irish Waters covering all of Ireland's major prospective basins.

Additionally any non-SEG-Y Irish Seismic is available as paper/film copies which IHS reconstruct to SEG-Y format. IHS ensure that files are provided complete with navigation. We can also load into Kingdom software on request.

UK Seismic and high resolution aeromagnetic data

IHS own approximately 25,000 km of 2D seismic originally acquired by JEBSCO Seismic and also the Fisher Bank and Ross-Etrick 3D surveys. The data is supplied as SEG-Y digital data but field tapes are available for reprocessing by clients if required. IHS also provide high-resolution aeromagnetic surveys both as original flight data as well as filtered, gradient and gridded files to enable faults to be correlated, basin depth to be calculated or iron-rich formations to be mapped.



Seismic profile with play correlation

Seismic and well log packages from the former Soviet Union

IHS have approximately 250,000 km of 2D Seismic data and logs from over 2400 wells in the former Soviet Union. This data was originally supplied as paper prints but the majority has now been reconstructed to SEG-Y or LAS format and digital navigation obtained (UKOOA/MapInfo/ArcGIS) from maps. Well data has been merged from separate prints into one composite file with appropriate header information. This data is a cost effective means of assessing the main petroleum bearing basins. The information is supported by reports, maps and cross-sections and may be licensed as regional packages or else individually.