

ROBERTSON RESEARCH INTERNATIONAL LIMITED

MEMORANDUM No. 2599

Results of a carbon analysis of a coal sample from
the Mobil Norway 33/12-1 well

Project No. RRI/745/IID/2106

As per our instructions received verbally on the 1st. October, 1974 from Dr E. Jones, we have carried out a carbon volatile matter and reflectivity analysis of a coal core from 7,963-7,964 feet in the Mobil 33/12-1 well.

The results are summarised below:-

<u>Moisture</u>	<u>Ash</u>	<u>Volatile Matter (d.a.f.)</u>	<u>Total Carbon Content (d.a.f.)</u>	<u>Equivalent Average Reflectivity (in oils)</u>
6.85%	4.7%	45.1%	79.3%	0.7%

(d.a.f.) = dry ash free basis

The reflectivity quoted is on the basis of a European coal of similar carbon content.

Vitrinite reflectivity analysis performed on this coal has indicated a reflectivity of 0.42% averaged over 30 readings. The coal appears under the microscope to be a normal coal but perhaps a little inertinite rich and lean in exinite content. The coal seems more mature than the reflectivity of 0.42% would suggest. The carbon content of a European Coal (after Teichmüller) with similar reflectivity would be 71%. It can be seen that the actual measured carbon content of 79% bears out the observation that the actual rank of the coal is higher than would be suggested by the reflectivity value. It also appears that the correlation between reflectivity and carbon content applying to European Carboniferous coals, does not apply to this Jurassic age coal.

In our report on the Mobil 33/12-2 well we interpreted a reflectivity value for a similar depth in that well, of 0.6%. It is sometimes found that coal reflectivities do vary from those of vitrinite in adjacent sediments. The disparity between the reflectivity value in the cuttings of 33/12-2 and the coal of 33/12-1 could be explained on this basis.

We believe that the results indicate that at this depth, the maturity of the sediments in both wells is good for heavy to medium oil generation from oil-prone sediments.

14th. November, 1974.

PCB/Eml.