

### 1. HEADSPACE GAS (C<sub>1</sub>-C<sub>5+</sub>)

A silicone rubber septum was glued to the lid of each can. The lid was punctured through the septum and a 5 ml sample of headspace gas withdrawn with a gas-tight syringe. Cans were not shaken prior to sampling. The sample was analysed by gas chromatography using the following instrumental parameters:

Gas chromatograph:	Perkin Elmer Sigma 2 fitted with flame ionisation detector
Column:	6' x 1/8" i.d. copper packed with activated alumina (80-100 mesh)
Column temperature:	40-275°C at 15° per minute
Carrier gas:	N <sub>2</sub>
Quantitation:	Peak areas integrated with Perkin Elmer Sigma 10 Data System. Peak areas calibrated against a standard mixture comprising 100 ppm of each of methane, ethane, propane, n-butane, n-pentane and n-hexane in N <sub>2</sub> .

Cuttings gas (C<sub>1</sub>-C<sub>4</sub>) yields are expressed as ppm by volume of headspace.

$$\text{Percent wet gas} = \frac{C_2-C_4}{C_1-C_4} \times 100\%$$

Also determined from headspace analysis were total C<sub>5+</sub> hydrocarbon yield (ppm by volume) and i-pentane/n-pentane ratio.

### 2. SAMPLE PREPARATION

Cuttings were washed in water to remove mud and lost circulation material and then air-dried at 60°. Clean dry cuttings and sidewall cores (scraped free of mud cake) were ground in a Siebtechnik mill for 20-30 secs. In the case of the samples selected for residual oil analysis, aliquots of intact cuttings or sidewall core were set aside for solvent extraction.

### 3. TOTAL ORGANIC CARBON (TOC)

Total organic carbon was determined by digestion of a known weight (≈0.2 g) of powdered rock in 50% HCl to remove carbonates, followed by combustion in oxygen in the induction furnace of a Leco IR-12 Carbon Determinator and measurement of the resultant CO<sub>2</sub> by infra-red detection.