

Pressure Study— Barents Sea

Understanding Palaeo-Pressures and Trap Status

Overview

The Barents Sea is a frontier province for hydrocarbon exploration with proven discoveries (Snøhvit) yet many targets result in a non-discovery with a high incidence of shows and partially-filled or non-producible gastraps. The complex uplift history is often seen as the reason for the lack of exploration success with seal breach blamed for the loss of hydrocarbons.

Recognising the modern-day pressure distribution at all stratigraphic levels combined with understanding the burial history and its effect on the evolution of palaeo-pressure development is therefore critical for accurately risking traps.

To aid exploration in the Barents Sea, Geo Pressure Technology (a world leader in pressure analysis) have combined with IHS Global Ltd (leading source of critical information and insight, providing high-quality pressure databases) and Geo Track International (experts in burial history reconstruction) to produce a comprehensive study that discusses all aspects of fluid pressure affecting drilling and exploration.

Dataset

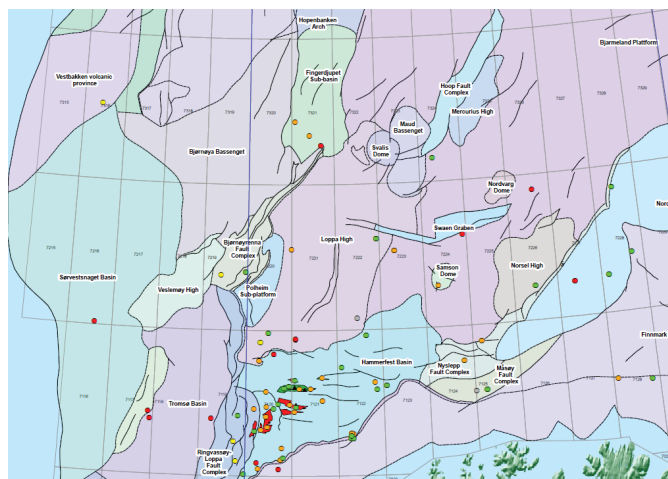
Pressure data provision for the study is supplied by IHS in the form of the Barents Sea Pressure Database, which includes direct fluid pressure data (WFT tools, DST and kicks), fracture pressure data (FIT/LOT and LC events) and mud pressure data. After extensive data-mining a final list of 82 wells (out of 83 E&A wells) has been identified combining data quality with geospatial distribution. The other key data source was a synthesis of burial re-construction models from 21 wells based on Apatite Fission Track (AFTA), Vitrinite Reflectance (VR) and geothermal gradient data provided by GeoTrack International to aid understanding of palaeo-breach.

Approach

- Re-interpretation, standardization and QC of formation pressure using the IHS Pressure Database.
- Analysis of pore fluid data for all wells including creation of Single- and Multi-Well Pressure-Depth plots using Ikon Science's RokDoc-PressureView™ software.
- Mapping of the distribution of formation overpressures at all main reservoir horizons using ArcView GIS software.
- Focus on trap integrity/seal breaching, hydrodynamic traps, lateral drainage and reservoir compartmentalization including Triassic pressure transition zones.

Benefits of the study include:

- Reduced drilling risk with associated savings to time and cost.
- Improved understanding of the regional pressure regime and its part in controlling aspects of the petroleum system, focusing on trap integrity.



Barents Sea Pressure Study Area

For more information www.ihsmarkit.com/pressure

CUSTOMER CARE

NORTH AND SOUTH AMERICA

T +1 800 447 2273
+1 303 858 6187 (Outside US/Canada)

EUROPE, MIDDLE EAST AND AFRICA

T +44 1344 328 300

ASIA PACIFIC

T +604 291 3600

E CustomerCare@ihsmarkit.com

About IHS Markit

IHS Markit (NYSE: INFO) is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. The company delivers next-generation information, analytics and solutions to customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions. IHS Markit has more than 50,000 key business and government customers, including 80 percent of the Fortune Global 500 and the world's leading financial institutions. Headquartered in London, IHS Markit is committed to sustainable, profitable growth.