

CORE LABORATORIES AUSTRALIA (QLD.) LTD.



25th January 1983

Esso Australia Limited  
Esso House  
127 Kent Street  
Sydney, N.S.W. 2001

Attention: Mr. K. Kuttan

Subject: Core Analysis  
Well: Wirrah #1  
Our Job No: QLD-CA-133

Dear Sir,

Presented here are the results of Analysis performed on Conventional Core from your Well Wirrah #1.

1. Bulk Volume:

Is measured by displacement, using mercury as the liquid pressure medium because of its high surface tension. The mercury pump is calibrated to 0.01 cubic centimeters.

2. Helium Injection Porosity:

Is measured by a Helium Porosimeter to determine the amount of grain volume in the sample. Porosity being determined by bulk volume minus grain volume, helium is used because of the small molecule size, ability to diffuse rapidly, and absorption of helium on the rock surface is minimal.

3. Permeability:

Is a measure of the ability of a porous material to transmit fluid. Permeability values are for air at a confining pressure of 180 PSIG.

4. Grain Density:

Is obtained by using measurements from the mercury pump, (Bulk Volume) Helium Porosimeter, (Grain Volume) and analytical balance (Dry Sample Weight).

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A brief lithological description completes the report. Should you have any queries concerning the data, please do not hesitate to contact me in Brisbane on (07) 260-1722.

We thank you for this opportunity to be of service to you on this occasion and trust that we may be of service to you again in the future.

Yours faithfully,  
CORE LABORATORIES AUSTRALIA (QLD) LTD

A handwritten signature in dark ink, appearing to read 'P. Ritchie'.

PAUL RITCHIE  
Laboratory Supervisor,  
Brisbane, Australia

Enc:

COMPANY: Esso Australia	FORMATION:	FILE: QLD-CA-133
WELL: Wirrah #1	CORE TYPE: Conventional	DATE REPORT: 13/1/83
FIELD:	BASIN:	ANALYSTS: P. Ritchie
COUNTRY:	STATE:	DRILLING FLUID:

SAMPLE #	DEPTH METRES	KA-md	SUMMATION OF FLUIDS			HE INJ Ø %	GRAIN DENSITY
			Ø %	SO	STW		
<u>Core # 8 / 7</u>							
1	<del>2799.75</del>	0.57				8.3	2.67
2	<del>2799.95</del>	0.16				6.2	2.72

- DEPTHS & CORE NUMBER ARE INCORRECT.
- CORE-8 HAD NO CORE RECOVERY.
- CORE PLUGS ABOVE ARE ASSUMED TO COME FROM CORE-7 (0.22m RECOVERY) IN THE INTERVAL 2805-2807m. [(CORED INTERVAL WAS 2805-2807.8m)].
- LOG SUGGESTS SAND 2805-2807m  
ie. PLUG SAY 2806m MD

LITHOLOGIES

DESCRIPTION

CORE NO: ~~8~~ 7

SAMPLE NO.

- |   |  |
|---|--|
| 1 | SST, wh gry, f m, hd, sbang ang, mod wl, v/sl/calc, carb<br>strks, carb speck thru, tr mica. |
| 2 | SST, wh gry, f m, hd, sbang ang, mod wl, abund pyr, carb<br>specks thru.                     |