

Fina Exploration Norway Inc.



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REGISTRERT

OLJEDIREKTORATET

**GEOCHEMICAL SOURCE SCREEN ANALYSES OF
CONVENTIONAL CORE SAMPLES**

WELL N 1/3-3



ANALYSES METHODOLOGY

All analyses were performed on instrumentation co-invented and/or developed by FINA.

1. SOURCE SCREEN ANALYSES

* Rock-Eval : IFP/FINA Procedure. Rock-Eval 2 generation of equipment with TOC attachment employed. Analyses calibrated against IFP 55000 Standard. Analysis procedure conforms with that required by NIGOGA.

2. SOURCE DETAIL ANALYSES

* Soxtec Extraction Procedure. Quantified analyses fulfil NIGOGA requirements.

* Pyrolysis-Gas Chromatography : GEOFINA HYDROCARBON METER Procedure. Individual component quantified analyses calibrated against IFP 55000 Standard. Being the benchmark equipment, FINA's specification conforms and exceeds that required by NIGOGA.

3. C ISOTOPE ANALYSES

* Kerogen/Kerogen Pyrolysate D¹³C analyses : GEOCHEM/FINA AUTOPIP™ Procedure. No equivalent NIGOGA specifications. Data reported vs NBS22 at D¹³C -29.8 ppt.

Source Screen and Source Detail analyses were performed by the Exploration Geochemistry Group, Petrofina Exploration and Production, c/o Fina Research, Zone Industrielle C, B-7181 Seneffe (Feluy), Belgium.

The C Isotope Analyses were performed by THE GEOCHEM GROUP, Chester Street, Chester CH4 8RD England.



KEY TO SUMMARY DATA FILE PARAMETERS

TOC-Total Organic Carbon; **S1**-Productivity (free/thermovaporisable hydrocarbons); **S2**-Potential Productivity (hydrocarbons from kerogen/bitumen transformation); **HI**-Hydrogen Index (S2 normalised to TOC); **R0** (mean vitrinite reflectance); **TR**-Production Index (S1 normalised to S1+S2); **GI(S1)**-Generation Index (100xS1 normalised to TKC); **GI (TSE)**-Generation Index (100xTSE normalised to TKC); **Bitumen-Free Analyses** : **TKC**-Total Kerogen Carbon; **K2**-Precision Potential Productivity; **K3**-Precision Kerogen CO2 Productivity; **KPI**-Kerogen Pyrolysis Index (Precision HI); **OI**-Precision Oxygen Index (100xK3 normalised to TKC); **GOPR**-Gas/Oil Production ratio (kerogen pyrolysis K2 product C1-5 gas content normalised to total pyrolysate); **PI**-Paraffin Index (kerogen pyrolysis K2/C9+alkane/alkene product normalised to TKC); **TM**-Rock-Eval Tmax (deg.C); **TAI**-Thermal Alteration Index (1-5 scale); **TSE**-Total Soluble Extract (rock bitumen); **D-13C (K) (KPY) (TSE)** - Stable Carbon Isotope Value of Kerogen, Kerogen Pyrolysate (K2) and Rock Bitumen (TSE), respectively.