

4. ROCK-EVAL ANALYSIS

A 100 mg portion of powdered rock was analysed by the Rock-Eval pyrolysis technique (Girdel IFP-Fina Mark 2 instrument; operating mode, Cycle 1).

5. RESIDUAL OIL ANALYSIS

Intact cuttings and sidewall core chips (13-33 g) were extracted with dichloromethane in Soxhlet apparatus for 4-5 hours. Removal of solvent by careful rotary evaporation gave the crude extract (nominally C₁₅₊ EOM).

In most cases, a total hydrocarbon fraction (saturates and aromatics) was isolated from the EOM by liquid chromatography on activated alumina (sample : adsorbent ratio = 1:100). Hydrocarbons were eluted with petroleum ether/dichloromethane (50:50).

6. GAS CHROMATOGRAPHY (GC)

Total hydrocarbons (or EOM) were examined by gas chromatography using the following instrumental parameters:

Gas chromatograph:	Perkin Elmer Sigma 2 fitted with on-column injector
Column:	25 m x 0.3 mm fused silica, SGE QC3/BP1
Detector temperature:	300 °C
Carrier gas:	He at 85 kPa
Column temperature:	100-290 °C at 5° per minute and held at 290 °C until all peaks eluted
Quantification:	Relative concentrations of individual normal and iso-prenoid alkanes obtained by measurement of peak areas with a Perkin Elmer LCI-100 integrator

7. KEROGEN ISOLATION AND PYROLYSIS-GC

Solvent-extracted rock powder was forwarded to Laola Pty Limited, Perth, for kerogen isolation by a standard palynological acid digestion technique.

Kerogen concentrates were then submitted to the Petroleum Geochemistry Group, Western Australian Institute of Technology for analysis by pyrolysis-GC using a Chemical Data Systems Pyroprobe 120 in the subambient mode.