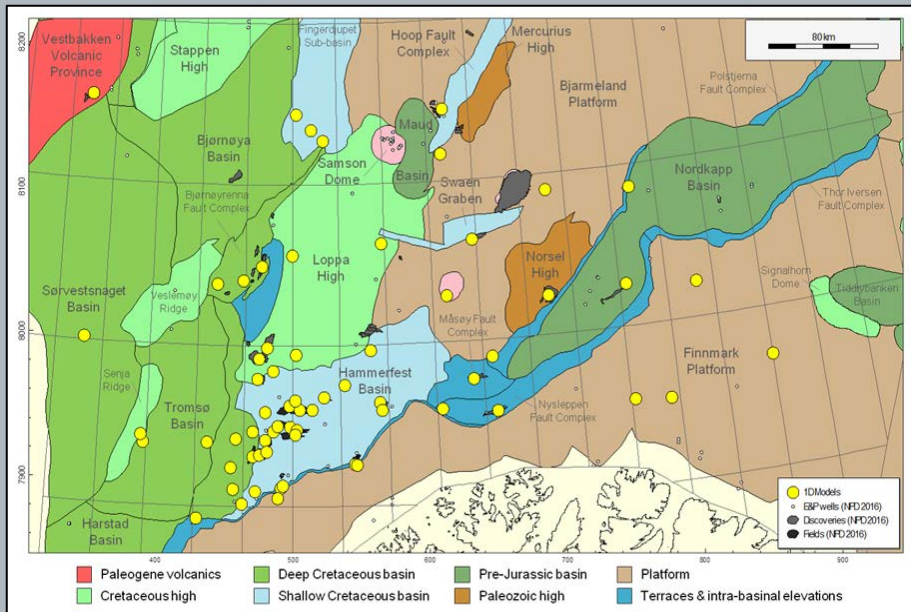


Barents Sea

1-D Basin Models

NEW FOR
2016

IGI Ltd. has amassed extensive knowledge of the Norwegian Continental Shelf (NCS) through over 30 years of experience working on many studies, both for industry and academic applications. This compilation of 1-D basin models has been constructed to help exploration geologists, geophysicists and petroleum systems analysts quickly appraise areas of interest within the Barents Sea by saving them the time-consuming task of constructing and quality-assuring a regional suite of 1-D basin models. The time saved from building 1-D models can be used more productively to focus on the questions which matter.



All models are constructed using stratigraphic tops from the Norwegian Petroleum Directorate (NPD) website and thermally-calibrated using maturity data extracted from IGI's 2016 Barents Sea Geochemical Database. The delivered models have been thermally-calibrated to a "best-fit" scenario which aims to honour the primary calibrants of temperature and vitrinite reflectance data. Aside from the time saving aspect, the models are provided in a standardised template to help the client quickly and efficiently begin refining the model to understand

and reduce exploration risk. Additional proprietary data may be added to compliment or refine the models.

1-D basin models are provided in ZetaWare Inc. Genesis format. In addition, each model has an associated two page document summarising both the key stratigraphic and thermal inputs, a tabulated MS Excel sheet containing key stratigraphy and calibration data and an in-depth technical note explaining the key information and rationale underlying the models.

Modelling cost (in Genesis format):
Price per 1-D model: £350
All 65 1-D models: £16,500
If bought with database: £12,500

For further details please contact:
info@igiltd.com

Stratigraphic & Thermal Inputs

- * Compile stratigraphic tops and thermal calibration data
- * Correct temperature data (Horner Correction)
- * Quantify Cenozoic uplift for each model

Understand Exploration Risk

- * Source maturity
- * Timing of hydrocarbon generation
- * Reservoir temperature history

Streamline Workflow

- * Improve 3-D model calibration
- * Import directly into Trinity



Wells modelled:

7019/1-1	7120/12-4	7121/1-1	7124/3-1	7224/6-1
7117/9-1	7120/2-1	7121/4-1	7124/4-1S	7224/7-1
7117/9-2	7120/2-2	7121/4-2	7125/1-1	7226/11-1
7119/12-1	7120/5-1	7121/5-1	7125/4-1	7226/2-1
7119/12-2	7120/6-1	7121/5-2	7128/4-1	7228/2-1S
7119/12-3	7120/7-1	7121/7-1	7128/6-1	7228/7-1
7119/7-1	7120/7-2	7121/7-2	7131/4-1	7229/11-1
7119/9-1	7120/7-3	7122/2-1	7216/11-1	7316/5-1
7120/10-2	7120/8-1	7122/4-1	7219/8-1	7321/7-1
7120/1-1	7120/8-2	7122/6-1	7219/9-1	7321/8-1
7120/1-2	7120/8-3	7122/6-2	7220/6-1	7321/9-1
7120/12-1	7120/9-1	7122/7-3	7220/8-1	7324/10-1
7120/12-2	7120/9-2	7122/7-4S	7222/6-1S	7324/8-1

Data pack includes:

- Technical note (key inputs & rationale)
- 1-D model in digital format (in Genesis)
- 1-D inputs and outputs (per model)
- Tabulated calibration data (per model)

Example Model

Kelly bushing elevation: 23.5m
 Water depth: 349.5m
 Latitude: 72° 51' 9.75" N
 Longitude: 2° 26' 28.61" E
 X-coordinate: 547436.90
 Y-coordinate: 8084541.65
 UTM zone: 35N

Bottom hole temperature (MFD): 130°C
 Average geothermal gradient: 36.5°C/km
 Surface heat flow: 66.6mW/m²
 Uplift since maximum burial: 1,300m
 Oldest penetrated age: Havert Fm. (Lower Triassic)

Example Model

Vitrinite Reflectance (LLNL) (%Ro)

Temperature (°C)

Depth (MDS) (m)

Time (Ma)

Figure 3. Schematic overview of the typical thickness and composition

Vitrinite Reflectance Maturity Scale (LLNL Knowledge)

- Immature (< 0.5%Ro)
- Early Oil Window (0.5 - 0.7%Ro)
- Main Oil Window (0.7 - 1.0%Ro)
- Late Oil Window (1.0 - 1.2%Ro)
- Main Gas Window (1.2 - 2.2%Ro)
- Late Gas Window (2.2 - 3.0%Ro)

