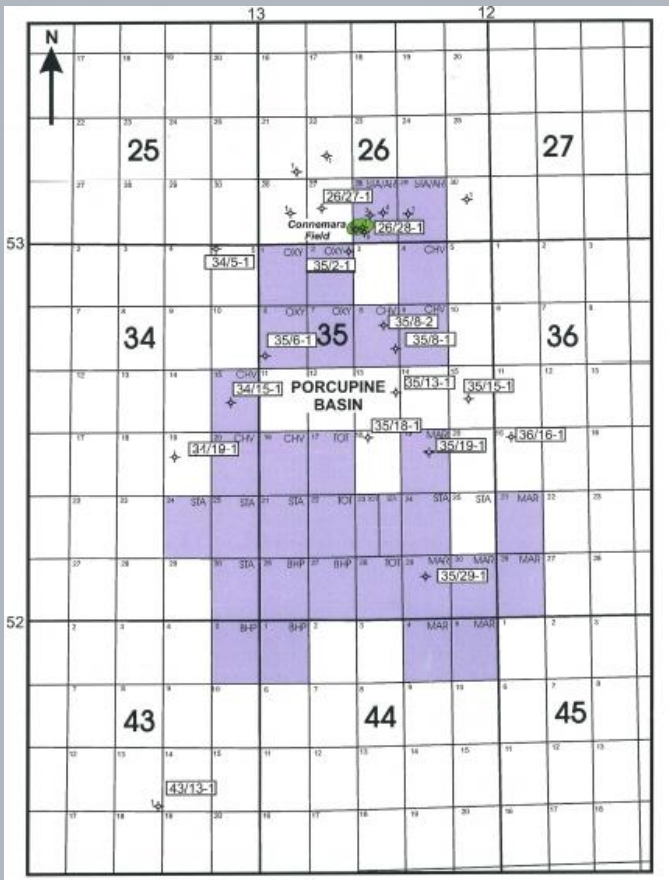


# Porcupine Trough

## Geochemical Interpretation Report

UPDATED IN  
**2015**



The recently-updated Geochemical Review and Hydrocarbon Type Prediction for the Porcupine Trough (1996) report is available to purchase.

Conducted by IGI Ltd. in association with Collinson Jones Consulting Ltd. & OceanGrove Geoscience Ltd, the report contains >600 pages, in pdf format, and includes an evaluation of the Lower Cretaceous source potential as well as the Jurassic (Middle and Upper), and also includes oil-oil and oil-source correlation.

Updated in 2015, the underpinning database is now provided in p:IGI-3 format with:

- calculation of new ratios/parameters
- georeferenced well locations
- internally consistent stratigraphy

1-D models for the key drilled wells for calibration are also now provided in Zetaware's Genesis format to compliment the original models in BasinMod format.

The report commissioned analyses to provide new geochemical data for 13 wells (after a critical review of existing data), and compiled a single integrated geochemical database for the study. For the source rock evaluation (all intervals) the database includes the following:

- Total Organic Carbon (TOC) data for 1177 samples (from 21 wells)
- Rock Eval pyrolysis (RE) data for 805 samples (19 wells)
- Vitrinite reflectance (VR) data for 438 samples (18 wells)

### Source Rock Geochemistry

- \* HC source potential by lithostratigraphic unit
- \* Including newly commissioned analyses
- \* Geochemical database compiled

### 1-D Basin Modelling

- \* 1-D models for 15 drilled wells
- \* 48 pseudowells
- \* Maturity maps for key source rocks

### Hydrocarbon Geochemistry

- \* Evaluation of new oil data
- \* Oil-source rock correlation

#### Report cost

Usual purchase price: £12,500

Current discounted price: £10,000

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An extensive set of wells were included, for which the basic geochemical data comprise:

- |            |     |    |    |           |     |    |    |
|------------|-----|----|----|-----------|-----|----|----|
| • 26/22-1A | TOC |    |    | • 35/13-1 | TOC | RE |    |
| • 26/27-1B | TOC | RE |    | • 35/15-1 | TOC | RE | VR |
| • 26/28-1  | TOC | RE | VR | • 35/18-1 | TOC | RE | VR |
| • 26/28-3  | TOC |    | VR | • 35/19-1 | TOC | RE | VR |
| • 26/28-4a | TOC |    |    | • 35/2-1  | TOC | RE | VR |
| • 26/28-5  | TOC | RE | VR | • 35/29-1 |     |    | VR |
| • 26/29-1  |     | RE | VR | • 35/6-1  | TOC | RE | VR |
| • 26/30-1  | TOC | RE | VR | • 35/8-1  | TOC | RE | VR |
| • 27/13-1  | TOC | RE |    | • 35/8-2  | TOC | RE | VR |
| • 34/15-1  | TOC | RE | VR | • 36/16-1 | TOC | RE | VR |
| • 34/19-1  | TOC | RE | VR | • 43/13-1 | TOC | RE | VR |
| • 34/5-1   | TOC | RE | VR |           |     |    |    |

#### **In addition:**

- Over 200 samples evaluated were from the Lower Cretaceous.
- Isotope and molecular data are also included in the database, but these are only available for a relatively small number of samples. The oil samples have undergone Gas Chromatography (GC) and carbon-isotope analyses.

#### **Basin modelling:**

A coarse regional seismic grid was used to create regional maps of 7 key horizons. These seismic maps are used as the stratigraphic basis for regional geothermal and maturity modelling using Platte River's BasinMod 1-D software. Modelling was performed on 15 drilled wells for calibration purposes, followed by construction of a grid of 48 pseudowell 1-D models. Maturity maps were constructed for base Tertiary, base Cretaceous, base Late Jurassic and base Middle Jurassic horizons at 4 key times during basin development. Source rock facies and maturation maps have been co-joined to produce a generation/migration model and the predicted results compared with the chemical and physical properties of the migrated hydrocarbons recovered from tests and shows in the basin. The objective has been to produce a model predicting the hydrocarbon types (phase and composition) and volumes for different parts of the basin. Estimates of the timing of generation in the various depocentres are also provided. Errors and risks are discussed in the context of volumetric modelling of ultimate hydrocarbon charges for defined drainage polygons.

#### **The report deliverables will comprise:**

1. The report in pdf format (main text, and Appendices, including data reports)
2. The geochemical database in p:IGI and Excel formats
3. All 1-D basin modelling files in BasinMod format & key wells in Genesis format

