WCR WEST FORTESCUE-1
VOLUME 2
W866

ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC.

WELL COMPLETION REPORT

WEST FORTESCUE-1

16 SEP 1985 VOLUME 2

GIPPSLAND BASIN, VICTORIA

ESSO AUSTRALIA LIMITED

Compiled by: G.A. Nash

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WEST FORTESCUE-1

WELL COMPLETION REPORT

VOLUME II

(Interpretative Data)

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GEOLOGICAL AND GEOPHYSICAL ANALYSIS

Introduction

West Fortescue-1 was located in VIC/P-1, approximately 990m north of Fortescue-1 and was spudded on April 30, 1984.

The primary purpose of this well was to test for the presence of a commercially viable oil accumulation in the Fortescue FM-1.1 sand in a culmination west of the Fortescue field.

Previous Drilling History

The Fortescue field was discovered by the West Halibut-1 well in September 1978 following the dry Fortescue-1 well, drilled in June 1978. West Halibut-1 encountered oil-bearing sandstones and siltstones down to -2412m TVDSS, 16m TVD below the original Halibut/Cobia OWC of -2396m TVDSS. Fortescue-2 and 3 also tested oil below the Halibut/Cobia OOWC, but local shaliness in all three exploration wells prevented the definite recognition of the Fortescue contact. Fortescue-4 however, encountered an OWC at -2419.5m TVDSS, 23.5m TVD lower than the original Halibut/Cobia oil-water contact.

The unit which was the primary objective at West Fortescue is the Fortescue FM-1.1 which was first intersected by Fortescue-1 and 3. The A-1 production well was drilled from the 21 conductor Fortescue Platform in early 1984 and was the next well to intersect the FM-1.1. This well encountered a deeper OWC than previously observed in the Fortescue Field. The contact was at -2429m TVDSS within the FM-1.2 unit compared to the main Fortescue Field OWC of -2419.5m TVDSS. This indicated there was an "upper" hydraulic system in the FM-1.1 and Upper part of the FM-1.2 units which was separate to the main "lower" system of Fortescue (FM-1.3 and FM-1.2 Lower units). The FM-1.1 with an expected OWC at -2429m was therefore the target of the well.

Structure

Post drill mapping of the West Fortescue area is largely consistent with the pre-drill interpretation. The feature is a palaeo-topographic high. Truncation of essentially westerly dipping internal units has produced an eroded homocline. Successively younger units subcrop against the Top of Latrobe Unconformity surface further west.

The main Fortescue Field to the east is a stratigraphic accumulation trapped within west dipping beds on the western flank of the Halibut Field. These beds have a primary top seal formed by the impermeable Lakes Entrance Formation marls overlying the truncated surface of the west dipping reservoir units at the Top of Latrobe Unconformity. A secondary top seal is provided by shaly sections of the FM-1.0 in the north-west. In addition, the coals within the middle of the FM-1.2 unit have formed an intra-formational seal causing the development of the "upper" and "lower" Fortescue hydraulic systems with different OWC's. In the West Fortescue area, the overall westerly dip of the Top of Latrobe unconformity surface (enclosure 1) and hence the Lakes Entrance Formation primary seal, flattens and begins to rise to the north-west toward Marlin.

Although the overall dip of beds in the Fortescue Field is to the west, there is a minor southerly dip component (enclosures 2 and 3) particularly in the area of West Fortescue.

STRATIGRAPHY

Stratigraphic Summary

Age	Unit / Horizon	Depths Predicted (m)KB	Depths Drilled (m)KB	Depths Drilled (m)SS	Thickness (m)
Recent to Middle Miocene	Gippsland Limestone (sea floor)	86	86	65	2130
Early Miocene	Lakes Entrance Formation	2183	2216	2195	204
Middle Eocene to Late Paleocene	Latrobe Group (Top glauconitic sandstone)	2414	2421	2400	250+
	FM-1.0	2417	2423	2402	25
	OWC	2450	2438	2417	
	FM-1.1	2422	2448	2427	33
	FM-1.2 Upper	2465	2481	2460	30
	FM-1.2 Lower	2492	2511	2490	22
	FM-1.3	2524	2533	2512	35
	FM-1.4/M-1.0	2565	2568	2547	45
	M-1.1.1	2607	2613	2592	22.5
	M-1.2.2	2620	2635.5	2614.5	5
	M-1.3.1	2625	2640.5	2619.5	
	Total Depth	2671	2671	2650	

The stratigraphic sequence encountered in West Fortescue-1 was essentially as predicted and comparable to that seen in Fortescue-1.

West Fortescue-1 contains a relatively continuous sequence of sediments from the Late Palaeocene Upper L. balmei zone to the Early Eocene Upper M. diversus zone. Three periods of non-deposition are recognized. The first occurs between the Top of Coarse Clastics and the Top of Latrobe Glauconitic Sandstone ("Gurnard Formation") covering the Early and Middle Eocene period which includes the P. asperopolus and some of the Lower N. asperus zones. A second hiatus is found between the Glauconitic Sandstone and an Early Oligocene hard ground covering some of the Lower N. asperus zone into the lower section of the P. tuberculatus zone. The youngest recognized hiatus occurs between the hardground and the base of the Early Miocene Lakes Entrance Formation within the P. tuberculatus zone (see Figure 1).

The Top of Latrobe was intersected 7m TVD low to prediction. The FM-1.0 unit, the youngest Fortescue unit intersected has been truncated by a Middle Eocene to Early Oligocene unconformity. This unit was 25m thick and consists of shale siltstone and fine to medium grained sandstone with a clay-silt matrix. The corresponding unit in Fortescue-1 comprises similar lithologies and is heavily bioturbated. The FM-1.0 unit is interpreted to be a lower shoreface to offshore marine unit. A sharp boundary separates the FM-1.0 from the underlying FM-1.1 unit. The nature of this contact is uncertain but it probably represents a sequence boundary.

The FM-1.1 Unit is composed of blocky, clean sands medium to very coarse grained and poorly cemented. This high net to gross section is interpreted as an upper shoreface/foreshore deposit.

The FM-1.2 section is composed of clean blocky sands at its top with interbedded silty sandstones, shales and coals towards its base. This unit represents a transition from a shoreface environment at its top to a tidal/coastal plain setting at its base. Sands within the base of this unit probably represent tidal channels and/or distributary channels associated with interdistributary bay fill sediments comprising shales and coal.

The FM-1.3 Unit contains a blocky sand at its top (possibly a tidal channel) underlain by minor coal, shale and an upward fining sand.

The latter section probably represents a coastal plain sequence. Coastal plain deposits persist from the base of the FM-1.3 to the top of the M-1.2.2 unit. These sediments consist of overbank/floodplain materials (coals and shales) intimately associated with thin sandy to silty stringers. These coarser beds represent crevasse splays fanning out into overbank areas during times of maximum stream erosion. Although no clean channel sequences are present in this section, the equivalent horizon in Fortescue-1 comprises excellent examples of upward fining point bars. This thick sequence of sediments (approximately 70m) represents an aggradational cycle in coastal plain sedimentation.

A sharp boundary at the top of the M-1.2.2 marks a parasequence boundary between coastal plain sedimentation above and offshore marine sedimentation below. During M-1.2.2 time offshore marine sedimentation was interrupted by a rapid relative sea level drop. A progradational/aggradational period of floodplain/coastal plain sedimentation was followed by a marine transgressive phase. Marginal marine conditions prevailed with the later development of upper shoreface to lower shoreface deposits. At the top of the youngest Fortescue unit preserved in the West Fortescue sequence (the FM-1.0), offshore bioturbated siltstone and shales are developed.

Hydrocarbons

Prior to the drilling of West Fortescue-1 it was known that the FM-1.1 and FM-1.2 Upper units constituted a separate hydraulic system to the lower Fortescue units with a deeper OWC (approximately -2429m TVDSS as seen in Fortescue A-1). Because the top of the FM-1.1 was mapped at about -2401m TVDSS predrill at the location, oil bearing sands were expected to be encountered within the blocky sands of the FM-1.1. These sands were the objective of the well.

Upon the completion of drilling the hole was logged and an RFT survey conducted. The FM-1.1 had come in 26m low and was wet, but log analysis indicated an oil bearing interval from 2410m-2417m TVDSS within a relatively good quality sand within the FM-1.0 unit. The equivalent section in Fortescue-1 was totally non-net.

Log analysis defined a possible OWC at -2417m TVDSS while RFT pressure plots placed the contact between 2417m and 2419m TVDSS (see Wireline Test Report). Pressure data also suggest the FM-1.0 sand is a separate accumulation not in direct pressure communication with currently producing FM-1.1 and FM-1.2U Fortescue sands. Pressure data also validated the pre drill interpretation that the FM-1.1 and FM-1.2 upper act as a separate hydraulic system to the main Fortescue lower system (see Wireline Test Report).

The 7.0m TVT of net oil sand within the FM-1.0 unit averaged 20% porosity and 43% water saturation. Three oil samples from 2413.0m and 2415.9m TVDSS were obtained during the RFT Survey above the interpreted OWC.

Geophysical Analysis

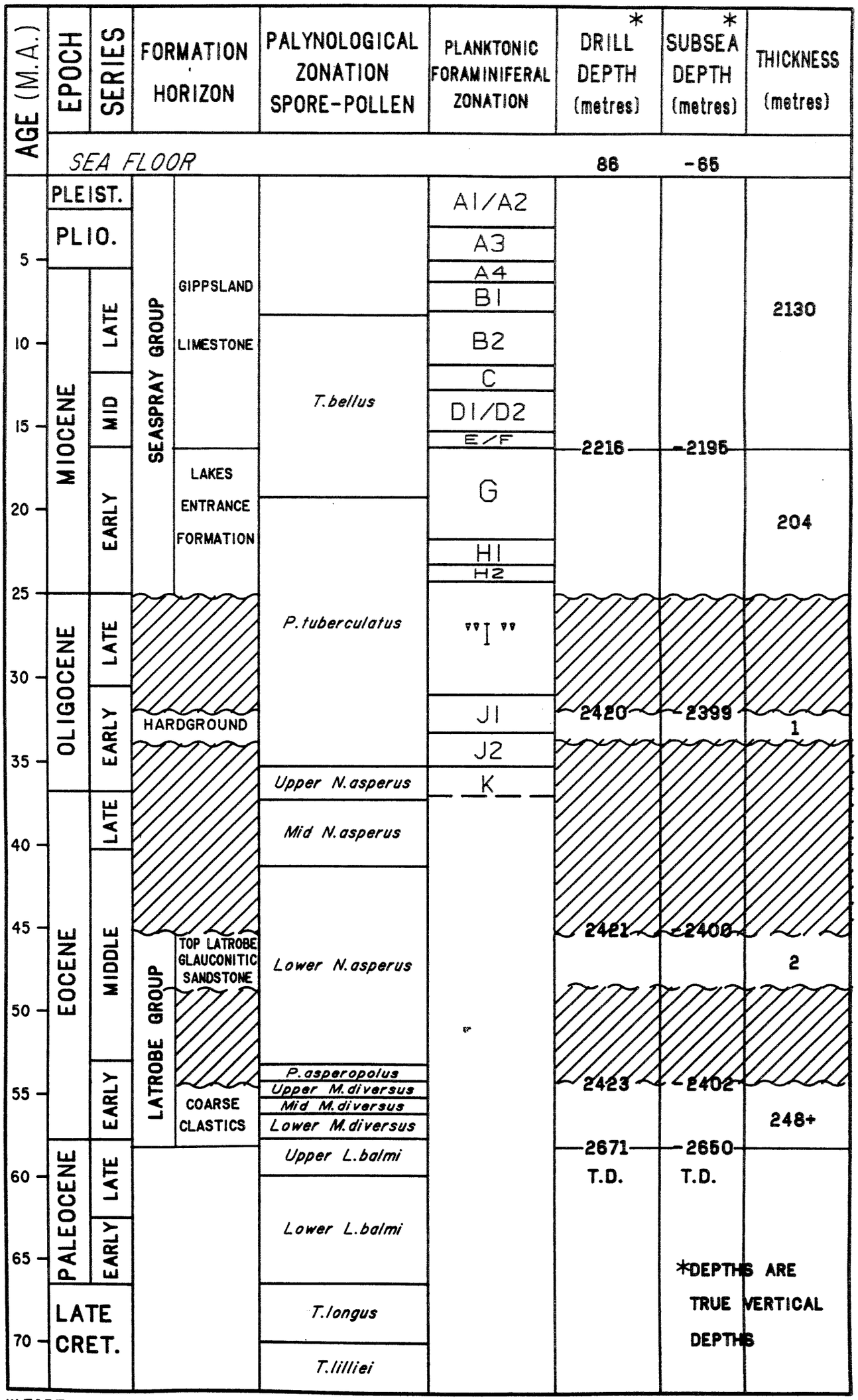
The primary target horizon, the "Top of Latrobe Group Coarse Clastics" (although comprising FM-1.0 and not FM-1.1 at its top) was intersected only 7m TVT low to prediction representing an error of less than 0.25%.

Conclusion

Although the well encountered a new oil accumulation, which was separate from the rest of Fortescue, within the FM-1.0 unit and not the FM-1.1 as expected, the volume present was assessed too small to support a subsea completion development and the West Fortescue-1 well was plugged and abandoned.

FIGURE 1

WEST FORTESCUE-1
STRATIGRAPHIC TABLE



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Appendix 1

APPENDIX

MICROPALAEONTOLOGICAL ANALYSIS, WEST FORTESCUE-1, GIPPSLAND BASIN

by

J. P. REXILIUS

Esso Australia Ltd., September, 1984.

Palaeontological Report 1984/28

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INTERPRETATIVE DATA

INTRODUCTION

Fifteen (15) sidewall core samples were examined for their foraminiferal content in West Fortescue-1 from 2366.2m to 2423.0m. Three samples were also checked for their calcareous nannoplankton content. Tables 1 and 2 provide a summary (Basic and Interpretative) of the palaeontological analysis in West Fortescue-1. A summary of the biostratigraphic breakdown of the stratigraphic units in the well is given below.

AGE	UNIT	ZONE	DEPTH (mKB)
E. Miocene or younger	Lakes Entrance Fm	(not studied)	
	log break at 2216m (*Mid-Miocene Marker)		
Early Miocene	Lakes Entrance Fm	H-1	2366.2 - 2419.2
	log break at 2420m (30Ma)		
#1 Early Oligocene	Un-named hardground unit (time equivalent of the "Oligocene Wedge")	No younger than J-1	2420.2
	log break at 2421m (40Ma)		
#2 latest Early-Middle Eocene	Top of Latrobe glauconitic sandstone unit	P9-P13 equiv.	2421.3
Indeterm.		Indeterm.	2423.0
	lithological/faunal break at 2423m (49.5Ma)		
#3 Early Eocene	Latrobe Group (coarse clastics)	(not studied)	
			TD 2671m

* Based on correlation with other wells on the Fortescue Field which have biostratigraphic control.
#1 age based on results of palynology (Macphail, 1984) and micropalaeontology.
#2 age based on calcareous nannoplankton
#3 age based on results of palynology (Macphail, 1984).

GEOLOGICAL COMMENTS

The top of the Latrobe Group in West Fortescue-1 consists of three closely spaced disconformity surfaces which equate with the 30Ma, 40Ma and 49.5Ma seismic sequence events of Vail et al. (1977). Close sidewall core spacing across the top of the Latrobe Group in the well has enabled these events to be recognized.

In West Fortescue-1 a thin top of Latrobe glauconitic sandstone unit disconformably overlies marginal marine Latrobe Group sediments. This disconformity is picked at 2423m and is based primarily on palaeontological and lithological data. The disconformity equates with the 49.5Ma event of Vail et al. (1977). The sidewall core sample shot immediately below the 53Ma event at 2424.2m consists of firm grey siltstone and has been assigned to the Early Eocene Upper M. diversus palynological Zone by Macphail (1984). The sidewall core sample immediately above the 49.5Ma event consists of fine grained, friable, whitish-grey, glauconitic sandstone but unfortunately is not age diagnostic. The sample is barren of palynomorphs (Macphail, 1984) and planktonic foraminifera, and contains only an impoverished non-age diagnostic calcareous nannoplankton assemblage. Fortunately an age diagnostic sample was shot in the upper part of the top of Latrobe glauconitic sandstone unit at 2421.2m. This sample is lithologically identical to the sample shot near the base of the unit and consists of fine grained, friable, white, glauconitic sandstone. The sample at 2421.2m is barren of palynomorphs (Macphail, 1984) but contains both planktonic foraminiferal and calcareous nannoplankton assemblages. The planktonic foraminiferal assemblage is not age diagnostic although the presence of rare specimens of Globigerina linaperta indicates the sample is Eocene in age. The calcareous nannoplankton assemblage provides a more refined biostratigraphic determination and indicates a likely age of latest Early Eocene - Middle Eocene. The foraminiferal assemblage at 2421.2m consists predominantly of planktonics and this indicates that the top of latrobe glauconitic sandstone unit was probably deposited in an outer continental shelf or deeper palaeoenvironment.

The top of Latrobe glauconitic sandstone unit is disconformably overlain by a thin Early Oligocene hardground unit which is a time equivalent of the "Oligocene Wedge". The disconformity at 2421m equates with the 40Ma event of Vail et al. (1977). The hardground is characterized by a sonic/density log spike and is less than 1m thick. The hardground was penetrated by SWC 39 (2420.2m). This sample consists of a hard, compact, glauconitic,

recrystallized calcareous shale. The combined results of palynology and micropalaeontology indicate that the sample at 2420.2m is Early Oligocene in age. Planktonic foraminiferal evidence indicates an age no younger than Zone J-1 (Early Oligocene) while palynological evidence (Macphail, 1984) indicates an age no older than Early Oligocene. Macphail (1984) recorded dinoflagellates indicative of the Oligocene/Miocene P. tuberculatus Zone. The hardground horizon in West Fortescue-1 is also present in other wells drilled on the eastern flank of the Fortescue Field (near the western flank of the pre-existing Marlin Channel). The characteristic density/sonic spike log signature is also present in Fortescue-1, Fortescue-3 and Halibut-1. The hardground in all these wells is less than 2m in thickness. The hardground is a time-equivalent of the "Oligocene Wedge" which is well developed in wells on the western part of the Fortescue-Cobia Field e.g. Fortescue-2, Rockling-1 and Cobia-2.

The Early Oligocene hardground horizon is disconformably overlain by the Lakes Entrance Formation. The disconformity at 2420m equates with the 30Ma event of Vail et al. (1977). The lowest sample of Lakes Entrance Formation in West Fortescue-1 (SWC 40 at 2419.2m) consists of a planktonic foraminiferal ooze which is Early Miocene (Zone H-1) in age. The hiatus between the hardground and the Lakes Entrance Formation spans at least 7my. The 30Ma event is widespread in the Gippsland Basin and is mapped seismically as the "Top of Latrobe". In West Fortescue-1 and many other wells drilled in the deeper parts of the offshore Gippsland Basin, the 30Ma, 40Ma and 49.5Ma events are beyond seismic resolution and are all mapped as the "Top of Latrobe" seismic marker.

There is evidence of reworking in two basal samples of the Lakes Entrance Formation in West Fortescue-1. Minor reworked green calcareous shale (presumably the Early Oligocene hardground) was noted in sidewall core samples at 2418.6 and 2417.5m. Reworking of Early Oligocene and older sediments during the early stages (Zone H-1 time) of the deposition of the Lakes Entrance Formation has been recorded in numerous recently drilled Gippsland Basin wells.

The Mid Miocene Marker equates with the sonic log break at 2216m. The Mid Miocene Marker occurs at comparable depths in other Fortescue-Cobia Field wells. For example, in Fortescue-1, the Mid Miocene Marker occurs at 2214m and falls within Zone F.

DISCUSSION OF ZONES

Indeterminate Interval : 2423.0m

The interval is barren of planktonic foraminifera and only contains an impoverished, non-age diagnostic calcareous nannoplankton assemblage. The interval is also barren of palynomorphs (Macphail, 1984).

Zones P9 - P13 equivalent : 2421.3m

Sidewall core 38 at 2421.3m contains a planktonic foraminiferal assemblage which is not age diagnostic. The presence of rare specimens of Globigerina linaperta indicates a generalized Eocene age. A more refined age assignment is provided by the calcareous nannofossil species Cruciplacolithus staurion. Smith (1972) records the species range as P6-P13 in the western North Atlantic Ocean region. Edwards & Perch-Nielsen (1975) recorded the species in DSDP Site 277 (drilled on the southern Campbell Plateau, south of New Zealand) and noted its range as latest Early Eocene - Mid Eocene (interval from the first appearance of Reticulofenestra dictyoda to the first appearance of Cyclicargolithus reticulatus nannofossil events).

In addition Edwards & Perch-Nielsen (1975) recorded Discoaster sp. as being restricted to the interval Mid Early Eocene - Mid Eocene in DSDP Site 277 (interval from the last appearance of Discoaster multiradiatus to the first appearance of Cyclicargolithus reticulatus nannofossil events). The specimen of Discoaster sp. illustrated by Edwards & Perch-Nielsen is synonymous with specimens recorded in SWC 38 (2421.3m) in West Fortescue-1. The calcareous nannoplankton assemblage at 2421.3 is latest Early to Mid Eocene in age (P9-P13). This age assignment is based primarily on comparison with nannofossil assemblages recorded by Edwards & Perch-Nielsen in the southern Tasman Sea (DSDP Site 277). Palynological evidence indicates that the SWC at 2421.3m can be no older than the Upper M.diversus Zone (Macphail, 1984). The upper M.diversus Zone equates with Zones P7-P8.

No younger than Zone J-1 : 2420.2m

The presence of rare poorly preserved specimens of Globigerina angiporoides in the SWC at 2420.2 indicates an age no younger than Zone J-1. Macphail (1984) recorded dinoflagellates typically found in the P.tuberculatus palynological Zone in the same sample. The integration of palynological and micropalaeontological results support an Early Oligocene age for the sidewall core sample at 2420.2m.

Zone H-1 : 2366.2 - 2419.2

The presence of Globigerina woodi connecta without its descendant Globigerinoides trilobus indicates that the interval is Zone H-1 in age.

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TABLE 1

SUMMARY OF PALAEONTOLOGICAL ANALYSIS - WEST FORTESCUE-1, GIPPSLAND BASIN

INTERPRETATIVE DATA

NATURE OF SAMPLE	DEPTH (M)	YIELD		PRESERVATION		DIVERSITY		ZONE	AGE	COMMENTS
		PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS			
51	2366.2	Moderate	Not studied	Poor	-	Moderate	-	H-1	Early Miocene	
50	2374.0	High	Not studied	Moderate/Poor	-	Moderate	-	H-1	Early Miocene	
49	2396.6	Moderate	Not studied	Poor	-	Low	-	Indeterm.	-	
48	2400.0	Low	Not studied	Poor	-	Very low	-	Indeterm.	-	
47	2402.1	Very low	Not studied	Poor	-	Very low	-	H-1	Early Miocene	
46	2406.6	Low	Not studied	Poor	-	Very low	-	Indeterm.	-	
45	2411.1	Low	Not studied	Poor	-	Low	-	Indeterm.	-	
44	2413.5	Low	Not studied	Poor	-	Low	-	H-1	Early Miocene	
43	2416.4	Moderate	Not studied	Poor	-	Low	-	H-1	Early Miocene	
42	2417.5	Moderate	Not studied	Poor	-	Moderate	-	Indeterm.	-	contains minor reworked
41	2418.6	High	Not studied	Poor	-	Moderate	-	H-1	Early Miocene	Early Oligocene green calc. shale (hardground)
40	2419.2	High	Not studied	Moderate/Poor	-	Moderate	-	H-1	Early Miocene	
39	2420.2	Very low	Low	Very poor	Moderate	Very low	Low	No younger than J-1	No younger than Early Oligocene	
38	2421.3	Low	Low	Poor	Moderate	Very low	Very low	P9-P13 equiv.	Early/Middle Eocene	contains Cruciplacolithus staurion
37	2423.0	Barren	Very low	-	Moderate	-	Very low	Indeterm.	-	

BASIC DATA

TABLE 2: BASIC DATA, WEST FORTESCUE-1

RANGE CHART: CALCAREOUS PLANKTONIC MICROFOSSILS AND OTHER SKELETAL MATERIAL

TABLE 2

SUMMARY OF PALAEONTOLOGICAL ANALYSIS - WEST FORTESCUE-1, GIPPSLAND BASIN

BASIC DATA

NATURE OF SAMPLE	DEPTH (M)	YIELD		PRESERVATION		DIVERSITY	
		PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS
51	2366.2	Moderate	Not studied	Poor	-	Moderate	-
50	2374.0	High	Not studied	Moderate/Poor	-	Moderate	-
49	2396.6	Moderate	Not studied	Poor	-	Low	-
48	2400.0	Low	Not studied	Poor	-	Very low	-
47	2402.1	Very low	Not studied	Poor	-	Very low	-
46	2406.6	Low	Not studied	Poor	-	Very low	-
45	2411.1	Low	Not studied	Poor	-	Low	-
44	2413.5	Low	Not studied	Poor	-	Low	-
43	2416.4	Moderate	Not studied	Poor	-	Low	-
42	2417.5	Moderate	Not studied	Poor	-	Moderate	-
41	2418.6	High	Not studied	Poor	-	Moderate	-
40	2419.2	High	Not studied	Moderate/Poor	-	Moderate	-
39	2420.2	Very low	Low	Very poor	Moderate	Very low	Low
38	2421.3	Low	Low	Poor	Moderate	Very low	Very low
37	2423.0	Barren	Very low	-	Moderate	-	Very low

MICROPALEONTOLOGICAL DATA SHEET

BASIN: GIPPSLAND ELEVATION: KB: 21.0m GL: -65.0m

WELL NAME: WEST FORTESCUE-1 TOTAL DEPTH: 2671.3m KB

AGE		FORAM. ZONULES	HIGHEST DATA					LOWEST DATA				
			Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time	Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time
PLEISTOCENE		A_1										
		A_2										
PLIOCENE		A_3										
		A_4										
MIOCENE	LATE	B_1										
		B_2										
		C										
	MIDDLE	D_1										
		D_2										
		E_1										
		E_2										
	EARLY	F										
		G										
		H_1	2366.2	2				2419.2	1			
OLIGOCENE	LATE	H_2										
		I_1										
		I_2										
	EARLY	J_1										
		J_2										
EOCENE		K										
		Pre-K										

COMMENTS: Sidewall core 39 at 2420.2m contains rare Globigerina angiporoides and is considered to be no younger than Zone J-1. Sidewall core 38 at 2421.3m contains rare specimens of Globigerina linaperta and is considered to be no younger than Zone K.

CONFIDENCE RATING:

0: SWC or Core - Complete assemblage (very high confidence).
1: SWC or Core - Almost complete assemblage (high confidence).
2: SWC or Core - Close to zonule change but able to interpret (low confidence).
3: Cuttings - Complete assemblage (low confidence).
4: Cuttings - Incomplete assemblage, next to uninterpretable or SWC with depth suspicion (very low confidence).

NOTE: If an entry is given a 3 or 4 confidence rating, an alternative depth with a better confidence rating should be entered, if possible. If a sample cannot be assigned to one particular zone, then no entry should be made, unless a range of zones is given where the highest possible limit will appear in one zone and the lowest possible limit in another.

DATA RECORDED BY: J.P. Rexilius DATE: 23/05/84

DATA REVISED BY: J.P. Rexilius DATE: 10/09/84

FOSSIL TYPE : CALCAREOUS PLANKTONIC MICROFOSSILS & OT. SKELETAL MATERIAL

Well Name WEST FORTESCUE-1 Basin GIPPSLAND Sheet No. 1 of 1

SAMPLE TYPE OR NO. *	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
DEPTHS / PLANKTONIC FORAMINIFERA	2423.0	2421.2	2420.2	2419.2	2418.6	2417.5	2416.4	2413.5	2411.1	2406.6	2402.1	2400.0	2396.6	2374.0	2366.2
Globigerina linaperta	---														
indeterminate globigerinids	—				■		■	—	—	—	—	—	■	■	—
indeterminate globorotalids	—														
indeterminate planktonics			---												
Globigerina angiporoides			---												
Globigerina woodi woodi				—	—		---	---	---		---			---	---
G. woodi connecta				—	---		---	---			---			---	---
G. pachitaensis				---											
G. praebulloides				—	—	—			---				---	—	—
Globoquadrina dehiscens				---	---	---	---	---	---			---	—	—	—
Globorotalia aff. bella				---											
G. zealandica zealandica				---											
Catapsydrax dissimilis				---	---	---				---				---	---
juvenile planktonics				■		■							■		
Globoquadrina advena					---	---							---	---	
Globorotalia nana						---									---
G. continuosa														---	
G. obesa														---	
CALCAREOUS NANNOPLANKTON															
indeterminate coccoliths	---	—													
Discoaster sp.		---													
Cruciplacolithus staurion		---													
Coccolithus spp.	---	—	—												
Coccolithus eupelagicus			—												
Reticulofenestra cf. scissura			---												
R. cf. alabamensis			---												
Cyclococcolithina sp.			---												
OTHER SKELETAL MATERIAL															
echinoid spines				---	---		---	---							---
fish teeth					---										
ostracods						---		---							---
bivalve fragments									---						

* C=CORE S=SIDEWALL CORE T=CUTTINGS J=JUNK BASKET

--- RARE — FEW ■ COMMON ■ ABUNDANT

PALAEO.CHART-2
DWG.1107/OP/287

Appendix 2

APPENDIX

PALYNOLOGICAL ANALYSIS
WEST FORTESCUE-1, GIPPSLAND BASIN

by

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Esso Australia Ltd
Palaeontology Report 1984/27

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1000L

INTERPRETATIVE DATA

INTRODUCTION

Twenty two (22) sidewall core samples were processed and examined for spore-pollen and dinoflagellates. Recovery and preservation was fair to good only in siltstone or shaley intervals. Palynological zones and lithofacies subdivisions from the base of the Lakes Entrance Formation to the lowest sidewall core shot (2569.2m) 102m above total depth are given below. The occurrence of spore-pollen and dinoflagellate species are given in the accompanying range chart. Anomalous and unusual occurrences of taxa are listed in Table 2.

SUMMARY

AGE	UNIT/FACIES	ZONE	DEPTH (m)
Early Miocene	Lakes Entrance Formation	P. tuberculatus	2419.2
	log break at 2420m (30 Ma)*		
Early Oligocene	Unnamed hardground unit (time equivalent of the "Oligocene wedge"	P. tuberculatus	2420.2
	log break at 2421m (40.5 Ma)*		
* latest Early - Middle Eocene	Intra-Latrobe Group glauconitic sandstone unit	Indeterminate	2421.3-2423.0
	lithological boundary at 2423m (53 Ma) *		
Early Eocene	Latrobe Group (coarse clastics) *	Upper M.diversus	2425.2
		Middle M.diversus	2427.5-2569.2

TD 2671

* ages based on micropalaeontological analyses (Rexilius 1984)

GEOLOGICAL COMMENTS

1. Like the Fortescue-1 well, West Fortescue-1 contains an unusually thick (minimum 122m) section of Middle M. diversus Zone sediments. The overlying unit of Upper M. diversus Zone shales and siltstones (the FM-1.0 seal) is markedly thinner (approximately 1m vs 28m in Fortescue-1), reflecting deeper erosion at the West Fortescue-1 well site during the formation of the Marlin Channel.

2. The unit defined by the gamma log peak between 2430-2421m comprises middle and Upper M. diversus Zone shales and siltstones and the overlying but undatable 4m interval of glauconitic sandstones. Resistivity data confirm the upward coarsening nature of this sequence.

3. The unnamed hardground unit (Rexilius 1984), represented by the sonic kick at 2420-2421m contains dinoflagellate species typical of the Oligocene/Miocene P. tuberculatus Zone in age. The equivalent facies in Fortescue-1, between approximately 2413-2415m, contains the P. tuberculatus Zone indicator species, Cyatheacidites annulatus (Stacy & Partridge, 1978).

4. The FM-1.1 sand is Middle M. diversus Zone in age. Fossilferous samples within this sand contained dinoflagellates, occasionally in considerable abundance, e.g. at 2447.1m, but never diverse populations. This indicates the unit was deposited in a marginal marine environment, probably shoreface in view of the well-sorted texture of the sands.

5. The highest coal, at 2506m, occurs above samples containing abundant dinoflagellates, e.g. at 2508.0m, 2512.0m and 2520.0m. This unit of coals interbedded with sands and shales showing various degrees of marine influence occurs to at least 2560.2m and represents a deltaic environment. The small-scale oscillations in sea level are younger than the Early Eocene Apectodinium (Wetzeliella) hyperacantha marine transgression recognized by Partridge (1976, revised by Stacy & Partridge, 1978)

6. Log analysis shows that the Middle M. diversus Zone coals between 2506.0 and 2569.2m in West Fortescue-1 are correlated with coals of both Middle and Lower M. diversus Zone age in Fortescue-1 (Stacy & Partridge ibid). The excellent match between individual coal seams in these wells indicates that the section down to at least 2573m and probably 2588m in Fortescue-1 is Middle not Lower M. diversus Zone in age (based on the first occurrences of Proteacidites tuberculiformis and P. tuberculo - tumulatus respectively in West Fortescue-1)

7. The basal 100m were not sampled. Biostratigraphic data from the Fortescue-1 well indicates West Fortescue-1 is likely to have bottomed close to, possibly just below, the Lower M. diversus/Upper L. balmei Zone boundary.

BIOSTRATIGRAPHY

Zone boundaries have been established using criteria proposed by Stover & Evans (1973), Stover & Partridge (1973) and subsequent proprietary revisions. The well contains an unusually thick, well-sampled M. diversus Zone interval and will prove important in any subsequent revision of the Early Eocene biostratigraphy in the Gippsland Basin.

Middle Malvacipollis diversus Zone 2569.2 to 2427.5m

The lower boundary is defined by the occurrence of Proteacidites tuberculotumulatus at 2569.2m (the basal sidewall core). This species is extremely rare in offshore wells, and although the majority of associated species, e.g. Tricolporites adelaidenasis, Polycolpites esobalteus, Banksieaeidites arcuatus are also typically first recorded in this zone, the Middle M. diversus Zone age is of low confidence. An alternative, more confident pick for the lower boundary is at 2549.09m, based on the first occurrence of Proteacidites tuberculiformis. Similar uncertainties exist with the upper boundary. This is provisionally placed at 2427.5m, the highest occurrence of an M. diversus Zone assemblage lacking indicates species of the Upper M. diversus Zone. This sample contains Proteacidites tuberculiformis and is no older than Middle M. diversus Zone in age. The sample at 2428.1m contains Anacolosidites rotundus and Proteacidites ornatus, species which first appear in this zone.

Upper Malvacipollis diversus Zone 2425.2m

One sample is assigned to this zone, based on occurrences of Protecacidites pachypolus and Myrtaceidites tenuis. The sample lacks species first appearing in the P. asperopolus Zone but is certainly no younger than P. asperopolus Zone# in age. The sample contains abundant Haloragacidites harrisii and Proteacidites spp. relative to Nothofagidites. Malvacipollis diversus and Deflandrea flounderensis suggest the sample at 2424.2m may also be (Upper) M. diversus Zone in age.

Proteacidites tuberculatus zone 2419.2 to 2420.2

Two samples are assigned to this zone. The lower, at 2420.2m, contains Pyxidinopsis pontus and probable Protoellipsodinium simplex, dinoflagellates typically found only in this zone. The occurrence of Cyatheacidites annulatus with these dinoflagellate species at 2419.2m confirms a P. tuberculatus zone age for the upper sample.

REFERENCES

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TABLE 1: SUMMARY OF PALYNOLOGICAL ANALYSIS - WEST FORTESCUE-1

INTERPRETATIVE DATA

SAMPLE NO.	DEPTH (m)	YIELD	DIVERSITY SPORE POLLEN	LITHOLOGY	ZONE	AGE	CONFIDENCE RATING	COMMENTS
SWC 40	2419.2	V. good	Low	Clyst., calc.	P. tuberculatus	Early Miocene	0	C. annulatus, P. pontus
SWC 39	2420.2	V. low	V. Low	Clyst., glau., calc.	P. tuberculatus	Oligocene/Miocene	2	P. simplex, P. pontus
SWC 38	2421.3	Barren	-	Ss., glau.	-	-	-	
SWC 37	2423.0	Negligible	-	Ss., glau.	Indeterminate	-	-	
SWC 36	2424.2	V. low	Low	Slst.	M. diversus	Early Eocene	-	D. flounderensis
SWC 35	2425.2	Fair	Good	Sh., carb.	Upper M. diversus	Early Eocene	1	M. tenuis, P. pachypolus, D. flounderensos, H. tasmaniense
SWC 34	2427.5	Good	Fair	Slst., carb.	Middle M. diversus	Early Eocene	1	P. tuberculiformis, T. moultonii
SWC 33	2428.1	Fair	Fair	Sh., carb.	Middle M. diversus	Early Eocene	1	A. rotundus, P. ornatus, Frequent W. longispina
SWC 32	2429.7	V. low	V. low	Slst.			-	M. diversus
SWC 29	2436.7	V. low	V. low	Slst.			-	M. diversus
SWC 25	2447.1	V. good	Good	Sh.,carb.,coaly	Middle M. diversus	Early Eocene	2	T. adelaidensis, Freq M. diversus, W. longispina
SWC 24	2454.3	V. low	Fair	Slst.	M. diversus	Early Eocene	-	C. orthoteichus
SWC 11	2508.1	Good	Fair	Slst., carb.	Middle M. diversus	Early Eocene	2	T. moultoni, T. paenestriatus
SWC 9	2512.0	V. low	Low	Ss.	M. diversus	Early Eocene	-	C. orthoteichus
SWC 8	2133.7	Barren	-	Slst.	-	-	-	
SWC 7	2516.1	Barren	-	Ss.	-	-	-	
SWC 6	2520.0	Fair	Fair	Sh.	Middle M. diversus	Early Eocene	1	P. tuberculiformis, B. emaciatus
SWC 5	2531.0	Low	Low	Sh.	M. diversus	Early Eocene	-	Frequent M. diversus
SWC 4	2549.0	V. good	Good	Sh., carb.	Middle M. diversus	Early Eocene	1	P. tuberculiformis, T. adelaidensis
SWC 3	2560.2	Good	Fair	Slst.	No older than Lower M. diversus		-	C. orthoteichus
SWC 2	2565.6	Low	Low	Slst., carb.	Indeterminate	-	-	M. diversus,
SWC 1	2569.2	Good	V. good	Sh.	Middle M. diversus	Early Eocene	2	P. tuberculotumulatus, T. adelaidensis B. arcuatus, P. esobulteus

TABLE

ANOMALOUS AND UNUSUAL OCCURRENCES OF SPORE-POLLEN TAXA IN WEST FORTESCUE-1

SAMPLE NO.	DEPTH (m)	ZONE	TAXON	COMMENTS
SWC 36	2424.2	?Upper *M. diversus*	*Deflandrea flounderensis*	Uncommon species
SWC 35	2425.2	Upper *M. diversus*(1)	*Deflandrea flounderensis*	as above
SWC35	2425.2	Upper *M. diversus*(1)	*Rugulatisporites* sp.	New var. cf *R. trophus*
SWC 34	2427.5	Middle *M. diversus*(1)	*Tricolpites reticulatus* Cookson	Rare sp.
SWC 34	2427.5	Middle *M. diversus*(1)	*Kuylisporites waterbolkii*	Rare sp.
SWC 3	2560.2	Middle *M. diversus*(3)	*Droseridites tholus*	Earliest record to date in Gippsland
SWC 1	2569.2	Middle *M. diversus*(2)	*Retistephanocolpites nixonii*	Rare sp.
SWC 1	2569.2	Middle *M. diversus*(2)	*Proteacidites tuberculotumulatus*	Very rare sp.
SWC 1	2569.2	Middle *M. diversus*(2)	*Camarozonosporites australiensis*	Rare in sediments this young

PALYNOLOGY DATA SHEET

BASIN: GIPPSLAND ELEVATION: KB: +25.3 GL: _____

WELL NAME: FORTESCUE-1 TOTAL DEPTH: _____

AGE	PALYNOLOGICAL ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth (m)	Rtg	Alternate Depth	Rtg	Two Way Time	Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time
NEOGENE	*T. pleistocenicus*										
	M. lipsis										
	C. bifurcatus										
	T. bellus										
PALEOGENE	*P. tuberculatus*	2410	0				2415	0			
	Upper *N. asperus*										
	Mid *N. asperus*										
	Lower *N. asperus*										
	P. asperopolus										
	Upper *M. diversus*	2416	1				2444	1			
	Mid *M. diversus*	2454.5	2				2588	2	2573	1	
	Lower ***M. diversus***	2590	3	2595	1		2655	1			
	Upper *L. balmei*	2666	0				2679	1			
	Lower *L. balmei*										
LATE CRETACEOUS	*T. longus*										
	T. lilliei										
	N. senectus										
	U. *T. pachyexinus*										
	L. *T. pachyexinus*										
	C. triplex										
	A. distocarinatus										
EARLY CRET.	*C. paradoxus*										
	C. striatus										
	F. asymmetricus										
	F. wonthaggiensis										
	C. australiensis										
PRE-CRETACEOUS											

COMMENTS: Apectodinium (Wetzeliella) hyperacantha Dinoflagellate zone: 2636-2672m Revision of Middle M. diversus Zone based on coal correlations with West Fortescue-1 (see Macphail M.K. Esso Aust. Ltd. Palaeontological Report 1984/27).

CONFIDENCE RATING:
- 0: SWC or Core, Excellent Confidence, assemblage with zone species of spores, pollen and microplankton.
- 1: SWC or Core, Good Confidence, assemblage with zone species of spores and pollen or microplankton.
- 2: SWC or Core, Poor Confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.
- 3: Cuttings, Fair Confidence, assemblage with zone species of either spores and pollen or microplankton, or both.
- 4: Cuttings, No Confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.

NOTE: If an entry is given a 3 or 4 confidence rating, an alternative depth with a better confidence rating should be entered, if possible. If a sample cannot be assigned to one particular zone, then no entry should be made, unless a range of zones is given where the highest possible limit will appear in one zone and the lowest possible limit in another.

DATA RECORDED BY: A.D. Partridge & H. Stacy DATE: 5 October 1978

DATA REVISED BY: M.K. Macphail DATE: 7 September 1984

PALYNOLOGY DATA SHEET

BASIN: GIPPSLAND ELEVATION: KB: + 21.0m GL: _____

WELL NAME: WEST FORTESCUE-1 TOTAL DEPTH: 2671m

AGE	PALYNOLOGICAL ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time	Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time
NEOGENE	*T. pleistocenicus*										
	M. lipsis										
	C. bifurcatus										
	T. bellus										
PALEOGENE	*P. tuberculatus*	2419.2	0				2420.2	2			
	Upper *N. asperus*										
	Mid *N. asperus*										
	Lower *N. asperus*										
	P. asperopolus										
	Upper *M. diversus*	2425.2	1				2425.2	1			
	Mid *M. diversus*	2427.5	2	2437.5	1		2569.2	2	2549.0	1	
	Lower *M. diversus*										
	Upper *L. balmei*										
	Lower *L. balmei*										
LATE CRETACEOUS	*T. longus*										
	T. lilliei										
	N. senectus										
	U. *T. pachyexinus*										
	L. *T. pachyexinus*										
	C. triplex										
	A. distocarinatus										
EARLY CRET.	*C. paradoxus*										
	C. striatus										
	F. asymmetricus										
	F. wonthaggiensis										
	C. australiensis										
PRE-CRETACEOUS											

COMMENTS: Dinoflagellates occur in all samples, often in abundance although diversity is usually low. It is not clear from these data whether marginal marine or fully marine environments are represented.

CONFIDENCE RATING:
- 0: SWC or Core, Excellent Confidence, assemblage with zone species of spores, pollen and microplankton.
- 1: SWC or Core, Good Confidence, assemblage with zone species of spores and pollen or microplankton.
- 2: SWC or Core, Poor Confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.
- 3: Cuttings, Fair Confidence, assemblage with zone species of either spores and pollen or microplankton, or both.
- 4: Cuttings, No Confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.

NOTE: If an entry is given a 3 or 4 confidence rating, an alternative depth with a better confidence rating should be entered, if possible. If a sample cannot be assigned to one particular zone, then no entry should be made, unless a range of zones is given where the highest possible limit will appear in one zone and the lowest possible limit in another.

DATA RECORDED BY: M.K. Macphail DATE: 20 June 1984

DATA REVISED BY: _____ DATE: _____

FOSSIL TYPE : CALCAREOUS PLANKTONIC MICROFOSSILS & OTHER SKELETAL MATERIAL

Well Name WEST FORTESCUE-1 Basin GIPPSLAND Sheet No. 1 of 1

SAMPLE TYPE OR NO. *	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
PLANKTONIC FORAMINIFERA / DEPTHS	2423.0	2421.2	2420.2	2419.2	2418.6	2417.5	2416.4	2413.5	2411.1	2406.6	2402.1	2400.0	2396.6	2374.0	2366.2
Globigerina linaperta	---														
indeterminate globigerinids	—				■		■						■	■	—
indeterminate globorotalids	—														
indeterminate planktonics			---												
Globigerina angiporoides			---												
Globigerina woodi woodi				—	—		---	---	---		---			—	—
G. woodi connecta				—	—		---	---			---			---	---
G. ouachitaensis				---											
G. praebulloides				—	—				---				---	—	—
Globoquadrina dehiscens				---	---	---	---	---	---			---	—	—	—
Globorotalia aff. bella				---											
G. zealandica zealandica				---											
Catapsydrax dissimilis				---	---	---			---					---	---
juvenile planktonics				■	■								■		
Globoquadrina advena					---	---							---	---	
Globorotalia nana						---								---	
G. continuosa														---	
G. obesa														---	
CALCAREOUS NANNOPLANKTON															
indeterminate coccoliths	---	—													
Discoaster sp.		---													
Cruciplacolithus staurion		---													
Coccolithus spp.	---	—	—												
Coccolithus eupelagicus			—												
Reticulofenestra cf. scissura			---												
R. cf. alabamensis			---												
Cyclococcolithina sp.			---												
OTHER SKELETAL MATERIAL															
echinoid spines				---	---		---	---						---	
fish teeth					---										
ostracods						---		---						---	
bivalve fragments									---						

* C=CORE S=SIDEWALL CORE T=CUTTINGS J=JUNK BASKET

--- RARE — FEW ■ COMMON ▣ ABUNDANT

PALAEO.CHART-2
DWG.1107/OP/287

Appendix 3

WEST FORTESCUE #1
QUANTITATIVE LOG ANALYSIS

Interval: 3420 - 3635m MDKB
Analyst : L.J. Finlayson
Date : July, 1984

WEST FORTESCUE #1 - QUANTITATIVE LOG ANALYSIS

West Fortescue #1 wireline logs have been analysed for effective porosity and water saturation over the interval 3420-3635m MDKB. Analysis was carried out using a reiterative technique which incorporates hydrocarbon correction to the porosity logs, density-neutron crossplot porosities, a Dual Water saturation relationship, and convergence on a preselected grain density window by shale volume adjustment.

Logs Used and Log Quality

LLD, (DLTE), MSFL, RHOB (LDTC), NPHI (CNTH), GR.

The MSFL and neutron porosity logs were corrected for borehole and environmental effects.

The LLD log is regarded as Rt.

All the above logs were run as one (CCS) combination.

Log Quality

1. DLT-MSFL-GR: All curves appear reasonable.

2. LDTC-CNTH-GR: All curves appear reasonable however it is noted that up to 6 porosity units crossover occurs on the density-neutron log in clean water bearing sands.

Analysis Parameters

a	1
m	2
n	2
Apparent Shale Density (RHOBSH)	2.55 gm/cc
Apparent Neutron Porosity (NPHISH)	0.30
Rsh	15.000 ohm.m
Rmf @ 81.1° C	0.083 ohm.m
Grain density - lower limit	2.65 gm/cc
Grain density - upper limit	2.67 gm/cc
Mud Filtrate Density (RHOF)	1.00 gm/cc
Hydrocarbon Density (RHOH)	0.75 gm/cc
Bottom Hole Temperature	81.1° C

Shale Volume

An initial estimate of VSH was calculated from density-neutron separation.

$$VSH\ ND = \frac{NPHI - \frac{2.65 - RHOB}{1.65}}{NPHISH - \frac{2.65 - RHOBSH}{1.65}} \quad - 1$$

Total Porosities

Total porosity was initially calculated from a density-neutron logs using the following algorithms:

$$h = 2.71 - RHOB + NPHI\ (RHOF - 2.71) \quad - 2$$

if h is greater than 0, then

$$\text{apparent matrix density, } RHOMa = 2.71 - h/2 \quad - 3$$

if h is less than 0, then

apparent matrix density, RHOMa = 2.71 - 0.64h - 4

Total porosity: $PHIT = \frac{RHOMa - RHOB}{RHOMa - RHOF}$ - 5

where RHOB = environ. corrected bulk density in gms/cc
NPHI = environ. corrected neutron porosity in limestone porosity units.
RHOF = fluid density (1.00 gms.cc)

Free Formation Water (Rw) and Bound Water (Rwb) Resistivities

Apparent water resistivity (Rwa) was derived as follows:

$Rwa = Rt * PHIT^m$ (m = 2) - 6

Free formation water resistivity (Rw) was taken from the clean, water sand Rwa. Bound water resistivity was calculated from the input shale resistivity value (RSH) read directly from the Rt log.

Listed below are the selected Rw values.

Depth Interval (m)	Rw (ohm.m)	Salinity (ppm NaCleq.)
2420 - 2445	0.078	40,000
2445 - 2510	0.058	55,000
2510 - 2580	0.079	38,000
2580 - 2635	0.096	30,000

Water Saturations

Water saturations were determined from the Dual Water model which uses the following relationship:

$$\frac{1}{Rt} = SwT^n * \frac{PHIT^m}{aRw} + SwT^{(n-1)} \frac{Swb * PHIT^m}{a} \frac{1}{Rwb} - \frac{1}{Rw} \quad - 7$$

or

$$\frac{1}{Rxo} = SxoT^n * \frac{PHIT^m}{aRmf} + SxoT^{(n-1)} \frac{Swb * PHIT^m}{a} \frac{1}{Rwb} - \frac{1}{Rmf} \quad - 8$$

where: SwT and SxoT are "total" water saturations

and Swb (bound water saturation) $= \frac{VSH * PHISH}{PHIT}$ - 9

where: PHISH = total porosity in shale derived from density-neutron crossplot.

with a = 1
m = 2
n = 2

Hydrocarbon correction to the porosity logs utilised the following algorithms:

RHOB = RHOB(raw) + 1.07 PHIT (1-SxoT) [(1.11-0.15P)RHOF - 1.15RHOH] -10
(Hydrocarbon corrected)

NPHI = NPHI(raw) + 1.3 PHIT (1-SxoT) $\frac{RHOF(1-P)-1.5RHOH + 0.2}{RHOF(1-P)}$ -11
(Hydrocarbon corrected)

where P = mud filtrate salinity in parts per unity
RHOF = mud filtrate density
RHOH = hydrocarbon density

The calculated "grain density" was derived by removing the shale component from the rock using the following algorithms:

$$RHOBSC = \frac{RHOB\ (hydrocarbon\ corrected) - VSH * RHOBSH}{1-VSH} \quad -12$$

$$NPHISC = \frac{NPHI\ (hydrocarbon\ corrected) - VSH * NPHISH}{1-VSH} \quad -13$$

The shale corrected density and neutron values were then entered into the cross-plot algorithms (equations 2, 3 and 4) to derive grain density (RHOG).

If calculated RHOG fell inside the specified grain density window, then PHIE and Swe were calculated as follows:

$$PHIE = PHIT - VSH * PHISH \quad -14$$

$$Swe = 1 - \frac{PHIT\ (1-SwT)}{PHIE} \quad -15$$

if VSH was greater than 60%, then Swe was set to 1 and PHIE set to zero.

If calculated RHOG fell outside the specified grain density window, the VSH was adjusted appropriately and the process repeated.

Coals and carbonaceous shales are edited for an output of VSH = 0, PHIE = 0 and Swe = 1.

Comments

1. Oil is calculated over the interval 2431.0-2438.0m. This is confirmed by significant recoveries of oil from RFT's at 2434m and 2436.9m.

2. An oil water contact is interpreted at 2438m.

3. All zones below 2438m are interpreted as being water bearing.

4. A high water saturation zone (Sw = 0.794) is calculated over the interval 2511.00-2513.75m. SWC data suggests that this interval is water bearing.

5. Attached are a summary of results, a listing and a Porosity/Saturation depth plot.

Attach:

WEST FORTESCUE #1

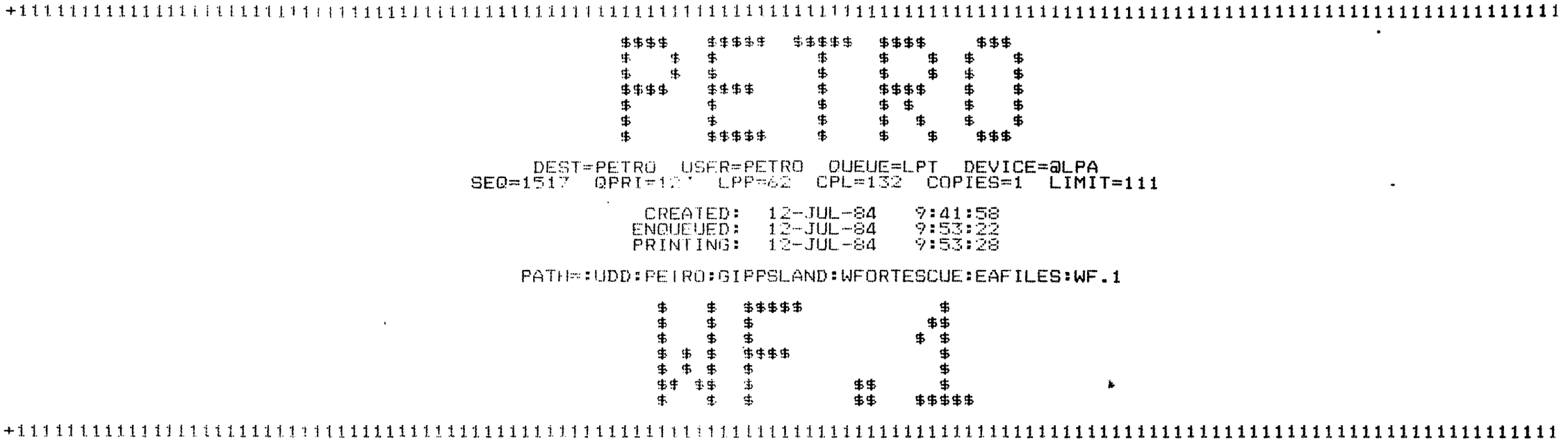
SUMMARY OF RESULTS

Interval Evaluated: 2420m to 2635m MDKB

Depth Interval (m MDKB)	Gross Thickness (m)	* Net Thickness (m)	*Porosity Average	* Swe Average	Fluid Content
2431.00 - 2438.00	7.00	7.00	0.203±.032	0.431±.129	Oil
2438.25 - 2442.25	4.00	4.00	0.176±.035	1.000	Water
2448.00 - 2489.75	41.50	41.75	0.218±.032	0.996	Water
2491.25 - 2505.00	13.75	13.75	0.233±.020	0.927	Water
2511.00 - 2513.75	2.75	2.75	0.139±.010	0.794	Water
2514.00 - 2518.50	4.50	4.50	0.197±.030	0.926	Water
2531.50 - 2545.00	13.50	13.50	0.213±.035	0.997	Water
2549.75 - 2559.75	10.00	10.00	0.211±.025	1.000	Water
2623.25 - 2630.50	7.00	7.25	0.182±.038	1.000	Water
2631.25 - 2635.00	3.75	3.75	0.211±.035	1.000	Water

* Net Porosity Thickness, Porosity Average and Swe Average refer to zones with calculated porosities in excess of 10%.

19061/24



DEST=PETRO USER=PETRO QUEUE=LPT DEVICE=@LPA
SEQ=1517 QPRI=127 LPP=62 CPL=132 COPIES=1 LIMIT=111

CREATED: 12-JUL-84 9:41:58
ENQUEUED: 12-JUL-84 9:53:22
PRINTING: 12-JUL-84 9:53:28

PATH=:UDD:PETRO:GIPPSLAND:WFORTESCUE:EAFILES:WF.1

AOS REV 4.28

AOS REV 04.28
AOS XLPT REV 04.21

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LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2420.000	60.796	2.483	2.926	2.636	.016	.295	12.367	1.000	1.000	1.000	.000
2420.250	62.485	2.149	1.766	2.792	.008	.272	12.367	1.000	1.000	1.000	.000
2420.500	64.369	2.560	3.460	2.866	.008	.182	12.367	1.000	1.000	1.000	.000
2420.750	90.395	1.797	50.007	2.826	.005	.112	12.367	1.000	1.000	1.000	.000
2421.000	121.821	9.002	46.433	2.719	-.003	.080	12.367	.678	1.000	1.000	.000
2421.250	140.478	4.808	3.203	2.575	.003	.135	12.367	.488	1.000	1.000	.000
2421.500	145.442	2.632	3.064	2.522	.011	.215	12.367	.766	1.000	1.000	.000
2421.750	136.944	2.256	3.389	2.589	.010	.238	12.367	1.000	1.000	1.000	.000
2422.000	124.832	2.015	2.401	2.664	.001	.250	12.367	1.000	1.000	1.000	.000
2422.250	119.199	1.792	4.514	2.678	-.010	.247	12.367	1.000	1.000	1.000	.000
2422.500	128.545	2.041	2.386	2.592	-.013	.228	12.367	1.000	1.000	1.000	.000
2422.750	146.178	2.326	2.684	2.522	.001	.227	12.367	.817	1.000	1.000	.000
2423.000	149.698	2.782	3.545	2.521	.003	.238	12.367	.868	1.000	1.000	.000
2423.250	137.436	3.734	4.363	2.590	-.003	.244	12.299	1.000	1.000	1.000	.000
2423.500	138.791	3.718	5.281	2.649	.001	.231	12.273	1.000	1.000	1.000	.000
2423.750	142.584	3.969	3.178	2.657	.003	.212	12.273	1.000	1.000	1.000	.000
2424.000	150.808	3.942	4.977	2.637	-.003	.192	12.273	.958	1.000	1.000	.000
2424.250	153.665	4.537	4.606	2.578	-.000	.189	12.273	.794	1.000	1.000	.000
2424.500	142.412	4.416	4.740	2.503	.001	.185	12.273	.526	1.000	1.000	.020
2424.750	136.278	4.690	4.922	2.486	-.002	.170	12.273	.417	1.000	1.000	.067
2425.000	138.948	5.119	5.936	2.511	.004	.167	12.273	.470	1.000	1.000	.036
2425.250	150.773	4.960	4.969	2.542	.008	.173	12.273	.633	1.000	1.000	.000
2425.500	154.591	4.057	4.522	2.591	.007	.191	12.273	.838	1.000	1.000	.000
2425.750	148.400	3.761	4.033	2.679	.013	.200	12.273	1.000	1.000	1.000	.000
2426.000	146.796	3.160	5.064	2.721	.009	.194	12.273	1.000	1.000	1.000	.000
2426.250	144.715	3.823	5.067	2.666	.006	.201	12.273	1.000	1.000	1.000	.000
2426.500	142.333	4.732	5.606	2.639	.019	.229	12.273	1.000	1.000	1.000	.000
2426.750	136.226	6.907	9.369	2.646	.035	.241	12.273	1.000	1.000	1.000	.000
2427.000	135.560	8.135	9.952	2.592	.012	.230	12.273	1.000	1.000	1.000	.000
2427.250	131.807	7.651	9.560	2.565	.004	.230	12.273	.943	1.000	1.000	.000
2427.500	130.071	5.720	10.370	2.575	.016	.231	12.273	.970	1.000	1.000	.000
2427.750	124.095	3.587	6.104	2.564	.027	.241	12.273	.986	1.000	1.000	.000
2428.000	118.691	3.045	1.387	2.584	.043	.256	12.273	1.000	1.000	1.000	.000
2428.250	123.500	3.496	4.861	2.559	.023	.225	12.273	.902	1.000	1.000	.000
2428.500	127.394	4.049	5.401	2.523	.019	.202	12.273	.713	1.000	1.000	.000
2428.750	106.607	4.395	3.839	2.592	.053	.186	12.273	.816	1.000	1.000	.000
2429.000	91.896	4.483	5.403	2.588	.032	.179	12.273	.776	1.000	1.000	.000
2429.250	87.002	4.385	4.913	2.542	.010	.181	12.236	.667	1.000	1.000	.000
2429.500	81.026	4.291	2.855	2.552	.010	.161	12.180	.606	1.000	1.000	.000
2429.750	76.813	4.672	3.012	2.534	.003	.160	12.180	.496	1.000	1.000	.021
2430.000	77.033	6.018	6.631	2.511	.006	.160	12.180	.435	1.000	1.000	.048
2430.250	70.996	6.744	7.091	2.507	.006	.139	12.143	.367	1.000	1.000	.061
2430.500	65.648	7.057	5.280	2.471	.011	.137	12.086	.265	1.000	1.000	.089
2430.750	61.207	7.289	6.395	2.452	.040	.159	12.086	.314	.871	1.000	.097
2431.000	52.471	7.584	2.887	2.404	.024	.169	12.086	.235	1.000	.583	.131
2431.250	49.541	7.839	3.098	2.363	.001	.182	12.086	.219	.939	.495	.154
2431.500	46.936	10.037	3.736	2.365	.009	.196	12.086	.288	.844	.404	.146
2431.750	38.004	11.922	4.669	2.346	.007	.181	12.086	.169	.715	.377	.167
2432.000	30.753	13.461	2.815	2.336	.000	.159	12.086	.051	.912	.373	.188
2432.250	28.947	13.743	2.277	2.360	.001	.150	12.086	.072	1.000	.392	.171
2432.500	32.026	14.416	2.142	2.320	-.004	.169	12.086	.051	.997	.341	.198
2432.750	34.305	15.335	1.791	2.283	.001	.212	12.086	.145	.978	.265	.211
2433.000	38.083	17.866	2.143	2.268	.003	.208	12.086	.095	.867	.250	.222
2433.250	38.654	20.276	1.816	2.241	-.001	.208	12.086	.024	.885	.240	.247
2433.500	34.094	22.352	1.695	2.238	-.000	.219	12.086	.067	.898	.210	.246
2433.750	34.744	22.455	1.935	2.247	.003	.204	12.086	.027	.874	.231	.241

1 LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2434.000	37.060	21.145	2.017	2.243	.005	.197	12.086	.000	.853	.247	.246
2434.250	38.259	21.669	1.628	2.232	.005	.210	12.086	.010	.907	.229	.256
2434.500	36.411	23.223	1.751	2.235	.004	.217	12.086	.050	.886	.211	.247
2434.750	32.974	23.337	1.723	2.243	-.003	.193	12.086	.000	.918	.233	.247
2435.000	30.465	15.604	1.757	2.267	-.003	.169	12.086	.000	.986	.309	.227
2435.250	30.333	12.273	1.978	2.310	.006	.155	12.086	.000	1.000	.385	.206
2435.500	44.930	7.074	2.093	2.336	.013	.150	12.086	.011	1.000	.473	.192
2435.750	59.846	7.794	3.465	2.344	.019	.151	12.086	.035	.853	.524	.183
2436.000	64.843	7.140	3.048	2.340	.015	.156	12.086	.049	.893	.535	.185
2436.250	58.803	6.077	3.014	2.313	.011	.156	12.086	.000	.852	.561	.201
2436.500	60.306	4.925	2.444	2.298	.009	.164	12.086	.000	.895	.590	.212
2436.750	63.025	4.529	2.414	2.303	.011	.163	12.086	.000	.904	.617	.212
2437.000	63.805	4.254	2.816	2.311	.008	.168	12.086	.028	.856	.648	.203
2437.250	67.343	4.111	2.365	2.306	.005	.189	12.086	.106	.903	.625	.201
2437.500	70.789	3.630	2.639	2.312	.003	.189	12.086	.121	.875	.685	.194
2437.750	70.647	3.491	2.721	2.331	.008	.184	12.086	.147	.905	.733	.181
2438.000	69.503	3.446	2.967	2.326	.007	.176	12.086	.102	.863	.742	.187
2438.250	69.813	2.520	2.950	2.314	.000	.156	12.086	.000	.864	.864	.203
2438.500	78.807	2.058	2.115	2.311	.002	.164	12.086	.006	.978	.927	.208
2438.750	104.417	1.847	1.903	2.322	-.003	.183	12.086	.117	1.000	1.000	.190
2439.000	124.309	1.958	2.224	2.345	.002	.197	12.086	.238	1.000	1.000	.164
2439.250	105.956	1.797	2.127	2.325	.002	.200	12.086	.199	1.000	1.000	.180
2439.500	85.207	1.525	1.551	2.284	.003	.212	12.086	.149	1.000	.995	.209
2439.750	81.183	1.304	1.314	2.277	.011	.217	12.086	.155	1.000	1.000	.213
2440.000	68.422	1.282	1.285	2.271	.006	.224	12.086	.172	1.000	1.000	.214
2440.250	57.732	1.329	1.079	2.266	.003	.223	12.086	.154	1.000	1.000	.220
2440.500	56.827	1.718	1.293	2.300	.011	.189	12.086	.089	1.000	.981	.206
2440.750	65.324	2.095	2.088	2.347	.010	.159	12.086	.075	1.000	1.000	.179
2441.000	82.737	2.512	2.232	2.377	.009	.186	12.086	.244	1.000	1.000	.147
2441.250	91.164	2.702	2.762	2.372	.012	.218	12.086	.420	1.000	1.000	.112
2441.500	89.395	2.616	2.633	2.383	.009	.199	12.086	.314	1.000	1.000	.138
2441.750	73.542	2.395	2.284	2.371	.017	.174	12.086	.203	1.000	1.000	.151
2442.000	59.202	2.375	2.693	2.410	.043	.148	12.086	.191	1.000	1.000	.129
2442.250	67.302	3.132	2.644	2.406	.042	.183	12.086	.305	1.000	1.000	.125
2442.500	101.772	4.182	3.594	2.371	.041	.310	12.086	.811	1.000	1.000	.000
2442.750	109.291	4.213	4.474	2.406	.014	.305	12.010	.874	1.000	1.000	.000
2443.000	87.190	3.182	4.180	2.448	.008	.231	11.992	.651	1.000	1.000	.000
2443.250	75.633	3.036	3.685	2.439	.008	.213	11.992	.484	1.000	1.000	.056
2443.500	80.570	3.630	4.732	2.466	.012	.192	11.992	.460	1.000	1.000	.057
2443.750	85.390	4.275	4.498	2.464	.008	.189	11.992	.444	1.000	1.000	.066
2444.000	84.369	4.449	4.153	2.444	.007	.208	11.992	.476	1.000	.943	.057
2444.250	88.905	5.098	4.942	2.461	.014	.213	11.992	.539	1.000	.961	.024
2444.500	94.773	6.902	9.998	2.492	.027	.209	11.992	.665	1.000	1.000	.000
2444.750	88.996	6.751	7.995	2.487	.046	.185	11.992	.485	.935	.935	.039
2445.000	79.082	5.764	5.680	2.450	.043	.162	11.992	.321	.928	.711	.098
2445.250	70.801	5.092	5.225	2.385	.042	.157	12.007	.164	.774	.624	.145
2445.500	70.853	5.483	6.543	2.422	.116	.161	12.086	.366	.935	.816	.084
2445.750	72.117	6.531	9.018	2.538	.091	.151	12.086	.468	1.000	1.000	.026
2446.000	76.667	8.271	9.285	2.497	.014	.151	12.086	.362	.851	.707	.071
2446.250	81.876	8.212	10.134	2.487	.000	.155	12.086	.357	.749	.669	.076
2446.500	82.674	7.196	7.093	2.477	.011	.136	12.086	.280	.969	.744	.085
2446.750	84.497	7.082	7.445	2.463	.013	.158	12.080	.339	.829	.660	.089
2447.000	118.065	8.046	11.618	2.480	.014	.218	11.992	.670	1.000	1.000	.000
2447.250	137.600	7.976	11.703	2.514	.026	.246	11.992	.882	1.000	1.000	.000
2447.500	132.529	7.560	10.014	2.514	.013	.261	11.992	.949	1.000	1.000	.000
2447.750	102.770	5.958	8.304	2.479	.012	.210	11.992	.631	1.000	1.000	.000

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LOG ANALYSIS

DEPTH	.SGP	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2448.000	66.377	4.382	4.317	2.405	.006	.151	11.992	.186	.920	.723	.133
2448.250	50.283	2.914	3.432	2.373	.001	.125	11.992	.000	.943	.833	.170
2448.500	44.184	2.512	2.837	2.382	.006	.107	11.992	.000	1.000	.959	.159
2448.750	45.138	2.411	2.916	2.394	.007	.103	11.992	.000	1.000	.977	.153
2449.000	49.405	3.052	3.207	2.408	.006	.106	11.992	.004	1.000	.926	.149
2449.250	52.402	2.573	4.303	2.386	.003	.117	11.992	.000	.929	.929	.162
2449.500	48.503	1.680	2.111	2.344	-.000	.149	11.992	.028	1.000	.989	.185
2449.750	37.888	1.112	1.561	2.324	-.000	.181	11.992	.114	1.000	1.000	.189
2450.000	38.081	1.010	1.096	2.278	-.000	.202	11.992	.091	1.000	1.000	.219
2450.250	39.729	1.143	1.047	2.261	.004	.215	11.992	.105	1.000	.941	.228
2450.500	34.870	1.209	1.706	2.300	.005	.175	11.992	.027	1.000	1.000	.212
2450.750	32.102	1.263	1.307	2.312	.003	.155	11.992	.000	1.000	1.000	.205
2451.000	31.701	1.436	1.287	2.309	.002	.168	11.992	.020	1.000	.961	.207
2451.250	36.362	1.439	1.721	2.339	-.001	.133	11.992	.000	1.000	1.000	.186
2451.500	38.956	1.225	1.054	2.315	.007	.153	11.992	.000	1.000	1.000	.203
2451.750	38.993	1.070	1.080	2.247	.014	.195	11.992	.000	1.000	.950	.246
2452.000	38.813	.970	1.133	2.225	.014	.203	11.992	.000	1.000	.952	.257
2452.250	38.681	.993	.989	2.233	.011	.214	11.992	.029	1.000	.946	.253
2452.500	43.931	.994	1.056	2.217	.006	.223	11.992	.025	1.000	.908	.263
2452.750	41.168	1.043	1.021	2.213	.002	.225	11.992	.026	1.000	.879	.266
2453.000	35.335	1.060	1.196	2.259	.009	.203	11.992	.045	1.000	.974	.235
2453.250	35.249	1.053	1.195	2.286	.012	.191	11.992	.060	1.000	1.000	.218
2453.500	46.862	1.417	1.364	2.303	.013	.186	11.992	.081	1.000	.947	.205
2453.750	67.697	2.232	8.096	2.397	.022	.143	11.992	.135	1.000	1.000	.143
2454.000	69.704	4.698	6.497	2.464	.019	.126	11.989	.200	.957	.919	.099
2454.250	60.147	4.532	4.148	2.428	.014	.130	11.945	.154	1.000	.796	.122
2454.500	56.089	4.094	4.676	2.410	.014	.135	11.956	.132	.907	.780	.135
2454.750	53.384	3.869	4.622	2.412	.017	.138	11.953	.152	.919	.811	.132
2455.000	56.342	3.477	3.739	2.410	.015	.131	11.939	.114	1.000	.857	.137
2455.250	55.481	2.908	4.275	2.417	.015	.115	11.930	.061	.990	.979	.138
2455.500	50.556	2.316	3.304	2.407	.017	.125	11.917	.078	1.000	1.000	.142
2455.750	45.298	1.805	2.722	2.362	.004	.135	11.930	.009	1.000	1.000	.177
2456.000	39.904	1.274	1.763	2.295	.003	.162	11.930	.000	1.000	.999	.214
2456.250	41.012	.991	1.179	2.246	.012	.196	11.916	.000	1.000	.982	.247
2456.500	42.578	.917	.956	2.218	.011	.213	11.918	.000	1.000	.954	.264
2456.750	47.588	.927	.890	2.204	.005	.227	11.933	.011	1.000	.914	.273
2457.000	49.828	1.052	1.104	2.222	.002	.234	11.914	.087	1.000	.890	.254
2457.250	47.075	1.017	1.304	2.242	.006	.223	11.925	.090	1.000	.951	.241
2457.500	43.244	.954	.979	2.231	.004	.223	11.927	.060	1.000	.957	.251
2457.750	43.624	.939	1.036	2.219	-.000	.227	11.914	.048	1.000	.939	.260
2458.000	43.282	.950	1.064	2.226	.007	.230	11.914	.082	1.000	.949	.251
2458.250	43.586	1.038	1.016	2.241	.011	.217	11.914	.057	1.000	.940	.245
2458.500	47.684	1.113	1.555	2.253	.007	.215	11.928	.083	.972	.935	.235
2458.750	47.581	1.141	1.054	2.249	.009	.215	11.921	.072	1.000	.913	.239
2459.000	45.579	1.139	1.516	2.258	.007	.193	11.914	.000	1.000	.939	.241
2459.250	44.242	1.186	1.182	2.266	.008	.179	11.914	.000	1.000	.954	.232
2459.500	44.738	1.232	1.257	2.265	.012	.189	11.914	.000	1.000	.919	.236
2459.750	45.257	1.182	1.293	2.270	.015	.199	11.914	.054	1.000	.947	.228
2460.000	45.327	1.168	1.163	2.251	.014	.198	11.914	.002	1.000	.910	.245
2460.250	41.705	1.151	1.203	2.252	.011	.187	11.914	.000	1.000	.936	.240
2460.500	38.419	1.234	1.365	2.277	.010	.181	11.914	.000	1.000	.950	.229
2460.750	37.758	1.157	1.494	2.292	.021	.192	11.914	.079	1.000	1.000	.212
2461.000	38.484	1.126	1.346	2.288	.028	.200	11.914	.103	1.000	1.000	.212
2461.250	42.649	1.201	1.219	2.285	.017	.198	11.914	.087	1.000	.978	.215
2461.500	46.333	1.293	1.919	2.308	.010	.197	11.914	.141	1.000	.965	.196
2461.750	47.981	1.389	1.784	2.305	.009	.202	11.914	.157	1.000	.959	.196

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LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2462.000	32.959	1.279	1.428	2.289	.002	.160	11.914	.000	1.000	.990	.215
2462.250	27.806	1.226	1.728	2.301	.002	.127	11.914	.000	1.000	1.000	.197
2462.500	28.420	1.130	1.430	2.302	.006	.139	11.914	.000	1.000	1.000	.202
2462.750	29.687	1.051	1.174	2.287	.007	.160	11.914	.000	1.000	1.000	.216
2463.000	27.882	1.047	1.172	2.281	.010	.168	11.914	.000	1.000	1.000	.222
2463.250	26.159	1.001	1.379	2.278	.006	.167	11.914	.000	1.000	1.000	.223
2463.500	22.853	.975	1.083	2.288	.005	.177	11.914	.003	1.000	1.000	.222
2463.750	20.717	.959	1.151	2.333	.010	.170	11.914	.085	1.000	1.000	.187
2464.000	21.331	.912	1.101	2.317	.007	.188	11.914	.125	1.000	1.000	.192
2464.250	23.895	.869	.963	2.259	.002	.209	11.914	.071	1.000	1.000	.232
2464.500	25.805	.899	1.056	2.260	.004	.188	11.914	.000	1.000	1.000	.238
2464.750	24.250	.959	1.163	2.267	.001	.184	11.914	.000	1.000	1.000	.233
2465.000	21.235	.940	1.175	2.265	.006	.190	11.914	.002	1.000	1.000	.236
2465.250	23.551	.918	1.125	2.249	.006	.193	11.914	.000	1.000	1.000	.244
2465.500	26.079	.899	1.049	2.230	.001	.203	11.914	.000	1.000	.994	.256
2465.750	27.897	.932	1.098	2.242	.005	.196	11.914	.000	1.000	1.000	.248
2466.000	26.450	.951	1.097	2.253	.008	.178	11.914	.000	1.000	1.000	.236
2466.250	23.735	.929	1.122	2.242	.006	.192	11.914	.000	1.000	1.000	.246
2466.500	23.821	.903	1.125	2.228	.000	.205	11.914	.000	1.000	.987	.257
2466.750	25.775	.910	1.133	2.223	-.000	.201	11.914	.000	1.000	.983	.257
2467.000	24.695	.951	1.327	2.237	-.002	.187	11.914	.000	1.000	1.000	.246
2467.250	21.569	.980	1.342	2.266	-.001	.183	11.914	.000	1.000	1.000	.233
2467.500	21.264	1.012	1.374	2.305	-.001	.195	11.914	.124	1.000	1.000	.199
2467.750	22.959	.988	1.352	2.311	-.002	.188	11.914	.111	1.000	1.000	.197
2468.000	23.725	.923	1.270	2.272	.004	.186	11.914	.002	1.000	1.000	.232
2468.250	24.028	.892	1.249	2.250	.006	.187	11.914	.000	1.000	1.000	.241
2468.500	24.599	.918	1.264	2.245	.002	.190	11.914	.000	1.000	1.000	.244
2468.750	22.381	.951	1.363	2.252	.005	.179	11.914	.000	1.000	1.000	.237
2469.000	21.944	.944	1.440	2.252	.004	.168	11.914	.000	1.000	1.000	.233
2469.250	23.542	.934	1.324	2.250	.003	.174	11.914	.000	1.000	1.000	.236
2469.500	22.931	.990	1.241	2.264	.009	.165	11.914	.000	1.000	1.000	.227
2469.750	23.423	1.035	1.436	2.280	.013	.162	11.914	.000	1.000	1.000	.220
2470.000	23.782	1.063	1.348	2.271	.009	.176	11.914	.000	1.000	1.000	.228
2470.250	23.483	1.133	1.417	2.279	.013	.165	11.914	.000	1.000	1.000	.221
2470.500	23.592	1.239	1.770	2.320	.024	.156	11.914	.000	1.000	1.000	.202
2470.750	24.109	1.280	1.920	2.304	.011	.163	11.914	.000	1.000	1.000	.211
2471.000	26.277	1.155	1.946	2.288	.011	.155	11.914	.000	1.000	1.000	.214
2471.250	26.100	1.146	1.488	2.288	.012	.167	11.914	.000	1.000	1.000	.219
2471.500	22.388	1.056	1.712	2.290	.010	.183	11.914	.035	1.000	1.000	.218
2471.750	20.529	.976	1.519	2.271	.009	.192	11.914	.026	1.000	1.000	.230
2472.000	22.701	.937	1.228	2.260	.014	.177	11.914	.000	1.000	1.000	.233
2472.250	22.547	.974	1.584	2.274	.017	.161	11.914	.000	1.000	1.000	.222
2472.500	22.688	1.049	1.544	2.280	.011	.158	11.914	.000	1.000	1.000	.218
2472.750	22.443	1.076	1.562	2.281	.001	.151	11.914	.000	1.000	1.000	.215
2473.000	24.166	.910	1.387	2.273	.005	.160	11.914	.000	1.000	1.000	.221
2473.250	24.975	.835	1.144	2.244	.011	.190	11.914	.000	1.000	1.000	.245
2473.500	23.457	.844	1.137	2.235	.011	.201	11.914	.000	1.000	1.000	.253
2473.750	22.006	.906	1.162	2.246	.009	.186	11.914	.000	1.000	1.000	.242
2474.000	21.136	.938	1.320	2.262	.009	.173	11.914	.000	1.000	1.000	.231
2474.250	23.382	.924	1.172	2.269	.015	.174	11.914	.000	1.000	1.000	.229
2474.500	24.154	.886	1.113	2.244	.006	.179	11.914	.000	1.000	1.000	.240
2474.750	24.037	.891	1.141	2.232	.009	.186	11.914	.000	1.000	1.000	.247
2475.000	24.310	.902	1.237	2.234	.010	.183	11.914	.000	1.000	1.000	.245
2475.250	22.520	.911	1.152	2.236	.011	.164	11.914	.000	1.000	1.000	.237
2475.500	21.775	.908	1.159	2.244	.011	.167	11.914	.000	1.000	1.000	.235
2475.750	21.741	.904	1.137	2.242	.009	.171	11.914	.000	1.000	1.000	.238

1 LOG ANALYSIS

DEPTH	.VSH	.ILD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2476.000	26.535	.831	1.098	2.232	.003	.184	11.914	.000	1.000	1.000	.247
2476.250	40.980	.888	1.072	2.247	.009	.188	11.914	.000	1.000	1.000	.243
2476.500	66.646	1.377	1.304	2.316	.012	.168	11.914	.039	1.000	.998	.201
2476.750	85.384	3.142	4.381	2.379	.006	.163	11.914	.174	.976	.976	.150
2477.000	91.338	2.177	1.991	2.357	.005	.176	11.914	.174	1.000	.889	.163
2477.250	100.570	2.057	2.792	2.353	.010	.170	11.914	.137	.956	.906	.169
2477.500	106.323	1.945	3.215	2.353	.019	.182	11.914	.190	.934	.934	.163
2477.750	100.724	1.731	1.588	2.306	.017	.186	11.914	.088	1.000	.857	.202
2478.000	84.158	1.732	2.414	2.312	.023	.171	11.914	.037	.911	.875	.204
2478.250	78.542	1.784	2.013	2.314	.021	.165	11.914	.016	1.000	.869	.205
2478.500	78.711	1.768	2.057	2.300	.011	.179	11.914	.043	.955	.837	.211
2478.750	75.604	1.734	2.093	2.321	.022	.194	11.914	.162	1.000	.891	.186
2479.000	76.179	1.664	1.997	2.323	.029	.189	11.914	.145	1.000	.918	.186
2479.250	82.118	1.608	1.889	2.316	.031	.177	11.914	.076	1.000	.919	.198
2479.500	87.926	1.798	2.128	2.319	.020	.187	11.914	.128	.989	.871	.190
2479.750	89.838	2.021	2.445	2.347	.017	.170	11.914	.123	1.000	.896	.174
2480.000	78.503	2.513	3.316	2.394	.021	.147	11.914	.139	1.000	.949	.144
2480.250	55.069	2.690	3.781	2.410	.022	.106	11.914	.010	1.000	.993	.147
2480.500	37.319	1.694	4.543	2.373	.023	.106	11.914	.000	1.000	1.000	.162
2480.750	32.257	.988	1.395	2.314	.038	.153	11.914	.000	1.000	1.000	.203
2481.000	28.645	.889	1.194	2.256	.016	.175	11.914	.000	1.000	1.000	.234
2481.250	26.720	.974	1.194	2.232	.002	.182	11.914	.000	1.000	.990	.246
2481.500	25.384	1.051	1.430	2.245	.008	.156	11.914	.000	1.000	1.000	.230
2481.750	28.676	1.070	1.374	2.262	.014	.154	11.914	.000	1.000	1.000	.223
2482.000	31.537	1.012	1.442	2.258	.015	.167	11.914	.000	1.000	1.000	.230
2482.250	31.133	.973	1.313	2.240	.020	.178	11.914	.000	1.000	1.000	.241
2482.500	29.876	1.026	1.366	2.236	.016	.178	11.914	.000	1.000	.977	.243
2482.750	29.818	1.148	1.824	2.264	.013	.155	11.914	.000	1.000	1.000	.223
2483.000	31.518	1.198	1.703	2.286	.023	.144	11.914	.000	1.000	1.000	.210
2483.250	35.137	1.138	1.730	2.284	.024	.158	11.914	.000	1.000	1.000	.216
2483.500	43.161	1.053	1.228	2.236	.004	.183	11.914	.000	1.000	.958	.245
2483.750	42.461	1.032	1.289	2.212	.008	.188	11.914	.000	1.000	.923	.256
2484.000	38.714	1.073	1.228	2.219	.010	.186	11.914	.000	1.000	.917	.253
2484.250	37.288	1.077	1.304	2.217	.005	.168	11.914	.000	1.000	.941	.246
2484.500	32.389	1.148	1.338	2.223	-.001	.169	11.914	.000	1.000	.918	.244
2484.750	28.813	1.185	1.382	2.241	-.006	.168	11.914	.000	1.000	.932	.237
2485.000	31.707	1.200	1.436	2.255	-.002	.167	11.914	.000	1.000	.950	.231
2485.250	32.644	1.307	1.569	2.248	.001	.149	11.914	.000	1.000	.961	.219
2485.500	28.906	1.432	1.713	2.283	.005	.129	11.914	.000	1.000	.983	.204
2485.750	27.661	1.409	1.672	2.278	.004	.131	11.914	.000	1.000	.976	.207
2486.000	27.792	1.230	1.456	2.253	.006	.148	11.914	.000	1.000	.968	.224
2486.250	28.623	1.103	1.277	2.246	.015	.164	11.914	.000	1.000	.980	.233
2486.500	28.579	1.086	1.200	2.239	.014	.186	11.914	.000	1.000	.941	.245
2486.750	28.526	1.078	1.265	2.247	.012	.195	11.914	.000	1.000	.927	.249
2487.000	30.655	1.143	1.171	2.253	.012	.176	11.914	.000	1.000	.954	.236
2487.250	31.451	1.193	1.675	2.266	.007	.161	11.914	.000	1.000	.980	.224
2487.500	29.432	1.207	1.457	2.266	.001	.172	11.914	.000	1.000	.954	.229
2487.750	28.599	1.177	1.624	2.259	.007	.174	11.914	.000	.997	.953	.232
2488.000	27.943	1.203	1.415	2.257	.004	.175	11.914	.000	1.000	.937	.234
2488.250	25.867	1.185	1.703	2.273	.006	.174	11.914	.000	.995	.970	.227
2488.500	23.880	1.159	1.385	2.276	.009	.168	11.914	.000	1.000	.999	.223
2488.750	25.163	1.062	1.473	2.278	.014	.177	11.941	.000	1.000	1.000	.229
2489.000	25.432	1.040	1.416	2.265	.011	.190	11.992	.008	1.000	.996	.235
2489.250	25.188	.977	1.290	2.253	.009	.186	11.971	.000	1.000	1.000	.240
2489.500	27.122	1.019	1.314	2.246	.004	.179	11.974	.000	1.000	.983	.240
2489.750	41.231	1.197	1.584	2.255	-.001	.182	11.969	.000	.987	.954	.237

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LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2490.000	90.615	1.761	1.422	2.232	-.001	.218	11.983	.000	1.000	1.000	.000
2490.250	105.679	1.398	2.302	2.148	-.002	.252	11.992	.000	1.000	1.000	.000
2490.500	50.314	1.289	1.495	2.164	.003	.229	11.992	.000	1.000	1.000	.000
2490.750	29.956	1.118	1.218	2.221	.009	.229	11.988	.000	1.000	1.000	.000
2491.000	27.493	1.132	1.254	2.225	.005	.229	11.992	.000	1.000	1.000	.000
2491.250	27.250	1.183	1.400	2.236	.006	.211	11.992	.023	.979	.867	.252
2491.500	27.442	1.178	1.401	2.246	.007	.189	11.992	.000	1.000	.900	.244
2491.750	28.275	1.221	1.487	2.257	.009	.174	11.992	.000	1.000	.930	.234
2492.000	27.749	1.169	1.406	2.266	.010	.182	11.992	.000	1.000	.950	.234
2492.250	27.813	1.132	1.231	2.250	.006	.196	11.989	.000	1.000	.919	.245
2492.500	29.838	1.128	1.344	2.254	.012	.200	11.992	.020	1.000	.927	.241
2492.750	35.012	1.141	1.231	2.262	.018	.200	11.987	.041	1.000	.940	.234
2493.000	35.899	1.157	1.215	2.249	.012	.202	11.992	.015	1.000	.904	.245
2493.250	35.227	1.287	1.406	2.255	.008	.167	11.992	.000	1.000	.914	.231
2493.500	37.562	1.380	1.562	2.276	.013	.153	11.988	.000	1.000	.940	.217
2493.750	35.755	1.517	1.470	2.275	.016	.150	11.986	.000	1.000	.932	.209
2494.000	31.714	1.712	2.150	2.311	.013	.123	11.992	.000	1.000	.957	.192
2494.250	32.224	1.746	1.947	2.326	.019	.112	11.992	.000	1.000	1.000	.181
2494.500	38.411	1.546	1.676	2.307	.016	.125	11.992	.000	1.000	.995	.194
2494.750	40.670	1.332	1.544	2.284	.010	.158	11.992	.000	1.000	.960	.217
2495.000	38.748	1.306	1.441	2.286	.016	.167	11.992	.000	1.000	.955	.220
2495.250	33.646	1.425	1.507	2.290	.001	.146	11.992	.000	1.000	.959	.209
2495.500	31.297	1.507	2.068	2.314	.001	.131	11.992	.000	1.000	1.000	.194
2495.750	36.524	1.421	1.704	2.311	.007	.121	11.992	.000	1.000	1.000	.191
2496.000	49.502	1.220	1.462	2.273	.013	.155	11.992	.000	1.000	.988	.220
2496.250	49.809	1.136	1.159	2.241	.006	.187	11.992	.000	1.000	.919	.245
2496.500	41.827	1.139	1.227	2.256	.008	.175	11.992	.000	1.000	.960	.234
2496.750	36.484	1.164	1.411	2.271	.014	.165	11.992	.000	1.000	.990	.225
2497.000	43.202	1.134	1.309	2.263	.015	.177	11.992	.000	1.000	.967	.233
2497.250	45.888	1.097	1.250	2.249	.009	.181	11.992	.000	1.000	.956	.239
2497.500	43.571	1.096	1.111	2.241	.011	.174	11.992	.000	1.000	.955	.240
2497.750	41.430	1.079	1.146	2.243	.012	.175	11.992	.000	1.000	.965	.239
2498.000	42.875	1.022	1.195	2.241	.011	.182	11.992	.000	1.000	.977	.243
2498.250	44.420	.961	1.011	2.215	.010	.198	11.992	.000	1.000	.942	.260
2498.500	49.580	.996	1.014	2.219	.010	.198	11.992	.000	1.000	.931	.258
2498.750	69.603	1.287	1.489	2.269	.019	.176	11.992	.000	1.000	.920	.230
2499.000	89.412	1.462	2.068	2.310	.026	.173	11.992	.044	.975	.945	.205
2499.250	99.657	1.489	1.455	2.303	.027	.188	11.992	.093	1.000	.915	.204
2499.500	87.414	1.318	1.911	2.283	.027	.206	11.992	.123	.937	.920	.213
2499.750	64.852	1.274	1.234	2.264	.037	.191	11.992	.009	1.000	.895	.236
2500.000	71.202	1.252	1.214	2.274	.055	.189	11.992	.026	1.000	.926	.228
2500.250	77.707	1.326	1.478	2.250	.015	.220	11.992	.100	.982	.840	.235
2500.500	80.445	1.276	1.325	2.229	.000	.213	11.992	.011	.986	.811	.258
2500.750	82.707	1.307	1.228	2.222	.003	.203	11.992	.000	1.000	.810	.259
2501.000	89.534	1.374	1.553	2.252	.010	.205	11.992	.041	.965	.833	.240
2501.250	89.703	1.339	1.537	2.262	.012	.192	11.992	.010	.997	.869	.237
2501.500	83.443	1.301	1.282	2.242	.007	.196	11.992	.000	1.000	.847	.248
2501.750	82.335	1.310	1.420	2.247	.009	.211	11.992	.054	.996	.841	.242
2502.000	74.771	1.383	1.432	2.258	.009	.196	11.992	.015	1.000	.845	.239
2502.250	63.765	1.544	1.770	2.290	.010	.159	11.992	.000	1.000	.962	.215
2502.500	70.592	1.268	1.410	2.267	.008	.177	11.992	.000	1.000	.922	.231
2502.750	81.070	1.177	1.215	2.227	.002	.218	11.992	.023	1.000	.841	.260
2503.000	81.254	1.106	1.296	2.220	.003	.235	11.992	.091	.978	.859	.254
2503.250	70.260	1.042	1.147	2.212	.002	.238	11.992	.085	1.000	.869	.260
2503.500	[illegible]	1.020	1.040	2.203	.003	.226	11.992	.008	1.000	.864	.274
2503.750	[illegible]	1.013	1.175	2.202	.004	.193	11.992	.000	.956	.907	.263

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LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2504.000	42.474	1.001	1.152	2.214	.006	.178	11.992	.000	1.000	.951	.252
2504.250	34.663	.995	1.167	2.239	.007	.188	11.992	.000	1.000	.977	.246
2504.500	32.551	1.039	1.291	2.260	.007	.178	11.992	.000	1.000	1.000	.234
2504.750	38.334	1.019	1.283	2.258	.009	.171	11.992	.000	1.000	1.000	.232
2505.000	44.305	1.001	1.275	2.238	.010	.194	11.992	.000	1.000	.961	.249
2505.250	45.537	.983	1.264	2.245	.016	.205	11.992	.000	1.000	1.000	.000
2505.500	61.195	.997	1.400	2.260	.020	.203	11.992	.000	1.000	1.000	.000
2505.750	120.042	1.494	1.515	2.090	.008	.251	11.992	.000	1.000	1.000	.000
2506.000	147.020	5.398	25.163	1.666	.006	.435	11.992	.000	1.000	1.000	.000
2506.250	76.581	47.625	67.105	1.403	.015	.552	11.992	.000	1.000	1.000	.000
2506.500	32.275	50.588	232.961	1.358	.014	.544	11.992	.000	1.000	1.000	.000
2506.750	58.527	7.740	613.467	1.583	.003	.402	11.992	.000	1.000	1.000	.000
2507.000	78.341	4.056	2.328	2.102	.004	.272	11.992	.000	1.000	1.000	.000
2507.250	95.175	4.067	4.403	2.379	.013	.256	11.992	.000	1.000	1.000	.000
2507.500	122.819	6.594	10.955	2.442	.011	.238	11.992	.683	1.000	1.000	.000
2507.750	145.018	7.332	6.496	2.465	.004	.230	11.992	.689	1.000	1.000	.000
2508.000	136.977	7.535	5.735	2.466	.006	.232	11.954	.699	1.000	1.000	.000
2508.250	138.960	7.648	10.584	2.426	.009	.294	11.919	.877	1.000	1.000	.000
2508.500	130.625	9.231	8.864	2.387	.014	.333	11.914	.958	1.000	1.000	.000
2508.750	113.933	10.947	18.819	2.444	.019	.392	11.914	.917	1.000	1.000	.000
2509.000	112.934	15.573	19.687	2.492	.027	.264	11.914	.908	1.000	1.000	.000
2509.250	108.272	14.408	20.545	2.489	.028	.266	11.914	.910	1.000	1.000	.000
2509.500	81.625	5.013	14.573	2.468	.027	.239	11.914	.735	1.000	1.000	.000
2509.750	57.474	2.286	3.843	2.409	.039	.200	11.914	.383	1.000	1.000	.117
2510.000	52.405	2.007	1.581	2.380	.047	.192	11.914	.272	1.000	.986	.143
2510.250	75.582	3.286	4.755	2.419	.032	.195	11.914	.385	1.000	1.000	.111
2510.500	99.283	6.994	10.710	2.442	.015	.215	11.914	.530	.881	.881	.030
2510.750	92.389	7.714	9.363	2.447	.015	.195	11.914	.458	.752	.752	.062
2511.000	73.421	5.716	4.095	2.431	.019	.169	11.914	.302	1.000	.783	.110
2511.250	66.392	4.601	3.984	2.408	.022	.166	11.914	.239	.931	.811	.130
2511.500	64.104	4.239	3.236	2.380	.023	.162	11.914	.172	.969	.792	.149
2511.750	64.531	4.298	3.087	2.377	.017	.171	11.914	.204	.982	.771	.148
2512.000	63.268	4.401	3.769	2.386	.014	.172	11.914	.232	.969	.785	.139
2512.250	62.517	4.470	3.339	2.390	.013	.167	11.914	.217	.988	.791	.139
2512.500	63.703	4.520	3.382	2.383	.022	.157	11.914	.159	.959	.775	.148
2512.750	61.645	4.526	3.500	2.387	.018	.157	11.914	.168	.954	.785	.145
2513.000	60.593	4.617	3.452	2.398	.016	.150	11.949	.166	1.000	.814	.139
2513.250	61.433	4.787	3.432	2.409	.015	.135	11.992	.131	1.000	.841	.136
2513.500	63.087	5.054	3.965	2.408	.015	.132	11.992	.115	.977	.815	.138
2513.750	66.562	5.090	3.699	2.395	.015	.135	11.992	.095	.962	.772	.148
2514.000	65.847	5.277	3.976	2.373	.014	.144	11.992	.077	.900	.900	.163
2514.250	58.283	2.278	1.284	2.325	.017	.180	11.992	.115	1.000	.923	.188
2514.500	57.464	2.050	1.563	2.311	.017	.201	11.992	.169	1.000	.930	.191
2514.750	62.573	2.356	1.932	2.328	.012	.199	11.992	.206	1.000	.908	.177
2515.000	66.118	2.478	1.842	2.325	.009	.207	11.992	.234	1.000	.894	.176
2515.250	66.413	2.576	1.956	2.352	.008	.193	11.992	.241	1.000	.938	.159
2515.500	64.306	2.504	2.311	2.362	.007	.195	11.992	.275	1.000	.990	.150
2515.750	59.971	1.873	1.571	2.314	.009	.211	11.992	.224	1.000	.980	.184
2516.000	49.477	1.630	1.343	2.271	.006	.216	11.992	.138	1.000	.938	.218
2516.250	41.367	1.516	1.367	2.253	.007	.204	11.992	.038	1.000	.934	.240
2516.500	43.229	1.561	1.255	2.245	.006	.188	11.992	.000	1.000	.923	.244
2516.750	47.206	1.629	1.422	2.262	.005	.187	11.992	.000	1.000	.877	.237
2517.000	47.104	2.280	2.003	2.321	.017	.194	11.992	.165	1.000	.906	.185
2517.250	42.735	2.535	2.520	2.371	.027	.164	11.992	.160	1.000	1.000	.156
2517.500	37.644	2.351	2.047	2.396	.015	.147	11.992	.049	1.000	1.000	.176
2517.750	40.630	1.757	1.339	2.397	.007	.160	12.050	.000	1.000	.996	.213

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LOG ANALYSIS

DEPTH	.SGW	.RID	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2518.000	41.142	1.477	1.075	2.243	.009	.187	12.078	.003	1.000	.985	.234
2518.250	45.249	1.630	1.330	2.269	.010	.215	12.078	.131	1.000	.934	.220
2518.500	73.479	3.052	2.026	2.225	.011	.269	12.083	.258	.776	.581	.230
2518.750	90.468	4.645	14.502	2.271	.012	.289	12.069	.496	.721	.721	.091
2519.000	72.758	3.944	3.737	2.373	.014	.237	11.998	.458	.859	.807	.093
2519.250	67.747	3.899	2.150	2.370	.013	.207	12.004	.317	1.000	.906	.145
2519.500	93.414	4.305	2.784	2.406	.010	.212	12.086	.400	1.000	.779	.121
2519.750	112.056	10.254	10.946	2.504	.004	.246	12.086	.000	1.000	1.000	.000
2520.000	122.787	11.818	13.834	2.509	.044	.293	12.086	.000	1.000	1.000	.000
2520.250	125.767	9.194	10.470	2.434	.030	.350	12.086	.000	1.000	1.000	.000
2520.500	99.195	8.729	7.654	2.261	.009	.328	12.086	.000	1.000	1.000	.000
2520.750	56.344	10.021	15.318	1.747	.002	.351	12.086	.000	1.000	1.000	.000
2521.000	36.963	29.056	190.143	1.442	.029	.500	12.086	.000	1.000	1.000	.000
2521.250	64.212	33.904	185.962	1.525	.015	.507	12.086	.000	1.000	1.000	.000
2521.500	103.014	21.002	8.021	2.024	.006	.342	12.086	.000	1.000	1.000	.000
2521.750	116.370	18.293	14.792	2.527	.012	.247	12.086	.000	1.000	1.000	.000
2522.000	109.907	22.258	13.318	2.463	.002	.256	12.086	.000	1.000	1.000	.000
2522.250	99.122	30.031	40.692	2.044	-.007	.401	12.086	.000	1.000	1.000	.000
2522.500	91.271	23.898	872.930	1.734	-.005	.493	12.086	.000	1.000	1.000	.000
2522.750	84.102	6.817	13.894	1.967	-.008	.329	12.086	.000	1.000	1.000	.000
2523.000	70.001	5.970	1.857	2.358	.011	.200	12.086	.000	1.000	1.000	.000
2523.250	63.220	5.566	2.039	2.356	.010	.180	12.086	.196	1.000	.792	.161
2523.500	60.731	5.664	2.009	2.343	.004	.193	12.086	.216	1.000	.739	.167
2523.750	57.713	5.081	2.109	2.348	.012	.188	12.086	.208	1.000	.730	.165
2524.000	64.921	4.830	2.429	2.377	.010	.178	12.086	.239	1.000	.728	.144
2524.250	78.078	5.623	3.318	2.411	.007	.190	12.086	.347	1.000	.697	.119
2524.500	91.911	7.487	4.194	2.441	.008	.207	12.086	.468	.997	.736	.063
2524.750	113.960	14.722	13.301	2.473	.010	.270	12.086	.000	1.000	1.000	.000
2525.000	125.520	19.849	15.540	2.486	.012	.316	12.086	.000	1.000	1.000	.000
2525.250	111.484	18.014	13.574	2.326	.002	.354	12.086	.000	1.000	1.000	.000
2525.500	73.545	25.864	5.562	1.996	.006	.469	12.086	.000	1.000	1.000	.000
2525.750	40.589	36.506	226.831	1.450	.023	.559	12.086	.000	1.000	1.000	.000
2526.000	62.140	127.089	355.043	1.599	.009	.579	12.086	.000	1.000	1.000	.000
2526.250	87.082	22.078	153.613	1.597	.003	.572	12.086	.000	1.000	1.000	.000
2526.500	86.307	10.308	59.387	1.887	.013	.383	12.086	.000	1.000	1.000	.000
2526.750	71.329	4.818	3.797	2.280	.006	.197	12.086	.000	1.000	1.000	.000
2527.000	55.976	2.878	2.902	2.378	.012	.167	12.083	.194	1.000	.975	.148
2527.250	56.873	2.533	1.891	2.338	.012	.168	12.086	.096	1.000	.908	.182
2527.500	65.477	2.525	1.857	2.333	.007	.158	12.084	.033	1.000	.881	.194
2527.750	74.048	2.659	2.635	2.349	.006	.156	12.084	.074	.970	.922	.178
2528.000	74.680	2.972	1.647	2.357	.010	.171	12.078	.158	1.000	.886	.164
2528.250	75.744	3.787	2.415	2.385	.007	.177	12.086	.255	.952	.850	.138
2528.500	80.682	5.910	3.404	2.425	.001	.178	12.086	.329	1.000	.729	.112
2528.750	84.354	7.006	6.522	2.472	.003	.175	12.086	.406	.894	.795	.080
2529.000	71.073	5.272	6.800	2.461	.003	.191	12.086	.000	1.000	1.000	.000
2529.250	52.279	5.791	2.575	2.347	-.003	.217	12.086	.000	1.000	1.000	.000
2529.500	65.896	6.947	5.122	1.923	-.008	.407	12.086	.000	1.000	1.000	.000
2529.750	78.978	1.189	118.542	1.799	-.001	.479	12.081	.000	1.000	1.000	.000
2530.000	77.961	.488	.239	2.006	-.013	.391	12.086	.000	1.000	1.000	.000
2530.250	60.071	.610	1.003	2.353	-.001	.318	12.086	.000	1.000	1.000	.000
2530.500	51.745	1.023	.636	2.326	.001	.249	12.086	.000	1.000	1.000	.000
2530.750	58.243	1.557	.847	2.367	.016	.207	12.078	.314	1.000	1.000	.147
2531.000	81.237	4.948	8.649	2.465	.004	.167	12.086	.385	1.000	1.000	.084
2531.250	97.546	5.858	6.293	2.458	.007	.164	12.084	.352	.889	.884	.091
2531.500	98.491	4.936	4.558	2.440	.010	.154	12.085	.263	1.000	.964	.108
2531.750	97.038	4.109	4.113	2.421	.013	.139	12.086	.210	1.000	1.000	.114

1 LOG ANALYSIS

DEPTH	.CGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2532.000	47.185	3.718	4.107	2.434	.027	.147	12.079	.217	1.000	1.000	.115
2532.250	58.554	3.024	2.817	2.398	.028	.161	12.086	.217	1.000	1.000	.134
2532.500	54.141	2.687	2.422	2.363	.013	.164	12.086	.140	1.000	.956	.163
2532.750	51.744	2.599	2.347	2.366	.014	.152	12.086	.098	1.000	.916	.165
2533.000	42.643	3.315	2.906	2.382	.009	.124	12.086	.016	1.000	.932	.163
2533.250	36.286	3.094	2.789	2.389	.008	.110	12.086	.000	1.000	1.000	.158
2533.500	32.472	2.633	2.196	2.373	.016	.118	12.086	.000	1.000	1.000	.167
2533.750	27.853	2.425	1.979	2.346	.013	.128	12.086	.000	1.000	.993	.181
2534.000	28.100	2.379	1.946	2.328	.011	.129	12.086	.000	1.000	.966	.188
2534.250	28.628	2.245	1.846	2.324	.008	.140	12.086	.000	1.000	.964	.194
2534.500	35.469	1.847	1.750	2.301	.004	.153	12.086	.000	1.000	.989	.209
2534.750	34.535	1.576	1.181	2.274	.005	.163	12.086	.000	1.000	.997	.223
2535.000	36.106	1.531	1.339	2.275	.007	.168	12.086	.000	1.000	1.000	.225
2535.250	41.281	1.494	1.178	2.264	.003	.176	12.086	.000	1.000	.988	.232
2535.500	37.761	1.481	1.134	2.260	.004	.183	12.086	.000	1.000	.974	.236
2535.750	33.662	1.516	1.239	2.275	.005	.177	12.086	.000	1.000	.997	.228
2536.000	33.735	1.505	1.220	2.265	.004	.180	12.086	.000	1.000	.979	.233
2536.250	36.691	1.422	1.126	2.260	.005	.182	12.086	.000	1.000	.996	.236
2536.500	35.295	1.437	1.140	2.268	.001	.179	12.086	.000	1.000	.994	.235
2536.750	32.900	1.420	1.123	2.255	.001	.167	12.086	.000	1.000	1.000	.231
2537.000	33.416	1.362	1.028	2.260	.007	.190	12.086	.000	1.000	1.000	.239
2537.250	33.690	1.424	.998	2.250	.017	.189	12.086	.000	1.000	.967	.243
2537.500	36.465	1.710	1.246	2.285	.027	.152	12.086	.000	1.000	1.000	.214
2537.750	41.604	1.811	1.667	2.316	.033	.142	12.086	.000	1.000	1.000	.198
2538.000	37.591	1.726	1.262	2.291	.026	.171	12.086	.000	1.000	.969	.220
2538.250	32.667	1.564	1.235	2.254	.013	.178	12.086	.000	1.000	.948	.236
2538.500	33.045	1.521	1.103	2.256	.038	.180	12.086	.000	1.000	.960	.237
2538.750	34.808	1.578	1.113	2.259	.027	.184	12.086	.000	1.000	.940	.237
2539.000	34.822	1.633	1.357	2.262	.024	.163	12.086	.000	1.000	.966	.227
2539.250	32.718	1.635	1.217	2.284	.040	.165	12.086	.000	1.000	.995	.220
2539.500	29.322	1.556	1.164	2.283	.026	.187	12.086	.042	1.000	.995	.221
2539.750	26.074	1.501	1.155	2.260	.009	.191	12.086	.002	1.000	.953	.240
2540.000	23.968	1.398	1.074	2.257	.013	.186	12.112	.000	1.000	.991	.239
2540.250	22.820	1.463	1.139	2.270	.014	.172	12.156	.000	1.000	1.000	.228
2540.500	25.112	1.559	1.381	2.275	.010	.156	12.156	.000	1.000	1.000	.220
2540.750	26.777	1.565	1.197	2.275	.013	.161	12.156	.000	1.000	1.000	.221
2541.000	25.603	1.497	1.076	2.249	.011	.169	12.156	.000	1.000	.976	.235
2541.250	27.496	1.519	1.192	2.248	.006	.166	12.156	.000	1.000	.971	.234
2541.500	28.366	1.468	1.170	2.250	.006	.188	12.172	.000	1.000	.955	.242
2541.750	26.046	1.364	1.119	2.246	.002	.209	12.180	.043	1.000	.964	.244
2542.000	25.912	1.408	1.249	2.255	.006	.200	12.180	.027	1.000	.971	.240
2542.250	24.540	1.497	1.416	2.268	.009	.182	12.180	.000	1.000	.981	.233
2542.500	25.300	1.523	1.470	2.272	.005	.165	12.180	.000	1.000	1.000	.224
2542.750	28.054	1.461	1.382	2.267	.010	.157	12.180	.000	1.000	1.000	.223
2543.000	24.955	1.434	1.318	2.267	.012	.172	12.180	.000	1.000	1.000	.229
2543.250	23.247	1.428	1.372	2.275	.006	.181	12.180	.000	1.000	1.000	.230
2543.500	25.268	1.419	1.298	2.271	.001	.170	12.180	.000	1.000	1.000	.227
2543.750	26.053	1.400	1.353	2.268	.008	.169	12.180	.000	1.000	1.000	.228
2544.000	25.388	1.404	1.308	2.270	.010	.162	12.180	.000	1.000	1.000	.224
2544.250	24.767	1.416	1.330	2.270	.004	.164	12.180	.000	1.000	1.000	.225
2544.500	23.078	1.374	1.449	2.273	.000	.161	12.180	.000	1.000	1.000	.222
2544.750	24.402	1.289	1.249	2.257	.001	.163	12.180	.000	1.000	1.000	.229
2545.000	26.250	1.302	1.110	2.262	.001	.159	12.180	.000	1.000	1.000	.226
2545.250	28.877	1.407	1.576	2.285	.003	.149	12.180	.000	1.000	1.000	.000
2545.500	42.647	1.701	1.548	2.292	.004	.155	12.180	.000	1.000	1.000	.000
2545.750	104.731	1.739	3.172	2.130	.008	.228	12.180	.000	1.000	1.000	.000

1 LOG ANALYSIS

DEPTH	.GR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2546.000	141.644	7.724	4.036	1.697	.011	.402	12.180	.000	1.000	1.000	.000
2546.250	94.776	6.757	93.280	1.480	.016	.549	12.180	.000	1.000	1.000	.000
2546.500	79.823	8.391	339.459	1.572	.002	.504	12.180	.000	1.000	1.000	.000
2546.750	83.268	3.395	2.452	2.050	.004	.300	12.180	.000	1.000	1.000	.000
2547.000	82.587	2.215	2.307	2.318	.002	.228	12.180	.000	1.000	1.000	.000
2547.250	89.910	3.252	2.141	2.351	-.001	.226	12.180	.357	1.000	.769	.153
2547.500	100.337	7.350	5.719	2.410	.002	.209	12.180	.430	.750	.616	.095
2547.750	127.398	9.660	10.404	2.453	.002	.214	12.180	.562	.907	.907	.015
2548.000	134.607	8.988	8.717	2.467	-.000	.233	12.180	.709	1.000	1.000	.000
2548.250	132.473	8.518	7.524	2.467	-.003	.247	12.180	.772	1.000	1.000	.000
2548.500	134.779	10.113	10.922	2.507	.006	.276	12.180	1.000	1.000	1.000	.000
2548.750	147.401	12.029	15.474	2.547	.030	.313	12.180	1.000	1.000	1.000	.000
2549.000	161.365	12.148	10.663	2.547	.036	.340	12.180	1.000	1.000	1.000	.000
2549.250	140.887	5.159	16.435	2.519	.025	.315	12.180	1.000	1.000	1.000	.000
2549.500	87.793	2.330	3.834	2.435	.015	.230	12.180	.619	1.000	1.000	.000
2549.750	54.669	1.556	1.274	2.339	.014	.179	12.180	.148	1.000	1.000	.176
2550.000	42.772	1.618	1.443	2.317	.020	.167	12.180	.048	1.000	1.000	.200
2550.250	38.761	2.019	1.779	2.337	.014	.160	12.180	.061	1.000	1.000	.186
2550.500	31.299	2.202	2.218	2.358	.007	.150	12.180	.068	1.000	1.000	.173
2550.750	30.318	1.848	1.520	2.348	.010	.162	12.180	.094	1.000	1.000	.177
2551.000	32.613	1.587	1.288	2.308	.009	.170	12.180	.031	1.000	1.000	.207
2551.250	27.608	1.525	1.254	2.278	.008	.173	12.180	.017	1.000	1.000	.215
2551.500	22.904	1.557	1.321	2.303	.006	.160	12.180	.000	1.000	1.000	.211
2551.750	22.508	1.616	1.313	2.320	.008	.164	12.180	.034	1.000	1.000	.199
2552.000	25.677	1.814	1.505	2.342	.012	.161	12.180	.080	1.000	1.000	.181
2552.250	26.806	1.976	2.029	2.348	.011	.152	12.180	.054	1.000	1.000	.180
2552.500	26.586	2.094	1.787	2.351	.007	.140	12.180	.009	1.000	1.000	.183
2552.750	27.793	1.995	1.778	2.335	.004	.129	12.180	.000	1.000	1.000	.186
2553.000	30.336	1.983	1.358	2.311	.006	.137	12.180	.000	1.000	1.000	.198
2553.250	35.028	1.813	1.456	2.298	.004	.139	12.180	.000	1.000	1.000	.204
2553.500	36.422	1.772	1.498	2.280	-.001	.156	12.180	.000	1.000	.960	.218
2553.750	38.751	1.847	1.357	2.275	-.000	.163	12.180	.000	1.000	.925	.222
2554.000	39.213	1.928	1.528	2.288	.002	.146	12.180	.000	1.000	.957	.210
2554.250	34.756	1.902	1.557	2.304	.002	.141	12.180	.000	1.000	1.000	.202
2554.500	30.751	1.813	1.471	2.314	.008	.141	12.180	.000	1.000	1.000	.199
2554.750	30.571	1.762	1.477	2.306	.007	.144	12.180	.000	1.000	1.000	.203
2555.000	34.698	1.773	1.434	2.279	-.002	.144	12.180	.000	1.000	.986	.213
2555.250	34.408	1.668	1.383	2.267	-.002	.145	12.180	.000	1.000	.994	.218
2555.500	33.757	1.616	1.280	2.263	.009	.152	12.180	.000	1.000	.989	.222
2555.750	32.781	1.645	1.239	2.262	.003	.157	12.180	.000	1.000	.970	.225
2556.000	27.287	1.831	1.479	2.301	.000	.130	12.180	.000	1.000	1.000	.199
2556.250	25.818	1.855	1.869	2.340	.007	.114	12.180	.000	1.000	1.000	.177
2556.500	27.967	1.610	1.640	2.318	.002	.125	12.180	.000	1.000	1.000	.190
2556.750	29.323	1.410	1.299	2.264	-.003	.144	12.180	.000	1.000	1.000	.218
2557.000	30.156	1.360	1.167	2.253	.005	.150	12.180	.000	1.000	1.000	.225
2557.250	33.669	1.400	1.209	2.256	.007	.153	12.180	.000	1.000	1.000	.226
2557.500	36.740	1.435	1.365	2.268	.009	.159	12.180	.000	1.000	1.000	.224
2557.750	40.666	1.373	1.351	2.263	.003	.161	12.180	.000	1.000	1.000	.226
2558.000	41.361	1.321	1.263	2.241	.003	.175	12.180	.000	1.000	1.000	.240
2558.250	38.804	1.269	1.033	2.239	.007	.189	12.180	.000	1.000	1.000	.247
2558.500	39.701	1.265	1.069	2.242	.019	.181	12.180	.000	1.000	1.000	.243
2558.750	42.135	1.248	1.081	2.243	.024	.185	12.180	.000	1.000	1.000	.244
2559.000	40.851	1.206	1.061	2.223	.009	.211	12.182	.000	1.000	.972	.262
2559.250	41.848	1.124	1.075	2.201	.001	.217	12.195	.000	1.000	.966	.273
2559.500	51.763	1.169	1.039	2.211	.010	.198	12.199	.000	1.000	.988	.262
2559.750	[illegible]	2.318	1.153	[illegible]	[illegible]	.209	12.268	.225	1.000	.876	.182

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LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DPHI	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2560.000	141.054	8.291	5.410	2.509	.014	.219	12.273	.759	1.000	1.000	.000
2560.250	156.344	17.383	12.765	2.586	.005	.229	12.273	.995	1.000	1.000	.000
2560.500	147.853	12.263	4.126	2.570	.001	.251	12.273	1.000	1.000	1.000	.000
2560.750	132.477	12.183	12.341	2.530	.000	.291	12.273	1.000	1.000	1.000	.000
2561.000	125.964	12.179	14.578	2.422	-.001	.372	12.273	1.000	1.000	1.000	.000
2561.250	120.350	11.343	8.452	2.409	-.002	.347	12.273	1.000	1.000	1.000	.000
2561.500	118.967	10.479	10.729	2.478	.006	.284	12.273	1.000	1.000	1.000	.000
2561.750	123.630	10.296	12.037	2.514	.023	.272	12.273	1.000	1.000	1.000	.000
2562.000	128.987	10.248	7.477	2.541	.045	.302	12.273	1.000	1.000	1.000	.000
2562.250	127.338	10.230	11.256	2.564	.042	.352	12.273	1.000	1.000	1.000	.000
2562.500	110.263	10.164	15.025	2.432	.010	.379	12.256	1.000	1.000	1.000	.000
2562.750	80.951	5.197	8.397	2.348	.003	.293	12.234	.678	1.000	1.000	.000
2563.000	61.072	3.217	1.963	2.253	.011	.212	12.189	.299	1.000	.894	.157
2563.250	55.025	2.802	2.420	2.355	.008	.193	12.180	.249	1.000	1.000	.156
2563.500	50.774	2.800	2.446	2.329	-.008	.206	12.180	.242	.928	.918	.173
2563.750	49.277	2.543	1.853	2.310	-.007	.215	12.192	.234	1.000	.911	.185
2564.000	55.133	2.541	1.866	2.316	.001	.211	12.273	.232	1.000	.929	.182
2564.250	64.406	3.279	2.072	2.338	.002	.194	12.273	.213	1.000	.866	.170
2564.500	85.736	5.492	3.948	2.410	.004	.185	12.273	.323	.929	.805	.121
2564.750	106.148	9.007	7.362	2.498	.006	.208	12.273	.679	1.000	1.000	.000
2565.000	115.703	11.070	11.650	2.529	-.001	.237	12.273	.887	1.000	1.000	.000
2565.250	126.258	12.662	7.467	2.520	-.002	.270	12.273	1.000	1.000	1.000	.000
2565.500	131.332	13.102	10.212	2.456	-.002	.329	12.273	1.000	1.000	1.000	.000
2565.750	133.677	12.045	10.689	2.424	.003	.307	12.273	.938	1.000	1.000	.000
2566.000	130.031	9.542	5.636	2.454	.004	.235	12.273	.689	1.000	1.000	.000
2566.250	124.128	10.054	8.332	2.461	.001	.205	12.273	.512	.847	.823	.035
2566.500	131.217	13.681	16.292	2.409	.008	.255	12.273	.663	1.000	1.000	.000
2566.750	136.899	19.562	21.747	2.363	.008	.322	12.273	.000	1.000	1.000	.000
2567.000	129.250	24.898	21.398	2.474	.011	.329	12.273	.000	1.000	1.000	.000
2567.250	114.716	23.576	38.010	2.596	.014	.254	12.273	.000	1.000	1.000	.000
2567.500	104.751	20.521	12.182	2.443	.002	.258	12.273	.000	1.000	1.000	.000
2567.750	76.092	12.989	15.669	1.991	.002	.393	12.273	.000	1.000	1.000	.000
2568.000	33.480	16.732	17.042	1.572	.017	.541	12.273	.000	1.000	1.000	.000
2568.250	20.527	45.114	210.723	1.378	.033	.577	12.273	.000	1.000	1.000	.000
2568.500	50.862	131.667	843.912	1.477	.019	.550	12.263	.000	1.000	1.000	.000
2568.750	90.396	34.053	17.394	1.979	-.007	.409	12.240	.000	1.000	1.000	.000
2569.000	123.703	21.717	15.036	2.468	.001	.252	12.234	.000	1.000	1.000	.000
2569.250	137.260	11.306	19.787	2.487	.007	.227	12.234	.739	1.000	1.000	.000
2569.500	129.308	6.385	6.865	2.456	.015	.207	12.246	.507	.929	.929	.039
2569.750	115.983	4.757	3.054	2.421	.028	.191	12.251	.379	1.000	.919	.111
2570.000	115.778	7.772	3.873	2.436	.028	.219	12.273	.510	1.000	.842	.043
2570.250	125.575	13.317	11.096	2.473	.004	.249	12.273	.797	1.000	1.000	.000
2570.500	127.178	13.455	11.846	2.480	-.005	.275	12.273	.933	1.000	1.000	.000
2570.750	102.597	6.080	12.149	2.453	.009	.264	12.273	.813	1.000	1.000	.000
2571.000	68.187	4.256	2.449	2.398	-.001	.178	12.273	.265	1.000	.912	.133
2571.250	74.718	4.420	2.697	2.365	-.004	.152	12.273	.095	1.000	.824	.166
2571.500	102.645	10.378	7.138	2.414	.017	.215	12.357	.000	1.000	1.000	.000
2571.750	120.629	13.714	2.000	2.357	.067	.288	12.367	.000	1.000	1.000	.000
2572.000	117.796	18.244	4.937	1.946	.070	.421	12.487	.000	1.000	1.000	.000
2572.250	102.003	30.561	17.538	1.689	.022	.522	12.180	.000	1.000	1.000	.000
2572.500	101.[illegible]	33.340	22.457	1.954	.008	.392	12.180	.000	1.000	1.000	.000
2572.750	103.526	15.031	20.947	2.381	.005	.325	12.180	.000	1.000	1.000	.000
2573.000	90.850	8.513	5.766	2.405	.012	.296	12.180	.841	1.000	1.000	.000
2573.250	84.126	7.980	5.811	2.444	.016	.209	12.180	.489	.885	.813	.050
2573.500	[illegible]	10.732	7.124	2.475	.019	.199	12.180	.000	1.000	1.000	.000
2573.750	[illegible]	12.307	8.937	2.[illegible]	.[illegible]	.[illegible]	12.180	.000	1.000	1.000	.000

1 LOG ANALYSIS

DEPTH	.SGR	.ILD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2574.000	107.[illegible]	15.374	14.140	2.471	.003	.285	12.180	.000	1.000	1.000	.000
2574.250	77.[illegible]	16.558	10.414	2.152	.002	.418	12.180	.000	1.000	1.000	.000
2574.500	43.016	61.998	57.683	1.633	.009	.526	12.180	.000	1.000	1.000	.000
2574.750	54.[illegible]	53.694	451.472	1.506	.026	.507	12.180	.000	1.000	1.000	.000
2575.000	81.928	20.969	10.658	1.816	.020	.374	12.180	.000	1.000	1.000	.000
2575.250	91.[illegible]	16.433	15.105	2.392	.035	.261	12.180	.000	1.000	1.000	.000
2575.500	87.[illegible]	7.738	5.022	2.423	.015	.212	12.180	.000	1.000	1.000	.000
2575.750	93.[illegible]	6.190	2.826	2.432	.023	.205	12.180	.440	1.000	.814	.082
2576.000	101.947	7.853	12.908	2.449	.018	.226	12.180	.635	1.000	1.000	.000
2576.250	121.[illegible]	9.959	6.876	2.448	.012	.209	12.180	.500	.855	.779	.044
2576.500	137.054	10.034	8.596	2.471	.013	.191	12.180	.475	.809	.787	.048
2576.750	148.[illegible]	11.376	8.908	2.491	.013	.213	12.180	.682	1.000	1.000	.000
2577.000	149.[illegible]	10.367	6.501	2.489	.015	.215	12.180	.000	1.000	1.000	.000
2577.250	146.736	10.945	5.542	2.485	.015	.214	12.180	.000	1.000	1.000	.000
2577.500	139.986	15.871	10.409	2.501	.011	.250	12.180	.000	1.000	1.000	.000
2577.750	121.[illegible]	26.446	17.105	2.717	-.004	.370	12.180	.000	1.000	1.000	.000
2578.000	99.698	34.670	902.353	1.846	-.012	.531	12.180	.000	1.000	1.000	.000
2578.250	93.171	22.588	36.961	1.893	-.006	.458	12.180	.000	1.000	1.000	.000
2578.500	96.819	15.517	7.747	2.364	-.001	.267	12.180	.000	1.000	1.000	.000
2578.750	104.[illegible]	14.171	7.797	2.509	-.001	.198	12.180	.000	1.000	1.000	.000
2579.000	122.316	18.090	11.188	2.517	-.001	.218	12.180	.000	1.000	1.000	.000
2579.250	131.963	20.925	15.010	2.534	.003	.262	12.180	1.000	1.000	1.000	.000
2579.500	138.336	21.710	16.122	2.537	.009	.320	12.180	1.000	1.000	1.000	.000
2579.750	137.281	21.448	15.814	2.515	.001	.297	12.180	1.000	1.000	1.000	.000
2580.000	131.295	18.986	16.393	2.505	.000	.224	12.180	.767	1.000	1.000	.000
2580.250	111.[illegible]	13.161	10.414	2.471	-.001	.190	12.180	.503	.807	.788	.035
2580.500	99.[illegible]	11.484	8.046	2.449	.009	.187	12.180	.435	.730	.621	.073
2580.750	108.136	13.589	13.529	2.460	.014	.213	12.180	.608	1.000	1.000	.000
2581.000	115.[illegible]	13.[illegible]	11.032	2.482	.003	.240	12.180	.779	1.000	1.000	.000
2581.250	109.132	15.602	10.840	2.476	.000	.212	12.180	.641	1.000	1.000	.000
2581.500	95.[illegible]	7.086	14.416	2.472	.001	.202	12.180	.457	.800	.800	.069
2581.750	66.996	3.840	2.702	2.352	.012	.190	12.180	.230	.950	.827	.160
2582.000	55.1[illegible]	1.[illegible]	1.589	2.314	.017	.182	12.180	.100	1.000	.824	.196
2582.250	66.[illegible]	2.146	1.736	2.315	.002	.179	12.180	.091	1.000	.642	.196
2582.500	95.149	8.340	11.340	2.420	.020	.200	12.180	.420	.645	.645	.096
2582.750	120.[illegible]	17.058	16.872	2.506	.030	.238	12.180	.000	1.000	1.000	.000
2583.000	112.769	16.033	15.586	2.461	.006	.242	12.180	.000	1.000	1.000	.000
2583.250	86.[illegible]	10.654	14.[illegible]	2.379	.006	.232	12.180	.000	1.000	1.000	.000
2583.500	54.[illegible]	12.346	7.512	2.060	.009	.342	12.180	.000	1.000	1.000	.000
2583.750	44.338	25.048	12.475	1.645	.013	.499	12.180	.000	1.000	1.000	.000
2584.000	64.130	33.250	234.307	1.573	.019	.514	12.180	.000	1.000	1.000	.000
2584.250	84.[illegible]	7.042	116.991	1.762	.008	.477	12.149	.000	1.000	1.000	.000
2584.500	68.055	2.853	2.283	2.011	-.010	.302	12.172	.000	1.000	1.000	.000
2584.750	47.494	1.830	1.041	2.185	-.005	.218	12.163	.000	1.000	1.000	.000
2585.000	40.340	1.673	.970	2.192	-.002	.217	12.158	.000	1.000	.860	.277
2585.250	43.737	1.818	1.016	2.194	-.003	.208	12.165	.000	1.000	.843	.272
2585.500	60.[illegible]	2.624	1.217	2.316	-.006	.198	12.170	.000	1.000	.736	.259
2585.750	86.311	4.341	2.349	2.316	.001	.192	12.171	.151	.913	.694	.190
2586.000	106.405	8.779	6.961	2.429	.012	.208	12.172	.475	.785	.734	.061
2586.250	119.524	13.057	7.810	2.465	.010	.217	12.180	.635	1.000	1.000	.000
2586.500	121.160	12.031	10.657	2.458	.003	.201	12.180	.517	.805	.798	.032
2586.750	110.033	7.996	8.895	2.443	.005	.194	12.172	.448	.690	.682	.069
2587.000	105.[illegible]	9.253	5.165	2.458	.013	.200	12.172	.483	.965	.786	.049
2587.250	105.[illegible]	9.374	6.946	2.477	.008	.208	12.172	.627	1.000	1.000	.000
2587.500	110.[illegible]	7.509	5.106	2.450	.006	.205	12.169	.487	.945	.766	.050
2587.750	112.[illegible]	[illegible]	6.232	2.443	[illegible]	.218	12.172	.522	.894	.816	.035

1 LOG ANALYSIS

DEPTH	.GDR	.ILD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2588.000	115.394	11.928	7.807	2.443	.004	.225	12.172	.000	1.000	1.000	.000
2588.250	115.423	14.692	8.373	2.466	.004	.244	12.166	.000	1.000	1.000	.000
2588.500	111.472	19.331	11.094	2.334	-.005	.328	12.172	.000	1.000	1.000	.000
2588.750	99.480	12.233	607.491	2.032	-.002	.404	12.165	.000	1.000	1.000	.000
2589.000	85.801	8.336	5.805	2.069	-.001	.299	12.178	.000	1.000	1.000	.000
2589.250	83.781	6.352	5.613	2.387	.005	.208	12.165	.000	1.000	1.000	.000
2589.500	85.622	7.106	8.020	2.449	.005	.208	12.172	.000	1.000	1.000	.000
2589.750	91.518	7.531	6.847	2.456	-.000	.211	12.159	.530	.909	.909	.028
2590.000	105.911	9.224	8.489	2.474	.004	.236	12.168	.745	1.000	1.000	.000
2590.250	115.736	11.711	12.781	2.495	.007	.262	12.170	.913	1.000	1.000	.000
2590.500	122.813	14.192	7.748	2.514	.003	.269	12.172	.991	1.000	1.000	.000
2590.750	129.281	14.928	17.185	2.512	.008	.287	12.177	1.000	1.000	1.000	.000
2591.000	122.600	10.250	15.967	2.490	.016	.284	12.167	1.000	1.000	1.000	.000
2591.250	107.641	5.425	7.019	2.441	.014	.250	12.172	.726	1.000	1.000	.000
2591.500	89.735	3.374	2.718	2.379	.002	.220	12.172	.405	1.000	.943	.129
2591.750	85.049	3.090	2.397	2.341	.008	.198	12.176	.240	.976	.901	.166
2592.000	100.883	3.669	2.101	2.341	.008	.192	12.171	.212	1.000	.817	.169
2592.250	131.709	5.898	4.775	2.399	.007	.215	12.172	.431	.795	.747	.099
2592.500	139.884	9.732	6.602	2.464	.009	.252	12.180	.792	1.000	1.000	.000
2592.750	126.934	14.059	14.470	2.505	.009	.266	12.173	.957	1.000	1.000	.000
2593.000	121.598	16.431	12.690	2.495	.011	.260	12.171	.906	1.000	1.000	.000
2593.250	125.841	15.872	21.343	2.465	.013	.284	12.171	.935	1.000	1.000	.000
2593.500	123.954	11.329	11.043	2.475	.006	.282	12.158	.955	1.000	1.000	.000
2593.750	117.973	10.616	8.766	2.506	.009	.279	12.172	1.000	1.000	1.000	.000
2594.000	121.471	17.672	12.465	2.525	.009	.273	12.164	1.000	1.000	1.000	.000
2594.250	117.383	14.747	11.825	2.515	.017	.250	12.170	.913	1.000	1.000	.000
2594.500	105.017	13.782	12.382	2.509	.009	.237	12.180	.838	1.000	1.000	.000
2594.750	107.747	13.806	11.683	2.519	.004	.221	12.180	.791	1.000	1.000	.000
2595.000	114.293	12.734	12.547	2.522	.006	.228	12.180	.831	1.000	1.000	.000
2595.250	117.287	12.004	12.794	2.514	.007	.228	12.158	.809	1.000	1.000	.000
2595.500	115.490	7.648	8.910	2.511	.006	.199	12.177	.675	1.000	1.000	.000
2595.750	112.906	7.511	6.650	2.504	.010	.190	12.180	.615	1.000	1.000	.000
2596.000	108.023	7.428	4.049	2.500	.010	.188	12.179	.537	1.000	1.000	.018
2596.250	107.283	7.601	7.503	2.472	.009	.191	12.166	.535	.990	.990	.020
2596.500	100.487	5.981	7.996	2.477	.012	.191	12.177	.446	.937	.937	.067
2596.750	93.232	5.664	4.615	2.444	.010	.185	12.171	.380	.950	.888	.101
2597.000	88.508	5.945	6.396	2.445	.010	.194	12.162	.424	.869	.869	.085
2597.250	82.775	4.731	6.381	2.440	.008	.212	12.172	.489	.980	.980	.052
2597.500	91.314	1.744	4.228	2.464	.011	.220	12.179	.648	1.000	1.000	.000
2597.750	109.655	3.110	4.600	2.521	.021	.256	12.166	.978	1.000	1.000	.000
2598.000	109.157	5.570	11.403	2.509	.014	.286	12.180	1.000	1.000	1.000	.000
2598.250	82.771	5.131	19.220	2.411	.011	.276	12.180	.767	1.000	1.000	.000
2598.500	49.289	2.209	1.759	2.301	.005	.227	12.168	.268	1.000	.955	.186
2598.750	35.432	1.479	1.201	2.243	.007	.222	12.173	.098	1.000	1.000	.239
2599.000	49.055	1.880	.963	2.218	.007	.238	12.167	.104	1.000	.840	.254
2599.250	87.072	4.091	13.741	2.246	.012	.265	12.172	.357	.572	.572	.200
2599.500	108.483	7.066	17.575	2.380	.015	.245	12.180	.548	.852	.852	.030
2599.750	99.634	7.227	6.928	2.462	.008	.201	12.174	.497	.895	.895	.042
2600.000	96.171	6.879	5.034	2.451	.006	.194	12.172	.438	.937	.829	.075
2600.250	97.852	8.160	8.984	2.479	.009	.191	12.180	.496	.903	.903	.037
2600.500	101.774	9.283	8.376	2.506	.003	.181	12.175	.522	.972	.969	.021
2600.750	107.729	8.573	8.511	2.516	-.008	.176	12.177	.526	1.000	1.000	.018
2601.000	112.873	8.180	4.356	2.495	-.020	.181	12.179	.492	1.000	.964	.034
2601.250	122.451	8.751	7.382	2.498	-.010	.195	12.175	.621	1.000	1.000	.000
2601.500	127.474	11.541	12.670	2.528	.000	.217	12.178	.000	1.000	1.000	.000
2601.750	127.140	12.441	13.500	2.535	.005	.246	12.165	.000	1.000	1.000	.000

1 LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2602.000	138.100	23.762	13.854	2.229	-.004	.358	12.176	.000	1.000	1.000	.000
2602.250	123.173	46.202	104.878	1.742	.002	.509	12.172	.000	1.000	1.000	.000
2602.500	114.557	59.713	900.629	1.585	.013	.541	12.178	.000	1.000	1.000	.000
2602.750	126.139	36.478	29.187	1.896	.015	.380	12.176	.000	1.000	1.000	.000
2603.000	129.562	23.675	21.400	2.327	.033	.313	12.157	.000	1.000	1.000	.000
2603.250	108.483	11.314	11.563	2.268	.027	.305	12.175	.625	1.000	1.000	.000
2603.500	98.714	9.900	7.377	2.342	.010	.241	12.177	.463	.619	.572	.095
2603.750	116.558	13.197	12.192	2.471	.010	.252	12.179	.809	1.000	1.000	.000
2604.000	132.673	16.497	14.540	2.507	.010	.309	12.175	1.000	1.000	1.000	.000
2604.250	125.348	15.878	15.190	2.447	.006	.354	12.164	1.000	1.000	1.000	.000
2604.500	112.884	14.800	11.907	2.365	.007	.342	12.171	.950	1.000	1.000	.000
2604.750	117.778	14.249	12.407	2.407	.006	.269	12.176	.722	1.000	1.000	.000
2605.000	126.143	15.497	10.840	2.471	.007	.234	12.164	.729	1.000	1.000	.000
2605.250	126.557	16.441	14.105	2.489	.004	.255	12.170	.867	1.000	1.000	.000
2605.500	113.815	16.902	13.728	2.437	.002	.273	12.175	.819	1.000	1.000	.000
2605.750	92.162	12.396	11.029	2.289	-.005	.301	12.180	.628	1.000	1.000	.000
2606.000	75.337	8.157	8.017	2.221	-.006	.291	12.180	.000	1.000	1.000	.000
2606.250	75.010	9.269	5.059	2.221	.001	.299	12.174	.000	1.000	1.000	.000
2606.500	80.383	15.540	17.536	2.033	.007	.377	12.179	.000	1.000	1.000	.000
2606.750	89.819	21.543	178.410	1.922	-.000	.405	12.169	.000	1.000	1.000	.000
2607.000	112.566	14.922	17.264	2.151	-.008	.347	12.164	.000	1.000	1.000	.000
2607.250	122.880	14.924	10.455	2.445	-.004	.268	12.179	.000	1.000	1.000	.000
2607.500	116.496	14.549	10.256	2.493	.003	.247	12.176	.841	1.000	1.000	.000
2607.750	115.542	13.073	16.356	2.493	.006	.254	12.180	.872	1.000	1.000	.000
2608.000	107.217	4.985	10.708	2.443	.003	.252	12.180	.736	1.000	1.000	.000
2608.250	79.459	3.459	3.488	2.378	.006	.212	12.172	.366	.924	.924	.137
2608.500	60.951	2.438	1.384	2.323	.003	.200	12.165	.203	1.000	.970	.180
2608.750	62.136	2.443	1.653	2.300	.006	.203	12.178	.158	1.000	.903	.199
2609.000	75.825	3.474	2.600	2.360	.006	.201	12.180	.271	.973	.876	.155
2609.250	106.199	5.878	3.962	2.435	.009	.211	12.164	.000	1.000	1.000	.000
2609.500	124.867	10.566	7.491	2.469	.002	.228	12.159	.000	1.000	1.000	.000
2609.750	120.761	11.926	9.794	2.283	-.005	.294	12.180	.000	1.000	1.000	.000
2610.000	105.334	7.979	30.853	2.107	.001	.287	12.164	.000	1.000	1.000	.000
2610.250	88.209	6.092	3.410	2.242	.002	.217	12.174	.000	1.000	1.000	.000
2610.500	87.607	5.730	6.458	2.422	.003	.193	12.176	.000	1.000	1.000	.000
2610.750	87.748	7.090	4.261	2.443	.004	.187	12.171	.000	1.000	1.000	.000
2611.000	89.965	9.038	5.803	2.468	.018	.192	12.180	.000	1.000	1.000	.000
2611.250	85.316	12.771	11.683	2.324	.010	.286	12.180	.000	1.000	1.000	.000
2611.500	58.255	20.902	13.177	1.923	.005	.473	12.180	.000	1.000	1.000	.000
2611.750	48.410	25.284	68.027	1.660	.017	.518	12.180	.000	1.000	1.000	.000
2612.000	77.386	10.262	27.650	1.816	.010	.405	12.180	.000	1.000	1.000	.000
2612.250	70.203	4.480	13.082	2.226	.010	.246	12.180	.000	1.000	1.000	.000
2612.500	74.932	3.611	3.229	2.328	.017	.193	12.175	.331	.989	.989	.128
2612.750	60.041	2.817	2.457	2.383	.010	.199	12.180	.275	1.000	.987	.155
2613.000	55.957	2.383	2.066	2.427	-.000	.186	12.180	.074	.925	.914	.209
2613.250	57.325	2.328	1.549	2.371	.008	.179	12.180	.000	1.000	.876	.230
2613.500	71.535	3.375	1.885	2.297	.017	.212	12.180	.191	.966	.742	.197
2613.750	113.180	8.022	12.608	2.376	.014	.295	12.180	.813	1.000	1.000	.000
2614.000	140.411	16.681	16.658	2.514	.018	.311	12.172	1.000	1.000	1.000	.000
2614.250	138.788	14.709	15.255	2.580	.011	.264	12.172	1.000	1.000	1.000	.000
2614.500	139.749	14.260	12.001	2.601	.015	.252	12.164	1.000	1.000	1.000	.000
2614.750	137.597	14.100	13.350	2.577	.013	.269	12.174	1.000	1.000	1.000	.000
2615.000	129.254	14.776	14.497	2.554	.012	.285	12.141	1.000	1.000	1.000	.000
2615.250	134.519	14.235	16.077	2.533	.007	.305	12.168	1.000	1.000	1.000	.000
2615.500	129.534	8.946	8.435	2.503	.007	.269	12.155	1.000	1.000	1.000	.000
2615.750	91.755	5.733	6.075	2.475	.030	.210	12.152	.683	1.000	1.000	.000

1 LOG ANALYSIS

DEPTH	.SGR	.ILD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2616.000	77.539	4.623	2.958	2.452	.018	.202	12.120	.479	1.000	1.000	.053
2616.250	74.020	3.890	4.721	2.364	.003	.206	12.125	.330	.841	.841	.143
2616.500	52.473	2.667	1.379	2.293	.010	.199	12.112	.121	1.000	.845	.207
2616.750	44.113	2.469	1.260	2.281	.014	.198	12.118	.090	1.000	.855	.217
2617.000	62.937	3.857	2.582	2.398	.033	.182	12.180	.283	1.000	.960	.131
2617.250	88.401	6.455	8.888	2.540	.040	.202	12.180	.759	1.000	1.000	.000
2617.500	80.413	5.357	2.920	2.485	.010	.218	12.180	.694	1.000	1.000	.000
2617.750	82.343	5.516	2.085	2.460	.011	.217	12.180	.626	1.000	1.000	.000
2618.000	106.272	8.704	17.592	2.527	.013	.265	12.180	1.000	1.000	1.000	.000
2618.250	122.904	14.409	18.174	2.540	.007	.279	12.180	1.000	1.000	1.000	.000
2618.500	113.689	7.469	11.538	2.493	.003	.226	12.180	.746	1.000	1.000	.000
2618.750	95.113	5.102	2.806	2.420	.000	.200	12.180	.417	1.000	.870	.099
2619.000	85.800	5.719	3.270	2.390	.008	.199	12.180	.338	.945	.935	.132
2619.250	85.680	5.382	3.026	2.374	.003	.205	12.180	.325	.929	.929	.142
2619.500	95.183	5.769	2.735	2.355	-.005	.200	12.180	.256	.928	.821	.159
2619.750	117.567	5.885	2.561	2.416	.005	.205	12.180	.399	1.000	.738	.115
2620.000	130.609	14.050	15.479	2.500	.003	.243	12.180	.843	1.000	1.000	.000
2620.250	131.870	17.299	15.861	2.525	-.001	.268	12.180	1.000	1.000	1.000	.000
2620.500	128.986	15.295	15.480	2.529	-.005	.283	12.180	1.000	1.000	1.000	.000
2620.750	130.657	14.963	15.298	2.524	.008	.276	12.176	1.000	1.000	1.000	.000
2621.000	135.034	15.164	16.728	2.536	.029	.259	12.180	.000	1.000	1.000	.000
2621.250	130.991	15.859	14.109	2.527	.015	.283	12.161	.000	1.000	1.000	.000
2621.500	91.955	14.100	18.066	2.121	-.007	.346	12.155	.000	1.000	1.000	.000
2621.750	39.058	13.891	35.795	1.580	-.004	.427	12.148	.000	1.000	1.000	.000
2622.000	17.865	18.519	22.467	1.457	.013	.478	12.148	.000	1.000	1.000	.000
2622.250	23.051	40.418	80.780	1.578	.041	.539	12.154	.000	1.000	1.000	.000
2622.500	55.517	39.734	1399.163	1.614	.048	.536	12.156	.000	1.000	1.000	.000
2622.750	99.954	15.370	430.641	1.793	.016	.465	12.161	.000	1.000	1.000	.000
2623.000	107.088	6.859	6.359	2.295	.020	.337	12.154	.000	1.000	1.000	.000
2623.250	92.007	4.548	5.523	2.441	.011	.212	12.156	.000	1.000	1.000	.000
2623.500	76.071	3.442	4.824	2.573	.005	.201	12.144	.304	1.000	1.000	.145
2623.750	58.514	1.525	1.373	2.284	-.001	.202	12.150	.112	1.000	1.000	.213
2624.000	51.360	1.455	1.254	2.250	-.001	.203	12.150	.030	1.000	1.000	.243
2624.250	54.748	1.708	1.488	2.276	.011	.199	12.152	.080	1.000	1.000	.221
2624.500	70.346	2.273	1.684	2.339	.017	.199	12.156	.215	1.000	1.000	.175
2624.750	85.291	2.970	4.245	2.400	.011	.203	12.144	.381	1.000	1.000	.123
2625.000	88.282	3.017	3.881	2.402	.008	.204	12.147	.391	1.000	1.000	.121
2625.250	81.470	2.575	2.733	2.374	.009	.201	12.155	.306	1.000	1.000	.144
2625.500	84.139	2.734	2.504	2.374	.009	.187	12.151	.273	1.000	.972	.142
2625.750	92.736	2.614	5.536	2.426	.014	.201	12.151	.408	1.000	1.000	.104
2626.000	70.050	1.714	1.477	2.386	.011	.221	12.148	.424	1.000	1.000	.112
2626.250	52.137	1.602	1.205	2.282	-.001	.208	12.148	.134	1.000	1.000	.212
2626.500	57.648	2.030	1.567	2.288	.003	.188	12.145	.063	1.000	.967	.216
2626.750	63.703	2.192	2.899	2.333	.015	.179	12.135	.134	1.000	1.000	.182
2627.000	61.043	2.046	1.525	2.319	.022	.175	12.156	.081	1.000	1.000	.195
2627.250	59.424	1.982	1.893	2.299	.019	.173	12.148	.022	1.000	1.000	.213
2627.500	63.910	2.077	1.863	2.278	.008	.180	12.155	.051	.982	.982	.211
2627.750	65.529	2.541	1.825	2.334	.008	.178	12.153	.131	1.000	.982	.181
2628.000	64.354	2.698	2.725	2.363	.009	.172	12.119	.183	1.000	1.000	.158
2628.250	59.817	2.560	2.099	2.341	.007	.180	12.146	.159	1.000	1.000	.174
2628.500	54.776	2.031	1.660	2.298	.007	.191	12.145	.101	1.000	.991	.206
2628.750	53.447	1.838	1.536	2.273	.003	.190	12.148	.032	1.000	.978	.228
2629.000	55.934	1.901	1.426	2.265	.009	.189	12.141	.005	1.000	.942	.236
2629.250	55.987	2.075	1.456	2.272	.025	.196	12.148	.108	1.000	.958	.209
2629.500	57.374	2.088	1.933	2.327	.019	.187	12.156	.156	1.000	1.000	.183
2629.750	61.461	2.103	2.000	2.417	.009	.203	12.160	.207	1.000	1.000	.182

1 LOG ANALYSIS

DEPTH	.SGR	.LLD	.RXO	.RHOB	.DRHO	.NPHI	.CAL	.VSH	.SXO	.SWEC	.PHIE
2630.000	66.259	1.896	1.493	2.304	.011	.209	12.144	.197	1.000	1.000	.192
2630.250	79.618	1.971	1.665	2.309	.009	.185	12.156	.099	1.000	1.000	.200
2630.500	105.913	2.898	1.916	2.360	.019	.197	12.168	.252	1.000	.978	.156
2630.750	130.049	5.150	17.218	2.492	.047	.259	12.180	.893	1.000	1.000	.000
2631.000	117.662	4.844	18.568	2.522	.045	.267	12.167	1.000	1.000	1.000	.000
2631.250	81.298	2.188	1.953	2.367	.019	.236	12.139	.444	1.000	1.000	.107
2631.500	59.945	1.342	1.151	2.249	.003	.227	12.125	.139	1.000	1.000	.231
2631.750	52.044	1.471	1.151	2.237	.009	.210	12.134	.033	1.000	.999	.250
2632.000	50.357	1.556	1.243	2.244	.003	.221	12.148	.094	1.000	.983	.240
2632.250	49.444	1.602	1.274	2.248	.005	.230	12.125	.149	1.000	.978	.231
2632.500	48.171	1.622	1.324	2.248	.000	.214	12.145	.073	1.000	.973	.239
2632.750	50.264	1.646	1.476	2.263	.001	.208	12.131	.086	1.000	1.000	.229
2633.000	51.269	1.539	1.517	2.266	.010	.196	12.146	.039	1.000	1.000	.232
2633.250	52.866	1.501	1.280	2.289	.022	.180	12.148	.006	1.000	1.000	.227
2633.500	57.671	1.598	1.312	2.296	.031	.203	12.120	.133	1.000	1.000	.207
2633.750	51.447	1.793	1.502	2.276	.008	.215	12.139	.135	1.000	.976	.219
2634.000	52.563	1.747	1.607	2.273	.006	.203	12.136	.092	1.000	1.000	.222
2634.250	53.280	1.736	1.357	2.284	.010	.209	12.148	.144	1.000	1.000	.210
2634.500	54.903	1.692	1.489	2.302	.006	.230	12.152	.281	1.000	1.000	.185
2634.750	54.675	1.685	1.449	2.317	.003	.224	12.135	.296	1.000	1.000	.175
2635.000	52.438	1.568	1.425	2.322	.007	.220	12.133	.289	1.000	1.000	.172

Appendix 4

WEST FORTESCUE-1 RFT SURVEY

May 11 and May 12, 1984

The RFT survey run in West Fortescue-1 on May 11 and May 12, 1984 confirmed the correlations of Halibut and Fortescue units in this well. The major conclusions were:

1. Pressures in the FM-1.0 sands confirm that the FM-1.0 is a separate accumulation not in direct pressure communication with currently producing Fortescue sands.

2. The RFT pressure data suggests an OWC in the FM-1.0 at 2418m TVDSS. This agrees well with the log interpretation of a 2m transition zone with high water at 2418.5m TVDSS.

3. Oil samples were obtained from the FM-1.0 at 2413.0m and 2415.9m TVDSS, above the RFT interpreted OWC.

4. The FM-1.1/upper FM-1.2 pressures in West Fortescue-1 are in good agreement with those seen in the RFT survey of Fortescue A-1 on 5/3/84.

5. The lower FM-1.2/FM-1.3 pressures in West Fortescue-1 are consistent with those seen in previous RFT surveys in the Fortescue development wells.

6. The pressure in the M-1.0.1 sand suggests that the M-1.0.1 in this region is in limited communication with other M-1.0.1 sands. This is consistent with the very low Net-to-Gross seen in the M-1.0 in this well.

7. The pressures in the Halibut M-1.1.1 sands are consistent with those observed in previous RFT's.

Background

This survey consisted of 20 successful pressure pretests; three samples were obtained in two separate sampling runs. Detailed results are given in Tables 1 and 2 and the pretest pressures are presented graphically in Figure 1. The seat depths are referenced to the LDL-CNL-GR log of May 10th, 1984.

Interpretation

1. The pressure in the FM-1.0 sands is 64 psi greater than the pressure in the FM-1.1 system in this well and 59 psi greater than the pressure in the FM-1.1 system in Fortescue A-1 (the only well currently producing from the FM-1.1 system). This confirms that the FM-1.0 sands are in a separate hydraulic system to the upper FM-1.2/FM-1.1 system.

2. Figure 2 shows details of the FM-1.0 pressures showing the possible OWC between 2417 and 2419m TVDSS. We put the OWC at 2418m TVDSS, the midpoint of this interval. This range of OWC is consistent with the log interpretation of a 2m oil to water transition zone with high water at 2418.5m TVDSS.

3. The three oil samples obtained from the FM-1.0 sands confirm the presence of oil above the RFT interpreted OWC.

4. The pressure in the FM-1.1/upper FM-1.2 system at West Fortescue-1 is 5 psi more drawndown than the pressures observed in the Fortescue A-1 RFT survey. Since the A-1 is producing from these sands this suggests good communication between the two wells.

5. The pressure in the lower FM-1.2/FM-1.3 hydraulic system is 180 psi drawndown relative to the Cobia F-2 RFT pressure in this system. This is consistent with the drawdown due to production observed in other recent RFT surveys in Fortescue development wells.

6. The M-1.0.1 pressure in West Fortescue-1 is about 55 psi higher than would be expected from the trend established in previous Fortescue RFT's. This suggests that the M-1.0.1 in this region is isolated from the M-1.0.1 intersected by previous Fortescue wells.

7. The pressures observed in the Halibut M-1.1.1 sands are only 6 psi lower than the M-1.1.1 pressures measured in Fortescue A-19 and are entirely consistent with other recent M-1.1.1 pressures. This confirms good communication throughout the M-1.1.1.

6924f2-3

TABLE 1

WEST FORTESCUE-1 RFT RESULTS

May 11 and 12, 1984

RUN 2: PRETESTS

Seat	Depth m MDKB	Depth m TVDSS	Formation Pressure psig	Unit		Comment
2	2632.0	2611.0	3624.0	M-1.1.1	)	
3	2627.0	2606.0	3615.7	M-1.1.1	)	Water Gradient
4	2616.7	2595.7	3597.5	M-1.1.1	)	
5	2585.0	2564.0	3501.3	M-1.0.1		
6	2564.0	2543.0	3400.8	FM-1.3		
7	2558.0	2537.0	3357.6	FM-1.3		
8	2544.0	2523.0	3347.3	FM-1.3	)	Water Gradient
9	2535.0	2514.0	3335.3	FM-1.3	)	
10	2516.5	2495.5	3315.3	FM-1.2L		
11	2512.5	2491.5	3316.5	FM-1.2L		
12	2512.0	2491.0	3318.5	FM-1.2L		
13	2498.0	2477.0	3410.1	FM-1.2U	)	
14	2475.0	2454.0	3377.3	FM-1.1	)	Water Gradient
15	2457.5	2436.5	3353.7	FM-1.1	)	
16	2452.5	2431.5	3345.1	FM-1.1	)	
20	2441.7	2420.7	3394.8	FM-1.0		
21	2440.0	2419.0	3393.1	FM-1.0		
22	2437.0	2416.0	3388.9	FM-1.0	)	
23	2434.0	2413.0	3386.4	FM-1.0	)	Oil Gradient
24	2431.0	2410.0	3383.0	FM-1.0	)	

R.A.H. Mitchell
13/6/84

(6924f/4)

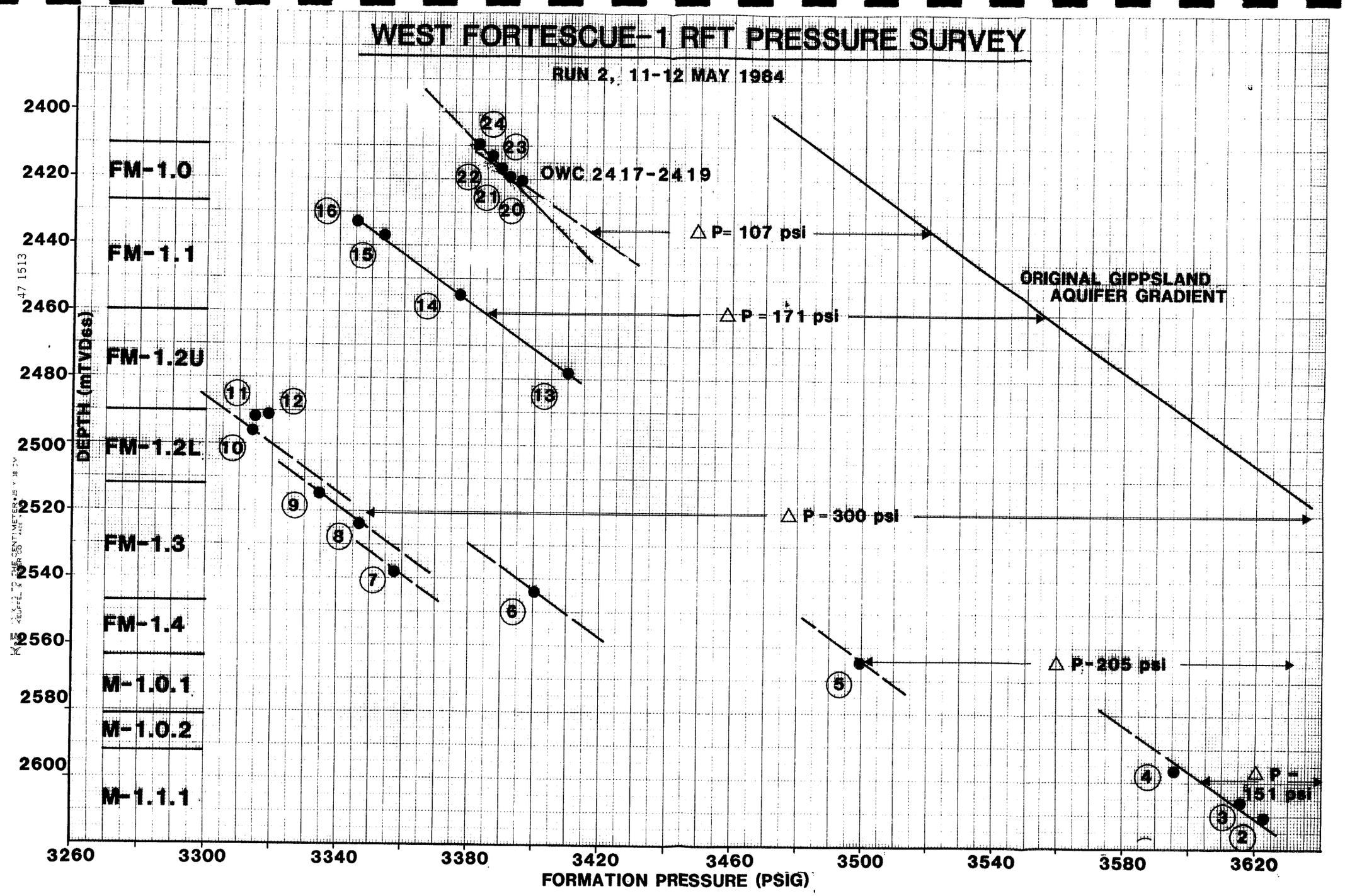
WEST FORTESCUE-1 RFT PRESSURE SURVEY
RUN 2, 11-12 MAY 1984
DEPTH (mTVDss)
FORMATION PRESSURE (PSIG)
FM-1.0
FM-1.1
FM-1.2U
FM-1.2L
FM-1.3
FM-1.4
M-1.0.1
M-1.0.2
M-1.1.1
OWC 2417-2419
ORIGINAL GIPPSLAND AQUIFER GRADIENT
△P= 107 psi
△P = 171 psi
△P = 300 psi
△P-205 psi
△P = 151 psi
2400
2420
2440
2460
2480
2500
2520
2540
2560
2580
2600
3260
3300
3340
3380
3420
3460
3500
3540
3580
3620

TABLE 2

WEST FORTESCUE-1 RFT RESULTS

May 11 and 12, 1984

RUNS 1 AND 3: SAMPLES

	Depth		Volume Recovered			
			Oil	Gas	Water	
Seat	m MDKB	m TVDSS	L	ft^3	L	Comment
1/1	2434.0	2413.0	17.6	3.96	1.75	Water probably filtrate. 1 gallon chamber preserved.
3/28	2436.9	2415.9	30.6	0.53	13.75	Water probably filtrate. Part sample ex 2437 m MDKB.
3/28	2436.9	2415.9	8.3	-	0.83	Water mostly filtrate.

R.A.H. Mitchell
26/6/84

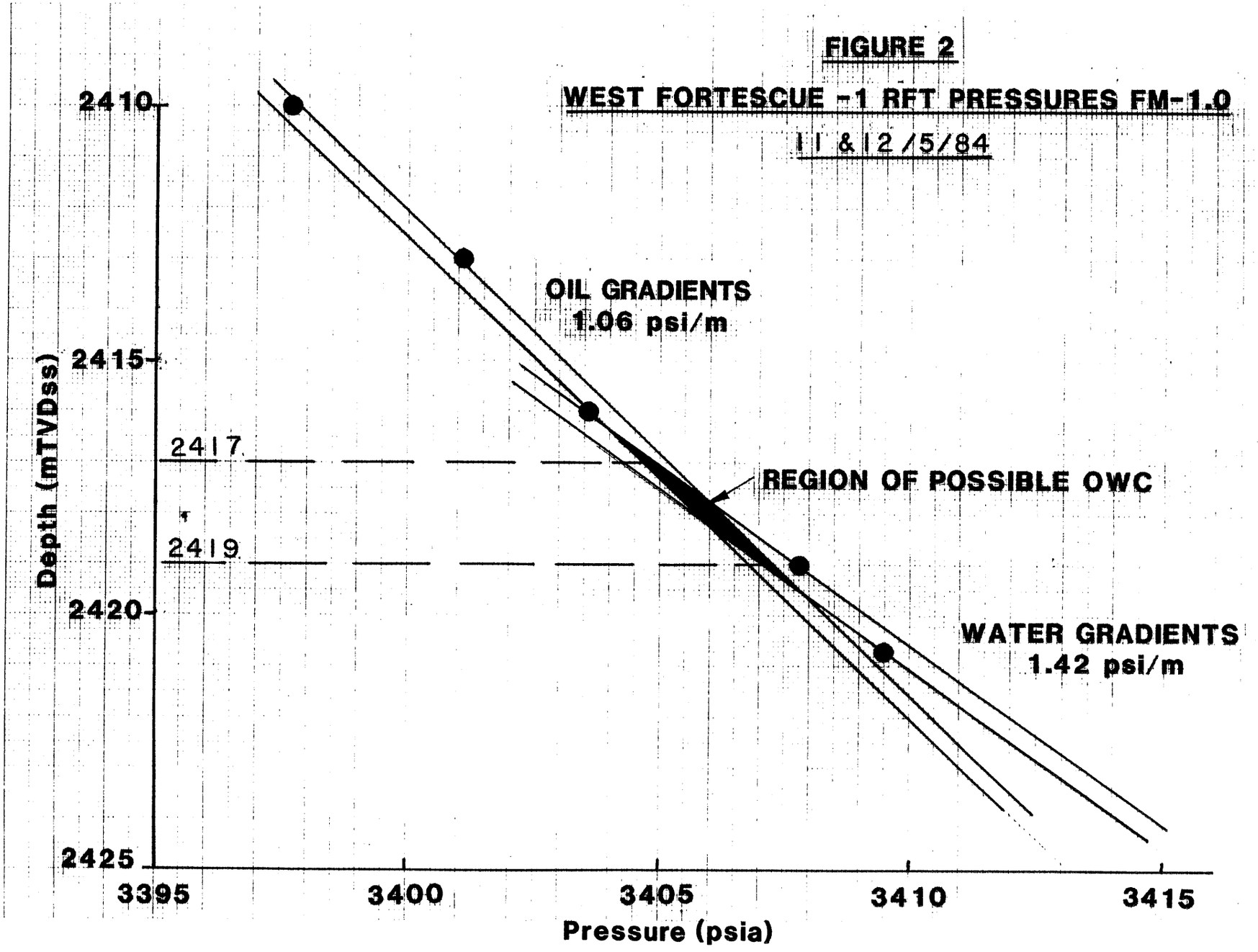
FIGURE 2
WEST FORTESCUE -1 RFT PRESSURES FM-1.0
11 & 12/5/84
2410
2415
2417
2419
2420
2425
Depth (mTVDss)
OIL GRADIENTS
1.06 psi/m
REGION OF POSSIBLE OWC
WATER GRADIENTS
1.42 psi/m
3395
3400
3405
3410
3415
Pressure (psia)

Appendix 5

GEOCHEMICAL REPORT

WEST FORTESCUE-1 WELL, GIPPSLAND BASIN

VICTORIA

J.K. EMMETT

Sample handling and Analyses by:

- D.M. Hill)
- D.M. Ford)
- J. McCardle) ESSO AUSTRALIA LTD.
- D.E. Bishop)
- H. Schiller)
- Exxon Production Research Company
- Geochem Laboratories

Esso Australia Ltd.
Geochemical Report

April, 1985

1523L

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APPENDICES

1. Detailed C_{4-7} Data Sheets
2. Detailed Vitrinite Reflectance and Exinite Fluorescence Data - Report by A.C. Cook

WEST FORTESCUE-1

INTRODUCTION

A range of geochemical analyses were performed on wet canned cuttings and sidewall cores collected during drilling of the West Fortescue well. Canned cuttings composited over 15-metre intervals were collected from 215 m KB to Total Depth (T.D.) at 2671 m KB. Light hydrocarbon (C_{1-4}) headspace gases were determined for alternate 15-metre intervals between 1700 m KB and T.D. Succeeding alternate 15-metre intervals were analysed for gasoline range (C_{4-7}) hydrocarbons between 1715 m KB and 2660 m KB. Selected samples were analysed for Total Organic Carbon (T.O.C.), Rock-Eval pyrolysis, kerogen isolation and elemental analysis, and C_{15+} liquid and gas chromatography. Vitrinite reflectance measurements were performed by A.C. Cook of Wollongong.

An oil sample (RFT-2, at 2437 m KB) was analysed by 'whole oil' gas chromatography and for API gravity.

DISCUSSION OF RESULTS

The detailed headspace cuttings gas data are listed in Table-1. Well profiles of the Total C_{1-4} gases and percent 'wet' (C_{2-4}) gas are shown in Figures 1(a) and 1(b) respectively.

Total cuttings gas values were generally fairly lean throughout the Gippsland Limestone and the Lakes Entrance Formations (Figure 1(a)), but there is a significant gas increase in the Latrobe Group sediments where generally rich gas readings occurred between about 2450 m KB and T.D. Wet gas values are commonly above 25% in the Latrobe Group (Figure 1(b)), and this in conjunction with the generally rich total gas levels observed, indicates that shales and siltstones in Latrobe Group have good oil and gas source potential.

Gasoline - range (C_{4-7}) hydrocarbons are generally moderately rich through the penetrated section (Appendix-1 and Figure 2), with the exception of a very rich zone in the Latrobe Group between about 2525 m KB and 2540 m KB.

Total Organic Carbon (T.O.C.) values in the Gippsland Limestone and the Lakes Entrance Formation are poor (average T.O.C.'s of 0.40% and 0.49% respectively - Table 2) compared to the fairly organic rich Latrobe Group sediments (average T.O.C. = 1.96%).

Vitrinite reflectance data (Table 3 and Figure 3) indicate that the entire penetrated section is presently immature for significant hydrocarbon generation. Detailed vitrinite reflectance and exinite fluorescence data are given in Appendix-2.

Present-day immaturity of the penetrated section is also shwon by Rock-Eval pyrolysis Tmax values (Table 4) and a plot of Tmax vs Hydrogen Index (Figure 4) indicates that Type III kerogen (i.e. woody-herbaceous-coaly organic matter) is present in the Lakes Entrance Formation and Latrobe Group samples analysed.

Elemental analysis of Latrobe Group kerogen samples (Table 5) followed by calculation of approximate atomic ratios of hydrogen: carbon (H/C), oxygen: carbon O/C and nitrogen: carbon (N/C) - Table 6, confirms the prevalence of land derived Type III organic matter. This is obvious when atomic H/C is plotted againts atomic O/C on a modified Van Krevelen diagram (Figure 5). Based on organic richness and organic matter type, the Latrobe Group sediments have very good oil and gas source potential.

The C_{15+} extract and liquid chromatography results are listed in Table 7. The richest extracts are from the Latrobe Group although only the deepest Latrobe Group sample at 2645-2660 m KB yielded a very rich total extract of

2203 ppm indicating very good oil source potential. The other Gippsland Limestone, Lakes Entrance Formation and Latrobe Group samples, gave moderately rich total extracts. The immaturity of these samples is indicated by the predominance of non-hydrocarbon (i.e. asphaltenes and N.S.O. resins) present in all the samples. The corresponding C_{15+} saturate chromatograms (Figures 6-12) also show present-day organic immaturity, although the character of the organic matter varies from sample to sample being predominantly marine-derived in the Gippsland Limestone samples, a mixture of marine and land-derived material in the Lakes Entrance Formation, and predominantly land-derived organics in the Latrobe Group.

Figure 12 is whole oil chromatogram of an oil sample (RFT-2 at 2437 m KB) recovered from West Fortescue-1. This oil is a mature (API = 38.5^{o}) paraffinic-based crude maximizing in the gasoline hydrocarbon range. This oil has obviously migrated from deeper in the section.

CONCLUSIONS

1. The entire penetrated section is presently immature for significant hydrocarbon generation.

2. Shales and siltstones from the Latrobe Group are rated as having very good oil and gas source potential.

3. Oil encountered in the top of Latrobe Group reservoir is a mature, paraffinic-based crude which has been generated and migrated from deeper in the section.

ESSO AUSTRALIA LTD.

TABLE 1

C1-C4 HYDROCARBON ANALYSES

REPORT A - HEADSPACE GAS

SIN - GIPPSLAND
LL - WEST FORTESCUE 1

MPLE NO.	DEPTH	GAS CONCENTRATION (VOLUME GAS PER MILLION VOLUMES CUTTINGS) METHANE C1	ETHANE C2	PROPANE C3	IBUTANE IC4	NBUTANE C4	WET C2-C4	TOTAL C1-C4	WET/TOTAL PERCENT	GAS COMPOSITION (PERCENT) TOTAL GAS M	E	P	IB	NB	WET GAS E	P	IB	NB
3056 A	1715.00	2526	11	12	10	7	40	2566	1.56	98.	0.	0.	0.	0.	27.	30.	25.	17.
3056 C	1745.00	188	5	5	4	3	17	205	8.29	92.	2.	2.	2.	1.	29.	29.	24.	18.
3056 E	1775.00	149	2	2	2	1	7	156	4.49	96.	1.	1.	1.	1.	29.	29.	29.	14.
3056 G	1805.00	771	33	47	37	19	136	907	14.99	85.	4.	5.	4.	2.	24.	35.	27.	14.
3056 I	1835.00	282	8	10	10	6	34	316	10.76	89.	3.	3.	3.	2.	24.	29.	29.	18.
3056 K	1865.00	508	12	10	6	4	32	540	5.93	94.	2.	2.	1.	1.	38.	31.	19.	13.
3056 M	1895.00	769	28	83	54	30	195	964	20.23	80.	3.	9.	6.	3.	14.	43.	28.	15.
3056 O	1925.00	1043	14	50	23	10	97	1140	8.51	91.	1.	4.	2.	1.	14.	52.	24.	10.
3056 Q	1955.00	521	19	38	36	16	109	630	17.30	83.	3.	6.	6.	3.	17.	35.	33.	15.
3056 S	1985.00	210	8	14	12	6	40	250	16.00	84.	3.	6.	5.	2.	20.	35.	30.	15.
3056 U	2015.00	429	16	29	26	13	84	513	16.37	84.	3.	6.	5.	3.	19.	35.	31.	15.
3056 W	2045.00	1850	99	333	182	62	676	2526	26.76	73.	4.	13.	7.	2.	15.	49.	27.	9.
3056 Y	2075.00	1398	67	126	87	40	320	1718	18.63	81.	4.	7.	5.	2.	21.	39.	27.	13.
3057 A	2105.00	1277	119	186	97	37	439	1716	25.58	74.	7.	11.	6.	2.	27.	42.	22.	8.
3057 C	2135.00	2355	235	146	321	80	782	3317	23.58	76.	7.	4.	10.	2.	30.	19.	41.	10.
3057 E	2165.00	1395	79	112	77	35	303	1698	17.84	82.	5.	7.	5.	2.	26.	37.	25.	12.
3057 G	2195.00	1976	139	155	91	33	418	2394	17.46	83.	6.	6.	4.	1.	33.	37.	22.	8.
3057 I	2225.00	207	6	6	3	1	16	223	7.17	93.	3.	3.	1.	0.	38.	38.	19.	6.
3057 K	2255.00	652	31	52	54	14	151	803	18.80	81.	4.	6.	7.	2.	21.	34.	36.	9.
3057 M	2285.00	67	4	7	9	2	22	89	24.72	75.	4.	8.	10.	2.	18.	32.	41.	9.
3057 O	2315.00	371	30	53	73	18	174	545	31.93	68.	6.	10.	13.	3.	17.	30.	42.	10.
3057 Q	2345.00	336	34	59	94	21	208	596	34.90	65.	6.	10.	16.	4.	16.	28.	45.	10.
3057 S	2375.00	379	0	114	257	55	426	805	52.92	47.	0.	14.	32.	7.	0.	27.	60.	13.
3057 U	2405.00	62	13	41	85	20	159	221	71.95	28.	6.	19.	38.	9.	8.	26.	53.	13.
3057 W	2435.00	879	233	373	236	147	989	1868	52.94	47.	12.	20.	13.	8.	24.	38.	24.	15.
3057 Y	2465.00	416	146	222	118	66	552	970	56.91	43.	15.	23.	12.	7.	26.	40.	21.	12.
3058 A	2495.00	2077	619	540	184	141	1484	3561	41.67	58.	17.	15.	5.	4.	42.	36.	12.	10.
3058 C	2525.00	25613	5375	3311	453	500	9639	35252	27.34	73.	15.	9.	1.	1.	56.	34.	5.	5.
3058 E	2555.00	8682	2849	2797	599	674	6919	15601	44.35	56.	18.	18.	4.	4.	41.	40.	9.	10.
3058 G	2585.00	15590	2720	1104	213	115	4152	19542	21.25	79.	14.	6.	1.	1.	66.	27.	5.	3.
3058 I	2615.00	14778	1799	714	118	76	2707	17485	15.48	85.	10.	4.	1.	0.	66.	26.	4.	3.
3058 K	2645.00	5292	1187	954	187	150	2478	7770	31.89	68.	15.	12.	2.	2.	48.	38.	8.	6.
3058 M	2675.00	2361	881	549	161	77	1668	4049	41.20	59.	22.	14.	4.	2.	53.	33.	10.	5.

TABLE 2 TOTAL ORGANIC CARBON REPORT

SIN - GIPPSLAND
LL - WEST FORTESCUE 1

AMPLE NO.	DEPTH	AGE	FORMATION	AN	TOC%	AN	TOC%	AN	TOC%	DESCRIPTION
3056 B	1730.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.43					LT-BRN GY CLYST
3056 D	1760.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.48					LT-BRN GY CLYST
3056 F	1790.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.47					LT-BRN GY CLYST
3056 H	1820.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.46					LT-BRN GY CLYST
3056 J	1850.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.47					LT-BRN GY CLYST
3056 L	1880.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.37					LT-BRN GY CLYST,LMST
3056 N	1910.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.44					OL-GY CLYST,LT-GY LMST
3056 P	1940.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.34					OL-GY CLYST 60%,LMST 40%
3056 R	1970.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.37					OL-GY CLYST 70%,LMST 30%
3056 T	2000.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.38					OL-GY CLYST
3056 V	2030.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.32					OL-GY CLYST,LMST 15%
3056 X	2060.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.35					LT-OL GY CLYST
3056 Z	2090.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.36					LT-OL GY CLYST
3057 B	2120.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.36					LT-OL GY CLYST
3057 D	2150.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.41					LT-OL GY CLYST
3057 F	2180.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.41					LT-OL GY CLYST
3057 H	2210.00	PLEIST-MID MIOCENE	GIPPSLAND LMST	2	.41					LT-OL GY/OL-GY CLYST

===> DEPTH : 86.00 TO 2216.00 METRES. <=== I ===> AVERAGE TOC : .40 % EXCLUDING VALUES GREATER THAN 10.00 % <===

3057 J	2240.00	EARLY MIOCENE	LAKES ENTRANCE	2	.42					OL-GY CLYST
3057 L	2270.00	EARLY MIOCENE	LAKES ENTRANCE	2	.41					OL-GY CLYST
3057 N	2300.00	EARLY MIOCENE	LAKES ENTRANCE	2	.37					OL-GY CLYST
3057 P	2330.00	EARLY MIOCENE	LAKES ENTRANCE	2	.40					OL-GY CLYST
3057 R	2360.00	EARLY MIOCENE	LAKES ENTRANCE	2	.34					OL-GY CLYST
2965 Y	2366.20	EARLY MIOCENE	LAKES ENTRANCE	1	.61					MD GY SLTST,CALC
2965 X	2374.50	EARLY MIOCENE	LAKES ENTRANCE	1	.49					MD GY SLTY CLYST,MICA
3057 T	2390.00	EARLY MIOCENE	LAKES ENTRANCE	2	.46					OL-GY CLYST
2965 V	2400.00	EARLY MIOCENE	LAKES ENTRANCE	1	.60					MD GY SLTY CLYST,MICA
2965 S	2411.10	EARLY MIOCENE	LAKES ENTRANCE	1	.94					MD GY SLTY CLYST,CALC
2965 U	2419.20	EARLY MIOCENE	LAKES ENTRANCE	1	.59					MD GY SLTST,CALC
3057 V	2420.00	EARLY MIOCENE	LAKES ENTRANCE	2	.31					OL-GY CLYST

===> DEPTH : 2216.00 TO 2421.00 METRES. <=== I ===> AVERAGE TOC : .49 % EXCLUDING VALUES GREATER THAN 10.00 % <===

2965 I	2425.20	EARLY EOC-LATE PALEO	LATROBE GROUP	1	2.35					LT OL/GY SLTST,MICA
2965 F	2429.70	EARLY EOC-LATE PALEO	LATROBE GROUP	1	1.40					MD-DK GY SNDY SLTST
2964 Y	2447.10	EARLY EOC-LATE PALEO	LATROBE GROUP	1	4.76					DK GY SH,QTZ LAMINAE
3057 X	2450.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	.42					OL-GY CLYST
2964 X	2454.30	EARLY EOC-LATE PALEO	LATROBE GROUP	1	.77					GY SLTST,ABUNDANT QTZ
3057 Z	2460.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	.45					OL-GY CLYST
3058 B	2510.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	.37					OL-GY CLYST
2964 F	2520.00	EARLY EOC-LATE PALEO	LATROBE GROUP	1	6.26					DK GY SLTY SH

TABLE 2 (CONT'D) TOTAL ORGANIC CARBON REPORT

ASIN - GIPPSLAND
ELL - WEST FORTESCUE 1

SAMPLE NO.	DEPTH	AGE	FORMATION	AN	TOC%	AN	TOC%	AN	TOC%	DESCRIPTION
2964 A	2529.20	EARLY EOC-LATE PALEO	LATROBE GROUP	1	2.50					MD DK GY SLTST
2964 E	2531.00	EARLY EOC-LATE PALEO	LATROBE GROUP	1	.60					LT-MD GY SNDY SLTST
*3056 D	2540.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	22.20					OL-GY CLYST,COAL LAMINAE
*2964 O	2549.00	EARLY EOC-LATE PALEO	LATROBE GROUP	1	3.34					DK GY SH
*2964 B	2565.60	EARLY EOC-LATE PALEO	LATROBE GROUP	1	5.59					DK GY SLTST,CARB,MICA
*3058 F	2570.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	.74					LT-OL GY CLYST
*3058 H	2600.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	.56					LT-OL GY CLYST
*3058 J	2630.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	.65					OL-GY CLYST
*3058 L	2660.00	EARLY EOC-LATE PALEO	LATROBE GROUP	2	.62					LT-OL GY/M DK-GY CLYST

===> DEPTH : 2423.00 TO 2660.00 METRES. <=== I ===> AVERAGE TOC : 1.96 % EXCLUDING VALUES GREATER THAN 10.00 % <===

TABLE 3 VITRINITE REFLECTANCE REPORT

SIN - GIPPSLAND
LL - WEST FORTESCUE 1

SAMPLE NO.	DEPTH	AGE	FORMATION	AN	MAX. RO	FLUOR. COLOUR	NO.CNTS.	MACERAL TYPE
2965 X	2374.50	EARLY MIOCENE	LAKES ENTRANCE	5	.50	OR	3	I>OR=E>OR=V DOM RARE
2964 Y	2447.10	EARLY EOC-LATE PALEO	LATROBE GROUP	5	.58	YEL-OR	27	V>E>I DOM MAJOR
2964 A	2529.20	EARLY EOC-LATE PALEO	LATROBE GROUP	5	.52	DULL OR-YEL	30	V>E>I DOM ABUNDANT

TABLE 4 ROCK EVAL ANALYSES

.SIN - GIPPSLAND REPORT A - SULPHUR & PYROLYZABLE CARBON
LL - WEST FORTESCUE 1

MPLE NO.	DEPTH	SAMPLE TYPE	AGE	TMAX	S1	S2	S3	PI	S2/S3	PC	COMMENTS
965 Y	2366.2	SWC	EARLY MIOCENE	410.	.09	.19	.26	.32	.73	.02	
965 X	2374.5	SWC	EARLY MIOCENE	410.	.05	.13	.19	.28	.68	.01	
965 V	2400.0	SWC	EARLY MIOCENE	411.	.04	.12	.19	.25	.63	.01	
965 S	2411.1	SWC	EARLY MIOCENE	411.	.04	.14	.23	.22	.60	.01	
965 N	2419.2	SWC	EARLY MIOCENE	413.	.04	.07	.18	.40	.38	.00	
965 I	2425.2	SWC	EARLY EOC-LATE PALEO	412.	.07	.15	.17	.32	.88	.01	
965 F	2429.7	SWC	EARLY EOC-LATE PALEO	395.	.55	.04	.29	.95	.13	.04	
964 Y	2447.1	SWC	EARLY EOC-LATE PALEO	421.	.45	6.01	.39	.07	15.41	.53	
964 X	2454.3	SWC	EARLY EOC-LATE PALEO	419.	.04	.06	.14	.40	.42	.00	
964 F	2520.0	SWC	EARLY EOC-LATE PALEO	418.	.39	5.24	.32	.07	16.37	.46	
964 A	2529.2	SWC	EARLY EOC-LATE PALEO	425.	.40	3.15	.12	.11	26.25	.29	
964 E	2531.0	SWC	EARLY EOC-LATE PALEO	412.	.06	.09	.00	.43	.00	.01	
964 D	2549.0	SWC	EARLY EOC-LATE PALEO	421.	.33	3.57	.23	.08	15.52	.32	
964 B	2565.6	SWC	EARLY EOC-LATE PALEO	417.	.82	11.10	.41	.07	27.07	.99	

=PRODUCTIVITY INDEX PC=PYROLYZABLE CARBON TC=TOTAL CARBON HI=HYDROGEN INDEX OI=OXYGEN INDEX

TABLE 4 (CONT'D)

ROCK EVAL ANALYSES

SIN - GIPPSLAND REPORT B - TOTAL CARBON,H/O INDICES
LL - WEST FORTESCUE 1

MPLE NO.	DEPTH	SAMPLE TYPE	FORMATION	TC	HI	OI	HI/OI	COMMENTS
965 Y	2366.2	SWC	LAKES ENTRANCE	.61	31.	42.	.74	
965 X	2374.5	SWC	LAKES ENTRANCE	.49	26.	38.	.68	
965 V	2400.0	SWC	LAKES ENTRANCE	.60	20.	11.	1.82	
965 S	2411.1	SWC	LAKES ENTRANCE	.94	14.	24.	.58	
965 N	2419.2	SWC	LAKES ENTRANCE	.59	11.	30.	.37	
965 I	2425.2	SWC	LATROBE GROUP	2.35	6.	7.	.86	
965 F	2429.7	SWC	LATROBE GROUP	1.40	2.	20.	.10	
964 Y	2447.1	SWC	LATROBE GROUP	4.76	126.	8.	15.75	
964 X	2454.3	SWC	LATROBE GROUP	.77	7.	18.	.39	
964 F	2520.0	SWC	LATROBE GROUP	6.26	83.	5.	16.60	
964 A	2529.2	SWC	LATROBE GROUP	2.50	126.	4.	31.50	
964 E	2531.0	SWC	LATROBE GROUP	.60	15.	0.	.00	
964 D	2549.0	SWC	LATROBE GROUP	3.34	106.	6.	17.67	
964 B	2565.6	SWC	LATROBE GROUP	5.59	198.	7.	28.29	

I=PRODUCTIVITY INDEX PC=PYROLYZABLE CARBON TC=TOTAL CARBON HI=HYDROGEN INDEX OI=OXYGEN INDEX

TABLE 5

KEROGEN ELEMENTAL ANALYSIS REPORT

ASIN - GIPPSLAND
ELL - WEST FORTESCUE 1

SAMPLE NO.	DEPTH	SAMPLE TYPE	--- ELEMENTAL % (ASH FREE) ---						COMMENTS
			N%	C%	H%	S%	O%	ASH%	
2965 H	2427.50	SWC	1.11	68.19	5.17	.00	25.54	5.20	
2965 G	2428.10	SWC	.95	72.25	5.42	.00	21.38	12.01	HIGH ASH
2965 E	2431.10	SWC	.66	63.18	5.51	.00	30.65	5.80	
2964 Z	2446.10	SWC	.88	69.70	4.74	.00	24.69	6.45	
2964 Y	2447.10	SWC	.69	71.51	4.64	.00	23.17	11.21	
2964 F	2520.00	SWC	.55	71.81	4.56	.00	23.08	11.31	
2964 A	2529.20	SWC	.79	74.38	5.31	.00	19.52	4.72	
2964 D	2549.00	SWC	.80	72.00	5.29	.00	21.91	8.82	
2964 C	2560.20	SWC	.73	71.78	5.21	.00	22.29	12.59	HIGH ASH
2964 B	2565.60	SWC	.67	65.17	4.60	.00	29.57	4.28	

TABLE 6

KEROGEN ELEMENTAL ANALYSIS REPORT

ASIN - GIPPSLAND
ELL - WEST FORTESCUE 1

SAMPLE NO.	DEPTH	SAMPLE TYPE	AGE	FORMATION	ATOMIC RATIOS H/C	O/C	N/C	COMMENTS
72965 H	2427.50	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.91	.28	.01	
72965 G	2428.10	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.90	.22	.01	HIGH ASH
72965 E	2431.10	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	1.05	.36	.01	
72964 Z	2446.10	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.82	.27	.01	
72964 Y	2447.10	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.78	.24	.01	
72964 F	2529.00	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.76	.24	.01	
72964 A	2529.20	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.86	.20	.01	
72964 D	2549.00	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.88	.23	.01	
72964 C	2566.20	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.87	.23	.01	HIGH ASH
72964 B	2565.60	SWC	EARLY EOC-LATE PALEO	LATROBE GROUP	.85	.34	.01	

TABLE 7

C15+ EXTRACT ANALYSES (OILS FLAGGED BY %)

SIN - GIPPSLAND
LL - WEST FORTESCUE 1

REPORT A - EXTRACT DATA - PPM (OIL=%)

MPLE NO.	DEPTH	TYPE	AN	AGE	TOTAL EXTRACT	*--- HYDROCARBONS ---* SATS.	AROMS.	TOTAL H/CARBS	*---------- NON-HYDROCARBONS ---------- ASPH.	ELUTED NSO	NON-ELT NSO	TOTAL NSO	SULPHUR	TOTAL NON/HC
3056 F	1790.00	CTS	2	PLEIST-MID MIOCENE	332.	31.	45.	76.	171.	53.	26.	79.	6.	25
3056 P	1940.00	CTS	2	PLEIST-MID MIOCENE	231.	0.	0.	0.	143.	0.	0.	0.	0.	14
3057 H	2210.00	CTS	2	PLEIST-MID MIOCENE	411.	49.	57.	106.	249.	35.	21.	56.	0.	30
3057 K	2360.00	CTS	2	EARLY MIOCENE	310.	19.	41.	60.	197.	32.	21.	53.	0.	25
3057 X	2450.00	CTS	2	EARLY EOC-LATE PALEO	451.	31.	64.	95.	292.	42.	18.	60.	3.	35
3058 L	2660.00	CTS	2	EARLY EOC-LATE PALEO	2203.	66.	299.	365.	1540.	192.	91.	283.	15.	183

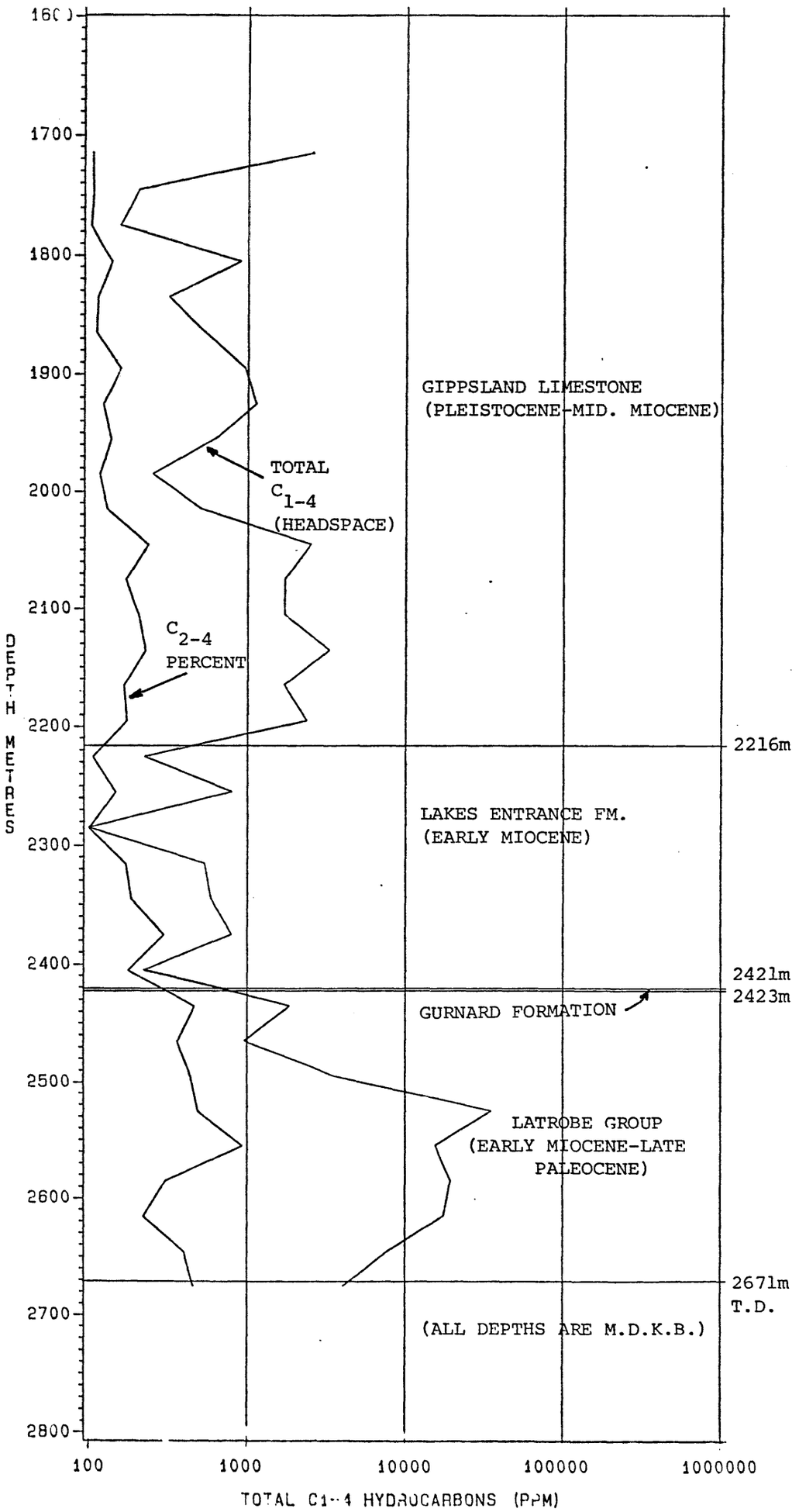
C15+ EXTRACT ANALYSES (OILS FLAGGED BY %)

SIN - GIPPSLAND
LL - WEST FORTESCUE 1

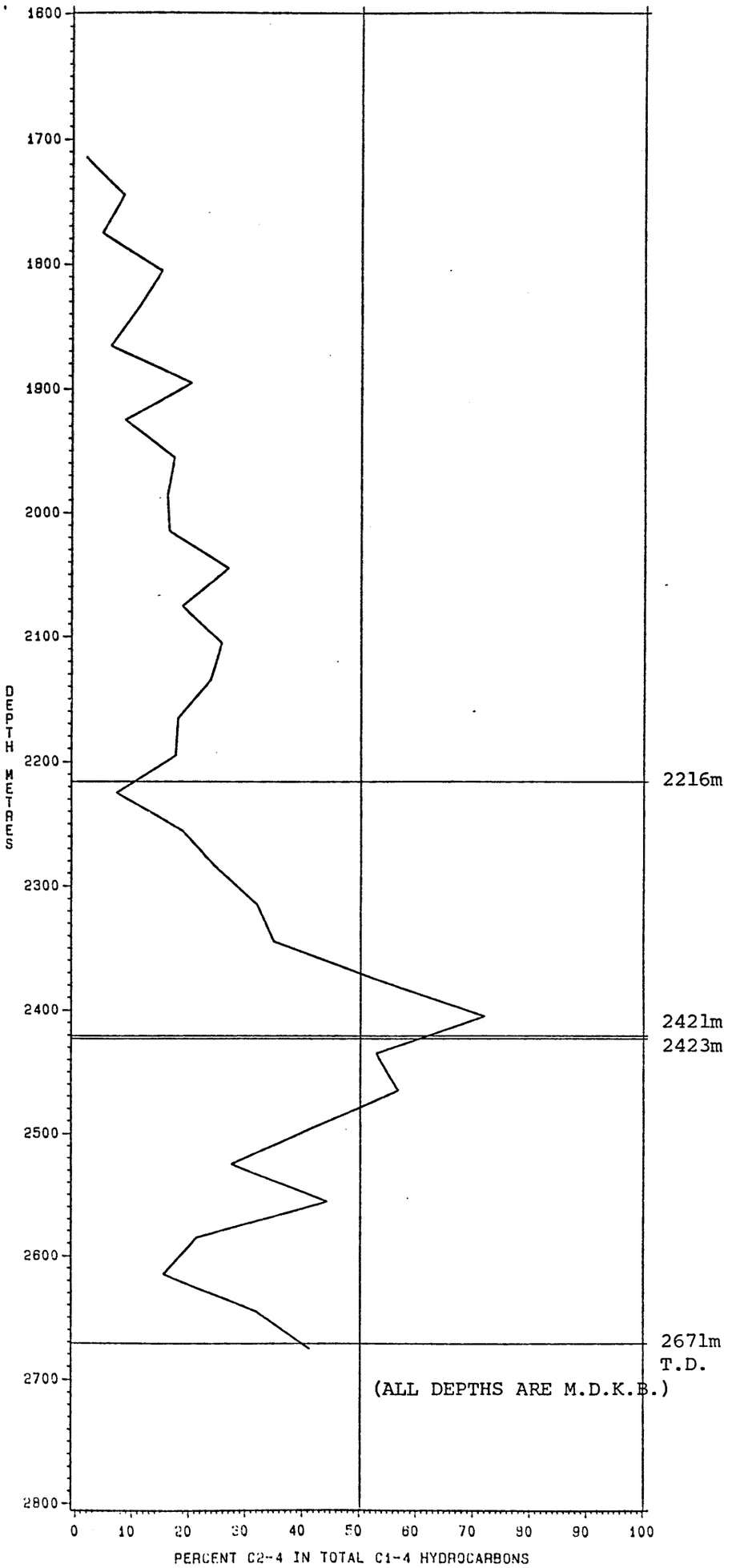
REPORT B - EXTRACTS % OF TOTAL

MPLE NO.	DEPTH	FORMATION	*HYDROCARBONS* SAT. %	AROM.%	*- NON-HYDROCARBONS -* NSO. %	ASPH.%	SULPH%	* SAT/AR	* HC/NHC	* COMMENTS
3056 F	1790.00	GIPPSLAND LMST	9.3	13.6	23.8	51.5	1.8	* .0	* .0	* IMMATURE, MAINLY MARINE
3056 P	1940.00	GIPPSLAND LMST	.0	.0	.0	61.9	.0	* .0	* .0	* IMMATURE, MAINLY MARINE
3057 H	2210.00	GIPPSLAND LMST	11.9	13.9	13.6	60.6	.0	* .0	* .0	* IMMATURE, MAINLY MARINE
3057 K	2360.00	LAKES ENTRANCE	6.1	13.2	17.1	63.5	.0	* .0	* .0	* IMMATURE, MARINE+NON-MA
3057 X	2450.00	LATROBE GROUP	6.9	14.2	13.3	64.7	.7	* .0	* .0	* IMMATURE, NON-MARINE
3058 L	2660.00	LATROBE GROUP	3.0	13.6	12.8	69.9	.7	* .0	* .0	* IMMATURE, NON-MARINE

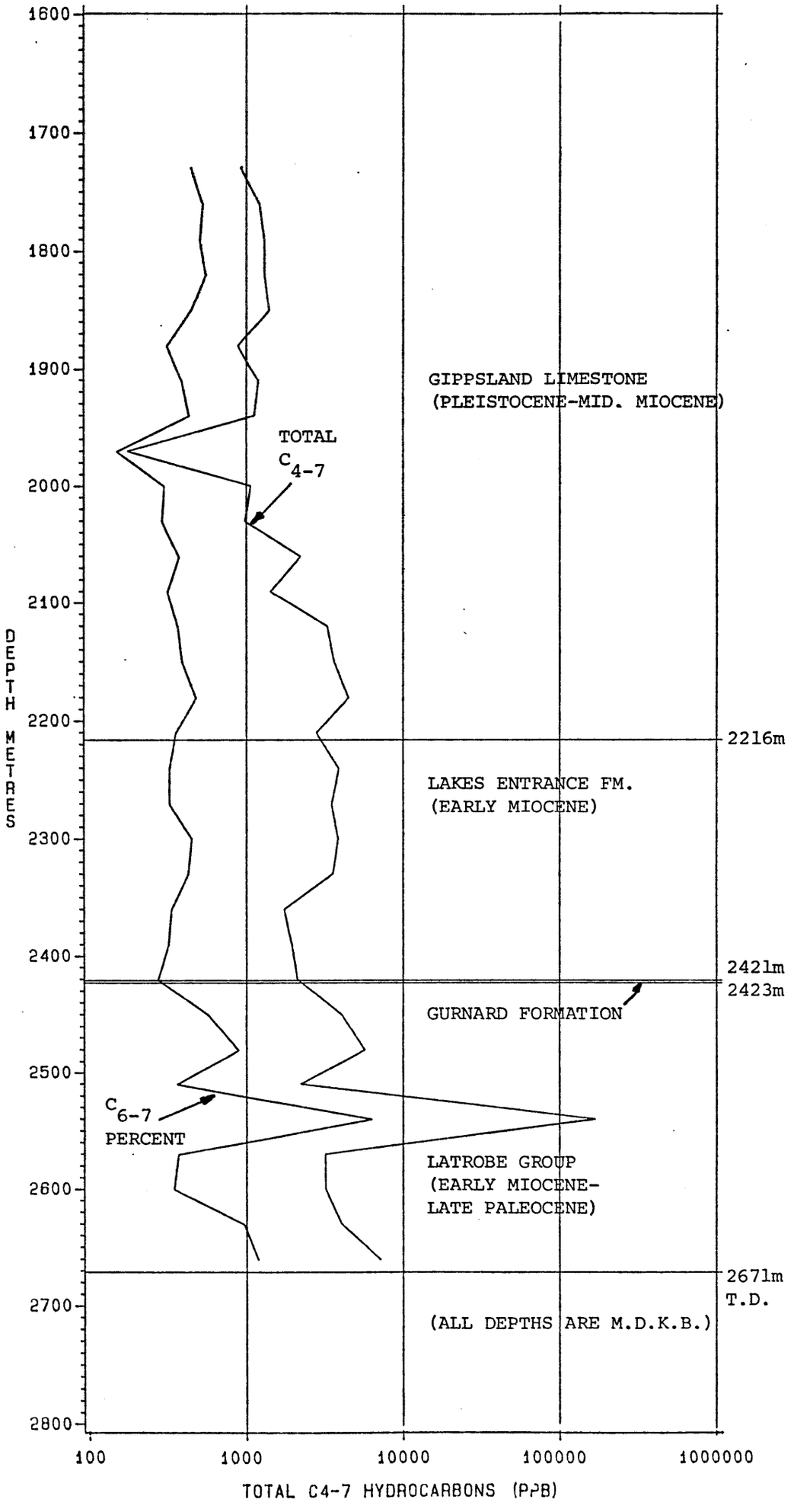
C_{1-4} CUTTINGS GAS LOG
WEST FORTESCUE 1
GIPPSLAND BASIN



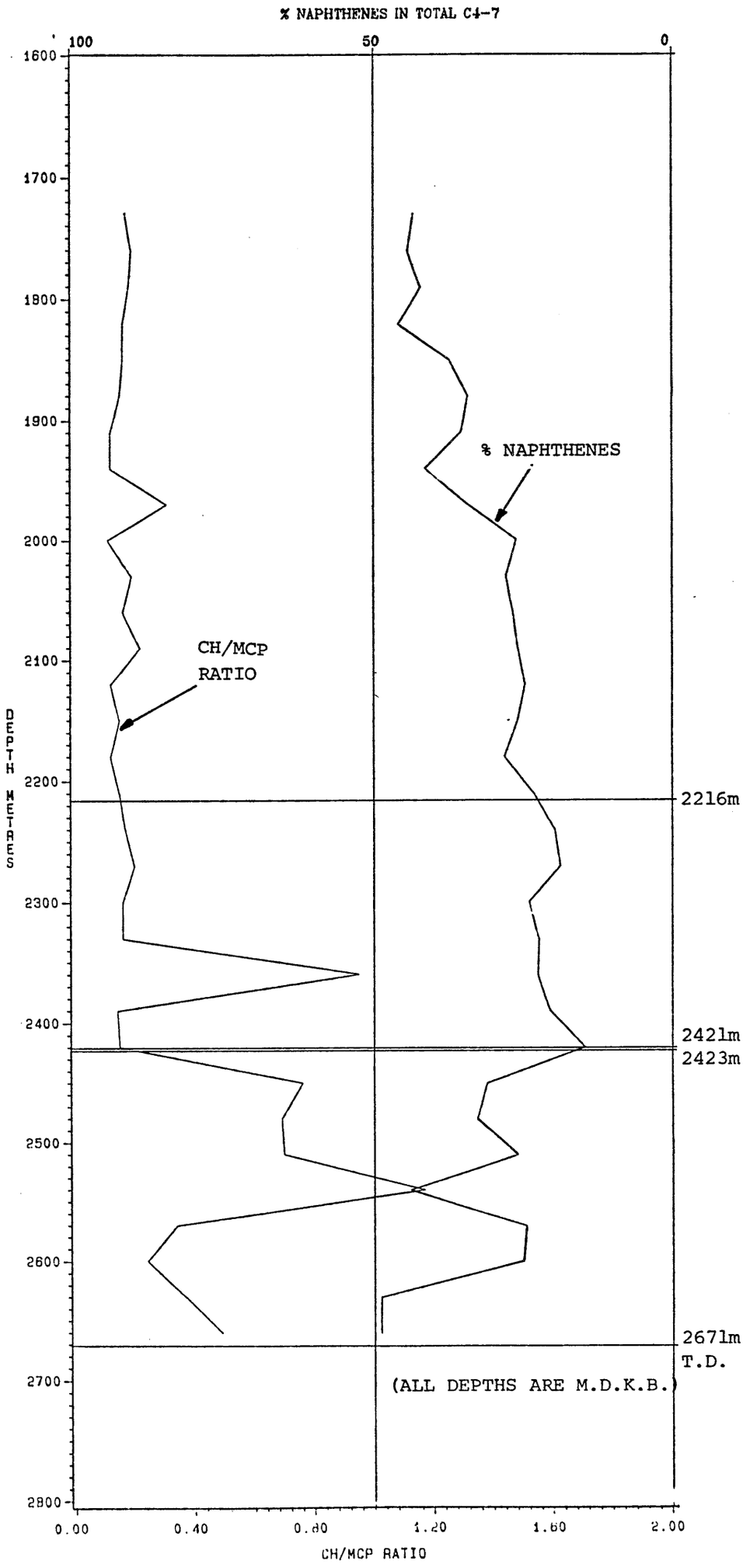
C_{1-4} CUTTINGS GAS LOG
WEST FORTESCUE 1
GIPPSLAND BASIN



C_{4-7} HYDROCARBON LOG
WEST FORTESCUE 1
GIPPSLAND BASIN



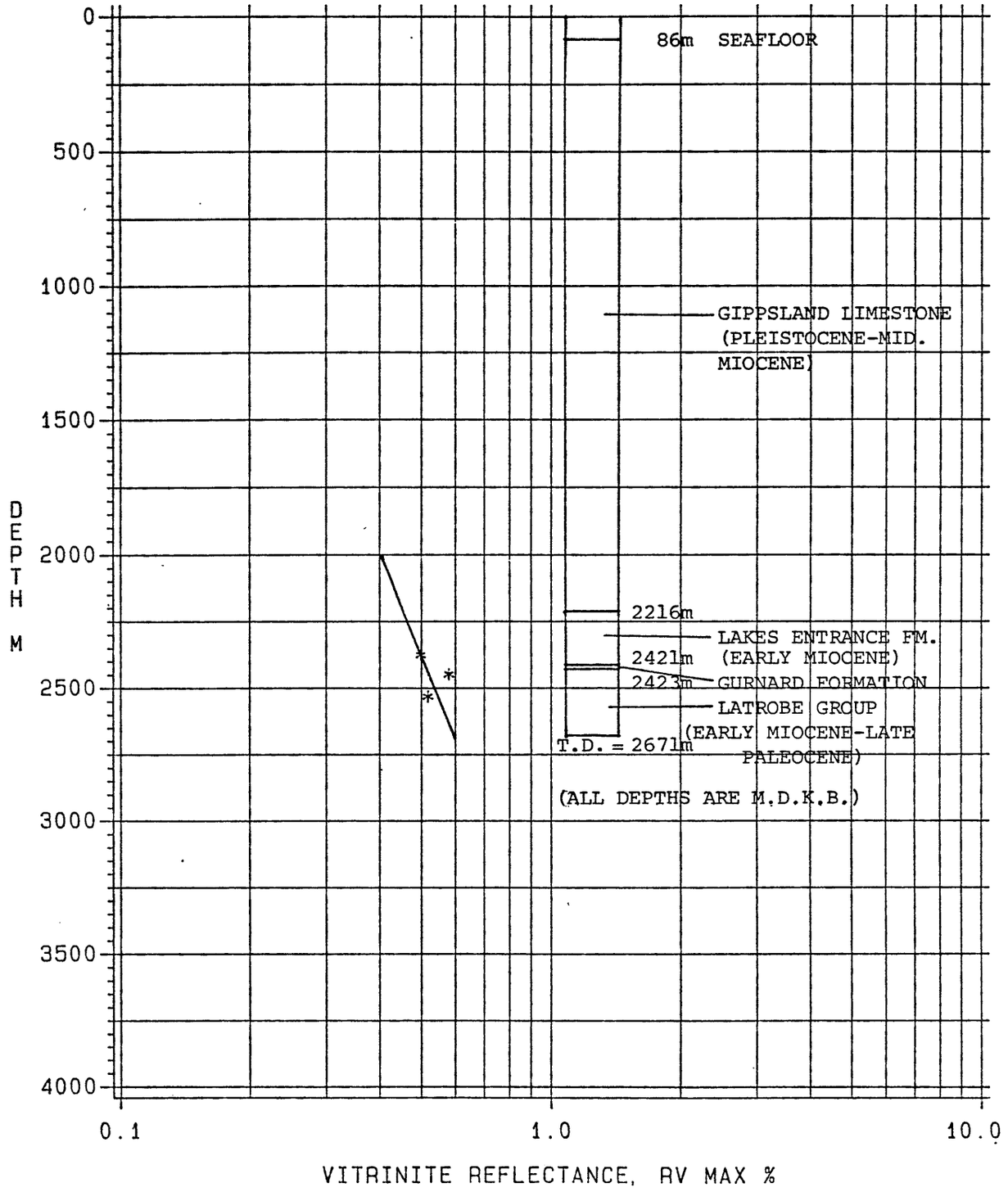
C_{4-7} HYDROCARBON LOG
WEST FORTESCUE 1
GIPPSLAND BASIN



VITRINITE REFLECTANCE vs. DEPTH

WEST FORTESCUE 1

GIPPSLAND BASIN

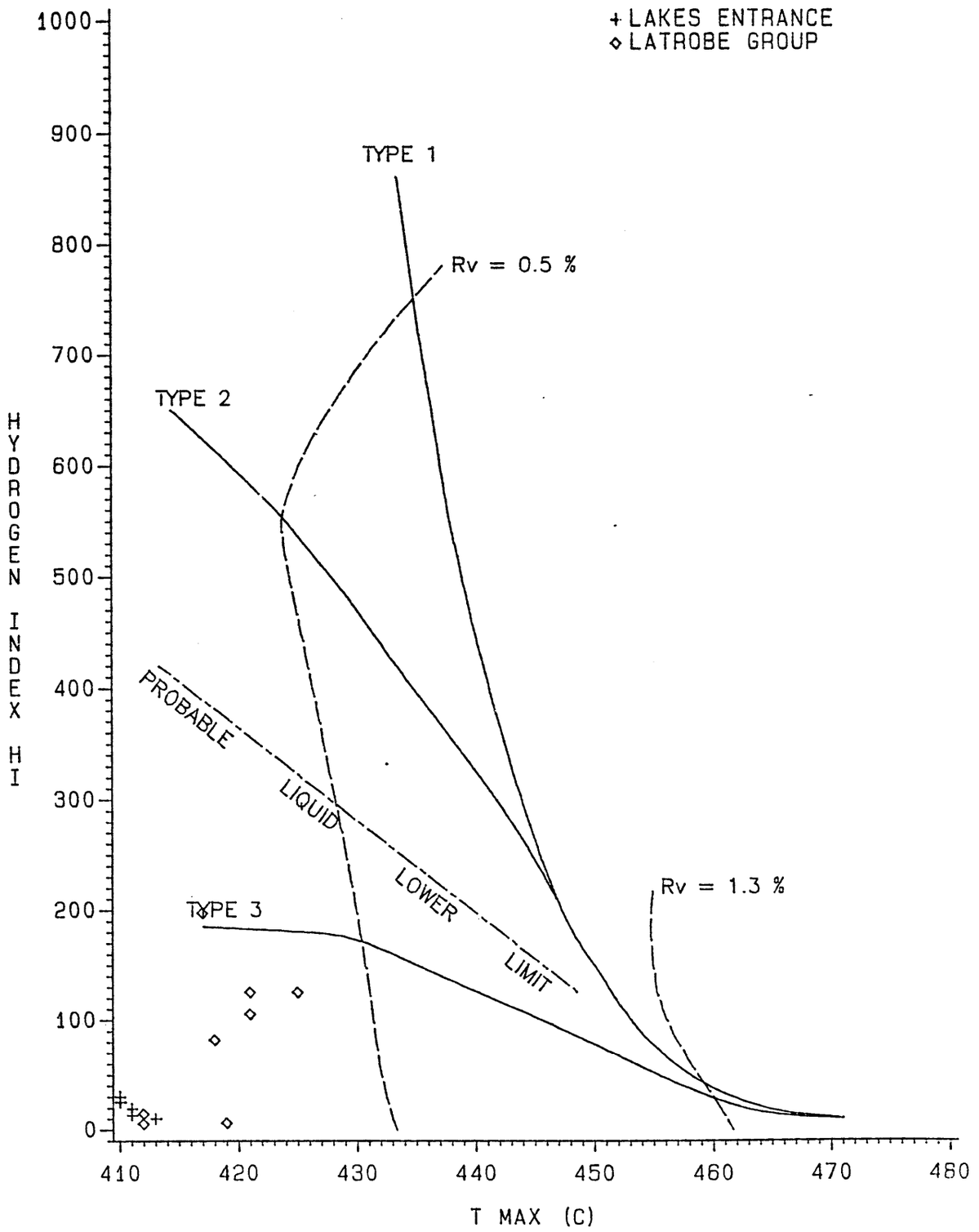


ROCKEVAL MATURATION PLOT

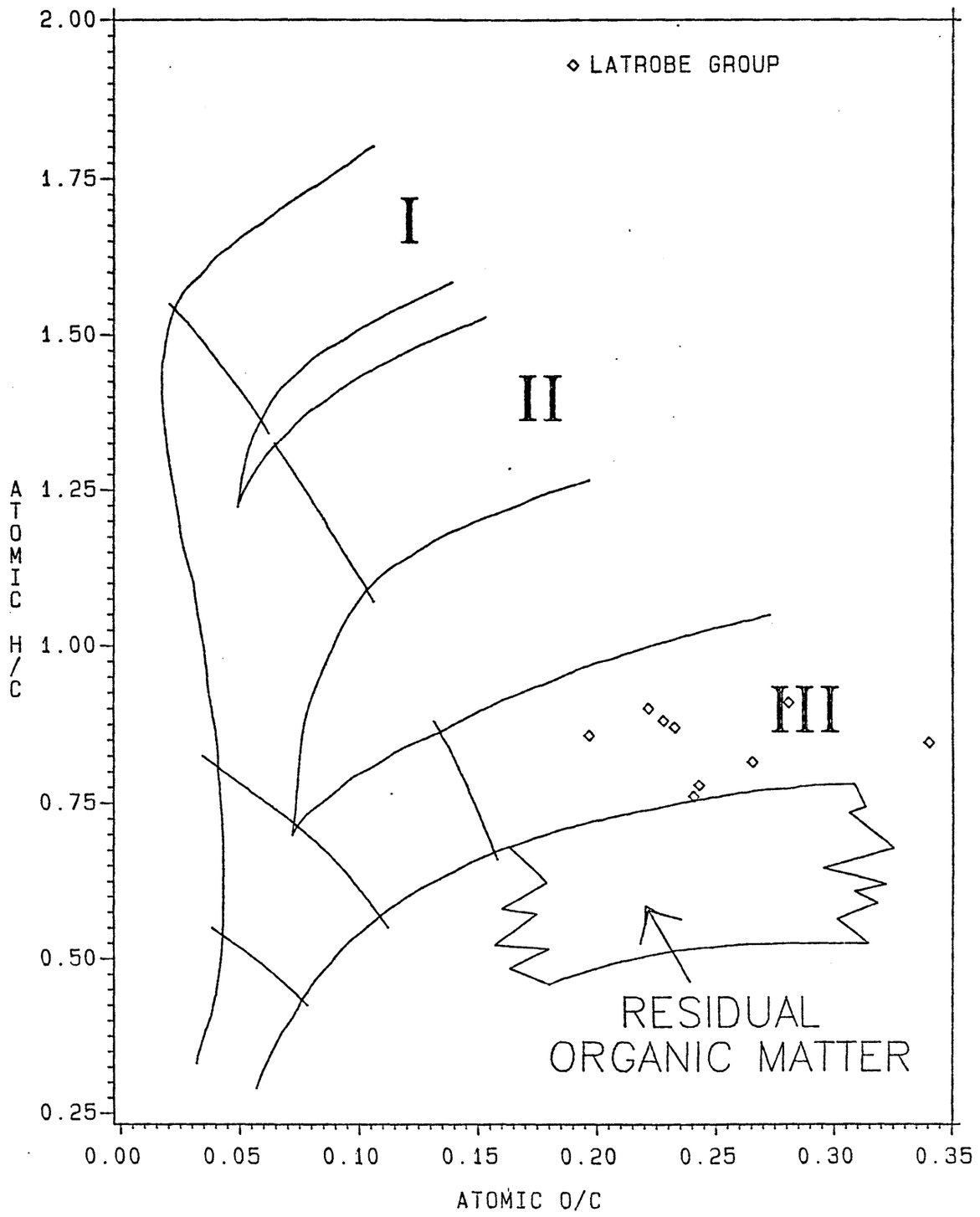
Tmax vs HYDROCEN INDEX

WEST FORTESCUE 1

GIPPSLAND BASIN



KEROGEN TYPE
WEST FORTESCUE 1
GIPPSLAND BASIN



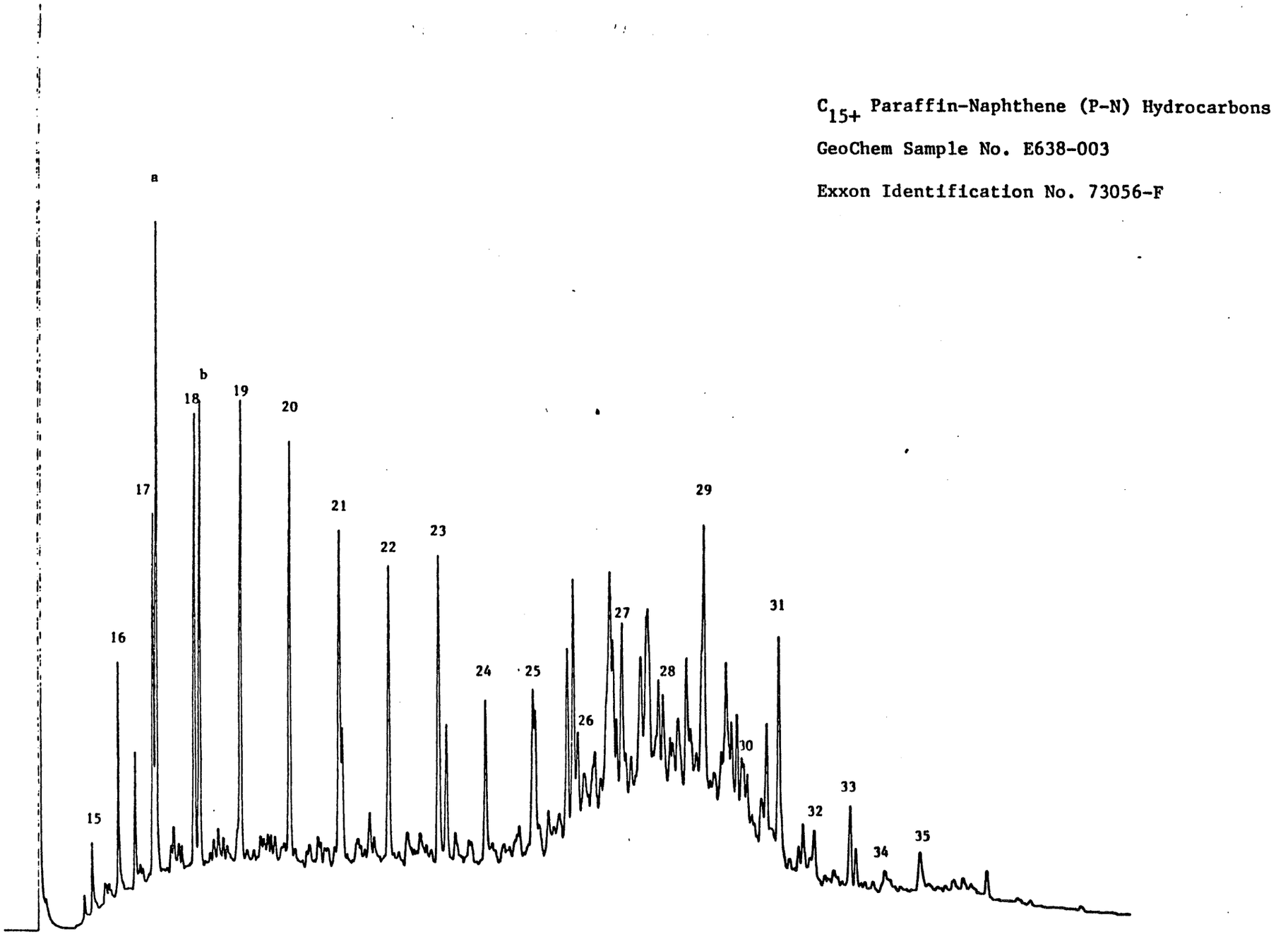


FIGURE 6: WEST FORTESCUE-1, Cuttings Extract, 1775-1790 m (KB), Gippsland Limestone

C_{15+} Paraffin-Naphthene (P-N) Hydrocarbons

GeoChem Sample No. E638-004

Exxon Identification No. 73056-P

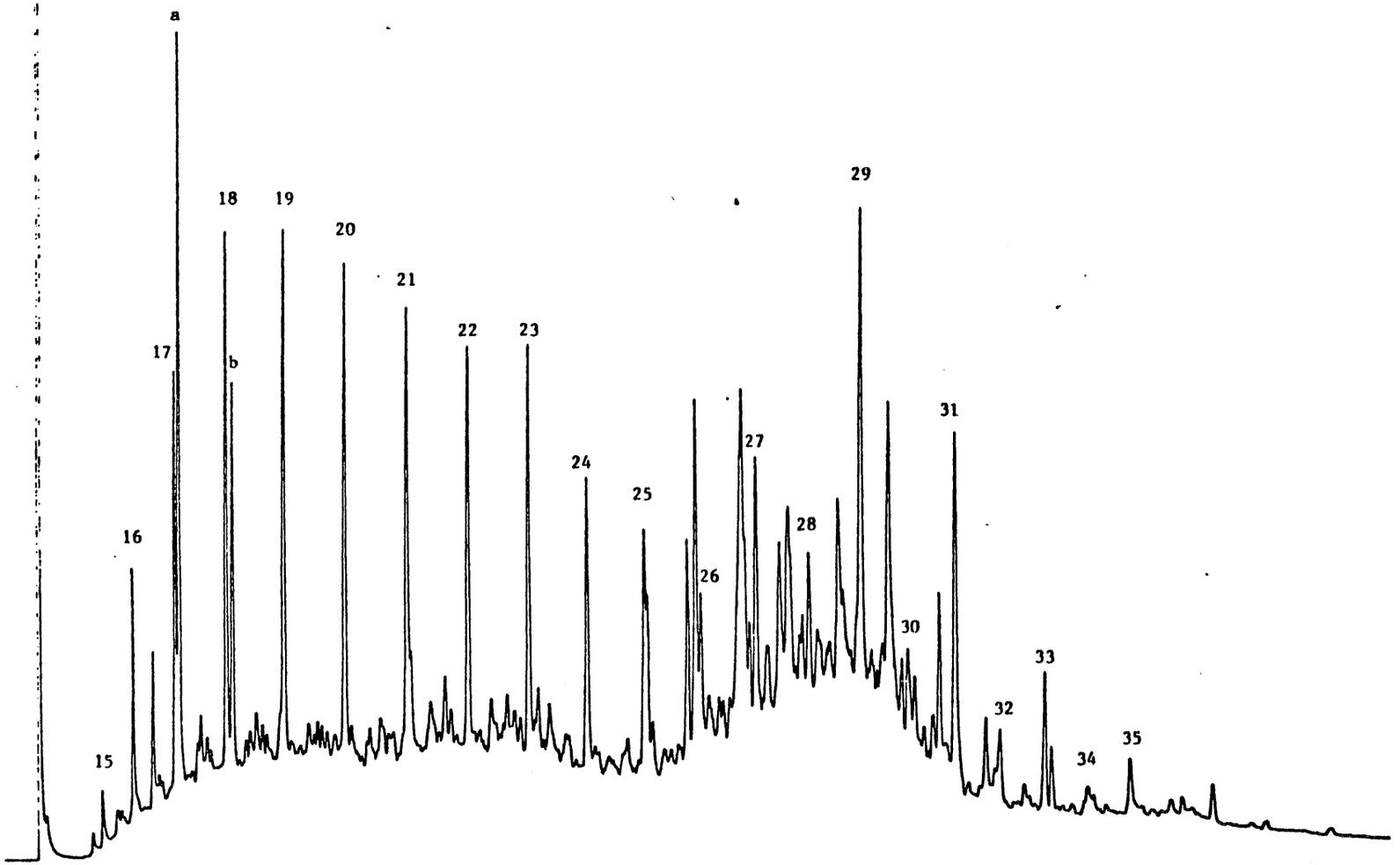


FIGURE 7: WEST FORTESCUE-1, Cuttings Extract, 1925-1940 m (KB), Gippsland Limestone

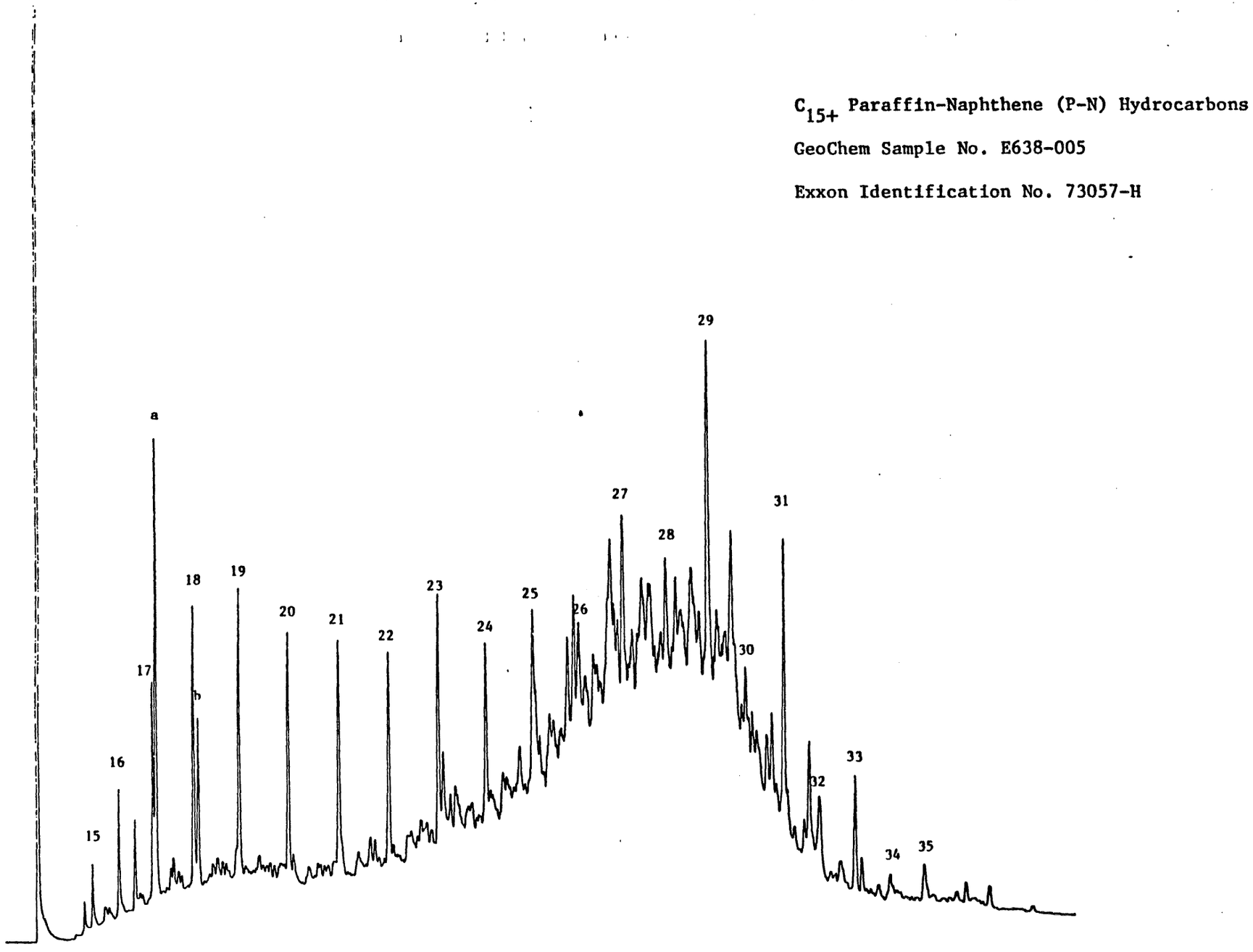


FIGURE 8: WEST FORTESCUE-1, Cuttings Extract, 2195-2210 m (KB), Gippsland Limestone

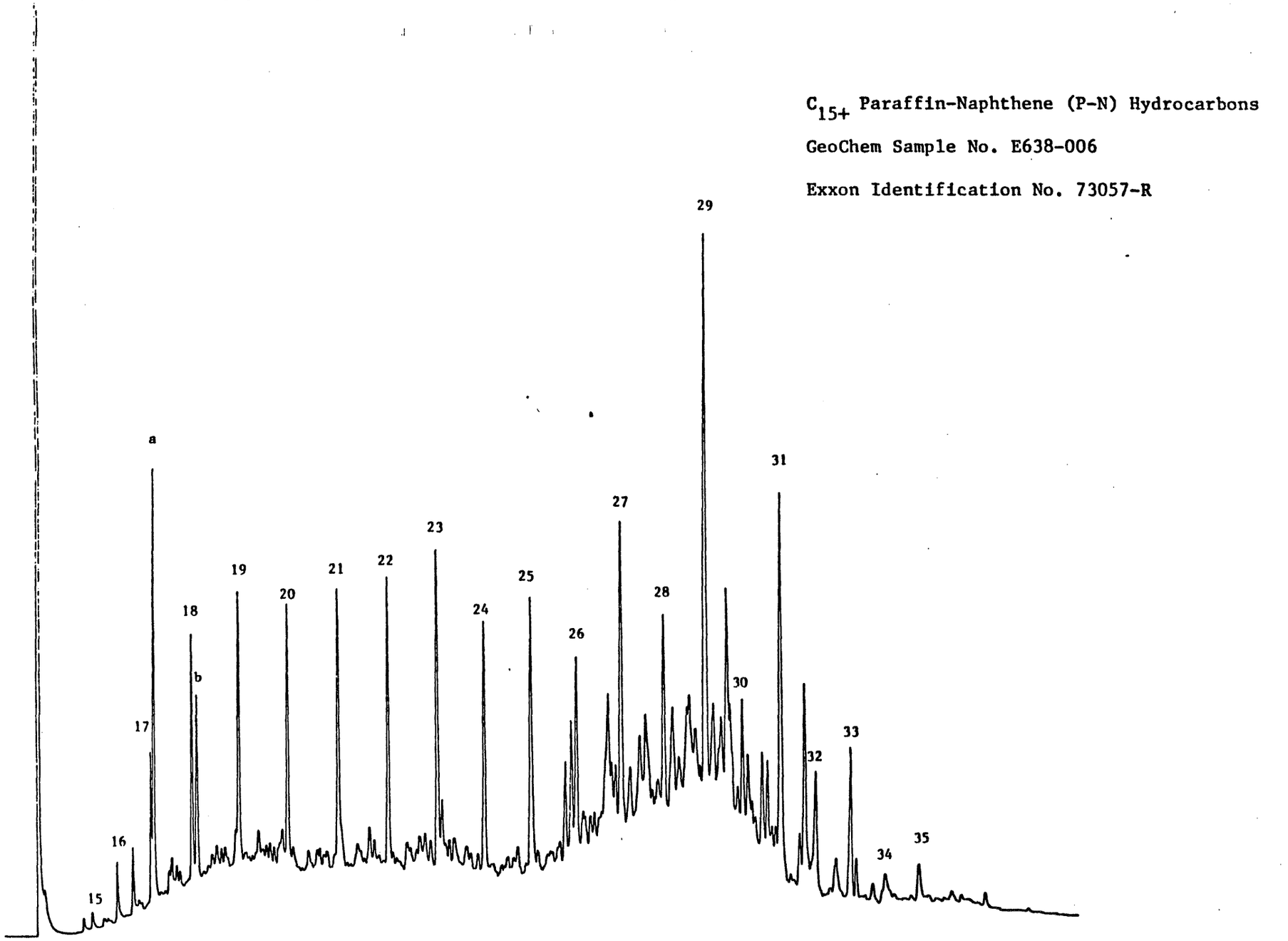


FIGURE 9: WEST FORTESCUE-1, Cuttings Extract, 2345-2360 m (KB), Lakes Entrance Fm.

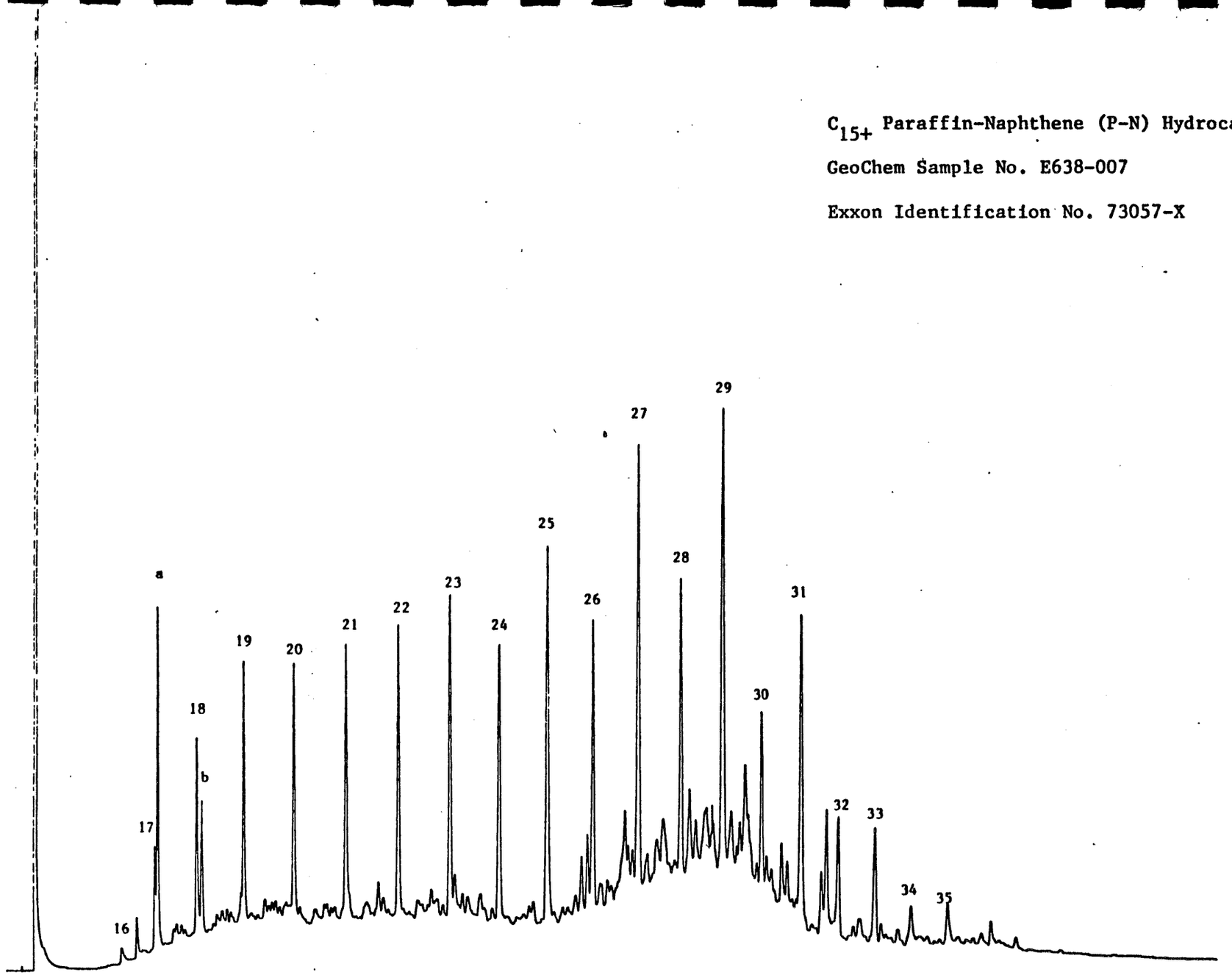


FIGURE 10: WEST FORTESCUE-1, Cuttings Extract, 2435-2450 m (KB), Latrobe Group

C_{15+} Paraffin-Naphthene (P-N) Hydrocarbons

GeoChem Sample No. E638-008

Exxon Identification No. 73058-L

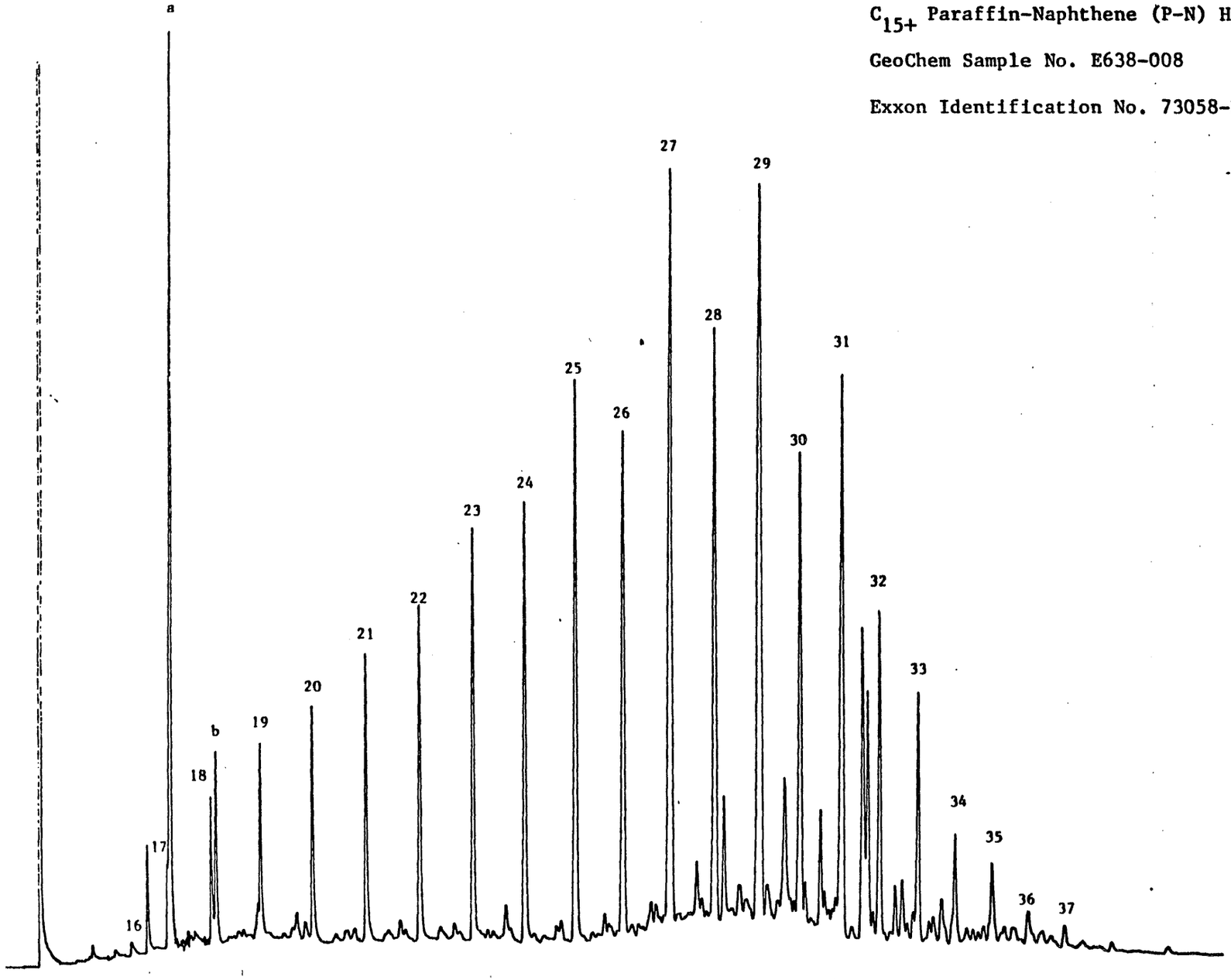


FIGURE 11 VTSM PORTESCUP Cuttings Extract 2645-2660 m (KB) Latrobe Group

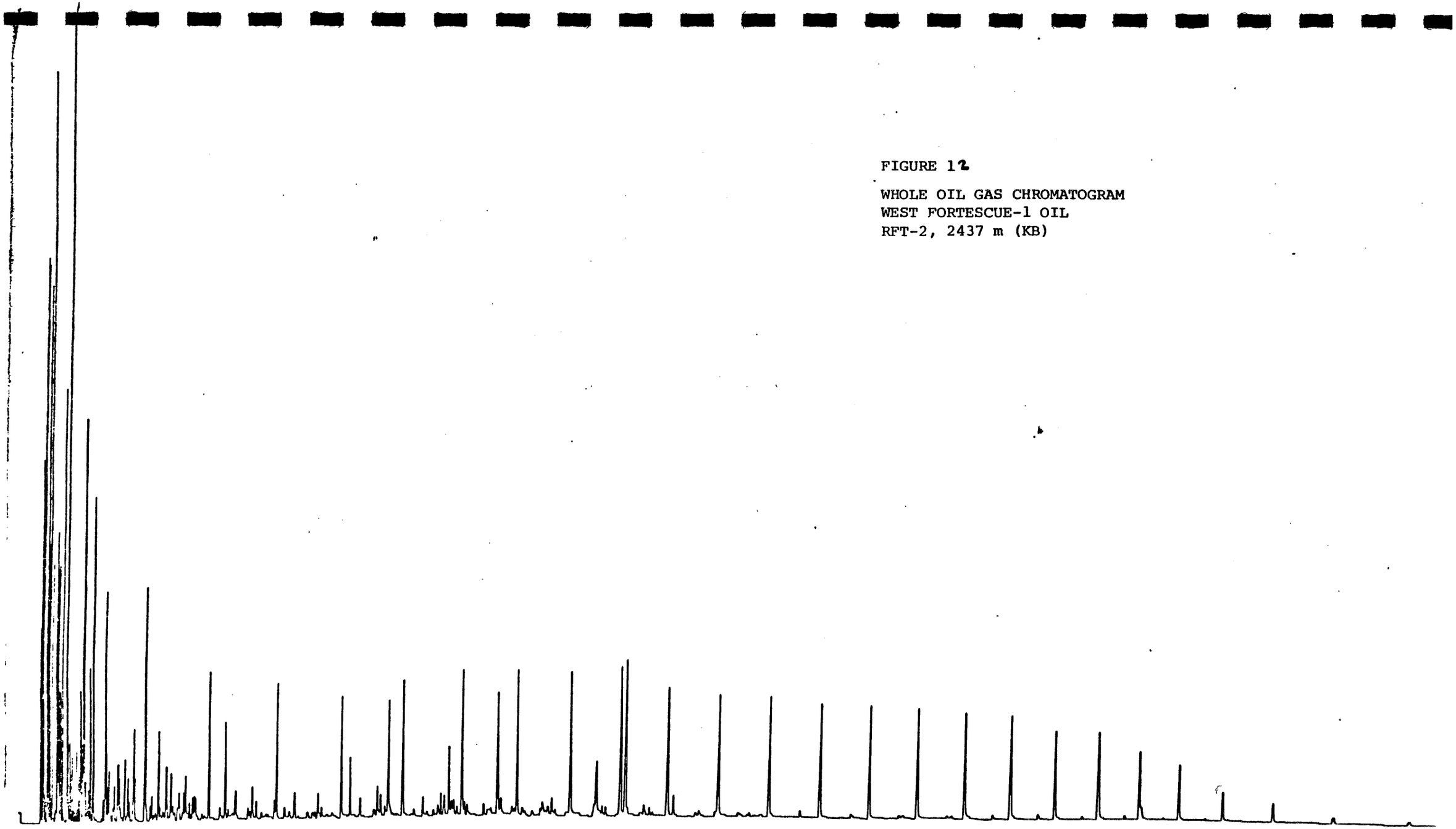


FIGURE 12

WHOLE OIL GAS CHROMATOGRAM
WEST FORTESCUE-1 OIL
RFT-2, 2437 m (KB)

APPENDIX 1

Detailed C_{4-7} Data Sheets

73056B AUSTRALIA,W. FORTESCUE-1, 1715-1730 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	37.8	4.05
ETHANE	0.0		1T2-DMCP	22.9	2.45
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	21.1	2.26	224-TMP	0.0	0.0
NBUTANE	35.8	3.84	NHEPTANE	72.0	7.73
IPENTANE	108.8	11.68	1C2-DMCP	16.5	1.77
NPENTANE	49.9	5.35	MCH	187.7	20.15
22-DMB	0.0	0.0			
CPENTANE	3.8	0.41			
23-DMB	2.6	0.28			
2-MP	47.5	5.10			
3-MP	38.0	4.08			
NHEXANE	48.0	5.15			
MCP	86.6	9.30			
22-DMP	0.0	0.0			
24-DMP	2.1	0.23			
223-TMB	0.0	0.0			
CHEXANE	15.0	1.61			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	55.9	6.00			
23-DMP ,	11.2	1.20			
3-MHEX ,	36.3	3.90			
1C3-DMCP	32.3	3.47			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	932.		C1/C2	1.32
GASOLINE	932.		A /D2	3.30
NAPHTHENES	403.	43.21	C1/D2	7.12
C6-7	624.	67.01	CH/MCP	0.17
			PENT/IPENT,	0.46

	PPB	NORM PERCENT
MCP	86.6	29.9
CH	15.0	5.2
MCH	187.7	64.9
TOTAL	289.3	100.0

PARAFFIN INDEX 1 0.993

PARAFFIN INDEX 2 15.293

73056D AUSTRALIA,W. FORTESCUE-1, 1745-1760 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	42.0	3.41
ETHANE	0.0		1T2-DMCP	27.6	2.24
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	17.0	1.38	224-TMP	0.0	0.0
NBUTANE	41.0	3.33	NHEPTANE	92.0	7.47
IPENTANE	161.0	13.08	1C2-DMCP	19.3	1.57
NPENTANE	61.8	5.02	MCH	256.2	20.81
22-DMB	0.5	0.04			
CPENTANE	5.8	0.47			
23-DMB	8.2	0.67			
2-MP	68.9	5.60			
3-MP	47.2	3.83			
NHEXANE	58.9	4.78			
MCP	126.2	10.25			
22-DMP	0.0	0.0			
24-DMP	3.2	0.26			
223-TMB	0.0	0.0			
CHEXANE	24.1	1.96			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	69.8	5.67			
23-DMP ,	16.6	1.35			
3-MHEX ,	41.3	3.36			
1C3-DMCP	42.6	3.46			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1231.		C1/C2	1.36
GASOLINE	1231.		A /D2	3.65
NAPHTHENES	544.	44.16	C1/D2	8.47
C6-7	820.	66.58	CH/MCP	0.19
			PENT/IPENT,	0.38

	PPB	NORM PERCENT
MCP	126.2	31.0
CH	24.1	5.9
MCH	256.2	63.0
TOTAL	406.5	100.0

PARAFFIN INDEX 1 0.990

PARAFFIN INDEX 2 15.020

73056F AUSTRALIA,W. FORTESCUE-1, 1775-1790 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	51.2	3.88
ETHANE	0.0		1T2-DMCP	30.7	2.32
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	22.0	1.66	224-TMP	0.0	0.0
NBUTANE	46.3	3.50	NHEPTANE	84.4	6.39
IPENTANE	206.3	15.62	1C2-DMCP	22.2	1.68
NPENTANE	72.3	5.47	MCH	245.8	18.61
22-DMB	0.0	0.0			
CPENTANE	3.6	0.28			
23-DMB	6.0	0.45			
2-MP	75.5	5.72			
3-MP	58.1	4.40			
NHEXANE	61.5	4.65			
MCP	129.3	9.79			
22-DMP	0.0	0.0			
24-DMP	2.7	0.20			
223-TMB	0.0	0.0			
CHEXANE	23.0	1.74			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	70.5	5.34			
23-DMP ,	17.0	1.29			
3-MHEX ,	44.5	3.37			
1C3-DMCP	48.2	3.65			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1321.		C1/C2	1.20
GASOLINE	1321.		A /D2	3.28
NAPHTHENES	554.	41.94	C1/D2	7.63
C6-7	831.	62.90	CH/MCP	0.18
			PENT/IPENT,	0.35

	PPB	NORM PERCENT
MCP	129.3	32.5
CH	23.0	5.8
MCH	245.8	61.8
TOTAL	398.1	100.0

PARAFFIN INDEX 1 0.884

PARAFFIN INDEX 2 13.711

73056H AUSTRALIA,W. FORTESCUE-1, 1805-1820 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	56.5	4.26
ETHANE	0.0		1T2-DMCP	35.2	2.66
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	22.0	1.66	224-TMP	0.0	0.0
NBUTANE	36.6	2.76	NHEPTANE	89.7	6.77
IPENTANE	186.1	14.05	1C2-DMCP	27.6	2.08
NPENTANE	59.4	4.48	MCH	289.0	21.81
22-DMB	0.0	0.0			
CPENTANE	3.4	0.26			
23-DMB	8.1	0.61			
2-MP	72.2	5.45			
3-MP	56.2	4.24			
NHEXANE	54.7	4.13			
MCP	120.8	9.12			
22-DMP	0.0	0.0			
24-DMP	3.3	0.25			
223-TMB	0.0	0.0			
CHEXANE	18.9	1.43			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	66.3	5.01			
23-DMP ,	18.6	1.41			
3-MHEX ,	46.4	3.50			
1C3-DMCP	54.0	4.08			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1325.		C1/C2	1.27
GASOLINE	1325.		A /D2	3.11
NAPHTHENES	605.	45.69	C1/D2	8.06
C6-7	881.	66.50	CH/MCP	0.16
			PENT/IPENT,	0.32

	PPB	NORM PERCENT
MCP	120.8	28.2
CH	18.9	4.4
MCH	289.0	67.4
TOTAL	428.7	100.0

PARAFFIN INDEX 1 0.774

PARAFFIN INDEX 2 13.292

73056J AUSTRALIA,W. FORTESCUE-1, 1835-1850 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	54.3	3.84
ETHANE	0.0		1T2-DMCP	30.0	2.12
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	38.9	2.75	224-TMP	0.0	0.0
NBUTANE	56.0	3.96	NHEPTANE	83.8	5.92
IPENTANE	244.9	17.32	1C2-DMCP	17.5	1.24
NPENTANE	100.1	7.08	MCH	198.7	14.06
22-DMB	2.8	0.20			
CPENTANE	5.2	0.37			
23-DMB	11.5	0.81			
2-MP	92.6	6.55			
3-MP	64.1	4.53			
NHEXANE	64.4	4.56			
MCP	148.2	10.48			
22-DMP	0.0	0.0			
24-DMP	4.6	0.32			
223-TMB	0.0	0.0			
CHEXANE	23.8	1.68			
33-DMP	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX	62.1	4.39			
23-DMP	20.8	1.47			
3-MHEX	43.2	3.05			
1C3-DMCP	46.4	3.28			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1414.		C1/C2	0.96
GASOLINE	1414.		A /D2	3.43
NAPHTHENES	524.	37.08	C1/D2	6.59
C6-7	798.	56.43	CH/MCP	0.16
			PENT/IPENT,	0.41

	PPB	NORM PERCENT
MCP	148.2	40.0
CH	23.8	6.4
MCH	198.7	53.6
TOTAL	370.7	100.0

PARAFFIN INDEX 1 0.805

PARAFFIN INDEX 2 14.873

73056L AUSTRALIA,W. FORTESCUE-1, 1865-1880 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	20.6	2.33
ETHANE	0.0		1T2-DMCP	18.6	2.11
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	29.8	3.37	224-TMP	0.0	0.0
NBUTANE	43.3	4.90	NHEPTANE	56.2	6.36
IPENTANE	153.9	17.98	1C2-DMCP	11.2	1.27
NPENTANE	85.0	9.62	MCH	119.5	13.52
22-DMB	0.0	0.0			
CPENTANE	3.6	0.40			
23-DMB	4.5	0.51			
2-MP	53.0	5.99			
3-MP	40.6	4.59			
NHEXANE	41.6	4.71			
MCP	85.3	9.66			
22-DMP	0.0	0.0			
24-DMP	2.1	0.24			
223-TMB	0.0	0.0			
CHEXANE	12.8	1.44			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	28.4	3.22			
23-DMP ,	11.6	1.31			
3-MHEX ,	27.6	3.12			
1C3-DMCP	29.3	3.32			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	884.		C1/C2	0.97
GASOLINE	884.		A /D2	3.55
NAPHTHENES	301.	34.06	C1/D2	5.82
C6-7	465.	52.62	CH/MCP	0.15
			PENT/IPENT,	0.54

	PPB	NORM PERCENT
MCP	85.3	39.2
CH	12.8	5.9
MCH	119.5	54.9
TOTAL	217.6	100.0

PARAFFIN INDEX 1 0.817

PARAFFIN INDEX 2 17.323

73056N AUSTRALIA,W. FORTESCUE-1, 1895-1910 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	49.6	4.10
ETHANE	0.0		1T2-DMCP	27.4	2.26
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	38.6	3.19	224-TMP	0.0	0.0
NBUTANE	55.8	4.62	NHEPTANE	67.9	5.62
IPENTANE	216.1	17.89	1C2-DMCP	15.4	1.28
NPENTANE	80.5	6.66	MCH	150.9	12.49
22-DMB	0.0	0.0			
CPENTANE	4.4	0.36			
23-DMB	11.4	0.94			
2-MP	80.9	6.70			
3-MP	58.1	4.80			
NHEXANE	53.6	4.43			
MCP	118.7	9.82			
22-DMP	0.0	0.0			
24-DMP	3.9	0.32			
223-TMB	0.0	0.0			
CHEXANE	13.8	1.14			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	55.3	4.58			
23-DMP ,	18.5	1.53			
3-MHEX ,	42.3	3.50			
1C3-DMCP	45.4	3.76			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1208.		C1/C2	0.86
GASOLINE	1208.		A /D2	2.87
NAPHTHENES	426.	35.22	C1/D2	5.20
C6-7	663.	54.83	CH/MCP	0.12
			PENT/IPENT,	0.37

	PPB	NORM PERCENT
MCP	118.7	41.9
CH	13.8	4.9
MCH	150.9	53.3
TOTAL	283.4	100.0

PARAFFIN INDEX 1 0.798

PARAFFIN INDEX 2 14.408

73056P AUSTRALIA,W. FORTESCUE-1, 1925-1940 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	57.8	5.12
ETHANE	0.0		1T2-DMCP	35.2	3.12
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	18.6	1.65	224-TMP	0.0	0.0
NBUTANE	35.3	3.12	NHEPTANE	65.1	5.77
IPENTANE	173.4	15.36	1C2-DMCP	21.7	1.92
NPENTANE	66.3	5.87	MCH	166.7	14.76
22-DMB	1.4	0.12			
CPENTANE	4.9	0.43			
23-DMB	10.7	0.95			
2-MP	70.9	6.28			
3-MP	60.7	5.38			
NHEXANE	46.4	4.11			
MCP	117.5	10.41			
22-DMP	0.0	0.0			
24-DMP	3.9	0.34			
223-TMB	0.0	0.0			
CHEXANE	13.8	1.22			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	50.6	4.48			
23-DMP ,	20.1	1.78			
3-MHEX ,	40.3	3.57			
1C3-DMCP	48.1	4.26			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1129.		C1/C2	0.82
GASOLINE	1129.		A /D2	2.77
NAPHTHENES	466.	41.23	C1/D2	5.74
C6-7	687.	60.84	CH/MCP	0.12
			PENT/IPENT,	0.38

	PPB	NORM PERCENT
MCP	117.5	39.4
CH	13.8	4.6
MCH	166.7	55.9
TOTAL	298.0	100.0

PARAFFIN INDEX 1 0.644

PARAFFIN INDEX 2 13.086

73056R AUSTRALIA,W. FORTESCUE-1, 1955-1970 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	4.9	2.78
ETHANE	0.0		1T2-DMCP	4.3	2.48
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	0.0	0.0	224-TMP	0.0	0.0
NBUTANE	0.0	0.0	NHEPTANE	30.9	17.65
IPENTANE	10.4	5.96	1C2-DMCP	0.0	0.0
NPENTANE	21.4	12.26	MCH	30.4	17.39
22-DMB	0.0	0.0			
CPENTANE	0.0	0.0			
23-DMB	0.0	0.0			
2-MP	4.9	2.83			
3-MP	12.5	7.17			
NHEXANE	19.3	11.04			
MCP	10.3	5.87			
22-DMP	0.0	0.0			
24-DMP	0.0	0.0			
223-TMB	0.0	0.0			
CHEXANE	3.2	1.83			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	5.7	3.26			
23-DMP ,	1.7	1.00			
3-MHEX ,	8.2	4.70			
1C3-DMCP	6.6	3.78			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	175.		C1/C2	1.51
GASOLINE	175.		A /D2	6.11
NAPHTHENES	60.	34.13	C1/D2	4.79
C6-7	126.	71.78	CH/MCP	0.31
			PENT/IPENT,	2.06

	PPB	NORM PERCENT
MCP	10.3	23.4
CH	3.2	7.3
MCH	30.4	69.3
TOTAL	43.9	100.0

PARAFFIN INDEX 1 0.880

PARAFFIN INDEX 2 32.168

73056T AUSTRALIA,W. FORTESCUE-1, 1985-2000 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	26.1	2.41
ETHANE	0.0		1T2-DMCP	18.4	1.70
PROPANE	128.1		3-EPENT	0.0	0.0
IBUTANE	37.3	3.44	224-TMP	0.0	0.0
NBUTANE	77.2	7.13	NHEPTANE	77.6	7.16
IPENTANE	220.0	20.31	1C2-DMCP	8.2	0.76
NPENTANE	83.4	7.70	MCH	96.8	8.94
22-DMB	4.3	0.39			
CPENTANE	6.2	0.58			
23-DMB	13.2	1.22			
2-MP	79.1	7.30			
3-MP	58.9	5.44			
NHEXANE	54.3	5.01			
MCP	89.5	8.26			
22-DMP	0.0	0.0			
24-DMP	3.6	0.33			
223-TMB	0.0	0.0			
CHEXANE	10.3	0.95			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	47.0	4.34			
23-DMP ,	15.8	1.46			
3-MHEX ,	29.9	2.76			
1C3-DMCP	26.2	2.42			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1212.		C1/C2	0.91
GASOLINE	1083.		A /D2	4.41
NAPHTHENES	282.	26.01	C1/D2	5.16
C6-7	504.	46.49	CH/MCP	0.11
			PENT/IPENT,	0.38

	PPB	NORM PERCENT
MCP	89.5	45.5
CH	10.3	5.2
MCH	96.8	49.2
TOTAL	196.6	100.0

PARAFFIN INDEX 1 1.086

PARAFFIN INDEX 2 22.292

73056V AUSTRALIA,W. FORTESCUE-1, 2015-2030 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	19.7	2.01
ETHANE	0.0		1T2-DMCP	18.9	1.93
PROPANE	91.7		3-EPENT	0.0	0.0
IBUTANE	38.8	3.96	224-TMP	0.0	0.0
NBUTANE	53.7	5.47	NHEPTANE	54.7	5.58
IPENTANE	224.7	22.90	1C2-DMCP	8.9	0.91
NPENTANE	67.0	6.83	MCH	113.0	11.52
22-DMB	0.6	0.06			
CPENTANE	5.1	0.52			
23-DMB	13.5	1.37			
2-MP	70.2	7.16			
3-MP	44.8	4.56			
NHEXANE	44.2	4.50			
MCP	68.5	6.98			
22-DMP	0.0	0.0			
24-DMP	3.5	0.36			
223-TMB	0.0	0.0			
CHEXANE	12.7	1.29			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	53.7	5.47			
23-DMP ,	14.5	1.48			
3-MHEX ,	24.5	2.49			
1C3-DMCP	25.9	2.64			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1073.		C1/C2	1.26
GASOLINE	981.		A /D2	4.04
NAPHTHENES	273.	27.80	C1/D2	7.33
C6-7	463.	47.16	CH/MCP	0.19
			PENT/IPENT,	0.30

	PPB	NORM PERCENT
MCP	68.5	35.3
CH	12.7	6.5
MCH	113.0	58.2
TOTAL	194.2	100.0

PARAFFIN INDEX 1 1.211

PARAFFIN INDEX 2 16.209

73056X AUSTRALIA,W. FORTESCUE-1, 2045-2060 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	71.7	3.20
ETHANE	0.0		1T2-DMCP	35.3	1.57
PROPANE	78.1		3-EPENT	0.0	0.0
IBUTANE	83.1	3.70	224-TMP	0.0	0.0
NBUTANE	92.8	4.13	NHEPTANE	96.7	4.31
IPENTANE	615.5	27.42	1C2-DMCP	13.8	0.61
NPENTANE	136.6	6.09	MCH	204.1	9.09
22-DMB	4.6	0.20			
CPENTANE	13.8	0.61			
23-DMB	43.0	1.92			
2-MP	189.9	8.46			
3-MP	111.9	4.98			
NHEXANE	96.2	4.29			
MCP	169.1	7.53			
22-DMP	0.0	0.0			
24-DMP	9.9	0.44			
223-TMB	0.0	0.0			
CHEXANE	27.0	1.20			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	80.9	3.60			
23-DMP ,	39.8	1.77			
3-MHEX ,	47.7	2.12			
1C3-DMCP	61.2	2.73			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	2323.		C1/C2	0.89
GASOLINE	2245.		A /D2	4.05
NAPHTHENES	596.	26.55	C1/D2	6.55
C6-7	953.	42.47	CH/MCP	0.16
			PENT/IPENT,	0.22

	PPB	NORM PERCENT
MCP	169.1	42.3
CH	27.0	6.7
MCH	204.1	51.0
TOTAL	400.2	100.0

PARAFFIN INDEX 1 0.764

PARAFFIN INDEX 2 14.551

73056Z AUSTRALIA,W. FORTESCUE-1, 2075-2090 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	40.3	2.81
ETHANE	0.0		1T2-DMCP	25.2	1.76
PROPANE	88.3		3-EPENT	0.0	0.0
IBUTANE	52.7	3.68	224-TMP	0.0	0.0
NBUTANE	79.3	5.54	NHEPTANE	67.1	4.69
IPENTANE	357.8	25.00	1C2-DMCP	7.7	0.54
NPENTANE	88.9	6.21	MCH	147.6	10.31
22-DMB	3.5	0.24			
CPENTANE	8.6	0.60			
23-DMB	25.7	1.79			
2-MP	123.3	8.62			
3-MP	70.1	4.90			
NHEXANE	62.4	4.36			
MCP	81.8	5.71			
22-DMP	0.0	0.0			
24-DMP	7.6	0.53			
223-TMB	0.0	0.0			
CHEXANE	18.1	1.26			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	65.5	4.58			
23-DMP ,	26.5	1.85			
3-MHEX ,	32.1	2.24			
1C3-DMCP	39.4	2.75			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1520.		C1/C2	1.19
GASOLINE	1431.		A /D2	4.04
NAPHTHENES	369.	25.75	C1/D2	7.21
C6-7	621.	43.40	CH/MCP	0.22
			PENT/IPENT,	0.25

	PPB	NORM PERCENT
MCP	81.8	33.0
CH	18.1	7.3
MCH	147.6	59.6
TOTAL	247.5	100.0

PARAFFIN INDEX 1 0.930

PARAFFIN INDEX 2 14.532

73057B AUSTRALIA,W. FORTESCUE-1, 2105-2120 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	93.8	2.82
ETHANE	0.0		1T2-DMCP	48.9	1.47
PROPANE	98.8		3-EPENT	0.0	0.0
IBUTANE	161.3	4.85	224-TMP	0.0	0.0
NBUTANE	157.9	4.75	NHEPTANE	110.4	3.32
IPENTANE	1070.0	32.19	1C2-DMCP	17.2	0.52
NPENTANE	180.4	5.43	MCH	255.1	7.67
22-DMB	5.2	0.16			
CPENTANE	19.6	0.59			
23-DMB	59.4	1.79			
2-MP	260.7	7.84			
3-MP	171.3	5.15			
NHEXANE	111.2	3.35			
MCP	259.2	7.80			
22-DMP	0.0	0.0			
24-DMP	12.8	0.39			
223-TMB	0.8	0.03			
CHEXANE	32.1	0.97			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	92.7	2.79			
23-DMP ,	50.9	1.53			
3-MHEX ,	62.2	1.87			
1C3-DMCP	90.7	2.73			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	3423.		C1/C2	0.75
GASOLINE	3324.		A /D2	3.56
NAPHTHENES	817.	24.57	C1/D2	6.11
C6-7	1238.	37.25	CH/MCP	0.12
			PENT/IPENT,	0.17

	PPB	NORM PERCENT
MCP	259.2	47.4
CH	32.1	5.9
MCH	255.1	46.7
TOTAL	546.4	100.0

PARAFFIN INDEX 1 0.664

PARAFFIN INDEX 2 13.197

73057D AUSTRALIA,W. FORTESCUE-1, 2135-2150 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	110.8	3.02
ETHANE	0.0		1T2-DMCP	60.9	1.66
PROPANE	106.4		3-EPENT	0.0	0.0
IBUTANE	189.8	5.18	224-TMP	0.0	0.0
NBUTANE	200.9	5.48	NHEPTANE	105.3	2.87
IPENTANE	1115.8	30.45	1C2-DMCP	23.1	0.63
NPENTANE	208.2	5.68	MCH	291.6	7.96
22-DMB	4.2	0.11			
CPENTANE	19.8	0.54			
23-DMB	57.8	1.58			
2-MP	263.6	7.19			
3-MP	203.1	5.54			
NHEXANE	113.8	3.10			
MCP	284.3	7.76			
22-DMP	0.0	0.0			
24-DMP	13.4	0.37			
223-TMB	2.1	0.06			
CHEXANE	43.0	1.17			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	96.4	2.63			
23-DMP ,	54.9	1.50			
3-MHEX ,	89.5	2.44			
1C3-DMCP	111.9	3.06			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	3771.		C1/C2	0.73
GASOLINE	3664.		A /D2	2.45
NAPHTHENES	945.	25.80	C1/D2	4.82
C6-7	1401.	38.24	CH/MCP	0.15
			PENT/IPENT,	0.19

	PPB	NORM PERCENT
MCP	284.3	45.9
CH	43.0	6.9
MCH	291.6	47.1
TOTAL	618.9	100.0

PARAFFIN INDEX 1 0.655

PARAFFIN INDEX 2 10.923

73057F AUSTRALIA,W. FORTESCUE-1, 2165-2180 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	138.4	3.06
ETHANE	0.0		1T2-DMCP	124.9	2.77
PROPANE	98.9		3-EPENT	0.0	0.0
IBUTANE	176.5	3.91	224-TMP	0.0	0.0
NBUTANE	181.9	4.03	NHEPTANE	126.9	2.81
IPENTANE	1324.8	29.33	1C2-DMCP	28.7	0.63
NPENTANE	211.7	4.69	MCH	393.6	8.72
22-DMB	3.7	0.08			
CPENTANE	19.4	0.43			
23-DMB	79.0	1.75			
2-MP	353.5	7.83			
3-MP	294.6	6.52			
NHEXANE	133.6	2.96			
MCP	368.0	8.15			
22-DMP	0.0	0.0			
24-DMP	17.6	0.39			
223-TMB	3.3	0.07			
CHEXANE	42.8	0.95			
33-DMP	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX	123.1	2.73			
23-DMP	73.2	1.62			
3-MHEX	143.6	3.18			
1C3-DMCP	153.6	3.40			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	4615.		C1/C2	0.69
GASOLINE	4516.		A /D2	1.81
NAPHTHENES	1269.	28.11	C1/D2	3.90
C6-7	1871.	41.43	CH/MCP	0.12
			PENT/IPENT,	0.16

	PPB	NORM PERCENT
MCP	368.0	45.7
CH	42.8	5.3
MCH	393.6	48.9
TOTAL	804.4	100.0

PARAFFIN INDEX 1 0.640

PARAFFIN INDEX 2 9.614

73057H AUSTRALIA,W. FORTESCUE-1, 2195-2210 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	84.6	3.01
ETHANE	0.0		1T2-DMCP	39.7	1.42
PROPANE	90.1		3-EPENT	0.0	0.0
IBUTANE	145.8	5.20	224-TMP	0.0	0.0
NBUTANE	124.0	4.42	NHEPTANE	110.7	3.95
IPENTANE	850.4	30.31	1C2-DMCP	10.0	0.36
NPENTANE	146.0	5.20	MCH	204.9	7.30
22-DMB	4.5	0.16			
CPENTANE	13.1	0.47			
23-DMB	54.7	1.95			
2-MP	238.3	8.49			
3-MP	156.9	5.59			
NHEXANE	108.7	3.87			
MCP	193.5	6.90			
22-DMP	0.0	0.0			
24-DMP	14.8	0.53			
223-TMB	0.0	0.0			
CHEXANE	29.0	1.03			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	86.7	3.09			
23-DMP ,	52.5	1.87			
3-MHEX ,	63.2	2.25			
1C3-DMCP	73.4	2.62			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	2896.		C1/C2	0.80
GASOLINE	2806.		A /D2	3.47
NAPHTHENES	648.	23.11	C1/D2	5.08
C6-7	1072.	38.20	CH/MCP	0.15
			PENT/IPENT,	0.17

	PPB	NORM PERCENT
MCP	193.5	45.3
CH	29.0	6.8
MCH	204.9	47.9
TOTAL	427.4	100.0

PARAFFIN INDEX 1 0.758

PARAFFIN INDEX 2 14.868

73057J AUSTRALIA,W. FORTESCUE-1, 2225-2240 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	68.8	1.76
ETHANE	0.0		1T2-DMCP	59.4	1.52
PROPANE	115.6		3-EPENT	0.0	0.0
IBUTANE	314.3	8.05	224-TMP	0.0	0.0
NBUTANE	211.6	5.42	NHEPTANE	128.5	3.29
IPENTANE	1343.0	34.40	1C2-DMCP	12.2	0.31
NPENTANE	216.0	5.53	MCH	246.3	6.31
22-DMB	5.5	0.14			
CPENTANE	18.7	0.48			
23-DMB	77.6	1.99			
2-MP	285.8	7.32			
3-MP	173.0	4.43			
NHEXANE	128.1	3.28			
MCP	224.4	5.75			
22-DMP	0.0	0.0			
24-DMP	16.0	0.41			
223-TMB	3.0	0.08			
CHEXANE	37.1	0.95			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	115.5	2.96			
23-DMP ,	54.9	1.41			
3-MHEX ,	65.1	1.67			
1C3-DMCP	99.5	2.55			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	4020.		C1/C2	0.86
GASOLINE	3904.		A /D2	3.94
NAPHTHENES	766.	19.63	C1/D2	6.13
C6-7	1259.	32.24	CH/MCP	0.17
			PENT/IPENT,	0.16

	PPB	NORM PERCENT
MCP	224.4	44.2
CH	37.1	7.3
MCH	246.3	48.5
TOTAL	507.8	100.0

PARAFFIN INDEX 1 0.793

PARAFFIN INDEX 2 14.687

73057L AUSTRALIA,W. FORTESCUE-1, 2255-2270 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	74.7	2.13
ETHANE	0.0		1T2-DMCP	38.2	1.09
PROPANE	98.8		3-EPENT	0.0	0.0
IBUTANE	258.9	7.39	224-TMP	0.0	0.0
NBUTANE	173.5	4.95	NHEPTANE	140.3	4.00
IPENTANE	1174.6	33.53	1C2-DMCP	9.0	0.26
NPENTANE	193.6	5.53	MCH	217.3	6.20
22-DMB	6.5	0.18			
CPENTANE	15.7	0.45			
23-DMB	78.1	2.23			
2-MP	282.6	8.07			
3-MP	154.5	4.41			
NHEXANE	139.8	3.99			
MCP	197.1	5.63			
22-DMP	0.0	0.0			
24-DMP	17.1	0.49			
223-TMB	2.7	0.08			
CHEXANE	39.0	1.11			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	105.4	3.01			
23-DMP ,	58.7	1.68			
3-MHEX ,	62.2	1.78			
1C3-DMCP	63.8	1.82			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	3602.		C1/C2	0.94
GASOLINE	3503.		A /D2	4.50
NAPHTHENES	655.	18.69	C1/D2	5.81
C6-7	1165.	33.26	CH/MCP	0.20
			PENT/IPENT,	0.16

	PPB	NORM PERCENT
MCP	197.1	43.5
CH	39.0	8.6
MCH	217.3	47.9
TOTAL	453.4	100.0

PARAFFIN INDEX 1 0.949

PARAFFIN INDEX 2 17.544

73057N AUSTRALIA,W. FORTESCUE-1, 2285-2300 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	117.2	3.02
ETHANE	0.0		1T2-DMCP	58.1	1.50
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	15.0	0.39	224-TMP	0.0	0.0
NBUTANE	66.3	1.71	NHEPTANE	176.9	4.55
IPENTANE	1237.4	31.83	1C2-DMCP	12.6	0.32
NPENTANE	236.5	6.08	MCH	325.2	8.37
22-DMB	3.8	0.10			
CPENTANE	20.1	0.52			
23-DMB	100.8	2.59			
2-MP	389.5	10.02			
3-MP	213.0	5.48			
NHEXANE	159.2	4.10			
MCP	257.2	6.62			
22-DMP	0.0	0.0			
24-DMP	25.3	0.65			
223-TMB	1.1	0.03			
CHEXANE	41.1	1.06			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	141.9	3.65			
23-DMP ,	79.8	2.05			
3-MHEX ,	109.4	2.82			
1C3-DMCP	99.3	2.56			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	3887.		C1/C2	0.93
GASOLINE	3887.		A /D2	3.07
NAPHTHENES	931.	23.95	C1/D2	4.64
C6-7	1605.	41.28	CH/MCP	0.16
			PENT/IPENT,	0.19

	PPB	NORM PERCENT
MCP	257.2	41.2
CH	41.1	6.6
MCH	325.2	52.2
TOTAL	623.5	100.0

PARAFFIN INDEX 1 0.915

PARAFFIN INDEX 2 15.398

73057P AUSTRALIA,W. FORTESCUE-1, 2315-2330 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	102.2	2.86
ETHANE	0.0		1T2-DMCP	52.1	1.46
PROPANE	17.2		3-EPENT	0.0	0.0
IBUTANE	11.5	0.32	224-TMP	0.0	0.0
NBUTANE	49.4	1.38	NHEPTANE	157.0	4.39
IPENTANE	999.2	27.94	1C2-DMCP	9.5	0.27
NPENTANE	273.7	7.65	MCH	216.2	6.05
22-DMB	4.1	0.11			
CPENTANE	21.0	0.59			
23-DMB	115.5	3.23			
2-MP	421.6	11.79			
3-MP	228.8	6.40			
NHEXANE	172.3	4.82			
MCP	264.7	7.40			
22-DMP	0.0	0.0			
24-DMP	26.5	0.74			
223-TMB	2.3	0.06			
CHEXANE	43.5	1.22			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	137.1	3.83			
23-DMP ,	81.9	2.29			
3-MHEX ,	96.9	2.71			
1C3-DMCP	88.9	2.49			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	3593.		C1/C2	0.77
GASOLINE	3576.		A /D2	3.40
NAPHTHENES	798.	22.32	C1/D2	4.09
C6-7	1451.	40.58	CH/MCP	0.16
			PENT/IPENT,	0.27

	PPB	NORM PERCENT
MCP	264.7	50.5
CH	43.5	8.3
MCH	216.2	41.2
TOTAL	524.4	100.0

PARAFFIN INDEX 1 0.962

PARAFFIN INDEX 2 16.089

73057R AUSTRALIA,W. FORTESCUE-1, 2345-2360 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	25.2	1.44
ETHANE	0.0		1T2-DMCP	0.1	0.00
PROPANE	20.1		3-EPENT	0.0	0.0
IBUTANE	41.3	2.36	224-TMP	0.0	0.0
NBUTANE	44.6	2.55	NHEPTANE	95.3	5.44
IPENTANE	476.0	27.18	1C2-DMCP	4.2	0.24
NPENTANE	98.2	5.61	MCH	122.7	7.01
22-DMB	1.0	0.06			
CPENTANE	7.0	0.40			
23-DMB	50.1	2.86			
2-MP	193.3	11.04			
3-MP	100.2	5.72			
NHEXANE	89.7	5.12			
MCP	99.3	5.67			
22-DMP	0.0	0.0			
24-DMP	16.2	0.92			
223-TMB	17.4	0.99			
CHEXANE	94.5	5.39			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	42.3	2.41			
23-DMP ,	49.6	2.83			
3-MHEX ,	41.2	2.35			
1C3-DMCP	41.6	2.38			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1771.		C1/C2	1.52
GASOLINE	1751.		A /D2	4.49
NAPHTHENES	395.	22.54	C1/D2	6.30
C6-7	739.	42.22	CH/MCP	0.95
			PENT/IPENT,	0.21

	PPB	NORM PERCENT
MCP	99.3	31.4
CH	94.5	29.8
MCH	122.7	38.8
TOTAL	316.5	100.0

PARAFFIN INDEX 1 1.246

PARAFFIN INDEX 2 18.595

73057T AUSTRALIA,W. FORTESCUE-1, 2375-2390 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	56.6	2.87
ETHANE	0.0		1T2-DMCP	26.2	1.33
PROPANE	12.8		3-EPENT	0.0	0.0
IBUTANE	9.3	0.47	224-TMP	0.0	0.0
NBUTANE	23.1	1.17	NHEPTANE	93.7	4.75
IPENTANE	546.0	27.67	1C2-DMCP	0.0	0.0
NPENTANE	117.9	5.97	MCH	97.9	4.96
22-DMB	3.3	0.17			
CPENTANE	7.4	0.37			
23-DMB	71.8	3.64			
2-MP	276.1	14.00			
3-MP	152.5	7.73			
NHEXANE	122.7	6.22			
MCP	147.7	7.49			
22-DMP	0.0	0.0			
24-DMP	21.4	1.08			
223-TMB	0.0	0.0			
CHEXANE	20.1	1.02			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	10.6	0.54			
23-DMP ,	54.6	2.77			
3-MHEX ,	66.0	3.34			
1C3-DMCP	48.0	2.43			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	1986.		C1/C2	0.46
GASOLINE	1973.		A /D2	3.28
NAPHTHENES	404.	20.47	C1/D2	1.95
C6-7	765.	38.80	CH/MCP	0.14
			PENT/IPENT,	0.22

	PPB	NORM PERCENT
MCP	147.7	55.6
CH	20.1	7.6
MCH	97.9	36.8
TOTAL	265.7	100.0

PARAFFIN INDEX 1 0.586

PARAFFIN INDEX 2 19.784

73057V AUSTRALIA,W. FORTESCUE-1, 2405-2420 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	27.5	1.28
ETHANE	0.0		1T2-DMCP	22.3	1.04
PROPANE	19.4		3-EPENT	0.0	0.0
IBUTANE	37.1	1.72	224-TMP	0.0	0.0
NBUTANE	73.9	3.43	NHEPTANE	81.4	3.78
IPENTANE	706.6	32.86	1C2-DMCP	0.0	0.0
NPENTANE	140.1	6.51	MCH	79.6	3.70
22-DMB	3.0	0.14			
CPENTANE	7.0	0.33			
23-DMB	63.9	2.97			
2-MP	267.1	12.42			
3-MP	145.8	6.78			
NHEXANE	110.4	5.13			
MCP	120.5	5.60			
22-DMP	0.0	0.0			
24-DMP	18.6	0.87			
223-TMB	0.0	0.0			
CHEXANE	18.5	0.86			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	88.0	4.09			
23-DMP ,	44.8	2.09			
3-MHEX ,	57.2	2.66			
1C3-DMCP	37.2	1.73			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	2170.		C1/C2	0.90
GASOLINE	2151.		A /D2	3.35
NAPHTHENES	313.	14.54	C1/D2	3.25
C6-7	706.	32.83	CH/MCP	0.15
			PENT/IPENT,	0.20

	PPB	NORM PERCENT
MCP	120.5	55.1
CH	18.5	8.4
MCH	79.6	36.4
TOTAL	218.6	100.0

PARAFFIN INDEX 1 1.669

PARAFFIN INDEX 2 17.827

73057X AUSTRALIA,W. FORTESCUE-1, 2435-2450 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	87.6	2.15
ETHANE	0.0		1T2-DMCP	57.2	1.40
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	0.0	0.0	224-TMP	0.0	0.0
NBUTANE	69.5	1.70	NHEPTANE	156.9	3.85
IPENTANE	824.0	20.19	1C2-DMCP	10.3	0.25
NPENTANE	521.4	12.78	MCH	379.7	9.30
22-DMB	11.9	0.29			
CPENTANE	53.7	1.32			
23-DMB	94.7	2.32			
2-MP	372.2	9.12			
3-MP	199.2	4.88			
NHEXANE	256.3	6.28			
MCP	341.4	8.37			
22-DMP	0.0	0.0			
24-DMP	19.8	0.48			
223-TMB	2.7	0.07			
CHEXANE	260.3	6.38			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	124.3	3.05			
23-DMP ,	73.6	1.80			
3-MHEX ,	87.7	2.15			
1C3-DMCP	76.5	1.87			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	4081.		C1/C2	1.33
GASOLINE	4081.		A /D2	4.71
NAPHTHENES	1267.	31.04	C1/D2	8.71
C6-7	1934.	47.40	CH/MCP	0.76
			PENT/IPENT,	0.63

	PPB	NORM PERCENT
MCP	341.4	34.8
CH	260.3	26.5
MCH	379.7	38.7
TOTAL	981.4	100.0

PARAFFIN INDEX 1 0.958

PARAFFIN INDEX 2 12.036

730572 AUSTRALIA,W. FORTESCUE-1, 2465-2480 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	115.1	2.00
ETHANE	0.0		1T2-DMCP	135.1	2.35
PROPANE	0.0		3-EPENT	0.0	0.0
IBUTANE	3.2	0.06	224-TMP	0.0	0.0
NBUTANE	57.9	1.01	NHEPTANE	255.3	4.45
IPENTANE	917.3	15.98	1C2-DMCP	15.7	0.27
NPENTANE	650.2	11.33	MCH	608.0	10.59
22-DMB	13.8	0.24			
CPENTANE	55.9	0.97			
23-DMB	112.3	1.96			
2-MP	522.1	9.10			
3-MP	299.7	5.22			
NHEXANE	519.1	9.04			
MCP	491.0	8.56			
22-DMP	0.0	0.0			
24-DMP	27.9	0.49			
223-TMB	3.5	0.06			
CHEXANE	336.4	5.86			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	192.0	3.34			
23-DMP ,	107.7	1.88			
3-MHEX ,	181.5	3.16			
1C3-DMCP	119.2	2.08			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	5740.		C1/C2	1.30
GASOLINE	5740.		A /D2	4.27
NAPHTHENES	1876.	32.69	C1/D2	6.26
C6-7	3107.	54.14	CH/MCP	0.69
			PENT/IPENT,	0.71

	PPB	NORM PERCENT
MCP	491.0	34.2
CH	336.4	23.4
MCH	608.0	42.4
TOTAL	1435.4	100.0

PARAFFIN INDEX 1 1.011

PARAFFIN INDEX 2 12.452

73058B AUSTRALIA,W. FORTESCUE-1, 2495-2510 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	48.3	2.16
ETHANE	0.0		1T2-DMCP	27.1	1.21
PROPANE	38.6		3-EPENT	0.0	0.0
IBUTANE	44.3	1.98	224-TMP	0.0	0.0
NBUTANE	222.1	9.92	NHEPTANE	77.1	3.44
IPENTANE	450.8	20.13	1C2-DMCP	4.2	0.19
NPENTANE	245.6	10.97	MCH	158.0	7.06
22-DMB	4.9	0.22			
CPENTANE	24.9	1.11			
23-DMB	41.6	1.86			
2-MP	176.2	7.87			
3-MP	102.4	4.57			
NHEXANE	130.3	5.82			
MCP	163.4	7.30			
22-DMP	0.0	0.0			
24-DMP	10.7	0.48			
223-TMB	0.0	0.0			
CHEXANE	114.0	5.09			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	73.6	3.29			
23-DMP ,	36.7	1.64			
3-MHEX ,	44.1	1.97			
1C3-DMCP	39.2	1.75			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	2278.		C1/C2	1.22
GASOLINE	2239.		A /D2	4.70
NAPHTHENES	579.	25.86	C1/D2	7.84
C6-7	927.	41.38	CH/MCP	0.70
			PENT/IPENT,	0.54

	PPB	NORM PERCENT
MCP	163.4	37.5
CH	114.0	26.2
MCH	158.0	36.3
TOTAL	435.4	100.0

PARAFFIN INDEX 1 1.027

PARAFFIN INDEX 2 12.468

73058D AUSTRALIA,W. FORTESCUE-1, 2525-2540 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	2682.2	1.57
ETHANE	0.0		1T2-DMCP	4205.7	2.47
PROPANE	130.0		3-EPENT	0.0	0.0
IBUTANE	268.3	0.16	224-TMP	0.0	0.0
NBUTANE	1407.1	0.83	NHEPTANE	3392.2	1.99
IPENTANE	17377.9	10.19	1C2-DMCP	1119.7	0.66
NPENTANE	25462.3	14.93	MCH	18289.8	10.73
22-DMB	818.1	0.48			
CPENTANE	4591.6	2.69			
23-DMB	2930.0	1.72			
2-MP	14553.5	8.54			
3-MP	7716.4	4.53			
NHEXANE	13366.6	7.84			
MCP	18766.7	11.01			
22-DMP	0.0	0.0			
24-DMP	1937.2	1.14			
223-TMB	67.3	0.04			
CHEXANE	21943.0	12.87			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	1696.1	0.99			
23-DMP ,	2546.8	1.49			
3-MHEX ,	2210.0	1.30			
1C3-DMCP	3150.4	1.85			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	170628.		C1/C2	1.40
GASOLINE	170498.		A /D2	7.58
NAPHTHENES	74749.	43.84	C1/D2	18.97
C6-7	95373.	55.94	CH/MCP	1.17
			PENT/IPENT,	1.47

	PPB	NORM PERCENT
MCP	18766.7	31.8
CH	21943.0	37.2
MCH	18289.8	31.0
TOTAL	58999.5	100.0

PARAFFIN INDEX 1 0.389

PARAFFIN INDEX 2 5.643

73058F AUSTRALIA,W. FORTESCUE-1, 2555-2570 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCENT
METHANE	0.0		1T3-DMCP	79.0	2.47
ETHANE	0.0		1T2-DMCP	45.5	1.42
PROPANE	217.3		3-EPENT	0.0	0.0
IBUTANE	218.5	6.82	224-TMP	0.0	0.0
NBUTANE	398.0	12.43	NHEPTANE	114.3	3.57
IPENTANE	602.5	18.81	1C2-DMCP	8.7	0.27
NPENTANE	274.3	8.56	MCH	160.5	5.01
22-DMB	4.6	0.14			
CPENTANE	46.7	1.46			
23-DMB	57.4	1.79			
2-MP	251.0	7.84			
3-MP	143.0	4.46			
NHEXANE	131.0	4.09			
MCP	282.0	8.81			
22-DMP	0.0	0.0			
24-DMP	16.8	0.52			
223-TMB	1.3	0.04			
CHEXANE	97.1	3.03			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	88.5	2.76			
23-DMP ,	53.7	1.68			
3-MHEX ,	65.6	2.05			
1C3-DMCP	62.9	1.96			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	3420.		C1/C2	0.72
GASOLINE	3203.		A /D2	3.74
NAPHTHENES	782.	24.43	C1/D2	5.28
C6-7	1207.	37.68	CH/MCP	0.34
			PENT/IPENT,	0.46

	PPB	NORM PERCENT
MCP	282.0	52.3
CH	97.1	18.0
MCH	160.5	29.7
TOTAL	539.6	100.0

PARAFFIN INDEX 1 0.822

PARAFFIN INDEX 2 14.901

73058H AUSTRALIA,W. FORTESCUE-1, 2580-2600 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	73.0	2.26
ETHANE	0.0		1T2-DMCP	56.9	1.76
PROPANE	66.1		3-EPENT	0.0	0.0
IBUTANE	257.2	7.94	224-TMP	0.0	0.0
NBUTANE	579.8	17.91	NHEPTANE	91.7	2.83
IPENTANE	579.8	17.91	1C2-DMCP	8.4	0.26
NPENTANE	224.9	6.95	MCH	179.4	5.54
22-DMB	4.0	0.12			
CPENTANE	42.4	1.31			
23-DMB	49.8	1.54			
2-MP	215.6	6.66			
3-MP	125.6	3.88			
NHEXANE	112.3	3.47			
MCP	313.0	9.67			
22-DMP	0.0	0.0			
24-DMP	10.9	0.34			
223-TMB	0.0	0.0			
CHEXANE	75.2	2.32			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	83.2	2.57			
23-DMP ,	40.8	1.26			
3-MHEX ,	53.4	1.65			
1C3-DMCP	60.4	1.87			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	3304.		C1/C2	0.66
GASOLINE	3238.		A /D2	3.82
NAPHTHENES	809.	24.98	C1/D2	6.33
C6-7	1159.	35.78	CH/MCP	0.24
			PENT/IPENT,	0.39

	PPB	NORM PERCENT
MCP	313.0	55.1
CH	75.2	13.2
MCH	179.4	31.6
TOTAL	567.6	100.0

PARAFFIN INDEX 1 0.717

PARAFFIN INDEX 2 12.837

73058J AUSTRALIA,W. FORTESCUE-1, 2615-2630 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	123.4	3.01
ETHANE	0.0		1T2-DMCP	193.2	4.70
PROPANE	14.3		3-EPENT	0.0	0.0
IBUTANE	2.8	0.07	224-TMP	0.0	0.0
NBUTANE	54.7	1.33	NHEPTANE	141.0	3.43
IPENTANE	346.6	8.44	1C2-DMCP	20.3	0.49
NPENTANE	462.6	11.26	MCH	412.4	10.04
22-DMB	9.5	0.23			
CPENTANE	91.2	2.22			
23-DMB	77.4	1.88			
2-MP	340.1	8.28			
3-MP	208.4	5.07			
NHEXANE	207.3	5.05			
MCP	742.5	18.08			
22-DMP	0.0	0.0			
24-DMP	12.8	0.31			
223-TMB	0.0	0.0			
CHEXANE	271.5	6.61			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ;	92.5	2.25			
23-DMP ,	64.9	1.58			
3-MHEX ,	81.9	1.99			
1C3-DMCP	149.9	3.65			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	4121.		C1/C2	0.63
GASOLINE	4107.		A /D2	4.26
NAPHTHENES	2004.	48.81	C1/D2	9.48
C6-7	2514.	61.20	CH/MCP	0.37
			PENT/IPENT,	1.33

	PPB	NORM PERCENT
MCP	742.5	52.1
CH	271.5	19.0
MCH	412.4	28.9
TOTAL	1426.4	100.0

PARAFFIN INDEX 1 0.374

PARAFFIN INDEX 2 9.210

73058L AUSTRALIA,W. FORTESCUE-1, 2645-2660 M

	TOTAL PPB	NORM PERCENT		TOTAL PPB	NORM PERCEN
METHANE	0.0		1T3-DMCP	172.0	2.39
ETHANE	0.0		1T2-DMCP	305.5	4.24
PROPANE	22.2		3-EPENT	0.0	0.0
IBUTANE	6.2	0.09	224-TMP	0.0	0.0
NBUTANE	85.9	1.19	NHEPTANE	181.3	2.52
IPENTANE	767.4	10.65	1C2-DMCP	28.8	0.40
NPENTANE	891.6	12.38	MCH	764.6	10.61
22-DMB	18.7	0.26			
CPENTANE	342.5	4.75			
23-DMB	64.4	0.89			
2-MP	479.9	6.66			
3-MP	354.7	4.92			
NHEXANE	413.3	5.74			
MCP	1151.3	15.98			
22-DMP	0.0	0.0			
24-DMP	18.3	0.25			
223-TMB	2.7	0.04			
CHEXANE	561.4	7.79			
33-DMP ,	0.0	0.0			
11-DMCP	0.0	0.0			
2-MHEX ,	124.4	1.73			
23-DMP ,	105.3	1.46			
3-MHEX ,	177.2	2.46			
1C3-DMCP	186.0	2.58			

	TOTALS PPB	NORM PERCENT	SIG COMP RATIOS	
ALL COMP	7226.		C1/C2	0.79
GASOLINE	7204.		A /D2	3.36
NAPHTHENES	3512.	48.76	C1/D2	8.18
C6-7	4192.	58.20	CH/MCP	0.49
			PENT/IPENT,	1.16

	PPB	NORM PERCENT
MCP	1151.3	46.5
CH	561.4	22.7
MCH	764.6	30.9
TOTAL	2477.3	100.0

PARAFFIN INDEX 1 0.455

PARAFFIN INDEX 2 7.035

APPENDIX 2

Detailed Vitrinite Reflectance and Exinite Fluorescence Data - Report by A.C. Cook

18.6.84

WEST FORTESCUE NO. 1

KK No.	Esso No.	Depth m	$\bar{R}_v$ max %	Range R_v max %	N	Exinite fluorescence (Remarks)
X336	72965 X	2374.5 SWC	0.50	0.47-0.53	3	Rare sporinite, orange. (Siltstone. D.o.m. rare, I>or=E>or=V. All three macerals rare. Carbonate common, yellow fluorescence. Diffuse humic matter sparse. Forams abundant. Pyrite abundant.)
X337	72964 Y	2447.1 SWC	0.58	0.48-0.71	27	Common sporinite, yellow to orange, rare cutinite, yellow. (Siltstone. D.o.m. major, V>E>I. Vitrinite major, exinite common, inertinite sparse. Pyrite abundant.)
X338	72964 A	2529.2 SWC	0.52	0.42-0.67	30	Common sporinite, orange to dull orange, common liptodetrinite, yellow to orange, sparse resinite, yellow, rare ?tasmanitid, yellow. (Siltstone>>coal. Coal rare, duroclarite. D.o.m. abundant, V>E>I. Vitrinite abundant, exinite common, inertinite sparse.)

Appendix 6

PE902482

This is an enclosure indicator page.
The enclosure PE902482 is enclosed within the container PE902481 at this location in this document.

The enclosure PE902482 has the following characteristics:

ITEM_BARCODE	= PE902482
CONTAINER_BARCODE	= PE902481
NAME	= Synthetic Seismic Trace
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAM
DESCRIPTION	= Synthetic Seismic Trace for West Fortescue-1
REMARKS	=
DATE_CREATED	= 6/09/84
DATE_RECEIVED	= 16/09/85
W_NO	= W866
WELL_NAME	= WEST FORTESCUE-1
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

Enclosures 1-4

PE902484

This is an enclosure indicator page.
The enclosure PE902484 is enclosed within the container PE902481 at this location in this document.

The enclosure PE902484 has the following characteristics:

ITEM_BARCODE	= PE902484
CONTAINER_BARCODE	= PE902481
NAME	= Structure Map Top of Latrobe Group
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= HRZN_CNTR_MAP
DESCRIPTION	= Structure Map Top of Latrobe Group for West Fortescue-1
REMARKS	=
DATE_CREATED	= 31/01/85
DATE_RECEIVED	= 16/09/85
W_NO	= W866
WELL_NAME	= West Fortescue-1
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902483

This is an enclosure indicator page.
The enclosure PE902483 is enclosed within the container PE902481 at this location in this document.

The enclosure PE902483 has the following characteristics:

ITEM_BARCODE	= PE902483
CONTAINER_BARCODE	= PE902481
NAME	= Structure Map Top of FM-1.2
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= HRZN_CNTR_MAP
DESCRIPTION	= Structure Map Top of FM-1.2 for West Fortescue-1
REMARKS	=
DATE_CREATED	= 31/01/85
DATE_RECEIVED	= 16/09/85
W_NO	= W866
WELL_NAME	= West Fortescue-1
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902485

This is an enclosure indicator page.
The enclosure PE902485 is enclosed within the container PE902481 at this location in this document.

The enclosure PE902485 has the following characteristics:

ITEM_BARCODE	= PE902485
CONTAINER_BARCODE	= PE902481
NAME	= Structural Cross Section A-A'
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= CROSS_SECTION
DESCRIPTION	= Structural Cross Section A-A' for West Fortescue-1
REMARKS	=
DATE_CREATED	= 31/03/85
DATE_RECEIVED	= 16/09/85
W_NO	= W866
WELL_NAME	= West Fortescue-1
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE601211

This is an enclosure indicator page.
The enclosure PE601211 is enclosed within the container PE902481 at this location in this document.

The enclosure PE601211 has the following characteristics:

ITEM_BARCODE	= PE601211
CONTAINER_BARCODE	= PE902481
NAME	= Well Completion Log
BASIN	= GIPPSLAND
PERMIT	= VIC/P1
TYPE	= WELL
SUBTYPE	= COMPLETION_LOG
DESCRIPTION	= Well Completion Log for West Fortescue-1
REMARKS	=
DATE_CREATED	= 16/05/84
DATE_RECEIVED	= 16/09/85
W_NO	= W866
WELL_NAME	= West Fortescue-1
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)