

**ESSO EXPLORATION AND PRODUCTION
AUSTRALIA INC.**

W1097

WELL COMPLETION REPORT

PETROLEUM DIVISION

VOLUME 1

BASIC DATA

20 OCT 1994

BLACKBACK-3

**GIPPSLAND BASIN
VICTORIA**

ESSO AUSTRALIA LIMITED

**Compiled by Greg Clota
April 1994**

BLACKBACK-3

WELL COMPLETION REPORT

VOLUME 1: BASIC DATA

CONTENTS

1. WELL DATA RECORD
2. OPERATIONS SUMMARY
3. CASING DATA
4. CEMENTING DATA
5. SAMPLES, CONVENTIONAL CORES, SIDEWALL CORES
6. WIRELINE LOGS AND SURVEYS
7. SUMMARY OF FORMATION TEST PROGRAMME
8. TEMPERATURE RECORD

FIGURES

1. LOCALITY MAP
2. WELL PROGRESS CURVE
3. WELL BORE SCHEMATIC
4. ABANDONMENT SCHEMATIC
5. HORNER TEMPERATURE PLOT - SUITE 2

APPENDICES

1. LITHOLOGICAL DESCRIPTIONS
2. CORE DESCRIPTIONS
3. SIDEWALL CORE DESCRIPTIONS
4. MDT RESULTS
5. VELOCITY SURVEY REPORT

ESSO AUSTRALIA LTD

1. WELL DATA RECORD

BLACKBACK-3

LOCATION : Latitude :38° 33' 34.85" South
Longitude :148° 31' 05.50" East
X= 632278 mE
Y= 5730977 mN
Map Projection: AMG Zone 55
Geographical Location: Bass Strait,
Victoria
Field :BLACKBACK

PERMIT : Vic/P24

ELEVATION : 25m

WATER DEPTH : 318m

TOTAL DEPTH : 3125m (Driller) 3099m (Logger)

PLUG BACK TYPE : 3 Cement Plugs and EZSV.

REASONS FOR PLUGGING
BACK : Dry Well

MOVE IN : 11/03/94 0700 hours

SPUDDED : 18/03/94 1130 hours

REACHED TD : 31/03/94 0700 hours

RIG RELEASED : 14/04/94 1330 hours

OPERATOR : Esso Australia Resources Ltd.

PERMITTEE OR LICENCEE : BHP Petroleum (Australia) Pty Ltd and
Esso Australia Resources Ltd.

ESSO INTEREST : 50%

OTHER INTEREST : 50%

CONTRACTOR : Diamond Offshore

RIG NAME : Ocean Bounty

EQUIPMENT TYPE : Semi-submersible

TOTAL RIG DAYS : 34.56

DRILLING AFE NO : L66014002

TYPE COMPLETION : 3 Cement Plugs and EZSV.

WELL CLASSIFICATION : Before Drilling: Appraisal
After Drilling: Dry Hole

2. OPERATIONS SUMMARY

MOBILIZATION/MOORING

After abandoning Halibut-2, the Ocean Bounty was towed by the MV Bona Vista to the Blackback-3 location. The rig departed the Halibut-2 location, March 11, 1994 and arrived at Blackback-3 with the no.7 anchor on bottom at 0700 hours, March 11, 1994.

The MV Runner and MV Bona Vista were used to set the anchors for the Ocean Bounty at Blackback-3. After anchors 7,3,6 and 2 were in place bad weather stopped operations. After a combination of bad weather and anchor running problems all anchors were finally in place and tensioned at 2330 hours March 17, 1994. The rig was ballasted down to drilling draft and the TGB was run and landed at 0830 hours, 18 March, 1994. The final rig location was 6.3m on a bearing of 238° True from the called location. Rotary table to seabed was 343m and water depth was 318m.

DRILLING OPERATIONS

a) 36"Hole/30" Casing

A Smith DS 26" bit and 36" hole opener and BHA were made up and stabbed into the TGB. The well was spudded at 1130 hours, 18 March, 1994 and drilled from 343m to 380m. The well was displaced with Hi Vis mud prior to making a wiper trip back to the seabed. After circulating the hole clean the well was again displaced with Hi Vis mud in stages whilst POOH. A Totco survey was dropped prior to the trip out to run casing (1 3/4° at 377m). The 30" casing was run with the PGB. The 30" casing was circulated and reciprocated in an attempt to straighten the well. The angle of the PGB after attempting to straighten the well was 1 1/2°.

Three joints of 30" 309lb/ft casing plus float shoe were run with the shoe landing at 377m. The 30" casing was cemented, using a stinger, with a slurry of 800 sacks of class "G" cement with 2% calcium chloride in seawater. After the running tool was backed out the PGB had a 2° angle.

The Smith DS 26" bit was rerun and tagged the top of cement at 375m. The 26" assembly was used to drill out the float shoe and clean out the rat hole.

b) 17 1/2" Hole/13 3/8" Casing

A Smith 17 1/2" SDSC bit and new BHA were made up and RIH to drill ahead from 380m to 1122m. The hole was circulated clean prior to making a wiper trip back to the seafloor. After circulating and conditioning the well and dropping a Totco survey (3/4° at 1100m) the drillstring was tripped out of the hole to run 13 3/8" casing.

63 joints of 54.5 lb/ft K55 13 3/8" casing with cross-over and well head joint were run with the shoe landing at 1100m. The casing was cemented with a lead slurry of 1500 sacks of class "G" cement with 3.1% pre-hydrated gel and a tail slurry of 670 sacks of class "G" neat cement in sea water. The plug was bumped at 1500psi with the float holding.

The BOP stack was run and latched. The stack was function and pressure tested as well as the surface equipment.

c) 12 1/4" Hole/9 7/8" Casing

A 12 1/4" Hycalog DS40HF PDC bit in combination with an F2000S mud motor was made up and used to drill out the 13 3/8" casing, clean out the rat hole and drill 3m of new formation to 1125m. A Phase II PIT was performed with leak-off at 920psi (EMW = 13.5ppg). Drilling continued from 1125m to 2160m at which depth the seawater gel mud system was displaced with a KCl/PHPA mud system. Drilling proceeded from 2160m to 2835m where a sample was circulated to surface for geological evaluation and the decision was made to cut core #1.

A new RC412 corebit and 18m corebarrel were made up and run into the hole to cut core #1. Core #1 was cut from 2835m to 2853m. Core #1 was caught at surface after the trip out of the hole and the recovery was 18.1m (100%). The core barrel was dressed and rerun with the same RC412 9 7/8" core bit and cut core #2 from 2853.1m to 2871m. Core #2 was retrieved at surface with a recovery of 17.1m (96%).

A Reed HP51AJ 9 7/8" bit and BHA were made up and drilled ahead from 2871m to 3125m(TD). A 10 stand wiper trip was made back to 2835m and the hole was circulated clean prior to pulling out to run E-Logs.

Suite 1 of the E-Logs consisted of DSI-MSFL-GR-ARI-AMS, FMI-LDT-CNTH-NGTD-AMS, MRIL-GR. Whilst running in with run #3 MRIL-GR the tool hung up at 2356m attempts to work the tool free failed and the decision was made to fish for the tool by cutting and treading the wireline (top of the fish was at 2850m). The fish was latched and pulled to surface.

A Reed HP51AJ 12 1/4" bit and BHA were made up and run into the hole to open the 9 7/8" section from 2835m to 3125m(TD). Whilst reaming out the hole to 12 1/4" the mud weight was raised to 10ppg. An 11 stand wiper trip was made to 2765m and the hole was circulated clean prior to pulling out for the continuation of the E-logging programme.

The remainder of the logging programme was completed and consisted of MDT-GR-AMS, MRIL-GR, VSP, CST-GR.

After the electric logging programme open ended drill pipe was run into the hole. Three cement plugs were spotted and tagged over the following intervals, plug #1 2890-2771m, plug #2 1140-1001m and plug #3 470-377m. An EZSV plug was set above plug #2.

3.

ESSO AUSTRALIA LTD.
BLACKBACK-3 FINAL WELL REPORT
CASING DATA

OD (In.)	WEIGHT (LB/FT)	GRADE	CONNECTION	LENGTH (M)	SHOE DEPTH (mMD-RKB)	CENTRALIZER POSITION	REMARKS
30	310	X-52	ST-2	12.13	376.86	NONE	FLOAT SHOE JOINT
30	310	X-52	ST-2	11.73		NONE	1 INTERMEDIATE JOINTS
30	310	X-52	ST-2	12.00		NONE	CIW TGB USED FROM 1992 TOP OF 30" WH @ 341m
				=====			
				35.86			
13-3/8	54.5	K-55	BTC	11.76	1100.47	NONE RUN	FLOAT SHOE JOINT (BTM)
13-3/8	54.5	K-55	BTC	11.78			FLOAT JOINT
13-3/8	54.5	K-55	BTC	11.93			FLOAT JOINT WITH FLT COLLAR
13-3/8	54.5	K-55	BTC	585.47			59 INTERMEDIATE JOINTS
13-3/8	68	N-80	BTC	117.65			10 INTERMEDIATE JOINTS
13-3/8 x 20	133	X-52	BTC x ALT-2	4.25			XO SWEDGE
20	133	X-52	ALT-2	11.98			ONE FULL JT FOR P&A CUT
14-3/4 x 20	133	X-52	ALT-2	5.65			VETCO MS-700 WH
				=====			
				760.47			

4.

ESSO AUSTRALIA LTD.
BLACKBACK-3 FINAL WELL REPORT
CEMENT DATA

DATE (1994)	TYPE JOB	INTERVAL (mMD-RKB)	TYPE CEMENT	VOLUME (SX)	SLURRY WEIGHT (PPG)	ADDITIVES	MIX WATER	REMARKS
19-MAR	30" PRIMARY	377-343	CLASS "G"	800	15.8	2% CaCl ₂	SW	CEMENTED TO MUDLINE- SEEN AT ML- 150% EXCESS USED +300 SACKs EXTRA.
22-MAR	13-3/8" LEAD	948-343	CLASS "G"	1500	12.5	3.1% PH-GEL	FW	RUN WITH 18-3/4" WH-MS-700.
22-MAR	13-3/8" TAIL	1100-948	CLASS "G"	670	15.8	NEAT	SW	BUMPED PLUG WITH 1500 PSI WITH SW DISPLACED AT 6-7 BPM WITH SW.
7-APR	P & A PLUG No.1	2890-2771	CLASS "G"	350	15.8	4 GP10B HR-6L	FW	SET ACROSS PAY ZONE AND LATROBE TOP. TAGGED WITH 15 KIPS.
7-APR	P & A PLUG No.2	1140-1001	CLASS "G"	465	15.8	NEAT	SW	SET ACROSS 13-3/8" SHOE. TAG W/15K# P/T TO 1200 PSI. RETAINER SET @ 998m.
8-APR	P & A PLUG No.3	470-377	CLASS "G"	260	15.8	2% CaCl ₂	SW	SURFACE PLUG-TAG WITH 15K#.

5. SAMPLES, CONVENTIONAL CORES, SIDEWALL CORES

CUTTINGS

Six sets of cuttings were collected:

Depth Int (mKB)	Freq x Sample Int	Type
1120 - 2260	3 x 30m	100gm washed and oven dried
	1 x 30m	200gm lightly washed and air dried
2260 - 2540	3 x 10m	100gm washed and oven dried
	1 x 10m	200gm lightly washed and air dried
2540 - 3125	3 x 5m	100gm washed and oven dried
	1 x 5m	200gm lightly washed and air dried
1120 - 2200	1 x 90m	1000gm washed and oven dried) Fission
2200 - 3100	1 x 100m	1000gm washed and oven dried) Track
2870 - 2880)	1 x 10m	200gm washed and oven dried) Fluid
2970 - 2980)	1 x 10m	200gm washed and oven dried) Inclusion
3070 - 3080)	1 x 10m	200gm washed and oven dried) Analysis

CORES

Two cores were cut:

Depth Int (mKB)	Core No.	Cut (m)	Recovered (m)	(%)
2835.0 - 2853.1	1	18.1	18.1	100
2853.1 - 2871.0	2	17.9	17.1	96

SIDEWALL CORES

Depth Int (mKB)	Shot	Recovered	Empty	Missing
1125 - 3069	60	35 (57%)	1	24

6. WIRELINE LOGS AND SURVEYS

Type	Scale	From	To
Descent 1			
ARI-MSFL-GR-AMS	1:200	3069	2750
GR	1:200	2750	460
DSI (P&S-FMD-STONELY)	1:200	3090	2745
DSI (P&S-FMD)	1:200	2750	1100
DSI (P&S)	1:100	1125	460
Descent 2			
LDL-CNL-NGS (Hi-Res)	1:200	3087	2760
FMI (MSD)	1:200	2935	2755
(Images)	1: 48	2935	2755
Descent 3			
MDT	(36 Pretests + Attempted 4 Samples)	3066.5	2832.4
Descent 4			
CSI (Zero-offset VSP)	(37 Levels)	2585	230
Descent 5			
CST	2xGuns (60 Shots)	3069	1125

WIRELINE LOGS AND SURVEYS

<u>Type and Scale</u>	<u>Suite 1</u>	<u>From To</u>
ARI-MSFL-GPIT- -DSI-GR-AMS	1:200	3099 2750 2750 460
FMI-LDT-CNTH- -NGTD-AMS	1:200	3096 2760
MDT-GR-AMS MRIL-GR	(27 Pretests/2 Samples) 1:200	3066.5 2832.4 2950 2810
Zero Offset VSP	(37 Levels)	3095 500
CST-GR	(60 Shot/34 Recovered)	3069 1125

SUMMARY OF WIRELINE FORMATION TEST PROGRAMME

TEST & SEAT NO	DEPTH (METRES) 25mK.B.	CHAMBER	RECOVER (LITRES)				FORMATION WATER	MUD FILTRATE	FORMATION PRESSURE		HYDROSTATIC PRESSURE		REMARKS
			OIL	COND.	GAS				MPaa	Psia	MPaa	Psia	
		LITRES	LITRES	LITRES	M ³	LITRES	LITRES						
1/1	2832.4	Pretest						28.05	4054.7	34.25	4950.5	Tight	
1/2	2833.0	Pretest						27.91	4034.0	34.26	4952.0	Tight	
1/3	2834.0	Pretest						27.88	4029.8	34.27	4953.5	Normal	
1/4	2835.3	Pretest						27.77	4014.1	34.29	4956.0	Normal	
1/5	2836.1	Pretest						27.78	4403.4	34.30	4957.4	Normal	
1/6	2837.0	Pretest						27.84	4015.0	34.31	4959.3	Tight	
1/8	2838.0	Pretest						27.92	4035.3	34.32	4961.0	Normal	
1/9	2838.5	Pretest						28.11	4063.5	34.33	4962.1	Tight/Normal	
1/10	2839.1	Pretest						29.06+	4207.0+	34.33	4963.0	Supercharged	
1/11	2839.8	Pretest						28.42	4108.7	34.34	4964.0	Tight	
1/12	2840.8	Pretest						00.08	12.0	34.35	4965.8	Very Tight	
1/13	2841.5	Pretest						28.00	4046.8	34.36	4967.0	Low permeability	
1/14	2842.3	Pretest						28.03	4051.7	34.37	4968.0	Low Permeability	
1/15	2844.7	Pretest						0.17	25.0	34.39	4971.6	Very Tight	
1/16	2846.8	Pretest						30.37+	4403.4+	34.42	4975.5	Supercharged	
1/17	2857.6	Pretest						0.07	9.6	34.55	4994.4	Very Tight	
1/18	2860.0	Pretest						31.34+	4574.5	34.58	4998.3	Supercharged	
1/19	2884.8	Pretest						28.08	4058.3	34.87	5041.1	Good	
1/20	2888.8	Pretest						28.11	4064.0	34.92	5048.0	Good	
1/21	2891.6	Pretest						28.14	4068.0	34.96	5053.0	Good	
1/22	2893.5	Pretest						28.16	4070.7	34.98	5056.1	Good	
1/23	2901.6	Pretest						28.25	4083.2	35.07	5069.8	Good	
1/24	2911.0	Pretest						28.33	4095.6	35.18	5085.8	Good	
1/25	2916.9	Pretest						28.39	4104.0	35.25	5096.0	Good	
1/26	2924.8	Pretest						28.47	4115.2	35.35	5109.6	Good	
1/27	2935.2	Pretest						28.58	4130.6	35.47	5127.4	Good	
1/28	2956.3	Pretest						28.78	4160.1	35.72	5163.9	Good	
1/29	2987.3	Pretest						29.10	4205.9	36.10	5217.8	Good	
1/30	3020.3	Pretest						29.43	4253.7	36.49	5274.7	Good	
1/31	3066.5	Pretest						29.88	4319.6	37.05	5355.3	Good	
1/*	2888.8										Sample	Probe plugged whilst using pumpout sub	
1/*	2888.3	Pretest						28.12	4064.1	34.91	5046.8	Good/Probe plugged whilst pumping sample	
1/*	2911.0	10.41 0.45										1.010.0 litres pumped with pumpout sub. 0.451.0 litre pumped with pumpout sub.	
1/38	2880.8	Pretest						28.04	4053.8	34.82	5033.0	Good	
1/39	2878.8	Pretest						0.63	9.1	34.79	5029.2	Very tight	
1/40	2875.2	Pretest						34.45	5005.1	34.75	5022.5	Supercharged	
1/*	2863.3	Pretest						0.05	7.0	34.60	5001.5	Very Tight	
1/43	2854.0	Pretest						0.05	6.8	34.49	5001.0	Very Tight	
1/44	2849.0	Pretest						0.06	8.0	34.43	5038.8	Very tight	
1/45	2835.3	10.41 0.45										0.4litres No productivity, sampling aborted 0.2litres No productivity, sampling aborted	

* = Attempt Sample

TEMPERATURE RECORD

LOGGING RUN	THERMOMETER DEPTH (m)	MAX. RECORDED TEMPERATURE (C°)	CIRCULATION TIME (tk) (hours)	TIME AFTER CIRCULATION STOPPED (t)	HORNER TEMPERATURE (C°)	GEOHERMAL GRADIENT (C°/km)
<u>Suite 1</u>						
DSI-MSFL-GR- ARI-AMS	3063	74	2.1	10.5		
FMI-LDT-CNTH- NGTD-AMS	3066	81	2.1	23.5		
MDT-GR	3066	76	2.25	15.6		
MRIL-GR	2950	81	2.25	28.0		
CSI	3090	87	2.25	50.0		

FIGURES



5th Cut
A4 Dividers
Re-order code 97052

58780



LOCALITY MAP

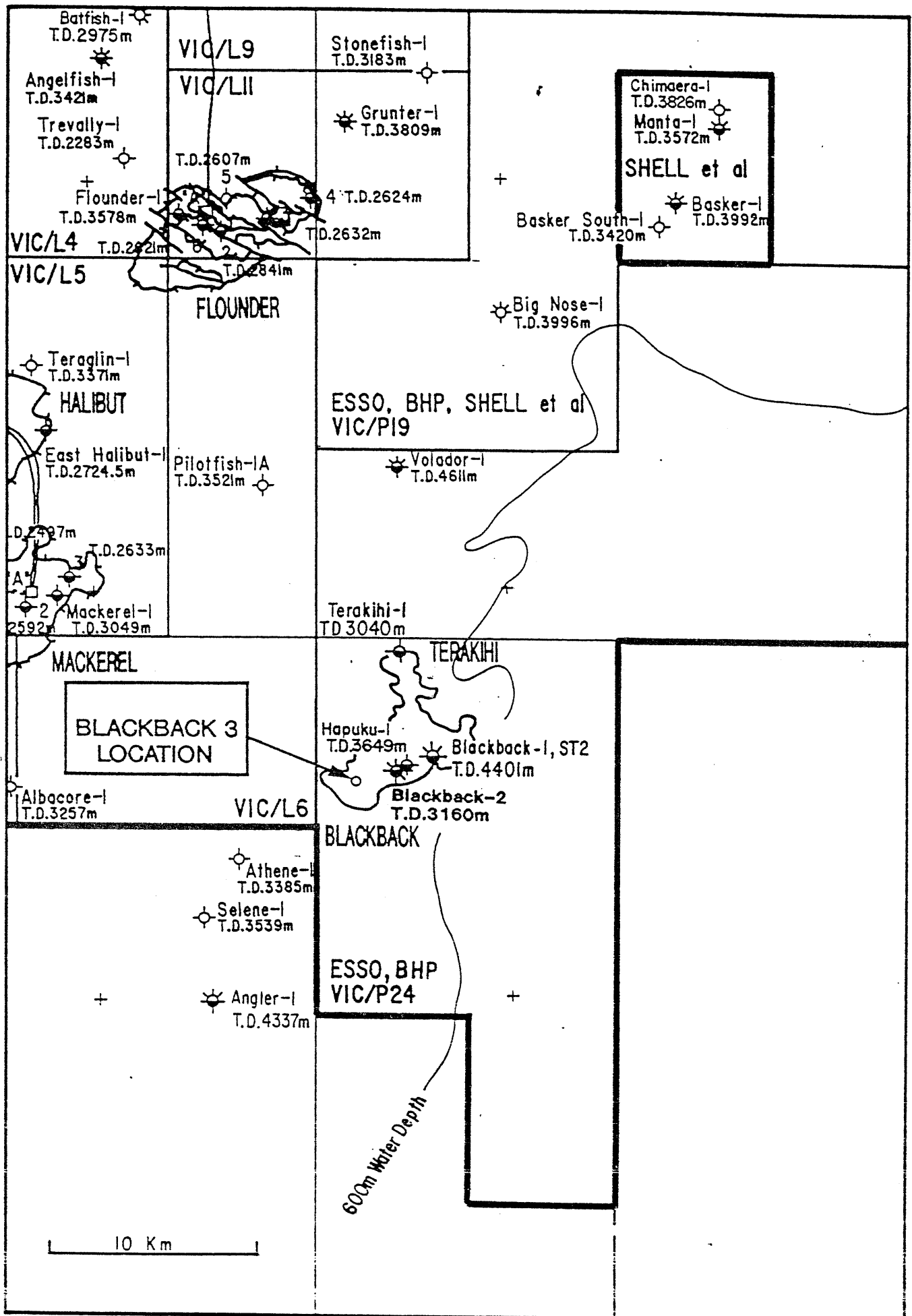


FIGURE 1

ESSO AUSTRALIA LTD WELL PROGRESS CURVE

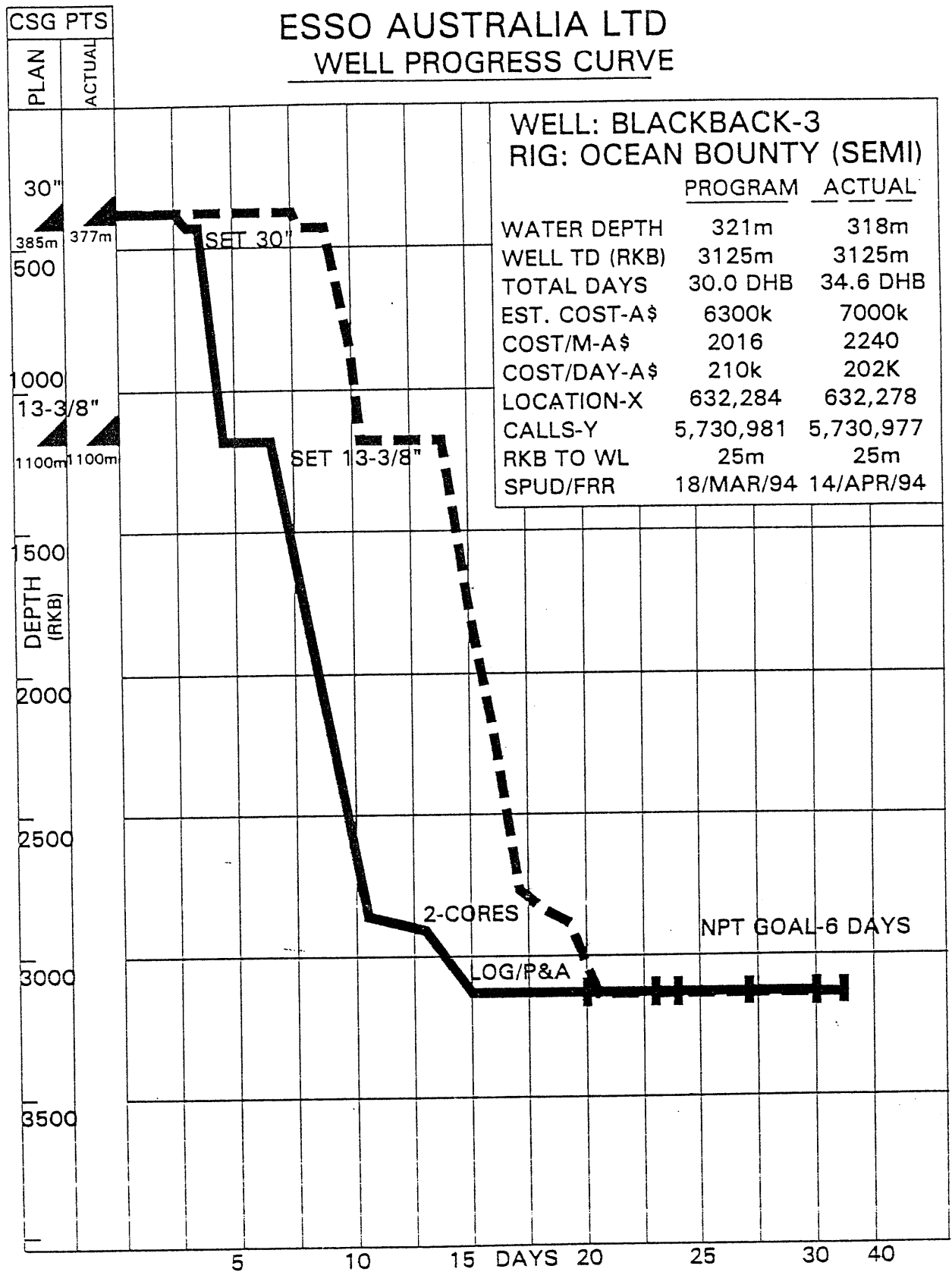


FIGURE 2

ESSO AUSTRALIA LTD. BLACKBACK-3 FINAL WELL SKETCH

RKB

MSL @ 25 m RKB

ALL DEPTHS FROM RKB

WATER DEPTH = 318 m

30" SUSPENSION JT
TOP @ 341m RKB
ML @ 343m RKB

TOC @ SEAFLOOR
BOTH CASINGS

TOC TAIL @ 948m

"STRAIGHT HOLE"

TOP OF WH @ 340m RKB
18-3/4" 10k* MS-700 WH
WITH 20" 133* EXT
ABOVE 20" 133* X-56
ALT-2 + 13-3/8" SWEDGE

30" 310* X-52 ST-2
310* X-52 ST-2 W/SHOE
SHOE @ 377m

26" X 36" HOLE TO 380m

13-3/8" 54.4/68* K-55 BTC
SHOE @ 1100m
(W/XO-20" 133* AT TOP)

17-1/2" HOLE TO 1122m

TOP OF LATROBE
@ 2830m

MAX MW-10.0 PPG
SW/PHPA MUD

12-1/4" HOLE TO 3125m
DEPTHS "m" = METERS

JMB-13/APR/94

BB3-WELL.DRW

FIGURE 3

ESSO AUSTRALIA LTD. BLACKBACK-3 FINALIZED P&A

RKB

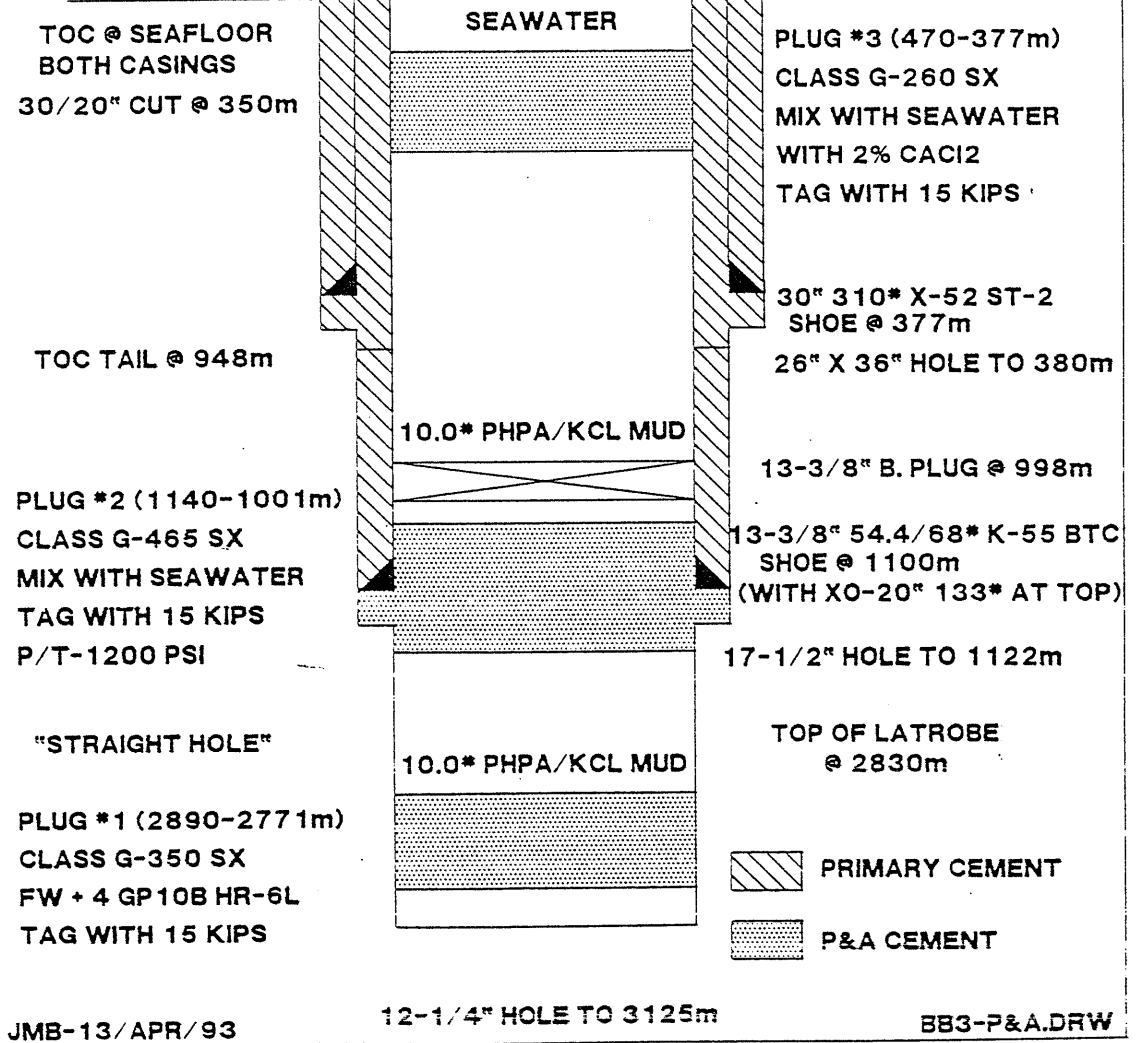
MSL @ 25 m RKB

ALL DEPTHS FROM RKB

WATER DEPTH = 318 m

ML @ 343m RKB

DEPTHS "m" = METERS



JMB-13/APR/93

12-1/4" HOLE TO 3125m

BB3-P&A.DRW

FIGURE 4

Blackback 3 Temperature Plot

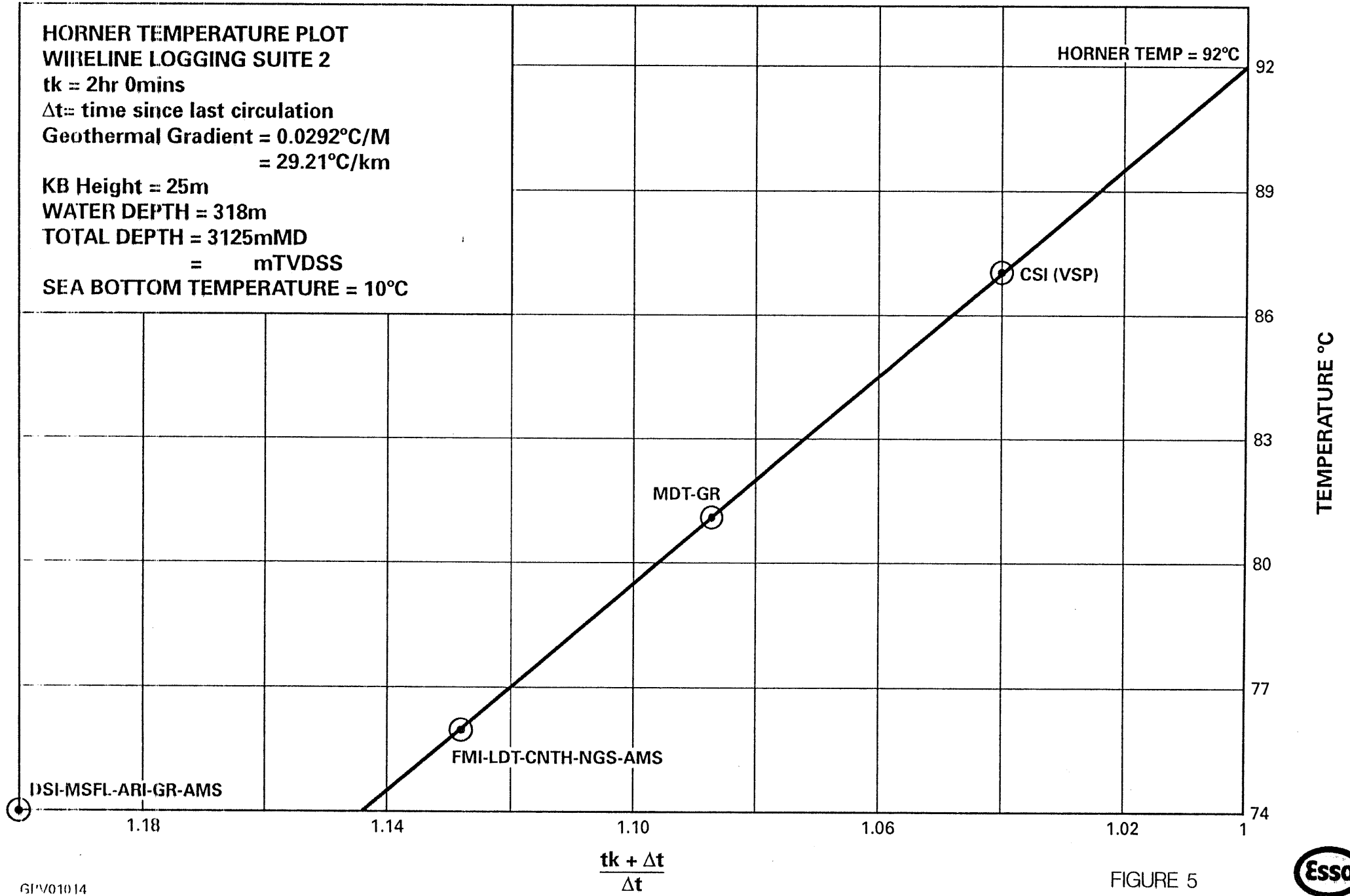


FIGURE 5



APPENDIX

1

APPENDIX 1:
BLACKBACK 3
LITHOLOGY DESCRIPTIONS

LITHOLOGY DESCRIPTIONS

<u>Depth</u>	<u>%</u>	<u>Description</u>
1150	100	<u>LIMESTONE</u> : Light to medium grey, blue grey, calcilutite, trace calcite silt, trace carbonaceous fragments, soft to firm, dispersive, blocky to massive, amorphous.
1180	100	<u>LIMESTONE</u> : As above.
1210	100	<u>LIMESTONE</u> : Light to medium grey, brown grey in part, calcilutite locally grading to calcisiltite, trace fine calcite sand, trace carbonaceous fragments, rare glauconite, soft to firm, dispersive, blocky to massive, amorphous.
1240	100	<u>LIMESTONE</u> : As above.
1270	100	<u>LIMESTONE</u> : Light grey, light brown grey, calcisiltite, moderately argillaceous, micritic, common fine calcite sand, common carbonaceous fragments, soft to firm, blocky.
1300	100	<u>LIMESTONE</u> : Predominantly as above, becoming increasingly micritic, grades to calcilutite, massive to amorphous, dispersive in part.
1330	100	<u>LIMESTONE</u> : Light to medium grey, brown grey, calcisiltite, micritic, common carbonaceous fragments, trace ooids, trace calcite sand, firm to moderately hard in part, blocky to massive.
1360	100	<u>LIMESTONE</u> : Predominantly as above, becoming increasingly micritic/argillaceous, grades to calcilutite in part.
1390	100	<u>LIMESTONE</u> : Light grey, brown grey, calcarenite very fine to fine, micritic cement, trace ooids, trace forams, trace carbonaceous fragments, rare glauconite, firm, blocky.
1420	100	<u>LIMESTONE</u> : Predominantly as above, becoming increasingly argillaceous/micritic, grades to calcilutite in part, soft to dispersive, massive to amorphous.

1450	100	<u>LIMESTONE</u> : Light grey, light brown grey, calcarenite, very fine to fine, micritic, trace carbonaceous fragments, rare glauconite, trace fossil fragments, trace brown cryptocrystalline slightly dolomitic fragments, firm moderately hard, brittle, blocky to massive.
1480	100	<u>LIMESTONE</u> : As above.
1510	100	<u>LIMESTONE</u> : Light brown, grey brown, calcarenite, very fine to fine, micritic, slightly argillaceous, common forams, trace ooids, slightly sparry in part, trace glauconite, firm, moderately hard in part, blocky to massive.
1540	100	<u>LIMESTONE</u> : Light grey, light brown grey, calcisiltite, slightly argillaceous, micritic, common very fine to fine calcite sand, trace carbonaceous specks, trace forams, firm, blocky to massive.
1570	100	<u>LIMESTONE</u> : Predominantly as above, locally abundant fine calcite sand, grades to calcarenite in part.
1600	100	<u>LIMESTONE</u> : Light grey, light grey brown, calcisiltite grades to calcarenite, common carbonaceous/coaly fragments, trace ooids, trace forams/fossil fragments, firm, massive to blocky.
1630	100	<u>LIMESTONE</u> : Light grey, light brown grey, calcarenite, very fine to fine, micritic cement, locally sparry, trace fossil fragments, trace carbonaceous specks, rare glauconite, firm, massive to blocky.
1660	100	<u>LIMESTONE</u> : Light to occasionally medium grey, brown grey in part, calcisiltite, trace very fine calcite sand, micritic, slightly argillaceous, trace carbonaceous fragments, trace disseminated pyrite, firm to blocky.
1690	100	<u>LIMESTONE</u> : Light grey, light brown grey, calcarenite, very fine to fine, micritic cement, trace carbonaceous fragments, trace forams, trace ooids, firm, blocky.

1720	100	<u>LIMESTONE</u> : Light grey, light brown grey, calcarenite, very fine to fine, micritic cement, slightly argillaceous, common carbonaceous/coaly fragments, trace skeletal fragments, firm, blocky to massive,
1750	100	<u>LIMESTONE</u> : Light brown, light grey brown, calcisiltite, locally common very fine calcite sand, micritic cement, slightly argillaceous, trace ooids, trace fossil fragments, firm, blocky.
1780	100	<u>LIMESTONE</u> : Predominantly as above, locally grades to calcarenite, trace glauconite, trace carbonaceous/coaly fragments, firm, blocky.
1810	100	<u>LIMESTONE</u> : Light brown, light grey brown, calcarenite, very fine to fine, micritic cement, slightly argillaceous, trace ooids, trace forams, trace carbonaceous fragments, trace disseminated pyrite, firm, blocky to massive.
1840	100	<u>LIMESTONE</u> : Predominantly as above, becoming increasingly micritic, grades to calcisiltite in part, trace skeletal fragments, firm, blocky to massive.
1870	100	<u>LIMESTONE</u> : Brown grey, olive grey, calcisiltite, trace very fine calcite sand, micritic, slightly argillaceous, trace ooids, trace carbonaceous fleck, trace brown slightly dolomitic cryptocrystalline fragments, soft to firm, massive.
1900	100	<u>LIMESTONE</u> : Predominantly as above, locally common very fine to fine calcite sand, trace glauconite, firm, massive, grades to calcarenite in part.
1930	100	<u>LIMESTONE</u> : Brown grey, olive grey, calcisiltite, locally common very fine calcite sand, micritic, trace forams, trace gastropods, rare glauconite, trace carbonaceous specks, rare ooids, firm, blocky to massive.

1960	100	<u>LIMESTONE</u> : Brown grey, olive grey, calcisiltite, micritic, slightly argillaceous, trace very fine calcite sand, trace carbonaceous fragments, trace ooids, trace disseminated pyrite, firm to moderately hard, blocky.
1990	100	<u>LIMESTONE</u> : Predominantly as above, trace skeletal fragments, rare glauconite, firm to moderately hard, blocky.
2020	100	<u>LIMESTONE</u> : Predominantly as above, becomes increasingly micritic, grades to calcilutite in part.
2050	100	<u>LIMESTONE</u> : Medium brown, brown grey, calcisiltite common very fine calcite sand, trace carbonaceous specks, rare glauconite, trace disseminated pyrite, trace lithic fragments, firm, blocky.
2080	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite grades to calcarenite, very fine to fine, trace glauconite, firm to locally moderately hard, blocky.
2110	100	<u>LIMESTONE</u> : Medium brown, brown grey, calcisiltite, common very fine calcite sand, micritic, rare glauconite, trace white calcite spar, slightly dolomitic in part, trace carbonaceous fragments, firm to moderately hard, occasionally hard, blocky.
2140	100	<u>LIMESTONE</u> : medium brown, olive grey, calcisiltite, micritic, trace very fine calcite sand, trace carbonaceous fragments, trace white calcite spar, firm to moderately hard, blocky.
2170	100	<u>LIMESTONE</u> : As above.
2200	100	<u>LIMESTONE</u> : As above.
2230	100	<u>LIMESTONE</u> : Light to medium grey, grey brown, calcisiltite, trace very fine calcite sand, trace disseminated pyrite, trace carbonaceous flecks, trace forams, trace glauconite in part, firm, blocky.

2260	100	<u>LIMESTONE</u> : Predominantly as above, trace ooids, becomes increasingly micritic and argillaceous, locally grades to calcilutite.
2270	100	<u>LIMESTONE</u> : Medium brown, grey brown, calcisiltite grading to calcilutite, micritic, trace fine calcite sand, trace glauconite, trace carbonaceous fragments, trace white calcite spar, firm to moderately hard, blocky.
2280	100	<u>LIMESTONE</u> : As above.
2290	100	<u>LIMESTONE</u> : As above.
2300	100	<u>LIMESTONE</u> : Brown grey, olive grey, calcilutite, moderately silty, micritic, trace carbonaceous fragments, trace white calcite spar, trace glauconite, firm, blocky.
2310	100	<u>LIMESTONE</u> : As above.
2320	100	<u>LIMESTONE</u> : As above.
2330	100	<u>LIMESTONE</u> : Brown grey, olive grey, calcilutite, moderately silty, micritic, slightly argillaceous, trace carbonaceous fragments, rare glauconite, locally trace fine calcite sand, slightly dolomitic in part, firm to moderately hard, occasionally hard, blocky.
2340	100	<u>LIMESTONE</u> : As above.
2350	100	<u>LIMESTONE</u> : As above.
2360	100	<u>LIMESTONE</u> : Brown grey, olive grey, calcilutite, slightly silty, trace forams, trace carbonaceous specks, micritic, slightly argillaceous, firm to moderately hard, blocky.
2370	100	<u>LIMESTONE</u> : Predominantly as above, trace brown slightly dolomitic cryptocrystalline fragments, trace fine calcite sand.
2380	100	<u>LIMESTONE</u> : As above.

2390	100	<u>LIMESTONE</u> : Light brown grey, olive grey, calcilutite, micritic, moderately argillaceous, silty in part, trace carbonaceous fleck, trace calcarenite inclusions, trace glauconite, moderately hard, blocky.
2400	100	<u>LIMESTONE</u> : As above.
2410	100	<u>LIMESTONE</u> : As above.
2420	100	<u>LIMESTONE</u> : grey brown, medium grey, calcilutite, slightly silty, micritic, slightly argillaceous, trace glauconite, trace very fine calcite sand, rare forams, firm, moderately hard in part, blocky.
2430	100	<u>LIMESTONE</u> : Predominantly as above, trace carbonaceous specks, trace ooids.
2440	100	<u>LIMESTONE</u> : Predominantly as above, trace nodular pyrite.
2450	100	<u>LIMESTONE</u> : Medium grey, grey brown, calcilutite, slightly silty, slightly to moderately argillaceous, micritic, trace nodular pyrite, trace glauconite, trace white calcite spar in part, trace carbonaceous fragments, firm to occasionally moderately hard, blocky.
2460	100	<u>LIMESTONE</u> : As above.
2470	100	<u>LIMESTONE</u> : Medium grey, brown grey, calcilutite, slightly silty, moderately argillaceous in part, micritic, trace nodular pyrite, trace glauconite, trace white fine calcite spar, trace forams, marly texture in part, firm, blocky.
2480	100	<u>LIMESTONE</u> : As above.
2490	100	<u>LIMESTONE</u> : As above.
2500	100	<u>LIMESTONE</u> : Predominantly as above, locally moderate to very argillaceous, trace disseminated pyrite, trace white calcite spar, grades to calcareous claystone in part.

2510	80	<u>LIMESTONE</u> : Grey brown, olive grey, calcilutite, slightly silty, moderately to very argillaceous, trace disseminated and nodular pyrite, rare fossil fragments, trace glauconite, rare lithic fragments, soft to firm, massive to blocky, grades to calcareous claystone.
	20	<u>CLAYSTONE</u> : Light to pale grey, moderately to very calcareous, trace carbonaceous specks, slightly silty, soft to firm, massive to amorphous in part.
2520	80	<u>LIMESTONE</u> : As above.
	20	<u>CLAYSTONE</u> : As above.
2530	60	<u>LIMESTONE</u> : As above.
	40	<u>CLAYSTONE</u> : As above.
2540	70	<u>LIMESTONE</u> : Medium grey, olive grey, calcilutite, slightly to moderately silty, moderately argillaceous, trace calcarenite inclusions, slightly dolomitic in part, trace glauconite, trace carbonaceous fleck, firm, blocky.
	30	<u>CLAYSTONE</u> : As above.
2545	40	<u>LIMESTONE</u> : Predominantly as above, trace forams, trace nodular and disseminated pyrite, firm to moderately hard, blocky.
	60	<u>CLAYSTONE</u> : Pale grey, light grey, moderately to very calcareous, slightly silty in part, trace carbonaceous fleck, trace disseminated pyrite, soft to firm, massive to amorphous in part, grades to calcilutite.
2550	40	<u>LIMESTONE</u> : As above.
	60	<u>CLAYSTONE</u> : As above.
2555	30	<u>LIMESTONE</u> : As above.
	70	<u>CLAYSTONE</u> : As above.
2560	30	<u>LIMESTONE</u> : As above.
	70	<u>CLAYSTONE</u> : As above.

2565	40	<u>LIMESTONE</u> : Predominantly as above, trace glauconite.
	60	<u>CLAYSTONE</u> : As above.
2570	40	<u>LIMESTONE</u> : As above, trace glauconite.
	60	<u>CLAYSTONE</u> : As above.
2575	40	<u>LIMESTONE</u> : As above.
	60	<u>CLAYSTONE</u> : As above.
2580	40	<u>LIMESTONE</u> : As above.
	60	<u>CLAYSTONE</u> : As above.
2585	20	<u>LIMESTONE</u> : Olive grey, calcilutite, moderately argillaceous, trace glauconite, trace calcite silt, micritic, trace nodular pyrite, rare fossil fragments, firm to moderately hard, blocky.
	80	<u>CLAYSTONE</u> : Pale grey, light brown grey, slightly silty, moderately to very calcareous, trace disseminated pyrite, trace lithic fragments, trace carbonaceous flecks and microlaminations, soft to firm, massive to blocky, grades to calcilutite.
2590	20	<u>LIMESTONE</u> : As above.
	80	<u>CLAYSTONE</u> : As above.
2595	10	<u>LIMESTONE</u> : As above.
	90	<u>CLAYSTONE</u> : As above.
2600	10	<u>LIMESTONE</u> : As above.
	90	<u>CLAYSTONE</u> : As above.
2605	100	<u>CLAYSTONE</u> : Pale grey, brown grey, moderately calcareous, occasionally non calcareous, trace forams, trace carbonaceous flecks, trace disseminated pyrite, soft to firm, massive to blocky.
2610	100	<u>CLAYSTONE</u> : As above.
2615	100	<u>CLAYSTONE</u> : Predominantly as above, trace nodular pyrite.

2620	100	<u>CLAYSTONE</u> : As above.
2625	100	<u>CLAYSTONE</u> : Pale grey, brown grey, olive grey, moderately to locally very calcareous, slightly silty, common nodular pyrite, trace glauconite, trace forams and fossil fragments, trace carbonaceous specks, soft to firm, massive to blocky.
2630	100	<u>CLAYSTONE</u> : As above.
2635	100	<u>CLAYSTONE</u> : As above.
2640	100	<u>CLAYSTONE</u> : As above.
2645	100	<u>CLAYSTONE</u> : Pale grey, light brown grey, slightly silty, moderately calcareous, trace disseminated pyrite, trace lithic fragments, trace carbonaceous specks, soft to firm, massive to blocky, locally grades to calcareous claystone.
2650	100	<u>CLAYSTONE</u> : As above.
2655	100	<u>CLAYSTONE</u> : As above.
2660	100	<u>CLAYSTONE</u> : As above.
2665	100	<u>CLAYSTONE</u> : Light to occasionally medium grey, brown grey, very calcareous, silty in part, trace carbonaceous fragments, trace disseminated and nodular pyrite, trace lithics in part, firm, blocky to massive, grades to calcareous claystone.
2670	100	<u>CLAYSTONE</u> : As above.
2675	100	<u>CLAYSTONE</u> : As above.
2680	100	<u>CLAYSTONE</u> : As above.
2685	100	<u>CLAYSTONE</u> : Pale grey, brown grey, olive grey, very calcareous, slightly silty in part, trace disseminated and pyrite, trace white vein calcite, trace forams, soft to firm, blocky to massive, grades to calcareous claystone.
2690	100	<u>CLAYSTONE</u> : As above.
2695	100	<u>CLAYSTONE</u> : As above.

2700	100	<u>CLAYSTONE</u> : As above.
2705	100	<u>CLAYSTONE</u> : Pale grey, grey brown, very calcareous, slightly silty in part, trace disseminated/nodular pyrite, trace carbonaceous specks, trace lithic fragments, soft to firm, massive to blocky, grades to calcareous claystone.
2710	100	<u>CLAYSTONE</u> : As above.
2715	100	<u>CLAYSTONE</u> : As above.
2720	100	<u>CLAYSTONE</u> : As above.
2725	100	<u>CLAYSTONE</u> : As above.
2730	100	<u>CLAYSTONE</u> : Predominantly as above, occasionally medium grey, trace fine calcite sand in part.
2735	100	: Off white, pale grey, light brown, very calcareous, trace disseminated pyrite, rare glauconite, trace carbonaceous specks, firm to soft, massive to blocky, grades to calcareous claystone.
2740	100	<u>CLAYSTONE</u> : As above.
2745	100	<u>CLAYSTONE</u> : As above.
2750	100	<u>CLAYSTONE</u> : As above.
2755	100	<u>CLAYSTONE</u> : Predominantly as above, locally trace forams, grades to calcareous claystone.
2760	100	<u>CLAYSTONE</u> : As above.
2765	100	<u>CLAYSTONE</u> : Pale grey, light grey brown, very calcareous, slightly silty, trace carbonaceous specks, trace biotite, trace disseminated pyrite, soft to firm, massive to blocky.
2770	100	<u>CLAYSTONE</u> : As above.
2775	100	<u>CLAYSTONE</u> : Pale grey, light grey brown, very calcareous, trace silt, trace nodular pyrite, trace glauconite, rare fossil fragments, soft to slightly dispersive in part, massive to blocky, amorphous in part.

2780	100	<u>CLAYSTONE</u> : As above.
2785	100	<u>CLAYSTONE</u> : As above.
2790	100	<u>CLAYSTONE</u> : As above.
2795	100	<u>CLAYSTONE</u> : Off white, light brown, grey brown in part, very calcareous, slightly silty, trace glauconite, trace nodular pyrite, rare forams, soft, slightly dispersive, massive to amorphous, blocky in part, grades to calcareous claystone.
2800	100	<u>CLAYSTONE</u> : As above.
2805	100	<u>CLAYSTONE</u> : Off white to light grey, brown grey, very calcareous, slightly silty, trace forams, trace glauconite, trace disseminated pyrite, trace biotite, trace fine to medium quartz sand, soft to firm, slightly dispersive, massive to blocky, amorphous, grades to calcareous claystone.
2810	100	<u>CLAYSTONE</u> : As above.
2815	100	<u>CLAYSTONE</u> : Light brown, buff, moderately calcareous, slightly silty, moderately arenaceous in part, trace to common glauconite, trace biotite, soft, slightly dispersive, massive to amorphous.
2820	100	<u>CLAYSTONE</u> : As above.
2825	100	<u>CLAYSTONE</u> : As above.
2830	10	<u>SANDSTONE</u> : Clear to translucent, light brown, very fine to predominantly fine, subangular to subrounded, good sorting, slight dolomitic cement, moderate kaolinitic matrix, common nodular glauconite, loose, inferred poor to fair visual porosity, no fluorescence.
	50	<u>SILTSTONE</u> : Grey brown, medium brown in part, very argillaceous, slightly micromicaceous, trace carbonaceous specks, trace lithic fragments, soft to firm, massive to blocky.
	40	<u>CLAYSTONE</u> : As above.

2835

30

SANDSTONE: Clear to translucent, light brown, fine to medium, subangular to subrounded, moderate to good sorting, trace dolomite cement, slightly to moderately argillaceous, trace nodular pyrite, trace to common glauconite, loose, hard aggregates in part, inferred fair visual porosity. FLUOPRESCENCE: 5% moderately bright pale yellow pin point fluorescence, very faint to nil cut, no residue.

70

SILTSTONE: As above.

(Beginning of core chip descriptions from core #1 & #2.)

2835

SANDSTONE: Medium grey, dark green grey, fine to predominantly medium to coarse, angular to subangular, moderate sorting, weak siliceous cement, abundant argillaceous/silty matrix, common glauconite, common biotite, trace pyrite, common altered feldspar, moderately hard, very poor to nil visual porosity. FLUORESCENCE: Trace pale yellow spotty fluorescence, weak fast streaming cut, thin to moderate ring residue, weak petroliferous odour.

2836

SANDSTONE: Medium to dark grey, fine to medium, subangular to subrounded, moderate to good sorting, weak siliceous cement, abundant kaolinitic matrix, common glauconite, trace biotite, abundant siderite stained quartz, moderately hard, very poor visual porosity. FLUORESCENCE: 10% Patchy dull pale yellow fluorescence, weak instant cut, thin ring residue, weak petroliferous odour.

2837

SANDSTONE: medium grey, medium brown, fine to coarse, angular to subrounded, poor sorting, weak siliceous cement, abundant argillaceous/silty matrix, abundant glauconite, common lithic clasts (altered feldspar?) common siderite coated quartz, moderately hard, very poor visual porosity, FLUORESCENCE; 30% Dull patchy pale yellow fluorescence, weak fast streaming cut, thin ring residue, weak petroliferous odour.

2838

SANDSTONE: Medium brown, fine to medium, occasionally coarse, angular to subrounded, poor sorting, abundant brown argillaceous matrix (matrix supported in part), common glauconite, trace altered feldspar, common siderite stained quartz, moderately hard, very poor to nil visual porosity. FLUORESCENCE: 10% Dull patchy pale yellow fluorescence, weak fast streaming cut, thin ring residue.

2839

SANDSTONE: Dark brown, dark grey, very fine to fine, occasionally medium, angular to subrounded, moderate to good sorting, abundant argillaceous matrix (matrix supported in part), common glauconite, trace biotite, trace lithic fragments, moderately hard, nil visual porosity. FLUORESCENCE: 5% Dull patchy pale yellow fluorescence, weak instant cut, thin ring residue.

2840

SANDSTONE: As above.
FLUORESCENCE: 10% As above.

2841

SANDSTONE: Light brown, medium grey, fine to medium, angular to subrounded, moderate to good sorting, weak siliceous cement, abundant glauconite, trace altered feldspar, trace biotite, friable to moderately hard, poor visual, porosity, FLUORESCENCE: 50% Moderately bright patchy pale yellow fluorescence, fast to instant streaming cut, moderately thick ring residue, weak petroliferous odour.

2842

SANDSTONE: Light grey, grey brown, clear to translucent, fine to medium, angular to subrounded, moderate sorting, weak siliceous cement, moderately argillaceous/silty matrix, common glauconite, trace milky quartz, friable to moderately hard, poor visual porosity. FLUORESCENCE: 10% Moderately bright patchy pale yellow fluorescence, instant cut, moderate ring residue, weak petroliferous odour.

- 2843 SANDSTONE: Medium grey, light brown, fine to predominantly medium to coarse, angular to subrounded, poor sorting, weak siliceous cement, abundant argillaceous matrix, common glauconite, trace biotite, trace altered feldspar, trace siderite stained quartz, moderately hard, poor visual porosity. FLUORESCENCE: 5% Dull patchy pale yellow fluorescence, faint fast streaming cut, thin to nil ring residue..
- 2844 SANDSTONE: Medium grey, light brown, fine to medium, angular to subrounded, abundant kaolinitic matrix, common glauconite, trace altered feldspar, trace biotite, moderately hard, very poor to nil visual porosity, no fluorescence.
- 2845 SANDSTONE: Off white, light grey, fine to medium, subangular to subrounded, moderate to good sorting, abundant argillaceous/silty matrix, common to abundant glauconite, trace altered feldspar, moderately hard, very poor visual porosity. FLUORESCENCE: 20% Dull patchy pale yellow fluorescence, moderate instant cut, moderately thick ring residue, weak petroliferous odour.
- 2846 SANDSTONE: Medium grey, light grey, fine to medium, angular to subrounded, weak siliceous cement, common brown argillaceous matrix, abundant kaolinitic matrix, common glauconite, trace altered feldspar, trace disseminated pyrite, trace biotite, moderately hard, tight, no fluorescence.
- 2847 SANDSTONE: Medium brown, green grey, fine to predominantly medium to coarse, angular to subrounded, poor sorting, weak siliceous cement, common kaolinitic/argillaceous matrix, abundant glauconite, common biotite, trace altered feldspar, moderately hard, poor to very poor visual porosity. FLUORESCENCE: 20% Moderately bright patchy pale yellow fluorescence, moderate instant to fast streaming cut, moderate to thick ring residue, weak petroliferous odour.

- 2848 SANDSTONE: Medium grey, grey green, fine to predominantly medium to coarse, angular to subrounded, poor sorting, weak siliceous cement, abundant argillaceous/silty matrix, common glauconite, trace nodular pyrite, trace biotite, trace siderite stained quartz, trace granular milky quartz, moderately hard, tight, no fluorescence.
- 2849 SANDSTONE: Predominantly as above, medium to coarse, tight, no fluorescence.
- 2850 SANDSTONE: Medium to dark grey, medium brown, fine to medium, occasionally coarse, angular to subrounded, poor to moderate sorting, weak siliceous cement, abundant kaolinitic/argillaceous matrix, abundant glauconite, common biotite, trace altered feldspar, trace granular milky quartz, moderately hard, no visual porosity, no fluorescence..
- 2851 SANDSTONE: As above, no fluorescence.
- 2852 SANDSTONE: Medium to dark brown, dark grey, fine to medium, occasionally coarse, angular to subrounded, moderate sorting, abundant argillaceous matrix (matrix supported in part), common glauconite, trace biotite, trace altered feldspar, trace very coarse milky quartz, moderately hard, tight, no fluorescence.
- 2853 SANDSTONE: Dark green grey, dark grey, fine to coarse, angular to subrounded, poor sorting, weak siliceous cement, abundant kaolinitic/argillaceous matrix, locally trace haematitic staining in matrix, common glauconite, trace lithic fragments, trace mica, moderately hard, poor visual porosity, no fluorescence.
- 2853.1 SANDSTONE: Dark green, dark grey, fine to medium, occasionally coarse, subangular to subrounded, moderately sorted, weak siliceous cement, common argillaceous matrix, common glauconite, trace altered feldspar, trace nodular pyrite, trace lithics, firm, poor visual porosity, no fluorescence.

- 2854 SANDSTONE: Dark green grey, medium to coarse, angular to subrounded, moderate sorting, abundant argillaceous matrix, trace lithics, common glauconite, trace altered feldspar, trace mica, firm, very poor visual porosity, no fluorescence.
- 2855 SANDSTONE: Medium grey green, fine to medium, subangular to subrounded, moderate to good sorting, weak siliceous cement, trace to common argillaceous matrix, trace to common glauconite, trace nodular pyrite, trace lithics, firm, poor to in par fair visual porosity, no fluorescence.
- 2856 SANDSTONE: Medium grey green, very fine to fine, subangular to subrounded, good sorting, weak siliceous cement, common argillaceous matrix, trace nodular pyrite, trace mica, common glauconite, trace lithics, firm, poor visual porosity, no fluorescence.
- 2857 SANDSTONE: Medium grey green, fine to medium, angular to subrounded, moderately sorted, weak siliceous cement, common glauconite, common siderite stained quartz, trace lithics, firm, poor to fair visual porosity, no fluorescence.
- 2858 SANDSTONE: Medium grey green, coarse to very coarse, subangular to subrounded, moderate sorting, weak siliceous cement, abundant argillaceous matrix, trace pyritic cement, common glauconite, common very coarse milky quartz, firm, very poor visual porosity, no fluorescence.
- 2859 SANDSTONE: Medium grey green, fine to predominantly medium, angular to subrounded, moderately sorted, weak siliceous cement, weak siliceous cement, common silty/argillaceous matrix, common glauconite, trace lithics, minor haematitic staining in matrix, common coarse milky quartz, firm to moderately hard, poor visual porosity, no fluorescence.

2860

SANDSTONE: Medium grey green, medium to coarse, occasionally very coarse, angular to subrounded, poor to moderate sorting, abundant argillaceous matrix, common to abundant glauconite, trace nodular pyrite, common altered feldspar, common lithics, moderately hard, very poor visual porosity, no fluorescence.

2861

SANDSTONE: Medium grey green, medium to coarse, angular to subrounded, moderate to poor sorting, abundant argillaceous matrix, common glauconite, trace altered feldspar, trace cherty fragments, trace nodular pyrite, moderately hard, very poor to nil visual porosity, no fluorescence.

2862

SANDSTONE: Medium grey green, fine to predominantly medium, angular to subrounded, moderate sorting, weak siliceous cement, trace argillaceous matrix, common glauconite, trace rock fragments, trace coarse milky quartz, trace cherty clasts, moderately hard, very poor visual porosity, no fluorescence.

2863

SANDSTONE: Medium to dark grey green, coarse to granular, angular to subrounded, poor sorting, abundant argillaceous matrix, common glauconite, trace to common haematitic stained quartz, moderately hard, very poor to nil visual porosity, no fluorescence.

2864

SANDSTONE: Medium to dark grey green, fine to medium, subangular to subrounded, moderate to good sorting, common argillaceous matrix, common glauconite, trace mica, trace altered feldspar, trace lithic fragments, moderately hard, very poor to nil visual porosity, no fluorescence.

2865

SANDSTONE: Medium to dark grey green, medium to very coarse, subangular to subrounded, poor to moderate sorting, weak siliceous cement, moderately argillaceous matrix, common glauconite, trace very coarse to granular milky quartz float, moderately hard, very poor to nil visual porosity, no fluorescence.

2866

SANDSTONE: Light to medium grey green, off white, fine to medium, subangular to subrounded, good sorting, weak siliceous cement, trace kaolinitic matrix, abundant glauconite, trace lithics, trace mica, moderately hard, poor to very poor visual porosity, no fluorescence.

2867

SANDSTONE: Light to medium grey, grey green, coarse to very coarse, angular to subrounded, poor sorting, abundant silty/argillaceous matrix, common glauconite, common haematitic staining in matrix, common rock fragments, crumbly to moderately hard, poor to in part fair visual porosity, no fluorescence.

2868

SANDSTONE: Light green, green grey, yellow green, medium to coarse, subangular to subrounded, moderate sorting, common limonitic stained argillaceous matrix, common glauconite, common milky quartz, trace rock fragments, moderately hard, poor to occasionally fair visual porosity, no fluorescence.

2869

SANDSTONE: Medium grey green, medium to predominantly coarse, angular to subrounded, poor sorting, common to abundant argillaceous matrix, common glauconite, trace haematite stained quartz, trace rock fragments, trace altered feldspar, moderately hard, very poor to nil visual porosity, no fluorescence.

PB:aw:wcrep1

2870.2

SANDSTONE: Grey green, medium grey, medium to predominantly coarse to very coarse, angular to subrounded, moderate sorting, weak siliceous cement, abundant argillaceous matrix, trace haemititic/limonitic stained matrix, common altered feldspar, trace nodular pyrite, occasional granular milky quartz float, abundant rock fragments, moderately hard, friable in part, no fluorescence

(End of core chip descriptions for cores #1 & #2)

2875

40

SANDSTONE: Clear to translucent, grey green, medium to very coarse, angular to subrounded, moderate sorting, weak siliceous cement, argillaceous matrix, trace limonitic/haematitic stained matrix, common glauconite, trace lithics, common milky quartz, loose, occasionally moderately hard aggregates, inferred fair visual porosity, no fluorescence.

60

SILTSTONE: (Probably cavings) Medium grey, grey brown, medium brown, moderately calcareous, very argillaceous, trace carbonaceous specks, slightly micromicaceous, firm to moderately hard, blocky.

2880

80

SANDSTONE: Clear to translucent, frosted, medium green, medium to coarse, angular to subrounded, poor to moderate sorting, common limonitic argillaceous matrix, common glauconite, trace rock fragments, trace nodular pyrite, moderately hard to loose, inferred fair visual porosity, no fluorescence.

20

SILTSTONE: As above.

2885

100

SANDSTONE: Predominantly as above, common milky quartz, locally common nodular pyrite.

Trace

SILTSTONE: As above.

2890

100

SANDSTONE: As above.

Trace

SILTSTONE: As above.

2895	90	<u>SANDSTONE</u> : Clear to translucent, frosted, light green, fine to predominantly medium to coarse, angular to subrounded, poor to moderate sorting, common argillaceous matrix, trace pyritic cement and nodules, common glauconite, trace lithic fragments, common very coarse to coarse milky quartz, loose, inferred fair visual porosity, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2900	90	<u>SANDSTONE</u> : As above.
	10	<u>SILTSTONE</u> : As above.
2905	100	<u>SANDSTONE</u> : Clear to translucent, frosted, light green, medium to very coarse, angular to subrounded, poor to moderate sorting, locally common argillaceous matrix, common very coarse milky quartz, trace smoky quartz, loose, inferred fair to good visual porosity, no fluorescence.
2910	100	<u>SANDSTONE</u> : As above, no fluorescence.
2915	100	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to predominantly coarse to very coarse, angular to subrounded, trace siliceous cement, trace kaolinitic matrix, trace glauconite, trace nodular pyrite, common milky/smoky quartz, loose, inferred good visual porosity, no fluorescence.
2920	100	<u>SANDSTONE</u> : As above.
2925	100	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to coarse, occasionally very coarse, trace pyritic cement, trace kaolinitic matrix in part, trace glauconite in part, abundant milky quartz, loose, inferred good visual porosity, no fluorescence.
	Trace	<u>SILTSTONE</u> : Light to medium grey, very argillaceous, slightly micromicaceous, trace disseminated pyrite, moderately hard, blocky to subfissile.
2930	100	<u>SANDSTONE</u> : As above, no fluorescence.

	Trace	<u>SILTSTONE</u> : As above.
2935	100	<u>SANDSTONE</u> : As above, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
2940	100	<u>SANDSTONE</u> : As above, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
2945	80	<u>SANDSTONE</u> : Clear to translucent, off white, fine to predominantly medium to coarse, subangular to subrounded, poor to moderate sorting, common kaolinitic matrix, trace glauconite, trace nodular pyrite, trace mica, loose inferred fair visual porosity, no fluorescence.
	20	<u>SILTSTONE</u> : Light to medium grey, grey brown, very argillaceous, micromicaceous, slightly calcareous in part, trace glauconite specks, trace carbonaceous specks, moderately hard, hard in part, blocky to subfissile.
2950	80	<u>SANDSTONE</u> : As above, no fluorescence.
	20	<u>SILTSTONE</u> : As above.
2955	70	<u>SANDSTONE</u> : Predominantly as above, common silty/kaolinitic matrix, trace to common glauconite, trace lithics, trace mica, loose, no fluorescence.
	30	<u>SILTSTONE</u> : As above.
2960	70	<u>SANDSTONE</u> : As above, no fluorescence.
	30	<u>SILTSTONE</u> : As above.
2965	70	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to very coarse, angular to subrounded, poor to moderate sorting, weak siliceous cement, trace kaolinitic matrix, trace glauconite, trace chlorite, common coarse milky/smoky quartz, loose, inferred fair to good visual porosity, no fluorescence.

	10	<u>SILTSTONE</u> : As above.
2970	90	<u>SANDSTONE</u> : As above, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2975	90	<u>SANDSTONE</u> : As above, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2980	90	<u>SANDSTONE</u> : As above, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2985	90	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to predominantly coarse to very coarse, angular to subangular, moderately sorted, weak siliceous cement, rare glauconite, abundant very coarse milky quartz, loose, inferred good visual porosity, no fluorescence.
	10	<u>SILTSTONE</u> : Light to medium grey brown, very argillaceous, micromicaceous, trace carbonaceous specks, moderately hard, blocky to subfissile, splinty in part.
2990	90	<u>SANDSTONE</u> : As above, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2995	90	<u>SANDSTONE</u> : Predominantly as above, trace smoky quartz, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
3000	90	<u>SANDSTONE</u> : As above, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
3005	100	<u>SANDSTONE</u> : Predominantly as above, becoming medium to coarse, trace biotite, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
3010	100	<u>SANDSTONE</u> : As above, no fluorescence.

	Trace	<u>SILTSTONE</u> : As above.
3015	100	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to coarse, angular to subrounded, moderate sorting, weak siliceous cement, trace kaolinitic matrix, trace to rare glauconite, trace biotite, trace smoky and milky quartz, loose, inferred good visual porosity, no fluorescence.
3020	100	<u>SANDSTONE</u> : As above.
3025	100	<u>SANDSTONE</u> : Predominantly as above, trace lithics, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
3030	100	<u>SANDSTONE</u> : As above, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
3035	100	<u>SANDSTONE</u> : Predominantly as above, becoming fine to medium, coarse in part.
	Trace	<u>SILTSTONE</u> : As above.
3040	100	<u>SANDSTONE</u> : As above.
	Trace	<u>SILTSTONE</u> : As above.
3045	100	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to coarse, occasionally fine, angular to subrounded, moderate to good sorting, trace siliceous cement, trace kaolinitic matrix, rare glauconite, common milky c quartz, loose, inferred good visual porosity, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
3050	100	<u>SANDSTONE</u> : As above, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
3055	90	<u>SANDSTONE</u> : Predominantly as above, becoming fine to medium, occasionally coarse, no fluorescence.
	10	<u>SILTSTONE</u> : As above.

3060	90	<u>SANDSTONE</u> : As above, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
3065	80	<u>SANDSTONE</u> : Predominantly as above, moderate kaolinitic matrix, trace biotite, trace glauconite, inferred good visual porosity, no fluorescence.
	20	<u>SILTSTONE</u> : Light to medium grey, grey brown, very argillaceous, slightly calcareous in part, micromicaceous, trace carbonaceous fragments, moderately hard, blocky to subfissile, grades to claystone.
3070	80	<u>SANDSTONE</u> : As above, no fluorescence.
	20	<u>SILTSTONE</u> : As above.
3075	90	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to coarse, occasionally very coarse, angular to subrounded, poor to moderate sorting, trace siliceous cement, trace kaolinitic matrix, common milky/smoky quartz, trace mica, trace glauconite, inferred good visual porosity, no fluorescence.
	10	<u>SILTSTONE</u> : Light to medium grey, occasionally pale grey, very argillaceous, slightly calcareous, trace lithic fragments, micromicaceous, moderately hard, subfissile.
3080	90	<u>SANDSTONE</u> : As above, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
3085	80	<u>SANDSTONE</u> : Predominantly as above, fine to predominantly medium to coarse, poor sorting, no fluorescence.
	20	<u>SILTSTONE</u> : As above.
3090	80	<u>SANDSTONE</u> : As above, no fluorescence.
	20	<u>SILTSTONE</u> : As above.

3095	100	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to coarse, angular to subrounded, moderate to good sorting, weak siliceous cement, common coarse milky quartz, trace mica, loose, inferred good visual porosity, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
3100	100	<u>SANDSTONE</u> : As above, no fluorescence.
	Trace	<u>SILTSTONE</u> : As above.
3105	90	<u>SANDSTONE</u> : Predominantly as above, becomes fine to medium, no fluorescence.
	10	<u>SILTSTONE</u> : Light grey, light brown grey, very argillaceous, micromicaceous, trace carbonaceous fragments, rare glauconite, soft to firm, blocky to subfissile in part.
3110	80	<u>SANDSTONE</u> : As above, no fluorescence.
	20	<u>SILTSTONE</u> : As above.
3115	70	<u>SANDSTONE</u> : Predominantly as above, becomes medium to coarse in part, no fluorescence.
	30	<u>SILTSTONE</u> : As above.
3120	70	<u>SANDSTONE</u> : Predominantly as above, becoming fine to medium, occasionally coarse milky quartz, no fluorescence.
	30	<u>SILTSTONE</u> : As above.
3125(TD)	100	<u>SANDSTONE</u> : Clear to translucent, frosted, medium, subangular to subrounded, good sorting, weak siliceous cement, trace nodular pyrite, trace mica, trace lithic fragments, loose, inferred good visual porosity, no fluorescence.

APPENDIX 2



5th Cut
A4 Dividers
Re-order code 97052

58780

APPENDIX 2:
BLACKBACK 3
CORE DESCRIPTIONS

ESSO AUSTRALIA LTD
CORE DESCRIPTION

CORE No.: 1
Interval cored: 2835 - 2853.1m
Cut: 18.1m
Bit type: RC 412
Described by: Greg Clota

WELL: Blackback 3
Recovered: 18.1 m (100%)
Bit Size: 9 7/8"
Date: 29/3/94

Interval Depth & ROP Graphic Shows Descriptive Lithology

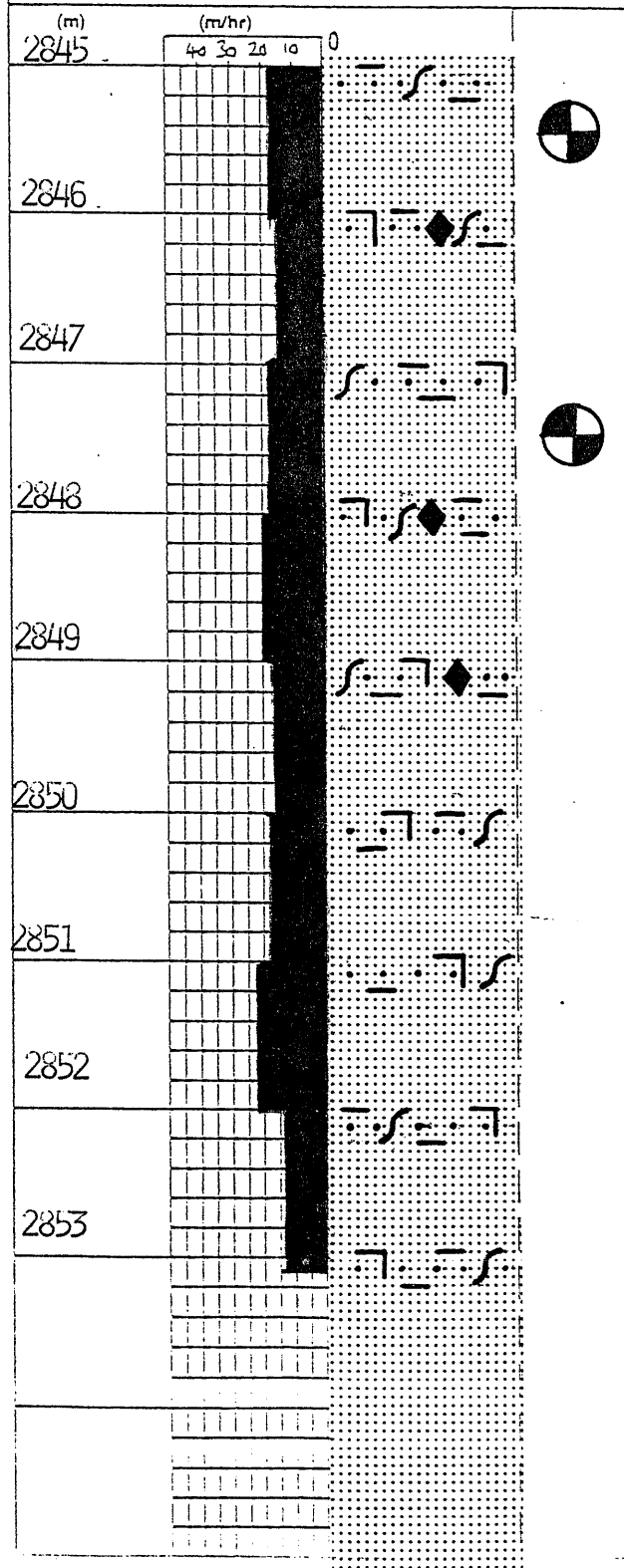
(m)	(m/hr)	Graphic	Shows	Descriptive Lithology
2835	40 30 20 10 0			2835.0 SANDSTONE: Medium grey, dark green grey, fine to predominantly medium to coarse, angular to subangular, moderately sorted, weak siliceous cement, abundant argillaceous/silty matrix, common glauconite, common biotite, trace pyrite, common altered feldspar, moderately hard, very poor to nil porosity, trace pale yellow spotty fluorescence, weak fast streaming cut, thin to moderate ring-residue, weak petroliferous odour.
2836				2836.0 SANDSTONE: Medium to dark grey, fine to medium, subangular to subrounded, moderate to well sorted, weak siliceous cement, abundant kaolinitic matrix, common glauconite, trace biotite, abundant brown stained (siderite coating) quartz, moderately hard, very poor porosity, 10% patchy pale yellow dull fluorescence, weak instant cut, thin ring residue, weak petroliferous odour.
2837				2837.0 SANDSTONE: Medium grey, medium brown, fine to coarse, angular to subrounded, poorly sorted, weak siliceous cement, abundant argillaceous/silty matrix, abundant glauconite, common lithic clasts (altered feldspar), common siderite coated quartz, moderately hard, very poor porosity, 30% dull patchy pale yellow fluorescence, weak fast streaming cut, thin ring residue, weak petroliferous odour.
2838				2838.0 SANDSTONE: Medium brown, fine to medium, occasionally coarse, angular to subrounded, poorly sorted, abundant brown argillaceous matrix, matrix supported in part, common glauconite, trace altered feldspar, common siderite stained quartz, moderately hard, very poor to nil porosity, 10% dull patchy pale yellow fluorescence, weak fast streaming cut, thin ring residue.
2839				2839.0 SANDSTONE: Dark brown, dark grey, very fine to fine, occasionally medium, angular to subrounded, moderate to well sorted, abundant argillaceous matrix, matrix supported in part, common glauconite, trace biotite, trace lithic fragments, moderately hard, nil visual porosity, 5% dull patchy pale yellow fluorescence, weak instant cut, thin ring residue.
2840				2840.0 SANDSTONE: As above, 10% fluorescence as above.
2841				2841.0 SANDSTONE: Light brown, medium grey, fine to medium, angular to subrounded, moderate to well sorted, weak siliceous cement, abundant glauconite, trace altered feldspar, trace biotite, friable to moderately hard, poor porosity, 50% moderately bright patchy pale yellow fluorescence, fast to instant streaming cut, moderate ring residue, weak petroliferous odour.
2842				2842.0 SANDSTONE: Light grey, grey brown, clear to translucent, fine to medium, angular to subrounded, moderately sorted, weak siliceous cement, moderate argillaceous/silty matrix, common glauconite, trace milky quartz, friable to moderately hard, 10% moderately bright patchy pale yellow fluorescence, instant cut, moderate ring residue, weak petroliferous odour.
2843				2843.0 SANDSTONE: Medium grey, light brown, fine to predominantly medium to coarse, angular to subrounded, poorly sorted, weak siliceous cement, abundant argillaceous matrix, common glauconite, trace biotite, trace altered feldspar, trace siderite stained quartz, 5% dull patchy pale yellow fluorescence, faint fast streaming cut, thin to nil ring residue.
2844				2844.0 SANDSTONE: Medium grey, light brown, fine to medium, angular to subrounded, abundant kaolinitic matrix, common glauconite, trace altered feldspar, trace biotite, moderately hard, very poor to nil porosity, no fluorescence, no cut.

ESSO AUSTRALIA LTD
CORE DESCRIPTION

CORE No.: 1
Interval cored: 2835 - 2853.1m
Cut: 18.1m
Bit type: RC 412
Described by: Greg Clota

WELL: Blackback 3
Recovered: 18.1m (100%)
Bit Size: 9 7/8 "
Date: 29/3/94

Interval Depth & ROP Graphic Shows Descriptive Lithology



2845.0 SANDSTONE: Off white, light grey, fine to medium, subangular to subrounded, moderate to well sorted, abundant argillaceous/silty matrix, common to abundant glauconite, trace altered feldspar, moderately hard, very poor porosity, 20% dull patchy pale yellow fluorescence, moderate instant cut, moderate ring residue, weak petroliferous odour.

2846.0 SANDSTONE: Medium grey, light grey, fine to medium, angular to subrounded, weak siliceous cement, common brown argillaceous matrix, abundant kaolinitic matrix, common glauconite, trace altered feldspar, trace disseminated pyrite, trace biotite, moderately hard, tight, no fluorescence.

2847.0 SANDSTONE: Medium brown, green grey, fine to predominantly medium to coarse, angular to subrounded, poorly sorted, weak siliceous cement, common kaolinitic/argillaceous matrix, abundant glauconite, common biotite, trace altered feldspar, moderately hard, poor to very poor porosity, 20% moderately bright patchy pale yellow fluorescence, moderate fast to instant streaming cut, moderate to thick ring residue, weak petroliferous odour.

2848.0 SANDSTONE: Medium grey, grey green, fine to predominantly medium to coarse, angular to subrounded, poorly sorted, weak siliceous cement, abundant argillaceous/silty matrix, common glauconite, trace nodular pyrite, trace biotite, trace siderite stained quartz, trace granular milky quartz, moderately hard, tight, no fluorescence.

2849.0 SANDSTONE: Predominantly as above, medium to coarse, tight, no fluorescence.

2850.0 SANDSTONE: Medium to dark grey, medium brown, fine to medium, occasionally coarse, angular to subrounded, poor to moderately sorted, weak siliceous cement, abundant kaolinitic/argillaceous matrix, abundant glauconite, common biotite, trace altered feldspar, trace granular milky quartz, moderately hard, no visual porosity, no fluorescence.

2851.0 SANDSTONE: As above, no fluorescence.

2852.0 SANDSTONE: Medium to dark brown, dark grey, fine to medium to occasionally coarse, angular to subrounded, moderately sorted, abundant argillaceous matrix, matrix supported in part, common glauconite, trace biotite, trace altered feldspar, occasional trace very coarse milky quartz, moderately hard, tight, no fluorescence.

2853.0 SANDSTONE: Dark green grey, dark grey, fine to coarse, angular to subrounded, poorly sorted, weak siliceous cement, abundant kaolinitic/argillaceous matrix, occasional trace haematitic staining in matrix, common glauconite, trace lithics, trace mica, moderately hard, poor porosity, no fluorescence.

ESSO AUSTRALIA LTD
CORE DESCRIPTION

CORE No.: 2

WELL: Blackback 3

Interval cored 2853.1 - 2871.0m

Recovered: 17.1m (96%)

Cut: 17.9m

Bit Size: 9 7/8"

Bit type: RC 412

Date: 30/4/94

Described by: Greg Clota

Interval Depth & ROP Graphic Shows Descriptive Lithology

Interval (m)	Depth & ROP (m/hr)				Graphic Shows	Descriptive Lithology
	40	30	20	10		
2853.1						2853.1 SANDSTONE: Dark green, dark grey, fine to medium, occasionally coarse, subangular to subrounded, moderately sorted, weak siliceous cement, common argillaceous matrix, common glauconite, trace altered feldspar, trace nodular pyrite, trace lithics, firm, poor porosity, no fluorescence.
2854						2854.0 SANDSTONE: Dark green grey, medium to coarse, angular to subrounded, moderately sorted, abundant argillaceous matrix, trace lithics, common glauconite, trace altered feldspar, trace mica, firm, very poor porosity, no fluorescence.
2855						2855.0 SANDSTONE: Medium grey green, fine to medium, subangular to subrounded, moderately to well sorted, weak siliceous cement, trace to common argillaceous matrix, trace to common glauconite, trace nodular pyrite, trace lithics, firm, poor to fair porosity in part, no fluorescence.
2856						2856.0 SANDSTONE: Medium grey green, very fine to fine, subangular to subrounded, well sorted, weak siliceous cement, common argillaceous matrix, trace pyritic cement, trace mica, common glauconite, trace lithics, firm, poor porosity, no fluorescence.
2857						2857.0 SANDSTONE: Medium grey green, fine to medium, angular to subrounded, moderately sorted, weak siliceous cement, common glauconite, common siderite stained quartz, trace lithics, firm, poor to fair porosity, no fluorescence.
2858						2858.0 SANDSTONE: Medium grey green, coarse to very coarse, subangular to subrounded, moderately sorted, weak siliceous cement, abundant argillaceous matrix, trace pyritic matrix, common glauconite, common very coarse milky quartz, firm, very poor porosity, no fluorescence.
2859						2859.0 SANDSTONE: Medium grey green, fine to predominantly medium, angular to subrounded, moderately sorted, weak siliceous cement, common silty/argillaceous matrix, common glauconite, trace lithics, minor haematite stained matrix, common coarse milky quartz, firm to moderately hard, poor porosity, no fluorescence.
2860						2860.0 SANDSTONE: Medium grey green, medium to coarse, occasionally very coarse, angular to subrounded, poor to moderately sorted, abundant argillaceous matrix, common to abundant glauconite, trace nodular pyrite, common altered feldspar, common lithics, moderately hard, very poor porosity, no fluorescence.
2861						2861.0 SANDSTONE: Medium grey green, medium to coarse, angular to subrounded, moderate to poorly sorted, abundant argillaceous matrix, common glauconite, trace altered feldspar, trace cherty fragments, trace nodular pyrite, moderately hard, very poor to nil porosity, no fluorescence.
2862						2862.0 SANDSTONE: Medium grey green, fine to predominantly medium, angular to subrounded, moderately sorted, weak siliceous cement, trace argillaceous matrix, common glauconite, trace rock fragments, trace coarse milky quartz, trace chert clasts, moderately hard, very poor porosity, no fluorescence.

ESSO AUSTRALIA LTD
CORE DESCRIPTION

CORE No.: 2
Interval cored: 2853.1 - 2871.0
Cut: 17.9m
Bit type: RC 412
Described by: Greg Clota

WELL: Blackback 3
Recovered: 17.1m (96%)
Bit Size: 9 7/8"
Date: 30/4/94

Interval Depth & ROP Graphic Shows Descriptive Lithology

Interval (m)	Depth & ROP (m/hr)	Graphic	Shows	Descriptive Lithology
2863	40 30 20 10 0			2863.0 SANDSTONE: Medium to dark grey green, coarse to granular, angular to subrounded, poorly sorted, abundant argillaceous matrix, common glauconite, trace to common haematite stained quartz, moderately hard, very poor to nil porosity, no fluorescence.
2864				2864.0 SANDSTONE: Medium to dark grey green, fine to medium, subangular to subrounded, moderate to well sorted, common argillaceous matrix, common glauconite, trace mica, trace altered feldspar, trace lithics, moderately hard, very poor to nil porosity, no fluorescence.
2865				2865.0 SANDSTONE: Medium to dark grey green, medium to very coarse, subangular to subrounded, poor to moderately sorted, weak siliceous cement, moderate argillaceous matrix, common glauconite, trace very coarse to granular milky quartz, moderately hard, very poor to nil porosity, no fluorescence.
2866				2866.0 SANDSTONE: Light to medium grey green, off white, fine to medium, subangular to subrounded, well sorted, weak siliceous cement, trace kaolinitic matrix, abundant glauconite, trace lithics, trace mica, moderately hard, poor to very poor porosity, no fluorescence.
2867				2867.0 SANDSTONE: Light to medium grey green, grey green, coarse to very coarse, angular to subrounded, poorly sorted, abundant silty/argillaceous matrix, common glauconite, common haematite staining in matrix, common rock fragments, crumbly to moderately hard, poor to fair porosity in part, no fluorescence.
2868				2868.0 SANDSTONE: Light green grey, green grey, yellow green, medium to coarse, subangular to subrounded, moderately sorted, common limonitic stained argillaceous matrix, common glauconite, common milky quartz, trace rock fragments, moderately hard, poor to occasionally porosity, no fluorescence.
2869				2869.0 SANDSTONE: Medium grey green, medium to predominantly coarse, angular to subrounded, poorly sorted, common to abundant argillaceous matrix, common glauconite, trace haematite stained quartz, trace rock fragments, trace altered feldspar, moderately hard, very poor to nil porosity, no fluorescence.
2870				2870.2 SANDSTONE: Grey green, medium grey, medium to predominantly coarse to very coarse, angular to subrounded, moderately sorted, weak siliceous cement, abundant argillaceous matrix, trace haematite/limonitic stained matrix, common altered feldspar, trace nodular pyrite, occasional granular milky quartz float, abundant rock fragments, moderately hard, friable in part, no fluorescence.

APPENDIX 3



5th Cut
A4 Dividers
Re-order code 97052

58780

APPENDIX 3:
BLACKBACK 3
SIDEWALL CORE DESCRIPTIONSS

3.

SIDEWALL CORE DESCRIPTIONS

<u>No.</u>	<u>Depth</u> (m)	<u>Rec.</u> (mm)	<u>B/R6</u>	<u>Description</u>
1	3069			Missing
2	3068			Missing
3	3063			Missing
4	3062	20	B	<u>SANDSTONE</u> : Off white, pale grey, medium to coarse, angular to subrounded, poor to moderate sorting, abundant kaolinitic matrix, trace biotite, trace chlorite, trace milky quartz, moderately hard, very poor visual porosity, no fluorescence.
5	3056			Missing
6	3051	30	B	Missing
7	3049.5			Missing
8	3022	25	B	<u>SANDSTONE</u> : Clear to translucent, light grey, fine to medium, subangular to subrounded, good sorting, weak siliceous cement, trace silty matrix, common biotite, friable, poor visual porosity, no fluorescence.
9	3020			Missing
10	3004	30	B	<u>SANDSTONE</u> : Dark grey, coarse to very coarse, angular to subrounded, moderate sorting, abundant argillaceous/silty matrix, matrix supported, trace biotite, common milky/smoky quartz, moderately hard, tight, no fluorescence.
11	3000.4	20	B	<u>SANDSTONE</u> : As above, no fluorescence.
12	2984			Missing
13	2973			Missing

14	2971	30	B	<u>SANDSTONE</u> : Medium grey, grey brown, fine to predominantly medium to coarse, angular to subrounded, moderate sorting, abundant brown argillaceous matrix, common glauconite, trace biotite, moderately hard, very poor visual porosity, no fluorescence.
15	2965			Missing
16	2951	20	B	<u>SANDSTONE</u> : Off white, light grey, fine to occasionally medium, subangular to subrounded, good sorting, weak siliceous cement, common kaolinitic/silty matrix, common biotite, trace chlorite, friable, very poor visual porosity, no fluorescence.
17	2948.7			Missing
18	2946	25	B	<u>SANDSTONE</u> : Off white, light green, fine to occasionally medium, subangular to subrounded, good sorting, weak siliceous cement, common kaolinitic matrix, common biotite, slightly glauconitic, common milky quartz, friable to moderately hard, very poor visual porosity, no fluorescence.
19	2936.2	20	B	<u>SANDSTONE</u> : Light grey, off white, fine to medium, subangular to subrounded, good sorting, slight dolomitic cement in part, common silty/argillaceous matrix, trace biotite, moderately hard, very poor visual porosity, no fluorescence.
20	2927.5	30	B	<u>SANDSTONE</u> : Off white, light grey, medium to coarse, occasionally very coarse, angular to subrounded, poor to moderate sorting, abundant kaolinitic/silty matrix, trace glauconite, trace biotite, trace rock fragments, moderately hard, very poor visual porosity, no fluorescence.
21	2926.5			Missing

22	2913	25	B	<u>SANDSTONE</u> : Light green grey, fine to coarse, angular to subrounded, poor sorting, abundant argillaceous matrix, trace glauconite, common milky quartz, trace biotite, friable to moderately hard, poor visual porosity, no fluorescence.
23	2905			Missing
24	2902	35	B	<u>SANDSTONE</u> : Clear to translucent, frosted, coarse to very coarse, angular to subrounded, weak siliceous cement, common glauconite, trace smoky/milky quartz, friable, good visual porosity, no fluorescence.
25	2900			Missing
26	2898.2	35	B	<u>SANDSTONE</u> : Dark green grey, medium to very coarse, angular to subangular, moderate to poor sorting, trace dolomite cement in part, abundant argillaceous matrix, matrix supported in part, common glauconite, trace lithic fragments, moderately hard, poor to occasionally fair visual porosity, no fluorescence.
27	2892.5			Missing
28	2887	40	B	<u>SANDSTONE</u> : Off white, green grey, medium to predominantly coarse to very coarse, angular to subrounded, poor to moderate sorting, moderate to weak siliceous cement, moderate kaolinitic/silty matrix, abundant glauconite, trace nodular pyrite, trace milky quartz, poor visual porosity, no fluorescence.
29	2883			Missing
30	2879.5	35	B	<u>SANDSTONE</u> : Green grey, very fine to very coarse, angular to subrounded, moderate kaolinitic matrix, silty matrix in part, abundant glauconite, trace nodular pyrite, moderately hard to hard, tight to very poor visual porosity, no fluorescence.

31	2875	35	B	<u>SANDSTONE</u> : Dark green grey, fine to medium, occasionally coarse, angular to subrounded, moderate to good sorting, weak siliceous cement, common silty matrix, trace kaolinite, common glauconite, trace haematitic/limonitic staining in part, trace rose quartz, friable to moderately hard, poor visual porosity, no fluorescence.
32	2867.5	35	B	<u>SANDSTONE</u> : Predominantly as above, haematitic/limonitic stained matrix, trace biotite, friable, poor visual porosity, no fluorescence.
33	2862.5			Missing
34	2856			Missing
35	2850	25	B	<u>SANDSTONE</u> : Dark grey, dark green grey, fine to medium, angular to subrounded, good sorting, trace siliceous cement, common silty/argillaceous matrix, trace haematitic stained matrix, trace glauconite, poor visual porosity, no fluorescence.
36	2845			Missing
37	2840			Missing
38	2835	35	B	<u>SANDSTONE</u> : Medium grey, brown grey, fine to predominantly medium, subangular to subrounded, good sorting, common to abundant argillaceous matrix, common glauconite, trace carbonaceous fragments, friable to moderately hard, poor to in part fair visual porosity. <u>FLUORESCENCE</u> : 50% Dull to moderately bright patchy yellow green fluorescence, weak instant to fast streaming cut, moderately thick ring residue, weak petroliferous odour.
39	2832			Missing

40	2829	45	B	<u>SANDSTONE</u> : Medium brown, grey brown, fine to occasionally medium, subangular to subrounded, moderate sorting, abundant argillaceous matrix, matrix supported, common glauconite, trace coarse milky/smoky quartz, locally becomes very silty/argillaceous, very poor to nil visual porosity, no fluorescence.
41	2826.2	35	B	<u>CLAYSTONE</u> : Medium brown, brown grey, moderately to very calcareous, slightly arenaceous, trace to common glauconite nodules, moderately hard, massive to subfissile.
42	2823	35	B	<u>CLAYSTONE</u> : As above, moderately to very calcareous, becoming calcareous claystone.
43	2818	35	B	<u>CALCAREOUS CLAYSTONE</u> : Medium brown, grey brown, slightly to moderately silty, arenaceous inclusions, trace glauconite, massive to subfissile.
44	2809	30	B	<u>CALCAREOUS CLAYSTONE</u> : Olive grey, slightly silty, micromicaceous, trace glauconite, moderately hard, massive to subfissile.
45	2798	60	B	<u>LIMESTONE</u> : Olive grey, moderately argillaceous, slightly micromicaceous, trace glauconite, moderately hard, massive, grades to calcareous claystone.
46	2772.4	40	B	<u>CALCAREOUS CLAYSTONE</u> : Olive grey, homogeneous, slightly micromicaceous, rare disseminated pyrite, moderately hard, sticky in part, plastic, massive.
47	2700	60	B	<u>CALCAREOUS CLAYSTONE</u> : Olive grey, brown grey, homogeneous, very silty, slightly micromicaceous, trace carbonaceous specks, sticky, firm, massive to subfissile in part.
48	2600	40	B	<u>LIMESTONE</u> : Olive grey, medium grey, calcilutite, slightly silty, trace white calcite infill, trace disseminated pyrite, moderately hard, sticky in part, massive.
49	2575			Missing

50	2550	25	B	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace carbonaceous specks.
51	2525			Missing
52	2501	30	B	<u>LIMESTONE</u> : Predominantly as above (2600m), calcilutite, slightly micromicaceous, massive.
53	2400	15	B	<u>LIMESTONE</u> : Olive grey, medium grey, calcilutite, slightly silty, homogeneous, micritic, slightly micromicaceous, moderately hard, massive to subfissile in part.
54	2200	30	B	<u>LIMESTONE</u> : Predominantly as above, calcilutite, moderately silty.
55	2009			Missing
56	1822	20	B	<u>LIMESTONE</u> : Light brown grey, calcilutite, moderately silty, trace white calcite microlaminations, slightly micromicaceous, moderately hard, massive.
57	1632			Empty
58	1442			Missing
59	1252	30	B	<u>LIMESTONE</u> : Light brown grey, calcilutite, moderately silty, trace carbonaceous specks, trace white calcite infill (birdseye?), moderately hard, massive.
60	1125	50	B	<u>LIMESTONE</u> : As above, calcilutite.

APPENDIX 4



5th Cut
A4 Dividers
Re-order code 97052

58780

APPENDIX 4:
BLACKBACK 3
MDT RESULTS

ESSO AUSTRALIA LTD - MDT PRESSURE DATA

Well		BLACKBACK-3				Page		1 of 7				
Date		4-Apr-94 to 5-Apr-94				Engineer-Geologist		Mike Scott/Rick Bombardieri/Greg Clota				
Tool Type (MDT, RFT)		Schlumberger MDT				KB (metres):		25				
Gauge Type		CQG				Probe type		Standard Probe				
Pressure units (psia, psig)		PSIA				Temperature units (degF, degC)		degC				
Run/Seat Number	Depth		Initial Hydrostatic Pressure	Time Pretest Start (hh:mm)	Minimum Flowing Pressure	Formation Pressure	Temp	Time Pretest End (hh:mm)	Final Hydrostatic Pressure	Total Time Set (mm:ss)	Comments Including Test Quality and Fluid Type.	
	m MDRKB	m TVDSS										PPg
1/1	✓ P	2832.4	2807.4	4950.5 10.26	19:13	4.6	4054.7 8.40	60.3	19:26	4950.5 10.26	13:00	20cc Withdrawal Tight Formation
1/2	✓ P	2833.0	2808.0	4952.0 10.26	19:35	3.4	4034.0 8.36	62.0	19:43	4952.0 10.26	08:00	10cc Withdrawal Tight Formation 0.3 md/ep
1/3	✓ P	2834.0	2809.0	4953.5 10.26	19:51	1877.2	4029.8 8.34	62.3	19:59	4953.5 10.26	08:00	10cc Withdrawal Normal Pretest 2.6 md/ep
1/4	✓ P	2835.3	2810.3	4956.0 10.26	20:08	1282.9	4014.1 8.31	62.8	20:13	4956.0 10.26	05:00	10cc Withdrawal Normal Pretest 2.1 md/ep
1/5	✓ P	2836.1	2811.1	4957.4 10.26	20:18	872.8	4015.0 8.31	63.1	20:27	4957.4 10.26	09:00	10cc Withdrawal Normal Pretest 1.6 md/ep
1/6	✓ P	2837.0	2812.0	4959.3 10.26	20:34	109.4	4024.5 8.32	63.4	20:43	4959.3 10.26	09:00	10cc Withdrawal Tight Formation 1.1 md/ep
1/7	✗ P	2838.0	2813.0	4961.0 10.26	20:51	1674.0	- -	63.9	20:53	4961.0 10.26	02:00	Lost Seat
1/7A	✓ P	2838.0	2813.0	4961.0 10.26	20:54	2194.2	4035.3 8.34	63.8	21:01	4961.0 10.26	07:00	10cc Withdrawal Normal Pretest 2.7 md/ep

ESSO AUSTRALIA LTD - MDT PRESSURE DATA

Well		BLACKBACK-3					Page		2 of 7			
Date		4-Apr-94 to 5-Apr-94					Engineer-Geologist		Mike Scott/Rick Bombardieri/Greg Clota			
Tool Type (MDT, RFT)		Schlumberger MDT					KB (metres):		25			
Gauge Type		CQG					Probe type		Standard Probe			
Pressure units (psia, psig)		PSIA					Temperature units (degF, degC)		degC			
Run/Seat Number	Depth		Initial Hydrostatic Pressure PPg	Time Pretest Start (hh:mm)	Minimum Flowing Pressure	Formation Pressure PPg	Temp	Time Pretest End (hh:mm)	Final Hydrostatic Pressure PPg	Total Time Set (mm:ss)	Comments Including Test Quality and Fluid Type.	
	m MDRKB	m TVDSS										
1/8 P	✓ P	2838.5	2813.5	4962.1 10.26	21:12	425.2	4063.5 8.40	64.0	21:19	4962.1 10.26	07:00	10cc Withdrawal Tight/Normal 1.4 md/cp
1/9 P	✗ P	2839.1	2814.1	4963.0 10.26	21:27	35.9	4200+ -	64.3	21:32	4963.0 10.26	05:00	10cc Withdrawal Very Tight Supercharged
1/10 P	✓ P	2839.8	2814.8	4964.0 10.26	21:39	332.5	4108.7 8.49	64.6	21:54	4964.0 10.26	15:00	10cc Withdrawal Tight Formation 1.1 md/cp
1/11 P	✗ P	2840.8	2815.8	4965.8 10.26	22:01	5.8	12.0 0.02	64.4	22:04	4965.8 10.26	03:00	10cc Withdrawal Very Tight Formation No Build-up
1/12 P	✓ P	2841.5	2816.5	4967.0 10.26	22:11	1360.0	4046.8 8.36	65.0	22:20	4967.0 10.26	09:00	10cc Withdrawal Normal/Slow Buildup 1.3 md/cp
1/13 P	✓ P	2842.3	2817.3	4968.0 10.26	22:27	6.5	4051.7 8.37	65.3	22:38	4968.0 10.26	11:00	10cc Withdrawal Very Tight/Slow Buildup
1/14 P	✗ P	2844.7	2819.7	4971.6 10.26	22:49	5.8	25.0 0.05	65.0	22:57	4971.6 10.26	08:00	10cc Withdrawal Very Tight/ No Buildup
1/15 P	✗ P	2846.8	2821.8	4975.5 10.26	23:00	6.0	4390+ -	65.0	23:10	4975.5 10.26	10:00	10cc Withdrawal Tight/Supercharged 0.0 md/cp

ESSO AUSTRALIA LTD - MDT PRESSURE DATA

Well		BLACKBACK-3				Page		3 of 7				
Date		4-Apr-94 to 5-Apr-94				Engineer-Geologist		Mike Scott/Rick Bombardieri/Greg Clota				
Tool Type (MDT, RFT)		Schlumberger MDT				KB (metres):		25				
Gauge Type		CQG				Probe type		Standard Probe				
Pressure units (psia, psig)		PSIA				Temperature units (degF, degC)		degC				
Run/Seat Number	Depth		Initial Hydrostatic Pressure	Time Pretest Start	Minimum Flowing Pressure	Formation Pressure	Temp	Time Pretest End	Final Hydrostatic Pressure	Total Time Set	Comments Including Test Quality and Fluid Type.	
	m MDRKB	m TVDSS										PPg
P=Pretest S=Sample												
1/16 P	×	2857.6	2832.6	4994.3 10.26	23:20	5.6	9.6 0.02	65.9	23:24	4994.4 10.26	04:00	10cc Withdrawal Tight/ No Buildup 0.0 md/cp
1/17 P	×	2860.0	2835.0	4998.3 10.26	23:31	8.4	4530+ -	67.1	23:40	4998.3 10.26	09:00	10cc Withdrawal Tight/Supercharged 0.1 md/cp
1/18 P	✓	2884.8	2859.8	5040.9 10.25	23:51	3956.0	4058.3 8.26	68.0	23:55	5041.1 10.26	04:00	10cc Withdrawal Good/Normal 22.1 md/cp
1/19 P	✓	2888.8	2863.8	5047.9 10.25	0:05	3925.0	4064.0 8.26	68.7	0:07	5048.0 10.25	02:56	20cc Withdrawal Good 47.9 md/cp
1/20 P	✓	2891.6	2866.6	5052.7 10.25	0:14	4058.9	4068.0 8.26	69.2	0:19	5053.0 10.26	05:56	20cc Withdrawal Good test 269.0 md/cp
1/21 P	✓	2893.5	2868.5	5056.1 10.25	0:25	4011.5	4070.7 8.26	69.7	0:29	5056.1 10.25	04:56	20cc Withdrawal Good test 237.6 md/cp
1/22 P	✓	2901.6	2876.6	5069.7 10.25	0:38	3731.0	4083.2 8.26	70.1	0:41	5069.8 10.25	03:00	20cc Withdrawal Good test 18.6 md/cp
1/23 P	✓	2911.0	2886.0	5085.9 10.25	0:50	4083.6	4095.6 8.26	70.6	0:54	5085.8 10.25	04:00	20cc Withdrawal Good test 516.4 md/cp

ESSO AUSTRALIA LTD - MDT PRESSURE DATA

Well		BLACKBACK-3				Page		4 of 7				
Date		4-Apr-94 to 5-Apr-94				Engineer-Geologist		Mike Scott/Rick Bombardieri/Greg Clota				
Tool Type (MDT, RFT)		Schlumberger MDT				KB (metres):		25				
Gauge Type		CQG				Probe type		Standard Probe				
Pressure units (psia, psig)		PSIA				Temperature units (degF, degC)		degC				
Run/Seat Number	Depth		Initial Hydrostatic Pressure	Time Pretest Start (hh:mm)	Minimum Flowing Pressure	Formation Pressure	Temp	Time Pretest End (hh:mm)	Final Hydrostatic Pressure	Total Time Set (mm:ss)	Comments Including Test Quality and Fluid Type.	
	<small>P=Pretest S=Sample</small>	m MDRKB										m TVDSS
1/24	<input checked="" type="checkbox"/>	2916.9	2891.9	5096.0	1:00	4079.8	4104.0	71.1	1:05	5096.0	05:56	20cc Withdrawal Good test 278.4 md/cp
	<input type="checkbox"/>			10.25			8.26			10.25		
1/25	<input checked="" type="checkbox"/>	2924.8	2899.8	5109.4	1:12	4113.0	4115.2	71.4	1:15	5109.6	03:56	20cc Withdrawal Good test 2268.3 md/cp
	<input type="checkbox"/>			10.25			8.26			10.25		
1/26	<input checked="" type="checkbox"/>	2935.2	2910.2	5127.4	1:25	3275.6	4130.6	71.6	1:28	5127.4	03:00	20cc Withdrawal Good test 11.2 md/cp
	<input type="checkbox"/>			10.25			8.26			10.25		
1/27	<input checked="" type="checkbox"/>	2956.3	2931.3	5163.7	1:37	4156.7	4160.1	72.0	1:41	5163.9	04:00	20cc Withdrawal Good test 1744.2 md/cp
	<input type="checkbox"/>			10.25			8.26			10.25		
1/28	<input checked="" type="checkbox"/>	2987.3	2962.3	5217.4	1:48	4203.7	4205.9	72.4	1:51	5217.8	03:00	20cc Withdrawal Good test 2855.4 md/cp
	<input type="checkbox"/>			10.25			8.26			10.25		
1/29	<input checked="" type="checkbox"/>	3020.3	2995.3	5274.3	2:00	4236.2	4253.7	73.4	2:04	5274.7	04:00	20cc Withdrawal Good test 3331.0 md/cp
	<input type="checkbox"/>			10.25			8.27			10.25		
1/30	<input checked="" type="checkbox"/>	3066.5	3041.5	5354.9	2:12	4317.7	4319.6	74.3	2:16	5355.3	04:00	20cc Withdrawal Good 2544.5 md/cp
	<input type="checkbox"/>			10.25			8.27			10.25		
1/31	<input checked="" type="checkbox"/>	2888.8	2865.8	5047.7	2:36	4588.0	4064.7	74.6	2:58	5047.7	22:00	Pretest for water samples Attempt to pump. Probe plugged. Move slightly.
	<input type="checkbox"/>			10.25			8.26			10.25		

ESSO AUSTRALIA LTD - MDT PRESSURE DATA

Well		BLACKBACK-3				Page		5 of 7			
Date		4-Apr-94 to 5-Apr-94				Engineer-Geologist		Mike Scott/Rick Bombardieri/Greg Clota			
Tool Type (MDT, RFT)		Schlumberger MDT				KB (metres):		25			
Gauge Type		CQG				Probe type		Standard Probe			
Pressure units (psia, psig)		PSIA				Temperature units (degF, degC)		degC			
Run/Seat Number	Depth		Initial Hydrostatic Pressure	Time Pretest Start	Minimum Flowing Pressure	Formation Pressure	Temp	Time Pretest End	Final Hydrostatic Pressure	Total Time Set	Comments
	m MDRKB	m TVDSS									
P=Pretest S=Sample											
1/32 <input checked="" type="checkbox"/> P	2888.3	2863.3	5046.3 10.25	3:01	4058.7	4064.1 8.26	73.7	3:14	5046.8 10.25	13:00	Pretest for water samples Attempt to pump. Probe plugged. Move location.
1/33 <input checked="" type="checkbox"/> P	2911.0	2886.0	5084.7 10.25	3:23	4093.5	4096.0 8.26	73.2	3:41	4096.0 8.26	18:00	Pretest for water samples Pumpout 10litres stopped 3:42
1/34 <input type="checkbox"/> S	2911.0	2886.0	- -	3:42	211.0	- -	74.6	4:01	5085.0 10.25	19:00	Sample 2.75 gallon. Probe plugged. Retract and reset.
1/35 <input checked="" type="checkbox"/> P	2911.0	2886.0	5085.0 10.25	4:04	1909.9	4096.1 8.26	74.2	4:16	- -	12:00	Pretest for water samples Pump out 8 litres.
1/36 <input type="checkbox"/> S	2911.0	2886.0	- -	Open: 4:17	-	- -	74.6	4:22	5081.6 10.24	05:00	Probe plugged Retract and reset
1/37 <input checked="" type="checkbox"/> P	2911.0	2886.0	5085.0 10.25	4:28	-	- -	-	-	- -	-	Probe plugged Retract and reset
1/38 <input checked="" type="checkbox"/> P	2911.0	2886.0	5085.0 10.25	4:30	4093.4	4096.2 8.26	74.6	-	- -	-	Pretest for water samples Pumpout 1 litre. Pump problems. Chk valve fail.
1/39 <input type="checkbox"/> S	2911.0	2886.0	- -	4:45	3240.0	4096.1 8.26	74.5	4:50	5085.0 10.25	05:00	Fill 450cc chamber

ESSO AUSTRALIA LTD - MDT PRESSURE DATA

Well		BLACKBACK-3				Page		6 of 7			
Date		4-Apr-94 to 5-Apr-94				Engineer-Geologist		Mike Scott/Rick Bombardieri/Greg Clota			
Tool Type (MDT, RFT)		Schlumberger MDT				KB (metres):		25			
Gauge Type		CQG				Probe type		Standard Probe			
Pressure units (psia, psig)		PSIA				Temperature units (degF, degC)		degC			
Run/Seat Number	Depth		Initial Hydrostatic Pressure	Time Pretest Start (hh:mm)	Minimum Flowing Pressure	Formation Pressure	Temp	Time Pretest End (hh:mm)	Final Hydrostatic Pressure	Total Time Set (mm:ss)	Comments Including Test Quality and Fluid Type.
	m MDRKB	m TVDSS									
1/40 P-Pretest S-Sample P	2880.8	2855.8	5032.8 10.25	5:05	3706.3	4053.8 8.26	74.3	5:07	5033.0 10.25	02:00	20cc Withdrawal Good/Normal 17.5md/cp
1/41 P	2878.8	2853.8	5029.5 10.25	5:12	6.4	9.1 0.02	73.5	5:16	5029.2 10.25	04:00	20cc Withdrawal Very Tight/Aborted No Buildup
1/42 P	2875.2	2850.2	5022.5 10.25	5:23	33.3	4980.0 10.16	74.1	5:26	5022.5 10.25	03:00	10cc Withdrawal Tight Supercharged
1/43 P	2868.9	2843.9	5011.8 10.38	-	-	-	-	-	-	-	Seat Failure Move slightly
1/44 P	2868.8	2843.8	5011.0 10.38	-	-	-	-	-	-	-	Seat Failure Move away
1/45 P	2863.3	2838.3	5001.5 10.36	5:47	5.9	7.0 0.01	72.8	5:50	5001.5 10.25	03:00	10cc Withdrawal Very Tight, Aborted No Buildup
1/46 P	2854.0	2829.0	4985.5 10.33	5:57	6.8	6.8 0.01	72.5	6:00	4986.0 10.25	03:00	10cc Withdrawal Very Tight, Aborted No Buildup
1/47 P	2849.0	2824.0	4976.5 10.31	6:05	7.3	8.0 0.02	72.8	6:09	4976.5 10.25	04:00	10cc Withdrawal Very Tight, Aborted No Buildup

ESSO AUSTRALIA LTD - MDT PRESSURE DATA

Well		BLACKBACK-3			Page		7 of 7					
Date		4-Apr-94 to 5-Apr-94			Engineer-Geologist		Mike Scott/Rick Bombardieri/Greg Clota					
Tool Type (MDT, RFT)		Schlumberger MDT			KB (metres):		25					
Gauge Type		CQG			Probe type		Standard Probe					
Pressure units (psia, psig)		PSIA			Temperature units (degF, degC)		degC					
Run/Seat Number	Depth		Initial Hydrostatic Pressure PPg	Time Pretest Start (hh:mm)	Minimum Flowing Pressure	Formation Pressure PPg	Temp	Time Pretest End (hh:mm)	Final Hydrostatic Pressure PPg	Total Time Set (mm:ss)	Comments Including Test Quality and Fluid Type.	
	m MDRKB	m TVDSS										
1/48	<input checked="" type="checkbox"/>	2835.3	2810.3	4953.1 10.26	6:15	2380.3	4011.1 8.30	72.1	6:18	-	03:00	Pretest for sample
1/49	<input type="checkbox"/>	2835.3	2810.3	-	6:19	155.1	158.0 0.33	-	-	-	-	Fill 2.75 gallon chamber Abort, no productivity
1/50	<input type="checkbox"/>	2835.3	2810.3	-	-	281.0	291.0 0.60	-	-	-	-	Fill 450 cc chamber Abort, no productivity

- Nomenclature:**
- ✓ Good pretest for pressure gradient determination
 - × Failed pretest for pressure gradient determination
 - Good pretest for sampling
 - Failed pretest for sampling

APPENDIX 5

APPENDIX 5

58780



5th Cut
A4 Dividers
Re-order code 97052

APPENDIX 5

BLACKBACK 3

VELOCITY SURVEY REPORT

DISTRIBUTED UNDER SEPARATE COVER