WELL COMPLETION REPORT

TURRUM-6 & TURRUM-6 ST1

WCR VOL 1

W1146

Turrum-6 &
Turrum-6ST1

Esso Australia Ltd.

WELL COMPLETION REPORT
TURRUM-6 & TURRUM-6 ST1

VOLUME 1

BASIC DATA

GIPPSLAND BASIN, VICTORIA

ESSO AUSTRALIA LTD

Compiled by: G. Clota
J. Reeve

WELL COMPLETION REPORT

VOLUME 1: BASIC DATA

CONTENTS

FIGURES

APPENDICES

1. WELL DATA RECORD

LOCATION	:	Latitude : 38° 14' 11.108" South Longitude : 148° 10' 24.946" East X= 602,710mE Y= 5,767,287mN Map Projection: UTM Co-ordination Base: ANS/AGD AMG Zone 55 Geographical Location: Bass Strait, Victoria Field : Turrum
PERMIT	:	Vic/L3
ELEVATION	:	25m
WATER DEPTH	:	60m
TOTAL DEPTH	:	2840m (Driller) 2842.5m (Logger)
PLUG BACK TYPE	:	Cement Plug
REASONS FOR PLUGGING BACK	:	Plug and Abandon
MOVE IN	:	23/09/95 at 2145 hours
SPUDDED	:	24/09/95 at 1700 hours
REACHED TD	:	11/10/95 at 1500 hours
RIG RELEASED	:	19/10/95 at 1815 hours
OPERATOR	:	Esso Australia Resources Ltd
PERMITTEE OR LICENSEE	:	BHP Petroleum (Bass Strait) Pty Ltd and Esso Australia Resources Ltd
ESSO INTEREST	:	50%
OTHER INTEREST	:	50% BHP Petroleum (Bass Strait) Pty Ltd
CONTRACTOR	:	Diamond Offshore General Company
RIG NAME	:	Ocean Bounty
EQUIPMENT TYPE	:	Semi-submersible
TOTAL RIG DAYS	:	25.9
DRILLING AFE NO	:	L61015110
TYPE COMPLETION	:	Plugged and abandoned
WELL CLASSIFICATION	:	Outpost/Extension Well

2. OPERATIONS SUMMARY

1. MOVING/MOORING

The Ocean Bounty was released at 2030 hours on the 23rd September, 1995 from the Turrum #5 location. The rig was in tow by the MV Lady Dawn at drilling draft to the Turrum #6 location. The rig was at the Turrum #6 location with the #6 anchor on bottom at 2145 hours on the 23rd of September, 1995. After running and tensioning the anchors the final rig location was 7.0m on a bearing of 360°T from the called location. The water depth was 60.0m.

2. DRILLING OPERATIONS

36" Hole/30" Casing

A Hughes ATX-1 14¾" bit plus 26" and 36" hole openers were made up and used to spud Turrum-6 at 1700 hours on the 24th September, 1995. The 36" hole section was drilled from 85m to 128.76m. The well was circulated clean and a wiper trip was made back to the mudline prior to displacing the well with hi-vis mud. The hole deviation at 109m was 0.28°/48°.

Three joints of 30" 309lb/ft casing were run with the PGB and cemented in place with 800 sacks of class 'G' cement with 2% $CaCl_2$ in sea water. The shoe was set at 117.7m.

17½" Hole/13 3/8" Casing

A Hughes 17½" Max-GT1 was made up and drilled out the float shoe and washed and cleaned the rathole to 128.76m. Drilling proceeded from 128.76m to 660m. Hi-vis sweeps were pumped after each stand during the drilling of the interval. Single shot surveys were run at the following intervals, 381m 0.23°/254° and 653m 0.48°/86°.

A wiper trip was made to the 30" casing shoe and the well was displaced in stages with hi-vis mud prior to tripping out and rigging up the wireline loggers. Suite #1 Run #1 was AS-LDL-CAL-GR-AMS. The logs were run riserless and without the motion compensator engaged. The logging string was directed to the wellhead by running the tools to the seafloor supported by the rig's utility guide frame.

46 joints of 68lb/ft K55 13 3/8" casing plus 1 joint of 20" 129lb/ft X-56 casing and the 18¾" wellhead joint were run with the shoe landed at 647.81m. The casing was cemented with a lead of 950 sacks of class 'G' cement plus 0.45 GPS Econolite (12.5ppg) and a tail of 700 sacks class 'G' cement (15.8ppg).

The BOP stack was run and latched, pressure and function tested along with the surface lines.

12¼" Hole

A 12¼" Diamond Boart QP19L was made up with an F2000M Dynadrill tandem mud motor and RIH. The float collar and shoe track were drilled out and the rathole cleaned to 660m. New formation was drilled from 660m to 663m where the hole was circulated clean and displaced with a KCl/PHPA mud system. A Phase II PIT was performed (EMW=14.58ppg, jug test) and then drilling proceeded from 663m to 1578m. A trip was made at 1578m due to a suspected washout in the drill string after a pressure loss of 800psi. At surface it was found that the tandem mud motor had twisted off below the top package. The top of the main body of the mud motor was at 1570m and the rotors stuck up at 1566.5m. It was decided not to attempt to fish for the junk and the well was plugged with 492 sacks of class 'G' cement with 12gal/10bbl CFR31 and 3gal/10bbl SCR100L (slurry weight 16.4ppg).

A 12¼" Smith M15SODL and F2000S Dynadrill mud motor with 1¼° bent housing was made up with a new BHA and RIH to kick-off from 1390m (TOC). Turrum-6 ST1 was kicked-off from 1390m at 0015 hours on the 1st October, 1995. Drilling proceeded from 1390m to 1723m where a trip was made to change the bit.

A 12¼" Reed EHP51HDLK was made up with the same F2000S Dynadrill mud motor with 1¼° bent housing (additional hole angle correction required) and used to drill ahead from 1723m to 2087m. A bit trip was made and the mud motor was laid out at surface.

A 12¼" Reed EHP51HDLK was made up with a new BHA and tripped into the hole to drill ahead from 2087m to 2130m. A bit trip was made due to the poor penetration rate throughout the bit run. At surface the bit was inspected and no visible defects were found. A 12¼" Hughes ATM22GD was made up with a F2000S Dynadrill mud motor and new BHA to drill ahead from 2130m to 2398m. A bit trip was made due to the rotating hours on bottom. The mud motor was laid out at surface.

A 12¼" Smith F2DL and new BHA were made up and tripped into the hole and drilled ahead from 2398m to 2611m. A sample was circulated for geological evaluation and the decision was made to cut a core. After tripping the drill string an 9 7/8" Hughes Christensen ARC-427 core bit and 18m core barrel were made up and tripped into the hole to cut Core #1 from 2611m to 2627m. The core barrel jammed off after 16m. At surface 15.8m (99%) of core was recovered.

A 12¼" Smith F2DL and new BHA were made up and tripped into the hole, reamed out the 9 7/8" core rat hole from 2611m to 2627m and drilled ahead from 2627m to a 2840m (TD). A wiper trip was made to the 13 3/8" shoe casing prior to tripping out the drill string and running the following E-Logs: AS-DLL-MSFL-GR-AMS, FMI-LDL-CNL-NGR-AMS, MDT-GR-AMS, CSAT, MRIL-GR, CST-GR.

After completion of the wireline logging programme Turrum-6 ST1 was plugged and abandoned. The cement plugs were spotted at 2840-2656, 2656-2480, 2480-2334, 2334-2225, 1730-1550, 1550-1405, 690-540 and 175-105. An EZSV bridge plug was set by wireline at 175m.

The Ocean Bounty was released from Turrum-6 ST1 18:15 hours, 19 October 1995, and demobilised.

3. CASING DATA

Size	#/FT	Grade	Conn	Interval	Shoe Depth
30"	310	X-52 & B	SF-60	83-118m	118m
20"	129.3	X-56	DQ FB-60	82-102m	x/o to 13 3/8" @ 102m
13-3/8"	68	K-55	BTC	102-648m	648m

4. CEMENTING DATA

		30"	20" x 13-3/8"	Open Hole Sidetrack	P&A Plugs 1-4	P&A Plug 5-6	P&A Plug 7	P&A Plug 8
Setting Depth	**M-RKB**	118	648	1565-1390	2840-2225	1734-1417	691-544	171-101
Lead Slurry								
Volume Pumped	SX		950					
Weight	PPG		12.5					
Additives								
Econolite	GAL/SK		0.45					
Mixwater (FW)	GAL/SK		12.76					
Yield	CUFT/SK		2.18					
Tail Slurry								
Volume Pumped	SX	800	700	492	1682	968	395	170
Weight	PPG	15.8	15.8	16.4	15.8	15.8	15.8	15.8
Additives								
Halad 322L (Fluid Loss)	GAL/10bbl				20	17		
SCR-100L (Retarder)	GAL/10bbl			3	3			
CFR3L (Frict Reducer)	GAL/10bbl			12				
CaCl2	%	2					2	2
Mixwater	GAL/SK	5	5	4.35	5	5	5	5
Yield	CUFT/SK	1.15	1.15	1.06	1.15	1.15	1.15	1.15
Bump Plug?		N/A	Yes					
Calculated TOC (m)		ML	ML	Tagged @ 1390m	2225	Tagged @1417m	Tagged @ 544m	101

5. SAMPLES, CONVENTIONAL CORES, SIDEWALL CORES

Interval (m)	Type
660 - 2840	Cuttings samples - 3 sets of washed and oven dried and 1 set of lightly washed and air dried cuttings. (Interval 1390-1578m duplicated for Turrum-6 & Turrum-6 ST1) Samples from 660 - 1300m at 30m intervals. Samples from 1300 - 2840m at 5m intervals.
2611-2627	Core #1 cut 16m and recovered 15.8m (99%)
1543-2819	60 sidewall cores were shot and recovered (100%).

6. WIRELINE LOGS AND SURVEYS

Type	Scale	From	To
Suite 1			
AS-LDL-GR-AMS	1:200	658	118
Suite 2			
AS-DLL-MSFL-GR-SP-AMS	1:200	2840	648.5
FMI-LDL-CNL-NGR-AMS	1:200	2842	648.5
MDT (CQ Gauge Pretests)	(65 pretest)	1479.9	2787.8
CSAT (Checkshot)	(89 levels)	2837	640
MRIL-GR	1:200	1496 1559 2560 2606	1540 1592 2575 2630
CST-GR (Sidewall Cores)	(60 shot, 60 recovered)	2819	1543

7. MEASURED WHILE DRILLING (MWD) LOGS

Type	Scale	From	To
GR-ROP-WOB (GR offline at 1504m)	1:200	1300	1578

8. SUMMARY OF WIRELINE FORMATION TEST PROGRAMME

Test and Seat No.	Depth (m) KB	Chamber Litres	Oil Litres	Recover (Litres)		Formation Water Litres	Mud Filtrate Litres	Formation Pressure		Hydrostatic Pressure		Remarks
				Cond. Litres	Gas M^3			MPaa	Psia	MPaa	Psia	
1/1	1479.9	Pretest	-	-	-	-	-	14.17	2055.6	17.72	2569.7	
1/2	1486.0	Pretest	-	-	-	-	-	14.18	2057.0	17.79	2580.6	
1/3	1488.5	Pretest	-	-	-	-	-	14.19	2057.4	17.82	2584.5	
1/4	1494.3	Pretest	-	-	-	-	-	14.20	2060.0	17.89	2594.0	Partial seal failure
1/5	1500.1	Pretest	-	-	-	-	-	14.20	2059.0	17.95	2604.1	
1/6	1505.1	Pretest	-	-	-	-	-	14.19	2058.8	18.01	2612.8	
1/7	1512.5	Pretest	-	-	-	-	-	14.22	2063.0	18.10	2625.6	
1/8	1520.3	Pretest	-	-	-	-	-	14.30	2073.9	18.20	2639.4	
1/9	1534.3	Pretest	-	-	-	-	-	14.43	2093.4	18.36	2663.6	
1/10	1565.2	Pretest	-	-	-	-	-	14.71	2133.1	18.74	2717.3	
1/11	1575.0	Pretest	-	-	-	-	-	14.80	2146.7	18.85	2734.3	
1/12	1580.8	Pretest	-	-	-	-	-	14.86	2154.8	18.92	2744.3	
1/13	1602.3	Pretest	-	-	-	-	-	15.07	2185.7	19.18	2781.3	
1/14	1615.1	Pretest	-	-	-	-	-	15.19	2203.6	19.33	2803.2	
1/15	1638.0	Pretest	-	-	-	-	-	15.42	2236.4	19.60	2842.3	
1/16	1646.8	Pretest	-	-	-	-	-	15.50	2248.7	19.70	2857.9	
1/17	1662.5	Pretest	-	-	-	-	-	15.67	2272.8	19.89	2884.9	
1/18	1670.8	Pretest	-	-	-	-	-	15.75	2284.2	19.99	2899.4	
1/19	2256.2	Pretest	-	-	-	-	-	22.17	3215.4	26.92	3905.0	
1/20	2283.0	Pretest	-	-	-	-	-	22.54	3268.7	27.23	3949.5	

Test and Seat No.	Depth (m) KB	Chamber Litres	Oil Litres	Recover (Litres)		Formation Water Litres	Mud Filtrate Litres	Formation Pressure		Hydrostatic Pressure		Remarks
				Cond. Litres	Gas M^3			MPaa	Psia	MPaa	Psia	
1/21	2284.0	Pretest	-	-	-	-	-	22.61	3279.0	27.24	3951.3	Supercharged. Incomplete build-up
1/22	2284.5	Pretest	-	-	-	-	-	22.55	3270.7	27.25	3952.0	
1/23	2379.0	Pretest	-	-	-	-	-	23.48	3405.5	28.35	4112.2	
1/24	2383.7	Pretest	-	-	-	-	-	23.53	3412.6	28.41	4121.0	
1/25	2441.1	Pretest	-	-	-	-	-	25.44	3690.4	29.09	4218.9	
1/26	2441.0	Pretest	-	-	-	-	-	25.44	3690.4	29.09	4218.9	Verification of #1/25
1/27	2567.0	Pretest	-	-	-	-	-	25.54	3703.8	30.57	4433.1	
1/28	2568.0	Pretest	-	-	-	-	-	25.55	3705.2	30.58	4435.7	
1/29	2609.0	Pretest	-	-	-	-	-	26.14	3791.8	31.07	4505.7	Low perm. Supercharged
1/30	2615.1	Pretest	-	-	-	-	-	2.48	359.0	31.14	4515.9	Aborted - tight
1/31	2616.0	Pretest	-	-	-	-	-	26.10	3785.0	31.15	4517.6	
1/32	2617.0	Pretest	-	-	-	-	-	28.34	4111.0	31.16	4519.4	Supercharged
1/33	2616.8	Pretest	-	-	-	-	-	26.08	3783.2	31.16	4519.2	
1/34	2618.4	Pretest	-	-	-	-	-	26.09	3784.1	31.18	4521.8	
1/35	2621.3	Pretest	-	-	-	-	-	26.10	3784.8	31.21	4526.6	
1/36	2623.4	Pretest	-	-	-	-	-	1.85	269	31.23	4530.1	
1/37	2623.2	Pretest	-	-	-	-	-	26.10	3785.4	31.23	4529.8	
1/38	2650.5	Pretest	-	-	-	-	-	27.97	4057.0	31.55	4575.5	Seat failed
1/39	2650.2	Pretest	-	-	-	-	-	31.54	4574.0	31.54	4575.1	Seat failed
1/40	2652.8	Pretest	-	-	-	-	-	26.43	3833.2	31.57	4579.3	
1/41	2654.6	Pretest	-	-	-	-	-	26.49	3842.7	31.59	4582.2	Aborted Supercharged
1/42	2655.3	Pretest	-	-	-	-	-	26.44	3835.3	31.60	4583.4	
1/43	2653.8	Pretest	-	-	-	-	-	26.44	3834.3	31.58	4580.9	
1/44	2670.9	Pretest	-	-	-	-	-	26.68	3869.8	31.78	4609.5	

Test and Seat No.	Depth (m) KB	Chamber Litres	Oil Litres	Recover (Litres)		Formation Water Litres	Mud Filtrate Litres	Formation Pressure		Hydrostatic Pressure		Remarks
				Cond. Litres	Gas M^3			MPaa	Psia	MPaa	Psia	
1/45	2676.1	Pretest	-	-	-	-	-	26.68	3870.2	31.85	4618.8	
1/46	2683.0	Pretest	-	-	-	-	-	26.80	3887.1	31.92	4630.3	
1/47	2684.1	Pretest	-	-	-	-	-	26.79	3885.0	31.92	4629.9	
1/48	2702.0	Pretest	-	-	-	-	-	26.48	3840.5	32.13	4660.5	
1/49	2704.6	Pretest	-	-	-	-	-	26.51	3844.3	32.17	4666.3	
1/50	2707.5	Pretest	-	-	-	-	-			32.21	4671.1	Seat failed
1/51	2707.5	Pretest	-	-	-	-	-	26.53	3848.2	32.21	4671.1	Re-seat #1/49
1/52	2712.9	Pretest	-	-	-	-	-	26.58	3855.8	32.27	4680.2	
1/53	2718.7	Pretest	-	-	-	-	-	3.17	452	32.32	4689.9	Tight. No build-up
1/54	2718.5	Pretest	-	-	-	-	-			32.34	4690.5	Tight. No build-up
1/55	2718.3	Pretest	-	-	-	-	-	2.00	290	32.33	4689.7	Tight. No build-up
1/56	2729.9	Pretest	-	-	-	-	-	26.77	3882.7	32.47	4709.2	
1/57	2735.3	Pretest	-	-	-	-	-	26.82	3890.2	32.53	4718.5	
1/58	2739.0	Pretest	-	-	-	-	-	26.86	3895.2	32.58	4724.8	
1/59	2751.8	Pretest	-	-	-	-	-	27.95	4054.0	32.73	4746.4	Seat failed
1/60	2751.8	Pretest	-	-	-	-	-	27.31	3961.0	32.72	4746.2	Seat failed
1/61	2754.7	Pretest	-	-	-	-	-	27.14	3937.0	32.76	4751.1	Low perm Supercharged
1/62	2753.0	Pretest	-	-	-	-	-	27.11	3931.7	32.74	4748.2	
1/63	2772.7	Pretest	-	-	-	-	-	27.44	3979.3	32.97	4781.8	Low perm
1/64	2784.1	Pretest	-	-	-	-	-	0.45	65	33.10	4800.7	Aborted. Tight
1/65	2787.8	Pretest	-	-	-	-	-	9.86	4331.3	33.14	4806.8	
1/66	2784.2	Pretest	-	-	-	-	-	31.20	4525.0	33.10	4800.6	Aborted Supercharged
1/67	2621.5		22.71	0.35	159.1	-	0.10	26.09	3783.7	31.20	4525.2	
1/68	2621.5		10.41	0.25	52.7	-	0.25	26.08	3783.3	31.20	4525.2	
1/69	2621.5		3.785	Preserved Chamber No. MRSC BB90				26.091	3784.5	31.20	4525.0	Sample surface pressure = 1800 psig

9. TEMPERATURE RECORD

Logging Run	Depth (m)	Max Recorded Temperature ^{0}C	Circulation Time (t_k) (hours)	Time After Circulation Stopped (t) (hours)	Geothermal Gradient (C°/km)
Suite 1					
LDL-AS-CAL-GR-AMS	641	21	1.33	6.83	
Suite 2					
DLL-MSFL-AS-GR-SP	2842.5	97	1.58	7.9	4.17
FMI-LDL-CNL-NGR-AMS	2842.5	106	1.58	14.5	
MDT-GR (pre-test)	2787.8	121	1.58	40	
CSAT	2837	126	1.58	45.16	
MRIL	No thermometers run				
CST'S	No thermometers run				

FIGURES

FIGURES

PE906508

This is an enclosure indicator page.
The enclosure PE906508 is enclosed within the container PE900855 at this location in this document.

The enclosure PE906508 has the following characteristics:

ITEM_BARCODE	= PE906508
CONTAINER_BARCODE	= PE900855
NAME	= Locality Map
BASIN	= GIPPSLAND
PERMIT	= VIC/L3
TYPE	= GENERAL
SUBTYPE	= PROSPECT_MAP
DESCRIPTION	= Locality Map for Turrum-6
REMARKS	=
DATE_CREATED	= 19/09/95
DATE_RECEIVED	= 18/03/96
W_NO	= W1146
WELL_NAME	= TURRUM-6
CONTRACTOR	=
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PROPOSED TURRUM-6
LOCALITY MAP

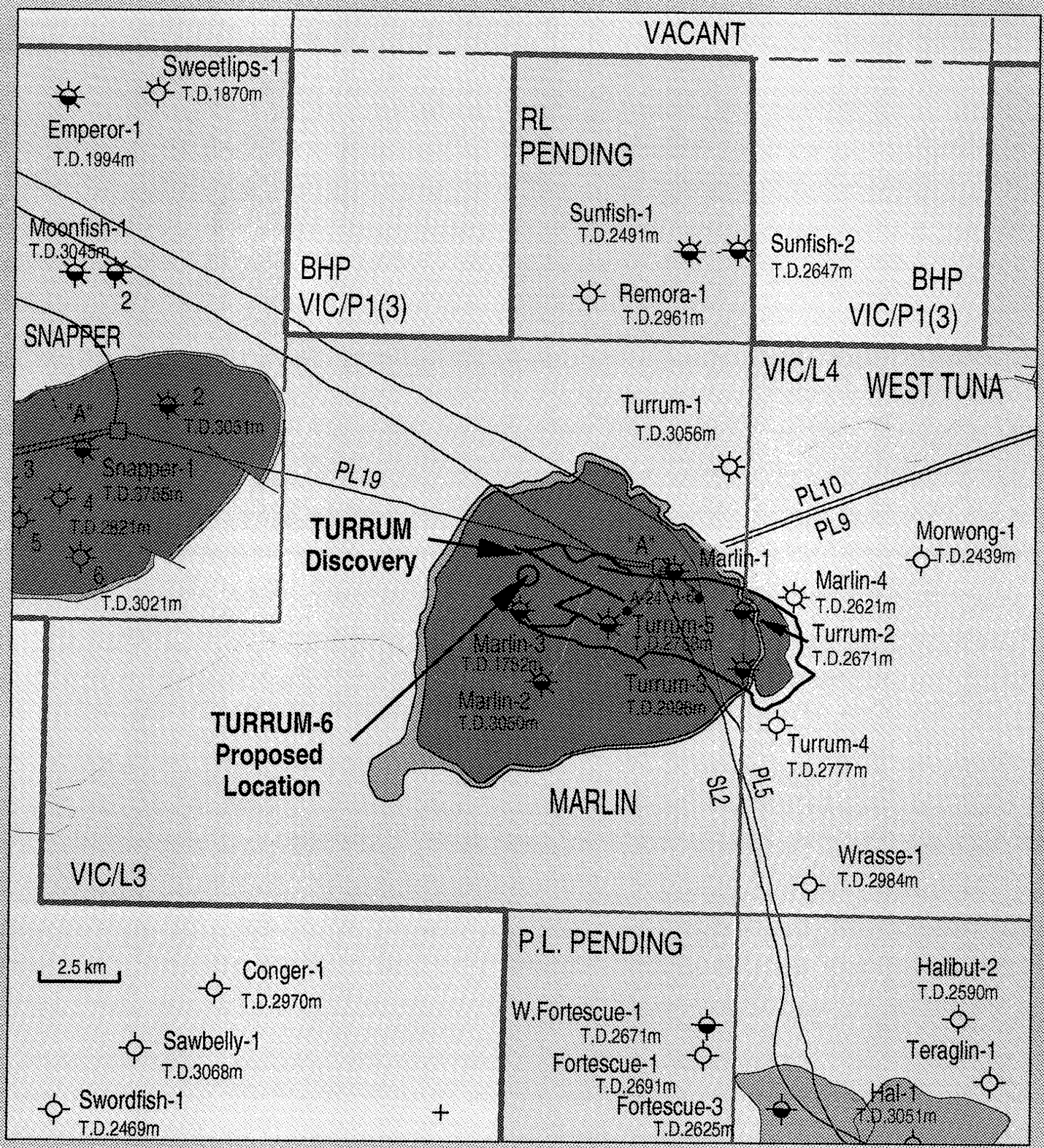

Figure 1

19/9/95 GPV01419

Esso Australia Ltd

Turrum 6 Outpost Well

Time Depth Curve

Lithology	Plan RT	Actual RT	Casing Plan	Casing Actual
ML	60m SS	60m SS		
	85m RT	85m RT	30" @121m	30" @118m
Gippsland Marl				
	1307	1315	13-3/8" @650m	13-3/8" @648m
Lakes Entrance	1447	1455		
Latrobe Marlin Sands	2259	2274		
Turrum Sands			9-5/8" Csg (Testing)	

	Planned	Actual
W[illegible] TD (m):	2840	2840
D[illegible] to TD:	19.0	18.7
Total Days (w/ move):	35.0	25.9
Est. Cost (A$k):	6400	5364
N[illegible] (%):	20	11
Well Angle:	0	<4
Rig:	Ocean Bounty	
R[illegible] Move:	23-Sep-95	
S[illegible]	24-Sep-95	
F[illegible]	19-Oct-95	

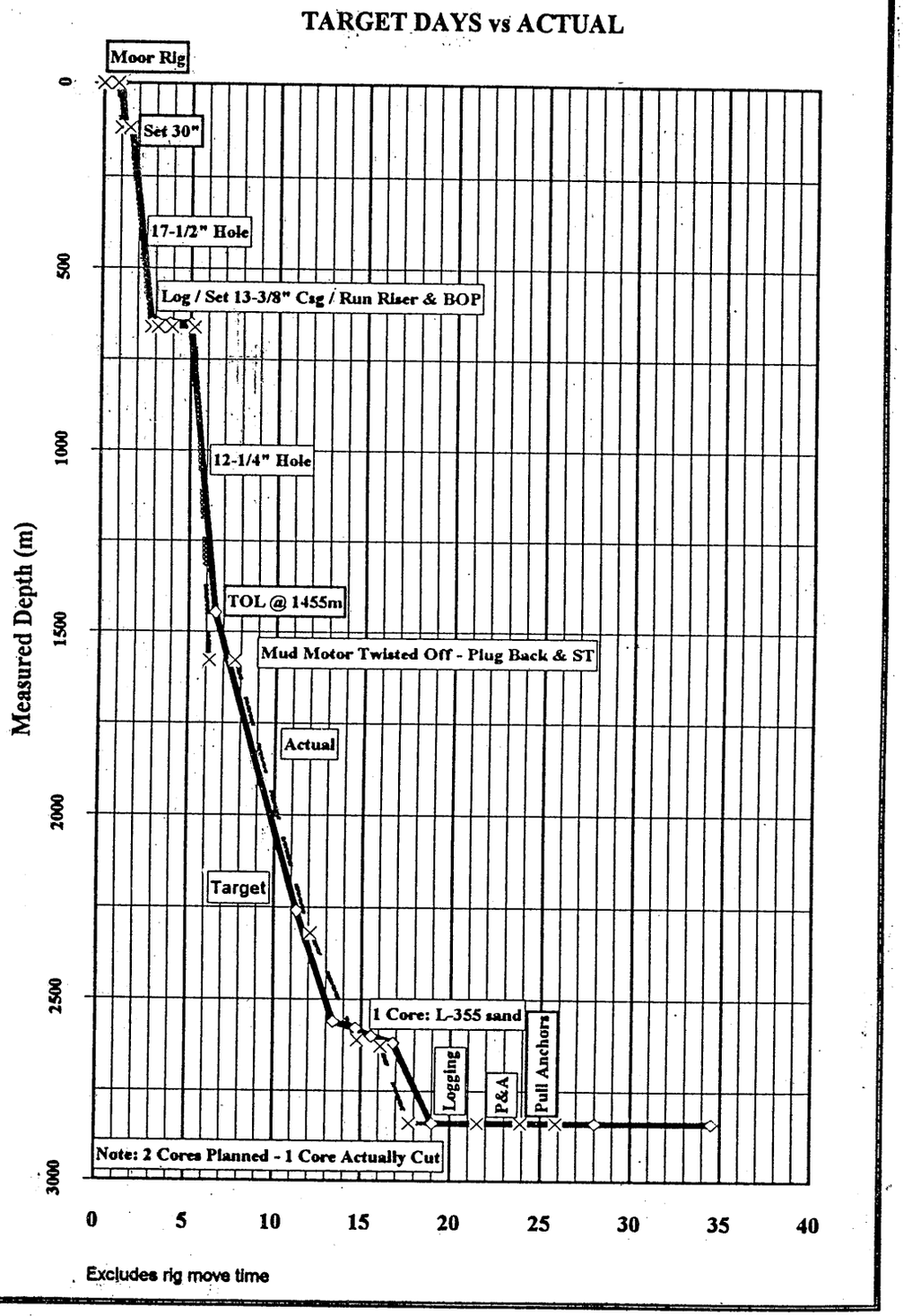

Figure 2

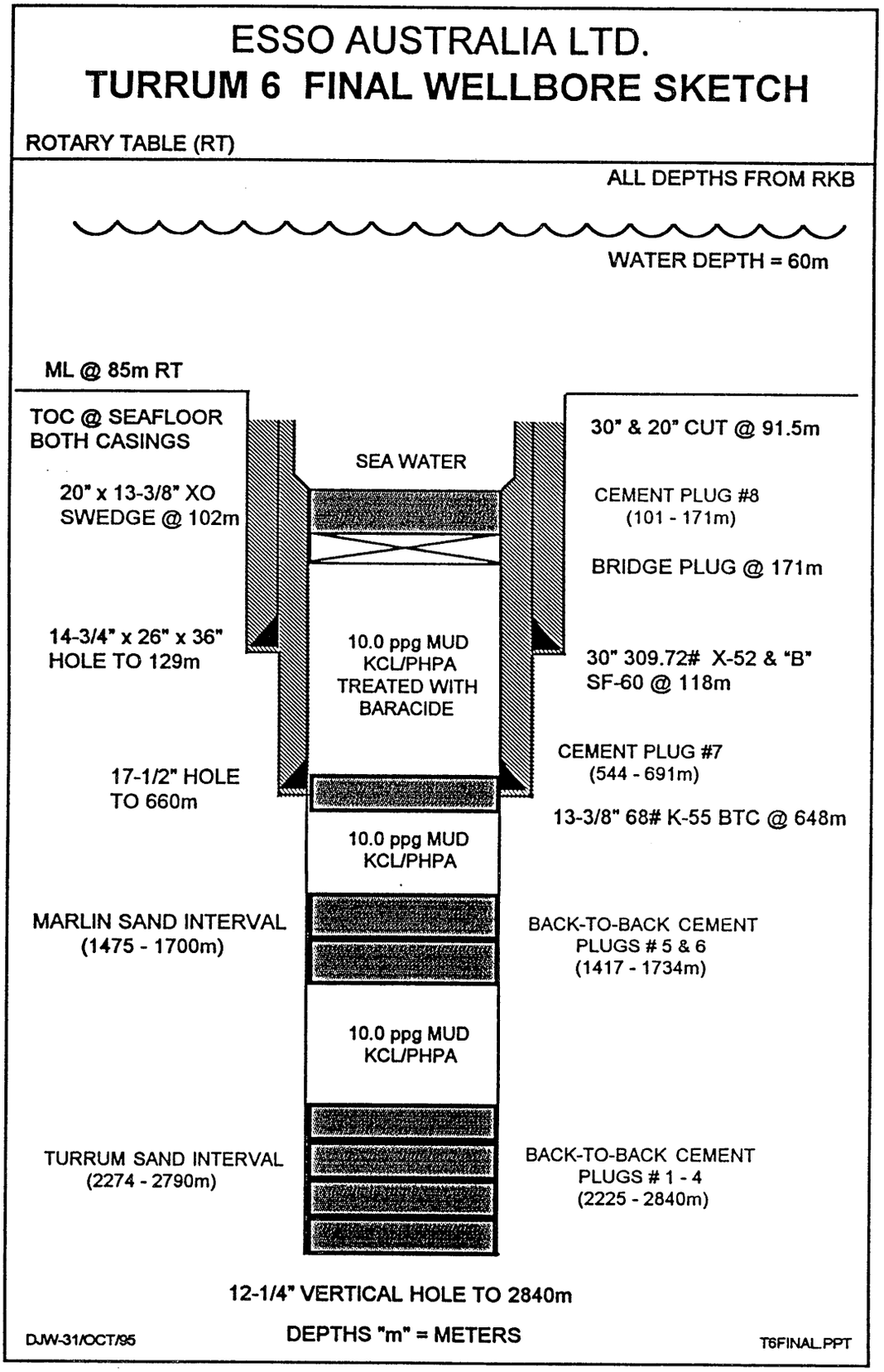
ESSO AUSTRALIA LTD.
TURRUM 6 FINAL WELLBORE SKETCH
ROTARY TABLE (RT)
ALL DEPTHS FROM RKB
WATER DEPTH = 60m
ML @ 85m RT
TOC @ SEAFLOOR
BOTH CASINGS
20" x 13-3/8" XO
SWEDGE @ 102m
14-3/4" x 26" x 36"
HOLE TO 129m
17-1/2" HOLE
TO 660m
SEA WATER
10.0 ppg MUD
KCL/PHPA
TREATED WITH
BARACIDE
10.0 ppg MUD
KCL/PHPA
10.0 ppg MUD
KCL/PHPA
MARLIN SAND INTERVAL
(1475 - 1700m)
TURRUM SAND INTERVAL
(2274 - 2790m)
30" & 20" CUT @ 91.5m
CEMENT PLUG #8
(101 - 171m)
BRIDGE PLUG @ 171m
30" 309.72# X-52 & "B"
SF-60 @ 118m
CEMENT PLUG #7
(544 - 691m)
13-3/8" 68# K-55 BTC @ 648m
BACK-TO-BACK CEMENT
PLUGS # 5 & 6
(1417 - 1734m)
BACK-TO-BACK CEMENT
PLUGS # 1 - 4
(2225 - 2840m)
12-1/4" VERTICAL HOLE TO 2840m
DJW-31/OCT/95
DEPTHS "m" = METERS
T6FINAL.PPT

Figure 3

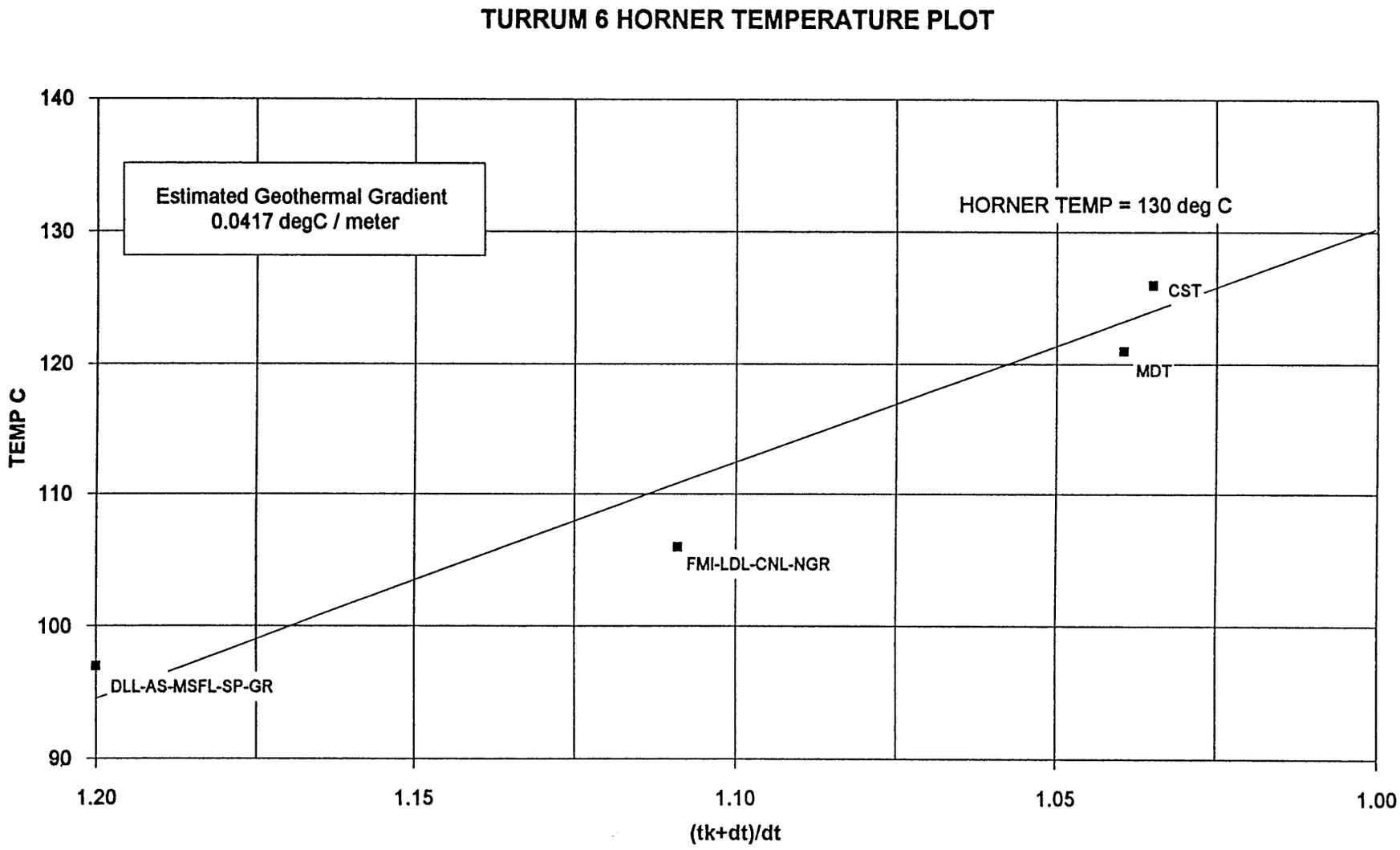
TURRUM 6 HORNER TEMPERATURE PLOT
Estimated Geothermal Gradient
0.0417 degC / meter
HORNER TEMP = 130 deg C
CST
MDT
FMI-LDL-CNL-NGR
DLL-AS-MSFL-SP-GR
TEMP C
140
130
120
110
100
90
1.20
1.15
1.10
1.05
1.00
(tk+dt)/dt

Figure 4

APPENDICES

APPENDIX 1

APPENDIX I

LITHOLOGY DESCRIPTIONS

LITHOLOGY DESCRIPTIONS

Depth	%	Description
	(Riser run at 660m)	
690	100	LIMESTONE: Light brown, pale grey brown, calcisiltite locally grades to calcilutite, rare glauconite, trace carbonaceous specks, rare disseminated, soft, massive.
720	100	LIMESTONE: Predominantly as above, trace light orange/brown fine grained calcarenite inclusions, rare ooids.
750	100	LIMESTONE: Light brown, light grey brown, calcisiltite, trace fine calcareous sand, trace white calcareous infill in part, trace carbonaceous fragments, rare forams, trace disseminated pyrite, soft, slightly dispersive, massive to amorphous.
780	100	LIMESTONE: Predominantly as above, calcisiltite becomes increasingly argillaceous grades to calcilutite.
810	100	LIMESTONE: Light brown, light brown grey, calcilutite, slightly silty in part, trace disseminated pyrite, rare fossil fragments, soft to slightly dispersive, massive to amorphous.
840	100	LIMESTONE: Predominantly as above, calcilutite, rare glauconite, trace disseminated pyrite.
870	100	LIMESTONE: Light grey, light grey brown, calcilutite, slightly silty, common fossil fragments, trace forams, trace white calcite infill and spar, soft, massive.
900	100	LIMESTONE: Predominantly as above, calcilutite, slightly silty, rare forams.
930	100	LIMESTONE: Predominantly as above, calcilutite, locally common forams.
960	100	LIMESTONE: Predominantly as above, calcilutite, trace fossil fragments.
990	100	LIMESTONE: Light grey, light brown grey, calcilutite, slightly silty in part, trace carbonaceous specks, trace disseminated pyrite, trace fossil fragments with pyritic replacement, soft, massive.
1020	100	LIMESTONE: As above.
1050	100	LIMESTONE: Predominantly as above, calcilutite, trace ooids.
1080	100	LIMESTONE: Light grey, light brown grey, calcilutite, slightly silty, trace fine calcite sand, trace carbonaceous specks, trace disseminated pyrite, soft, massive.
1110	100	LIMESTONE: As above.

1140	100	LIMESTONE: Predominantly as above, trace ooids, trace nodular pyrite.
1170	100	LIMESTONE: Light to occasionally medium grey, grey brown, calcilutite, slightly silty, trace coralline fragments with pyritic replacement, trace fine calcareous sand, trace radiolaria, soft, massive.
1200	100	LIMESTONE: Predominantly as above, calcilutite, common forams, trace disseminated pyrite, trace light brown/grey fine grained calcarenite inclusions.
1230	100	LIMESTONE: Light grey, brown grey, calcisiltite, moderately to locally very argillaceous, trace carbonaceous specks, rare glauconite, trace disseminated pyrite, trace fossil fragments, trace very fine calcareous sand, soft, massive.
1260	100	LIMESTONE: Predominantly as above, calcisiltite grades to calcilutite in part.
1290	100	LIMESTONE: As above.
1300	100	LIMESTONE: Light brown grey, light brown, calcisiltite, moderately to locally very argillaceous, trace disseminated pyrite and pyritic fossil fragments, rare glauconite, trace carbonaceous specks, soft, massive.
1305	100	LIMESTONE: As above.
1310	100	LIMESTONE: As above.
1315	100	LIMESTONE: Predominantly as above, common disseminated pyrite, trace forams.
1320	80	LIMESTONE: Light brown, light grey brown, calcisiltite, moderately argillaceous, trace fine calcareous sand, common forams, trace disseminated pyrite, trace carbonaceous specks, soft to firm, massive to blocky.
	20	CLAYSTONE: Medium grey, olive grey, slightly to moderately calcareous, slightly silty, trace lithic fragments, trace carbonaceous specks trace disseminated pyrite, slightly micromicaceous, soft to firm, massive to blocky.
1325	80	LIMESTONE: As above.
	20	CLAYSTONE: As above.
1330	80	LIMESTONE: As above.
	20	CLAYSTONE: As above.
1335	70	LIMESTONE: Predominantly as above, trace glauconite.
	30	CLAYSTONE:
1340	70	LIMESTONE: As above.
	30	CLAYSTONE: As above.
1345	70	LIMESTONE: As above.
	30	CLAYSTONE: As above.

1350	80	LIMESTONE: Predominantly as above, calcisiltite becomes very argillaceous grades to calcilutite.
	20	CLAYSTONE: As above.
1355	80	LIMESTONE: As above, calcisiltite grades to calcilutite.
	20	CLAYSTONE: As above.
1360	80	LIMESTONE: As above.
	20	CLAYSTONE: As above.
1365	90	LIMESTONE: Light grey, grey brown, calcilutite, locally very silty grades to calcisiltite, trace fine calcareous sand, trace carbonaceous fragments, trace disseminated pyrite, rare forams, soft, massive to blocky.
	10	CLAYSTONE: Medium grey, olive grey in part, slightly calcareous, trace disseminated pyrite, slightly micromicaceous, trace lithic fragments, smooth texture, firm, massive to blocky.
1370	90	LIMESTONE: As above.
	10	CLAYSTONE: As above.
1375	90	LIMESTONE: As above.
	10	CLAYSTONE: As above.
1380	90	LIMESTONE: Predominantly as above, calcilutite, becomes very silty locally grades to calcisiltite.
	10	CLAYSTONE: As above.
1385	90	LIMESTONE: As above.
	10	CLAYSTONE: Predominantly as above, locally very calcareous grades in part to calcilutite.
1390	90	LIMESTONE: As above.
	10	CLAYSTONE: As above.
1395	80	LIMESTONE: Light to medium grey, grey brown, calcisiltite, moderately to very argillaceous, trace fine calcareous sand, trace carbonaceous fragments, trace forams, trace disseminated pyrite, trace white calcite infill, firm, blocky.
	20	CLAYSTONE: Medium grey, occasionally olive grey, slightly calcareous, slightly micromicaceous, trace disseminated pyrite, trace carbonaceous fragments, firm, blocky.
1400	80	LIMESTONE: As above.
	20	CLAYSTONE: As above.
1405	80	LIMESTONE: As above.
	20	CLAYSTONE: As above.
1410	70	LIMESTONE: Predominantly as above, calcisiltite, becomes very arenaceous in part, grades to fine grained calcarenite, common forams and fossil fragments.
	30	CLAYSTONE: As above.
1415	70	LIMESTONE: As above.
	30	CLAYSTONE: As above.

1420	70	LIMESTONE: As above.
	30	CLAYSTONE: As above.
1425	90	LIMESTONE: Predominantly as above, calcisiltite, locally arenaceous grades to fine grained calcarenite.
	10	CLAYSTONE: As above.
1430	90	LIMESTONE: As above.
	10	CLAYSTONE: As above.
1435	80	LIMESTONE: Light brown, light grey brown, calcisiltite locally very arenaceous grades to calcarenite, trace forams, trace white calcite spar, trace nodular pyrite, trace glauconite, firm, massive.
	20	CLAYSTONE: As above.
1440	90	LIMESTONE: As above.
	10	CLAYSTONE: As above.
1445	70	LIMESTONE: As above.
	30	CLAYSTONE: As above
1450	90	LIMESTONE: As above.
	10	CLAYSTONE: As above.
1455	80	LIMESTONE: Predominantly as above, becomes light brown, common forams.
	20	SILTSTONE: Medium grey, olive grey, moderately argillaceous, trace limonitic staining, trace to common glauconite, trace to common disseminated pyrite, soft to slightly dispersive, massive to blocky.
1460	10	SANDSTONE: Frosted, clear to translucent, very coarse to granular, subangular, moderate sorting, trace pyritic cement, common argillaceous matrix, common granular milky quartz, loose, poor porosity, no fluorescence.
	90	SILTSTONE: As above.
1465	30	SANDSTONE: As above.
	70	SILTSTONE: Predominantly as above, medium to dark grey, olive grey, trace limonitic staining, trace glauconite.
1470	40	SANDSTONE: Clear to translucent, frosted, coarse to very coarse, occasionally granular, angular to subangular, poor to moderate sorting, trace pyritic cement, common argillaceous matrix, common milky/smoky quartz, loose, poor to fair porosity, no fluorescence.
	60	SILTSTONE: Medium to dark grey, olive grey, slightly to non calcareous, moderately argillaceous, trace arenaceous inclusions, trace limonitic stain, trace carbonaceous/lithic fragments, trace disseminated pyrite, trace glauconite, soft, massive.
1475	90	SANDSTONE: Clear to translucent, frosted, very coarse to granular, subangular to subrounded, poor to moderate sorting, predominantly clean, trace pyritic cement, trace smoky & milky quartz, trace nodular pyrite, loose, good porosity, no fluorescence.
	10	SILTSTONE: As above.
1480	90	SANDSTONE: As above.
	10	SILTSTONE: As above.

1485	100	SANDSTONE: Predominantly as above, becomes coarse to very coarse.
1490	100	SANDSTONE: Predominantly as above, trace pyritic cement, trace rose quartz.
1495	100	SANDSTONE: As above.
1500	100	SANDSTONE: As above, coarse to very coarse grained.
1505	90	SANDSTONE: As above.
	10	SILTSTONE: Light to medium grey, very argillaceous grades to claystone, trace carbonaceous flecks, slightly micromicaceous, smooth texture, firm to moderately hard, blocky.
1510	90	SANDSTONE: As above.
	10	SILTSTONE: As above.
1515	90	SANDSTONE: Clear to translucent, frosted, coarse to predominantly very coarse, angular to subrounded, moderately sorted, clean, common milky quartz, trace smoky quartz, loose, good porosity, no fluorescence.
	10	SILTSTONE: As above.
1520	90	SANDSTONE: As above.
	10	SILTSTONE: As above.
1525	80	SANDSTONE: Predominantly as above, trace pyritic cement.
	20	SILTSTONE: Medium grey, grey brown, occasionally medium brown, very argillaceous locally grades to claystone, trace coal fragments, slightly micromicaceous, moderately hard, blocky.
1530	80	SANDSTONE: As above.
	20	SILTSTONE: As above.
1535	80	SANDSTONE: As above.
	20	SILTSTONE: As above.
1540	80	SANDSTONE: As above.
	10	SILTSTONE: As above.
	10	COAL: Black, brown black, sub-bituminous, slightly argillaceous, dull lustre, earthy texture in part, hard to brittle, blocky.
1545	70	SANDSTONE: Predominantly as above, predominantly very coarse, subangular to subrounded, moderate sorting, trace pyritic cement and nodules.
	30	SILTSTONE: As above.
	Trace	COAL: As above.
1550	70	SANDSTONE: As above.
	30	SILTSTONE: As above.
	Trace	COAL: As above.
1555	80	SANDSTONE: Predominantly as above, coarse to very coarse, locally common argillaceous matrix.
	20	COAL: As above.
	Trace	SILTSTONE: As above.

1560	80	SANDSTONE: Predominantly as above, coarse to very coarse, angular to subangular, trace siliceous cement, good porosity, no fluorescence.
	10	SILTSTONE: As above.
	10	COAL: As above.

(Samples circulated after trip into hole with cementing stinger.)

1565	80	SANDSTONE: Clear to translucent, frosted, medium to coarse, angular to subangular, trace siliceous cement, common argillaceous matrix, trace quartz overgrowths, common milky quartz, trace nodular pyrite, trace coal fragments, loose, fair to good porosity, no fluorescence.
	20	SILTSTONE: Medium grey, grey brown, medium brown, slightly calcareous, very argillaceous grades to claystone in part, slightly micromicaceous, trace lithic/carbonaceous fragments, firm, blocky.
1570	60	SANDSTONE: Predominantly as above, becomes very coarse.
	40	SILTSTONE: As above.
	Trace	COAL: Black, brown black, sub-bituminous, slightly argillaceous, dull lustre, earthy texture in part, hard to brittle, blocky.
1578	70	SANDSTONE: As above.
	30	SILTSTONE: As above.
	Trace	COAL: As above.

(Kick-off Turrum-6 ST1 at 1390m)

1395	100	Cement
1400	100	Cement
1405	100	Cement
1410	10	LIMESTONE: Pale grey, light brown grey, calcilutite, trace carbonaceous fragments, trace disseminated pyrite, firm to soft, massive to blocky.
	90	Cement
1415	10	LIMESTONE: As above.
	90	Cement
1420	20	LIMESTONE: As above.
	80	Cement
1425	95	LIMESTONE: Pale grey, light brown grey, calcilutite, trace carbonaceous fragments, trace fine calcareous sand, trace disseminated pyrite, soft, massive to blocky.
	5	Cement
1430	90	LIMESTONE: Predominantly as above, trace forams.
	10	CLAYSTONE: Medium to dark grey, olive grey in part, slightly calcareous, trace carbonaceous fragments, slightly silty, smooth, firm , blocky.

1435	90	LIMESTONE: Predominantly as above, abundant forams and fossil fragments.
	10	CLAYSTONE: As above.
1440	90	LIMESTONE: Light grey, light brown grey, calcilutite, slightly silty, trace carbonaceous specks, trace fossil fragments, trace disseminated pyrite, trace fine calcareous sand in part, soft, massive.
	10	CLAYSTONE: As above.
1445	90	LIMESTONE: Predominantly as above, common fossil fragments, trace to common forams.
	10	CLAYSTONE: As above.
1450	80	LIMESTONE: As above.
	20	CLAYSTONE: Medium grey, olive grey in part, slightly calcareous, trace disseminated pyrite, trace carbonaceous fragments, slightly micromicaceous, firm, subfissile.
1455	90	LIMESTONE: As above.
	10	CLAYSTONE: As above.
1460	60	LIMESTONE: As above.
	40	SILTSTONE: Medium grey, olive grey, orange brown in part (weathered horizon), very argillaceous, common limonitic/haematitic staining, common glauconite, trace disseminated pyrite, slightly arenaceous in part, trace carbonaceous fragments, soft to slightly dispersive, massive to amorphous.
1465	60	SANDSTONE: Frosted, clear to translucent, very coarse to granular, subangular to subrounded, moderate sorting, trace to common pyritic cement, common argillaceous matrix, trace glauconite, common milky quartz, loose, poor porosity, no fluorescence.
	40	SILTSTONE: Predominantly as above, becomes medium grey to olive grey.
1470	60	SANDSTONE: As above.
	40	SILTSTONE: As above.
1475	40	SANDSTONE: Frosted, clear to translucent, very coarse to granular, subangular to subrounded, moderate sorting, trace pyritic cement, common argillaceous matrix, trace glauconite, trace nodular pyrite, common milky/smoky quartz, loose, poor porosity, no fluorescence.
	60	SILTSTONE: Medium grey, olive grey, very argillaceous, trace limonitic/haematitic staining, trace arenaceous inclusions, trace glauconite, trace disseminated and nodular pyrite, trace carbonaceous fragments, soft to slightly dispersive, massive.
1480	30	SANDSTONE: Predominantly as above, becomes coarse to very coarse, occasionally granular.
	70	SILTSTONE: Predominantly as above, abundant limonitic staining.
1485	30	SANDSTONE: As above.
	70	SILTSTONE: As above.

1490	80	SANDSTONE: Clear to translucent, frosted, coarse to granular, angular t subrounded, poor sorting, clean, trace pyritic cement & nodules, abundant milky quartz, loose, good porosity, no fluorescence.
	20	SILTSTONE: Light to medium grey, moderately argillaceous, slightly calcareous, trace lithic/carbonaceous fragments, slightly micromicaceous, soft to firm, massive to blocky.
1495	80	SANDSTONE: As above.
	20	SILTSTONE: As above.
1500	90	SANDSTONE: Predominantly as above, becomes granular.
	10	SILTSTONE: As above.
1505	90	SANDSTONE: As above.
	10	SILTSTONE: As above.
1510	100	SANDSTONE: Clear to translucent, frosted, medium to very coarse, angular to subangular, poor sorting, clean, trace pyritic cement, common nodular pyrite, trace kaolinitic inclusions, common very coarse milky quartz float, loose, good porosity, no fluorescence.
1515	100	SANDSTONE: As above.
1520	100	SANDSTONE: Predominantly as above, becomes medium to coarse, occasionally very coarse, trace coal fragments.
1525	100	SANDSTONE: Clear to translucent, frosted, coarse, subangular to subrounded, good sorting, clean, trace nodular pyrite, trace coal fragments, trace rock fragments, loose, good porosity, no fluorescence.
1530	100	SANDSTONE: Predominantly as above, becomes medium to coarse.
1535	100	SANDSTONE: Predominantly as above, coarse, trace smoky quartz, trace rock fragments, trace nodular pyrite.
1540	80	SANDSTONE: Predominantly as above, becomes medium to coarse.
	20	COAL: Black, brown black, slightly argillaceous, trace disseminated pyrite, sub-bituminous, dull lustre, earthy, brittle, blocky.
1545	60	SANDSTONE: Predominantly as above, becomes medium.
	10	SILTSTONE: Medium brown, grey brown, very argillaceous, common carbonaceous/coaly fragments, trace lithic fragments, micromicaceous, firm, blocky to subfissile.
	30	COAL: As above.
1550	80	SANDSTONE: Clear to translucent, frosted, fine to predominantly medium to coarse, subangular to subrounded, poor to moderate sorting, moderate kaolinitic matrix, trace nodular pyrite, trace rock fragments, trace smoky/milky quartz, loose, fair to good porosity, no fluorescence.
	10	SILTSTONE: As above.
	10	COAL: As above.

1555	90	SANDSTONE: Clear to translucent, frosted, medium to predominantly coarse, angular to subrounded, moderate sorting, common kaolinitic matrix, trace rock fragments, trace nodular pyrite, loose, fair to good porosity, no fluorescence.
	10	SILTSTONE: Medium brown, grey brown, very argillaceous, common carbonaceous fragments, slightly micromicaceous, occasionally mottled texture, firm, blocky to subfissile.
1560	90	SANDSTONE: Predominantly as above, becomes coarse to very coarse, common coal fragments, abundant kaolinitic matrix, fair porosity, no fluorescence.
	10	SILTSTONE: As above.
1565	70	SANDSTONE: Predominantly as above, becomes coarse to very coarse, common kaolinitic matrix, good porosity, no fluorescence.
	20	SILTSTONE: As above.
	10	COAL: Black, brown black, moderately argillaceous, trace disseminated pyrite, sub-bituminous, dull lustre, earthy texture, brittle, blocky.
1570	100	SANDSTONE: Clear to translucent, frosted, coarse to very coarse, angular to subangular, moderate sorting, trace kaolinitic matrix, trace coal fragments, trace nodular pyrite, common milky/smoky quartz, trace rose quartz (garnet?), loose, good porosity, no fluorescence.
1575	100	SANDSTONE: As above.
1580	90	SANDSTONE: Predominantly as above, becomes medium to predominantly coarse, trace kaolinitic matrix.
	10	SILTSTONE: Light to medium brown, medium brown grey, very argillaceous locally grades to claystone, common carbonaceous fragments, trace lithic fragments, slightly micromicaceous, soft to firm, massive to blocky, occasionally subfissile.
1585	90	SANDSTONE: Predominantly as above, trace to common kaolinitic matrix, trace nodular pyrite.
	10	SILTSTONE: As above.
	Trace	COAL: Brown black, black, sub-bituminous, moderately argillaceous, dull to occasionally subvitreous lustre, earthy, brittle to moderately hard, blocky.
1590	50	SANDSTONE: As above.
	40	SILTSTONE: As above.
	10	COAL: As above.
1595	60	SANDSTONE: Clear to translucent, frosted, medium to coarse, occasionally very coarse, subangular to subrounded, poor sorting, trace to common kaolinitic matrix, trace nodular pyrite, trace rock fragments, rare chlorite, loose, fair porosity, no fluorescence.
	40	SILTSTONE: Medium brown, light brown grey, moderately argillaceous, slightly siliceous, trace carbonaceous fragments, trace lithic fragments, micromicaceous, trace disseminated pyrite, firm, blocky to subfissile.

1600	90	SANDSTONE: Predominantly as above, weak calcareous cement, moderate kaolinitic matrix, fair porosity, no fluorescence.
	10	SILTSTONE: As above.
1605	100	SANDSTONE: Clear to translucent, frosted, medium, angular to subangular, good sorting, trace siliceous cement, trace quartz overgrowths, trace very coarse grained milky quartz float, trace coal fragments, trace muscovite, trace nodular pyrite, loose, good porosity, no fluorescence.
1610	100	SANDSTONE: As above.
1615	90	SANDSTONE: Clear to translucent, frosted, medium to predominantly coarse, angular to subangular, moderate to good sorting, weak calcareous cement, trace kaolinitic matrix, trace muscovite, common milky quartz, loose, good porosity, no fluorescence.
	10	COAL: Brown black, black, sub-bituminous, slightly argillaceous, dull lustre, trace disseminated pyrite, earthy, brittle, blocky.
1620	70	SANDSTONE: As above.
	30	COAL: As above.
1625	10	SANDSTONE: Predominantly as above, becomes fine to medium, moderate calcareous cement.
	10	SILTSTONE: Medium brown very argillaceous grades to claystone common carbonaceous fragments, slightly micromicaceous, firm to moderately hard, subfissile.
	80	COAL: As above.
1630	70	SANDSTONE: Clear to translucent, frosted, medium to predominantly coarse, occasionally very coarse, angular to subangular, poor sorting, trace siliceous cement, trace argillaceous matrix, trace rock fragments, trace coal fragments, polymodal, loose, fair to good porosity, no fluorescence.
	20	SILTSTONE: Light grey brown, medium brown, very argillaceous, common carbonaceous fragments, slightly micromicaceous, trace lithic fragments, occasionally mottled texture, firm, blocky.
	10	COAL: As above.
1635	90	SANDSTONE: Predominantly as above, trace coal fragments.
	10	SILTSTONE: As above.
1640	100	SANDSTONE: Predominantly as above, locally common kaolinitic matrix, loose, fair porosity, no fluorescence.
	Trace	SILTSTONE: As above.
	Trace	COAL: As above.
1645	100	SANDSTONE: As above.
1650	90	SANDSTONE: As above.
	10	COAL: As above.
1655	90	SANDSTONE: Predominantly as above, becomes fine to predominantly medium, occasionally coarse, common coarse milky quartz float.
	10	COAL: As above.

1660	20	SANDSTONE: Predominantly as above, fine to medium, common argillaceous matrix, trace nodular pyrite, loose, good porosity, no fluorescence.
	70	SILTSTONE: Light brown grey, medium brown, very argillaceous locally grades to claystone, trace carbonaceous fragments, trace lithic fragments, micromicaceous, firm to occasionally moderately hard, blocky to subfissile.
	10	COAL: Predominantly as above, locally becomes very argillaceous grades to carbonaceous claystone.
1665	80	SANDSTONE: Clear to translucent, frosted, medium to very coarse, angular to subangular, moderate sorting, trace kaolinitic matrix, trace nodular pyrite, trace very coarse milky quartz, trace rock fragments, loose, good porosity, no fluorescence.
	Trace	SILTSTONE: As above.
	20	COAL: As above.
1670	100	SANDSTONE: Clear to translucent, frosted, coarse to very coarse, angular to subangular, moderate sorting, trace kaolinitic/argillaceous matrix, predominantly clean, common very coarse milky quartz, trace nodular pyrite, trace coal fragments, loose, good porosity, no fluorescence.
1675	10	SANDSTONE: Predominantly as above, becomes coarse, abundant coarse milky quartz float.
	90	SILTSTONE: Light to medium brown, grey brown, very argillaceous, common carbonaceous fragments, micromicaceous, trace lithic fragments, firm to moderately hard, blocky to subfissile.
1680	10	SANDSTONE: As above.
	80	SILTSTONE: As above.
	10	COAL: Black, sub-bituminous to bituminous, slightly argillaceous, dull to occasionally subvitreous lustre, hard to brittle, blocky.
1685	Trace	SANDSTONE: Predominantly as above, becomes very coarse grained.
	100	SILTSTONE: Predominantly as above, becomes very dispersive in part, trace coal fragments.
1690	30	SANDSTONE: Clear to translucent, off white, fine to medium, subangular to subrounded, moderate sorting, moderate calcareous cement i part, common kaolinitic matrix, common biotite, trace coarse milky quartz, friable to loose, poor to fair porosity, no fluorescence.
	70	SILTSTONE: As above.
1695	40	SANDSTONE: Predominantly as above, becomes medium to coarse, common very coarse milky quartz float.
	60	SILTSTONE: Predominantly as above, trace coal fragments.
1700	10	SANDSTONE: As above.
	90	SILTSTONE: Medium brown grey, olive grey, very argillaceous grades to claystone, trace disseminated pyrite, trace carbonaceous fragments, micromicaceous, firm, massive to blocky.
1705	100	SILTSTONE: Predominately as above, common arenaceous inclusions, becomes slightly dispersive.

1710	Trace	SANDSTONE: Predominantly as above, becomes coarse grained.
	100	SILTSTONE: As above.
1715	100	SILTSTONE: As above.
1720	90	SILTSTONE: As above.
	10	COAL: Black, bituminous, slightly argillaceous in part, dull to subvitreous lustre, brittle, blocky to subfissile.
1725	100	SILTSTONE: As above.
	Trace	COAL: As above.
1730	10	SANDSTONE: Clear to translucent, frosted, medium to coarse, occasionally very coarse, angular to subangular, poor sorting, trace kaolinitic matrix, rare nodular pyrite, loose, good porosity, no fluorescence.
	90	SILTSTONE: Medium brown, light grey brown, very argillaceous grades to claystone in part, trace carbonaceous fragments, slightly micromicaceous, occasionally slightly arenaceous, firm to slightly dispersive, massive to blocky.
1735	40	SANDSTONE: Predominantly as above, becomes coarse, common nodular pyrite.
	60	SILTSTONE: As above.
1740	20	SANDSTONE: Predominantly as above, becomes medium grained subangular to rounded in part, good porosity, no fluorescence.
	60	SILTSTONE: As above.
	20	COAL: Black, sub-bituminous, locally very argillaceous grades to carbonaceous claystone, dull lustre, earthy, brittle, blocky to subfissile.
1745	80	SANDSTONE: Clear to translucent, off white, medium to coarse, occasionally very coarse, angular to subrounded, moderate sorting, trace to locally common dolomitic cement, abundant kaolinitic matrix, common milky quartz, trace nodular pyrite, loose, fair to good porosity, trace dull orange mineral fluorescence only.
	10	SILTSTONE: Predominantly as above, orange brown in part, slightly siliceous in part occasionally flinty.
	10	COAL: As above.
1750	10	SANDSTONE: Clear to translucent, off white, fine to medium, subangular to subrounded, moderate sorting, common kaolinitic matrix, trace nodular pyrite, friable to loose, fair to poor porosity, no fluorescence.
	70	SILTSTONE: Medium brown, light grey brown, very argillaceous, slightly siliceous in part, occasionally slightly arenaceous, slightly micromicaceous, common carbonaceous/coal fragments, mottled texture in part, firm, blocky to subfissile.
	20	COAL: Black, sub-bituminous, argillaceous in part locally grades to carbonaceous claystone, dull to subvitreous lustre in part, earthy, brittle, blocky to subfissile.

1755	100	SANDSTONE: Clear to translucent, light grey, fine to medium, subangular to rounded in part, good sorting, trace dolomitic cement, trace to locally common kaolinitic matrix, common muscovite, trace nodular pyrite, trace rock fragments, lose, occasionally hard aggregates, predominantly good porosity, dull orange mineral fluorescence only.
1760	100	SANDSTONE: Predominantly as above, occasionally coarse milky quartz float.
1765	100	SANDSTONE: Predominantly as above, becomes fine to medium, subangular to rounded, good sorting, good porosity, no fluorescence.
1770	100	SANDSTONE: Predominantly as above, medium to coarse, good sorting, trace dolomitic cement, trace muscovite, trace coal fragments, good porosity, dull orange mineral fluorescence only.
1775	70	SANDSTONE: Predominantly as above, occasionally coarse milky quartz, trace to common kaolinitic matrix.
	20	SILTSTONE: Light grey brown, occasionally medium brown, very argillaceous grades to claystone in part, occasionally slightly arenaceous, trace coal fragments, slightly micromicaceous in part, firm, blocky to subfissile.
	10	COAL: Black, sub-bituminous, slightly argillaceous in part, dull lustre, earthy, brittle, blocky.
1780	40	SANDSTONE: Predominantly as above, becomes medium, abundant kaolinitic matrix.
	50	SILTSTONE: As above.
	10	COAL: As above.
1785	95	SILTSTONE: Off white, light grey brown, occasionally medium brown, very argillaceous grades to claystone in part, occasionally slightly arenaceous, slightly micromicaceous, soft to firm, blocky.
	5	COAL: As above.
1790	20	SANDSTONE: Off white, pale brown, very fine to fine, subangular, good sorting, abundant kaolinitic/silty matrix, trace biotite, trace lithic fragments, friable, very poor to nil porosity, no fluorescence.
	80	SILTSTONE: As above.
1795	30	SANDSTONE: Predominantly as above, occasionally coarse milky quartz float, trace coarse grained nodular pyrite.
	60	SILTSTONE: As above.
	10	COAL: As above.
1800	20	SANDSTONE: Predominantly as above, becomes medium to coarse, trace kaolinitic/silty matrix, loose in part, poor porosity, no fluorescence.
	80	SILTSTONE: Predominantly as above, becomes grey brown.
1805	100	SILTSTONE: Predominantly as above, becomes arenaceous in part, occasionally grades to silty sandstone.
	Trace	COAL: As above.

1810	80	SANDSTONE: Clear to translucent, frosted, fine to predominantly medium, subangular to subrounded, rounded in part, good sorting, trace kaolinitic matrix, trace to common nodular pyrite, trace coal fragments, trace lithic fragments, trace coarse milky quartz grains, loose, good porosity, no fluorescence.
	20	SILTSTONE: Predominantly as above, becomes medium brown.
1815	90	SANDSTONE: Predominantly as above, becomes medium to coarse, trace kaolinitic matrix.
	10	SILTSTONE: As above.
1820	60	SANDSTONE: Predominantly as above, medium to coarse, trace siliceous cement, trace quartz overgrowths.
	30	SILTSTONE: Light brown grey, medium brown in part, very argillaceous, locally arenaceous grades to silty sandstone, trace carbonaceous specks, soft to firm, massive.
	10	COAL: Black, sub-bituminous, slightly argillaceous, trace disseminated and lenticular pyrite, dull lustre, earthy, brittle, blocky.
1825	50	SANDSTONE: Predominantly as above, trace siliceous cement.
	40	SILTSTONE: As above.
	10	COAL: As above.
1830	100	SILTSTONE: Light brown grey, occasionally off white, very argillaceous, common arenaceous inclusions, slightly micromicaceous, trace carbonaceous fragments, soft, slightly dispersive, massive to amorphous in part.
1835	80	SANDSTONE: Clear to translucent, frosted, medium to coarse, angular to subrounded, moderate to good sorting, trace dolomitic cement, common nodular pyrite, trace rock fragments, trace coal fragments, common coarse milky quartz, loose, good porosity, no fluorescence.
	20	SILTSTONE: Olive grey, light grey, grey brown, very argillaceous, trace lithic & carbonaceous fragments, slightly micromicaceous, slightly siliceous, firm, blocky to subfissile.
1840	60	SANDSTONE: Predominantly as above, trace siliceous cement, trace quartz overgrowths.
	30	SILTSTONE: Predominantly as above, becomes grey brown.
	10	COAL: Black, sub-bituminous, slightly argillaceous, dull to subvitreous lustre, earthy, brittle, blocky.
1845	10	SANDSTONE: Predominantly as above, trace dolomitic cement.
	70	SILTSTONE: Predominantly as above, becomes arenaceous, grades to silty sandstone.
	20	COAL: As above.
1850	50	SANDSTONE: Predominantly as above, trace siliceous cement, trace kaolinitic matrix, trace muscovite.
	40	SILTSTONE: As above.
	10	COAL: As above.
1855	80	SANDSTONE: Predominantly as above, medium to occasionally coarse, trace dolomitic cement, trace coaly fragments, slightly chloritic.
	20	SILTSTONE: As above.

1860	20	SANDSTONE: Predominantly as above, locally common kaolinitic matrix.
	70	SILTSTONE: As above.
	10	COAL: As above.
1865	10	SANDSTONE: Predominantly as above, becomes fine to medium, common kaolinitic matrix.
	70	SILTSTONE: Predominantly as above, becomes medium brown, brown grey, very argillaceous grades to claystone in part.
	20	COAL: As above.
1870	70	SILTSTONE: Predominantly as above, becomes brown grey, occasionally olive grey, trace carbonaceous microlaminations, slightly arenaceous in part.
	30	COAL: As above.
1875	30	SANDSTONE: Off white, light brown, fine, subangular to subrounded, good sorting, strong siliceous/dolomitic cement, common kaolinitic matrix, trace altered feldspar, occasionally medium to coarse quartz float, hard, tight, dull orange mineral fluorescence only.
	70	SILTSTONE: As above.
1880	70	SANDSTONE: Predominantly as above, becomes clear to translucent, medium to coarse, moderate dolomitic cement, fair to poor porosity, orange mineral fluorescence only.
	10	SILTSTONE: As above.
	20	COAL: As above.
1885	10	SANDSTONE: Predominantly as above, becomes fine to medium, very argillaceous/silty matrix.
	70	SILTSTONE: As above.
	20	COAL: As above.
1890	50	SANDSTONE: Clear to translucent, frosted, medium to occasionally coarse, subangular to subrounded, moderate sorting, trace dolomitic cement in part, common argillaceous/silty matrix, trace carbonaceous fragments, trace nodular pyrite, trace very coarse milky quartz, loose, fair porosity, no fluorescence.
	40	SILTSTONE: Brown grey, light to medium brown, very argillaceous, arenaceous in part, slightly carbonaceous, micromicaceous, firm, blocky to subfissile.
	10	COAL: Black, sub-bituminous, slightly argillaceous, dull lustre, earthy, brittle, blocky.
1895	40	SANDSTONE: Predominantly as above, moderate dolomitic cement.
	60	SILTSTONE: As above.
1900	100	SILTSTONE: Brown grey, occasionally medium brown, moderately argillaceous, common off white arenaceous inclusions, common carbonaceous fragments, micromicaceous, occasionally mottled texture, soft to firm, massive to blocky.
1905	90	SILTSTONE: Predominantly as above, common off white arenaceous inclusions.
	10	COAL: As above.

1910	100	SILTSTONE: Light brown, off white, light grey brown, arenaceous in part, very argillaceous, trace coal fragments, trace biotite, slightly micromicaceous, firm to soft, massive.
1915	30	SANDSTONE: Off white, clear to translucent, fine to medium, subangular to subrounded, moderate to good sorting, common kaolinitic matrix, common nodular pyrite, trace coal fragments, loose, fair to good porosity, no fluorescence.
	70	SILTSTONE: As above.
1920	20	SANDSTONE: Predominantly as above, trace chlorite.
	70	SILTSTONE: As above.
	10	COAL: Black, slightly argillaceous, sub-bituminous, dull to subvitreous lustre, earthy, brittle, blocky.
1925	100	SILTSTONE: Brown grey, occasionally olive grey, very argillaceous, trace carbonaceous/coaly fragments & microlaminations, locally common off white arenaceous inclusions, trace lithic fragments, slightly micromicaceous, firm, blocky.
1930	100	SILTSTONE: As above.
	Trace	COAL: As above.
1935	10	SANDSTONE: Clear to translucent, frosted, medium, subangular to subrounded, moderate to good sorting, trace argillaceous matrix, trace coal fragments, trace nodular pyrite, loose, poor to fair porosity, no fluorescence.
	90	SILTSTONE: As above.
1940	10	SANDSTONE: Predominantly as above, becomes fine to medium, trace siliceous cement, common kaolinitic matrix, trace glauconite in part, trace rock fragments, trace nodular pyrite, very poor porosity, no fluorescence.
	70	SILTSTONE: As above.
	20	COAL: Predominantly as above, becomes very dirty in part, grades to carbonaceous shale in part.
1945	90	SILTSTONE: Grey brown, light brown grey, occasionally off white, very argillaceous, micromicaceous, trace carbonaceous/coaly fragments, trace biotite, common off white arenaceous inclusions grade to silty sandstone in part, firm, blocky.
	10	COAL: Black, sub-bituminous, slightly argillaceous, dull to subvitreous lustre in part, earthy, brittle, blocky to subfissile in part.
1950	80	SANDSTONE: Clear to translucent, frosted, fine to occasionally medium, subangular to subrounded, good sorting, common kaolinitic matrix, trace chlorite, common smoky quartz, trace rock fragments, trace coal fragments, trace nodular pyrite, fair porosity, no fluorescence.
	20	SILTSTONE: As above.
1955	80	SANDSTONE: Predominantly as above, trace muscovite.
	10	SILTSTONE: As above.
	10	COAL: As above.

1960	70	SANDSTONE: Predominantly as above, fine, subrounded to rounded, good sorting, fair to good porosity, no fluorescence.
	20	SILTSTONE: As above.
	10	COAL: As above.
1965	60	SANDSTONE: Predominantly as above, becomes very fine in part, trace kaolinitic inclusions.
	40	SILTSTONE: Predominantly medium brown, moderately carbonaceous, trace coaly microlaminations.
	Trace	COAL: As above.
1970	30	SANDSTONE: Predominantly as above, becomes off white, very fine to fine, common kaolinitic matrix, friable, poor to nil porosity, no fluorescence.
	70	SILTSTONE: As above.
	Trace	COAL: As above.
1975	Trace	SANDSTONE: Predominantly as above, becomes very argillaceous/silty grades to sandy siltstone.
	90	SILTSTONE: As above.
	10	COAL: As above.
1980	100	SILTSTONE: Grey brown, light grey, off white in part, moderately argillaceous, common off white arenaceous inclusions, micromicaceous, trace coal/carbonaceous fragments, trace lithic fragments, soft, massive.
	Trace	COAL: As above.
1985	100	SILTSTONE: As above.
1990	90	SILTSTONE: Predominantly as above, becomes grey brown, trace off white arenaceous inclusions.
	10	COAL: Black, sub-bituminous to bituminous, slightly dirty, dull to subvitreous lustre, earthy, brittle, blocky.
1995	20	SANDSTONE: Clear to translucent, light brown, fine to predominantly medium, subangular to rounded, good sorting, trace dolomitic cement, trace altered feldspar, trace nodular pyrite, friable to loose, occasionally hard aggregates, very poor to nil porosity, no fluorescence.
	80	SILTSTONE: Predominantly as above, becomes brown grey.
2000	Trace	SANDSTONE: As above.
	100	SILTSTONE: Medium brown, brown grey, very argillaceous, slightly arenaceous in part, trace disseminated pyrite, micromicaceous, trace carbonaceous fragments in part, firm, blocky to subfissile.
2005	10	SANDSTONE: Off white, light brown, fine to occasionally medium, subangular to subrounded, moderate to good sorting, moderate dolomitic cement, trace to common argillaceous matrix, trace nodular pyrite, trace altered feldspar, trace carbonaceous fragments, loose, hard aggregates in part, poor to nil porosity, dull orange mineral fluorescence only.
	90	SILTSTONE: As above.

2010	20	SANDSTONE: Predominantly as above, becomes clean, loose, fair porosity, no fluorescence.
	70	SILTSTONE: As above.
	10	COAL: Black, brown black, slightly argillaceous, sub-bituminous, dull lustre, earthy, brittle, blocky to subfissile.
2015	10	SANDSTONE: Predominantly as above, off white, becomes fine, common kaolinitic matrix.
	90	SILTSTONE: As above.
2020	100	SILTSTONE: Grey brown, medium brown in part, moderately argillaceous, locally common off white very fine arenaceous inclusions, slightly micromicaceous, common coaly fragments, trace disseminated pyrite, firm, blocky.
2025	40	SANDSTONE: Clear to translucent, frosted, occasionally off white, fine to predominantly medium, subangular to rounded, good sorting, trace to common kaolinitic matrix, trace nodular pyrite, trace muscovite, trace coal fragments, trace rock fragments, loose to friable, fair porosity, no fluorescence.
	60	SILTSTONE: As above.
2030	70	SANDSTONE: Predominantly as above, becomes medium to coarse in part, locally common kaolinitic matrix.
	30	SILTSTONE: As above.
2035	70	SILTSTONE: Predominantly as above, locally common off white arenaceous inclusions.
	30	COAL: Black, sub-bituminous, slightly argillaceous, dull to subvitreous lustre, earthy, brittle, blocky to subfissile, locally grades to carbonaceous claystone.
2040	90	SILTSTONE: Predominantly as above, common very fine off white arenaceous inclusions.
	10	COAL: As above.
2045	10	SANDSTONE: Off white, clear to translucent, very fine to fine, occasionally medium, subangular to rounded, moderate sorting, locally common kaolinitic matrix, trace nodular pyrite, trace carbonaceous fragments, trace altered feldspar, friable to loose in part, poor porosity, no fluorescence.
	90	SILTSTONE: Predominantly as above, trace coal fragments.
2050	80	SILTSTONE: As above.
	20	COAL: As above.
2055	70	SANDSTONE: Clear to translucent, frosted, medium to occasionally coarse, angular to subrounded, moderate to good sorting, weak siliceous cement, trace calcareous/dolomitic cement, trace muscovite, trace coal fragments, common coarse milky quartz, loose, occasionally hard aggregates, predominantly good porosity, trace dull orange mineral fluorescence only.
	30	SILTSTONE: Olive grey, grey brown in part, very argillaceous, trace carbonaceous fragments and microlaminations, slightly micromicaceous, firm, blocky to subfissile.

2060	80	SANDSTONE: Predominantly as above, becomes fine to predominantly medium, subangular to subrounded, good sorting.
	20	SILTSTONE: As above, grades to claystone in part.
2065	60	SANDSTONE: Predominantly as above, trace kaolinitic matrix increasing with depth, trace nodular pyrite.
	40	SILTSTONE: Predominantly as above, locally very argillaceous grades to claystone.
2070	40	SANDSTONE: Predominantly as above, becomes medium.
	50	SILTSTONE: Predominantly as above, becomes off white in part, trace to common arenaceous inclusions.
	10	COAL: Black, sub-bituminous to bituminous, slightly silty/argillaceous, dull to subvitreous lustre, earthy, brittle, blocky to subfissile.
2075	40	SANDSTONE: Predominantly as above, trace feldspar.
	50	SILTSTONE: As above.
	10	COAL: As above.
2080	60	SANDSTONE: Predominantly as above, fine to medium, trace nodular pyrite.
	40	SILTSTONE: As above.
2085	40	SANDSTONE: As above.
	60	SILTSTONE: Predominantly as above, becomes medium brown, common off white arenaceous inclusions, trace coal fragments.
2090	20	SANDSTONE: Predominantly as above, trace siliceous cement.
	80	SILTSTONE: Dark olive grey, medium dark grey, moderately argillaceous, slightly arenaceous in part, common coal/carbonaceous fragments, trace disseminated pyrite in part, micromicaceous, firm, moderately hard in part, blocky to subfissile.
2095	10	SANDSTONE: Predominantly as above, becomes coarse, common siliceous cement, common nodular pyrite.
	90	SILTSTONE: As above.
2100	10	SANDSTONE: Off white, light grey, very fine to fine, subangular to subrounded, good sorting, abundant kaolinitic matrix, trace dolomitic cement in part, trace nodular pyrite, slightly micaceous, trace altered feldspar, friable, tight, no fluorescence.
	90	SILTSTONE: As above.
2105	100	SILTSTONE: Dark brown grey, grey black, very argillaceous grades to claystone, micromicaceous, trace carbonaceous specks, trace disseminated and nodular pyrite, trace off white very fine arenaceous inclusions, firm, blocky to subfissile.
2110	80	SANDSTONE: Clear to translucent, frosted, medium to coarse, angular to subangular, poor to moderate sorting, trace siliceous cement, trace quartz overgrowths, trace nodular pyrite, trace coal fragments, common milky quartz, loose, occasionally hard aggregates, poor porosity, no fluorescence.
	20	SILTSTONE: As above.

2115	20	SANDSTONE: Clear to translucent, frosted, off white, fine to predominantly medium to coarse, angular to subrounded, poor sorting, trace siliceous cement, trace to common kaolinitic matrix, trace nodular pyrite, rare glauconite, trace milky quartz, trace coal fragments, loose, occasionally hard aggregates, poor porosity, no fluorescence.
	80	SILTSTONE: Dark brown grey, olive black, very argillaceous grade to claystone, slightly micromicaceous, trace off white arenaceous inclusions, soft to firm, blocky to subfissile.
2120	10	SANDSTONE: As above.
	90	SILTSTONE: As above.
2125	100	SILTSTONE: Predominantly as above, becomes very argillaceous grades to claystone.
2130	100	SILTSTONE: As above.
2135	10	SANDSTONE: Off white, light grey, very fine to fine, subangular to subrounded, good sorting, abundant kaolinitic matrix, trace biotite, trace altered feldspar, friable, very poor to nil porosity, no fluorescence.
	90	SILTSTONE: As above.
2140	10	SANDSTONE: Predominantly as above, trace nodular pyrite.
	90	SILTSTONE: As above.
2145	100	SILTSTONE: Medium grey, dark olive grey, very argillaceous grades to claystone, micromicaceous, trace carbonaceous fragments, locally common off white very fine arenaceous inclusions, soft to firm, blocky.
2150	10	SANDSTONE: Off white, light brown, fine to medium, subangular to subrounded, trace dolomitic cement in part, trace altered feldspar, trace smoky quartz, trace coal fragments, friable to occasionally lose, poor porosity, no fluorescence.
	90	SILTSTONE: As above.
2155	20	SANDSTONE: Predominantly as above, becomes clean, loose, fair porosity, no fluorescence.
	80	SILTSTONE: As above.
2160	10	SANDSTONE: Predominantly as above, becomes fine, loose, fair porosity, no fluorescence.
	90	SILTSTONE: As above.
2165	10	SANDSTONE: Predominantly as above, becomes off white, very fine to fine, abundant kaolinitic matrix, tight, no fluorescence.
	90	SILTSTONE: As above.
2170	50	SANDSTONE: Clear to translucent, frosted, fine to predominantly medium, subangular to subrounded, good sorting, trace dolomitic cement in part, weak siliceous cement in part, locally common kaolinitic matrix, trace nodular pyrite, trace rock fragments, rare glauconite, loose, occasionally friable, poor to occasionally fair porosity, no fluorescence.
	50	SILTSTONE: As above.

2175	30	SANDSTONE: As above.
	70	SILTSTONE: As above.
2180	70	SANDSTONE: Clear to translucent, frosted, fine to medium, occasionally coarse, subangular to subrounded, moderate sorting, trace to moderate kaolinitic matrix, trace nodular pyrite, trace muscovite, trace coarse milky quartz float, poor to fair porosity, no fluorescence.
	30	SILTSTONE: Dark brown grey, dark olive grey, very argillaceous, common carbonaceous/coaly fragments, trace disseminated and nodular pyrite, trace biotite, firm, blocky to subfissile.
2185	60	SANDSTONE: Predominantly as above, trace coal fragments.
	40	SILTSTONE: As above.
2190	60	SANDSTONE: As above.
	40	SILTSTONE: As above.
	Trace	COAL: Black, sub-bituminous, slightly silty/argillaceous, dull lustre, earthy texture, brittle, blocky to subfissile.
2195	80	SANDSTONE: Predominantly as above, becomes fine, locally moderate kaolinitic matrix, trace coal fragments, poor porosity, no fluorescence.
	20	SILTSTONE: Predominantly as above, becomes medium brown.
2200	60	SANDSTONE: Clear to translucent, frosted, fine to medium, subangular to subrounded, good sorting, trace siliceous cement, trace dolomitic/calcareous cement in part, trace ,kaolinitic matrix, trace altered feldspar, trace quartz overgrowths, trace to rare coarse milky quartz, trace glauconite in part, moderately hard to loose, poor to nil porosity, no fluorescence.
	40	SILTSTONE: As above.
2205	40	SANDSTONE: Predominantly as above, becomes off white in part, common kaolinitic matrix.
	60	SILTSTONE: Predominantly as above, trace carbonaceous/coaly microlaminations.
	Trace	COAL: Black, sub-bituminous, silty/argillaceous, dull lustre, earthy, brittle, blocky to subfissile.
2210	10	SANDSTONE: As above.
	90	SILTSTONE: Predominantly as above, becomes medium brown grey, very argillaceous grades to claystone in part.
	Trace	COAL: As above.
2215	40	SANDSTONE: Clear to translucent, frosted, fine to predominantly medium, angular to subangular, moderate sorting, moderate siliceous/dolomitic cement, common nodular pyrite, trace muscovite, loose, fair porosity, no fluorescence.
	60	SILTSTONE: As above.

2220	50	SANDSTONE: Clear to translucent, off white, fine to occasionally medium, angular to subangular, good sorting, trace siliceous cement, moderate kaolinitic matrix, trace quartz overgrowths, trace carbonaceous fragments, common muscovite, trace altered feldspar, friable to occasionally loose, very poor to nil porosity, no fluorescence.
	50	SILTSTONE: Predominantly as above, becomes medium brown grey.
2225	20	SANDSTONE: Predominantly as above, moderate kaolinitic matrix.
	80	SILTSTONE: Predominantly as above, becomes medium grey brown, olive grey, very argillaceous, common carbonaceous fragments.
2230	60	SANDSTONE: Predominantly as above, trace nodular pyrite.
	40	SILTSTONE: As above.
2235	30	SANDSTONE: Predominantly as above, moderate kaolinitic matrix, locally common coarse milky quartz.
	70	SILTSTONE: Predominantly as above, locally common carbonaceous/coaly fragments and microlaminations.
2240	10	SANDSTONE: Clear to translucent, frosted, fine to medium, subangular to rounded in part, moderate sorting, trace kaolinitic matrix, trace coal fragments, trace muscovite, trace nodular pyrite, loose, poor porosity, no fluorescence.
	90	SILTSTONE: Olive grey, medium brown grey, very argillaceous grades to claystone in part, micromicaceous, trace biotite, trace lithic fragments, locally common coal fragments and laminations, firm to occasionally moderately hard, blocky to subfissile.
2245	100	SILTSTONE: Predominantly as above, trace off white arenaceous inclusions.
2250	80	SILTSTONE: Predominantly as above, becomes very argillaceous grade to claystone, common off white arenaceous inclusions.
	20	COAL: Black bituminous, trace disseminated pyrite, dull to subvitreous lustre, subconchoidal fracture in part, brittle, blocky to subfissile.
2255	40	SANDSTONE: Clear to translucent, frosted, fine to medium, angular to subangular, good sorting, weak siliceous cement, trace kaolinite inclusions, trace muscovite, trace rock fragments, loose, occasionally friable, fair porosity, no fluorescence.
	50	SILTSTONE: As above.
	10	COAL: As above.
2260	70	SANDSTONE: Predominantly as above, becomes medium, trace pyritic & siliceous cement, trace quartz overgrowths, trace muscovite, poor to fair porosity, no fluorescence.
	30	SILTSTONE: As above.
2265	70	SANDSTONE: Predominantly as above, becomes medium to coarse, trace nodular pyrite, fair porosity, no fluorescence.
	30	SILTSTONE: Predominantly as above, common coaly fragments.

2270	20	SANDSTONE: Predominantly as above, becomes pale to light brown, clear to translucent, fine to occasionally medium, common nodular pyrite.
	80	SILTSTONE: Predominantly as above, common coaly fragments.
2275	Trace	SANDSTONE: As above.
	90	SILTSTONE: Light brown grey, olive grey, moderately to very argillaceous, micromicaceous, common off white arenaceous inclusions, trace nodular pyrite, micromicaceous, common carbonaceous fragments, soft to firm, massive to blocky.
	10	COAL: Black, bituminous, trace disseminated and lenticular pyrite, subvitreous lustre, occasionally subconchoidal fracture, brittle, hard, blocky.
2280	20	SANDSTONE: Off white to light brown, very fine to fine, angular to subrounded, moderate to good sorting, trace siliceous cement, abundant kaolinitic matrix, trace altered feldspar, trace carbonaceous fragments, trace nodular pyrite, trace biotite, friable to occasionally loose, very poor porosity, no fluorescence.
	80	SILTSTONE: Predominantly as above, becomes medium brown in part, common coaly fragments.
2285	90	SANDSTONE: Off white to light brown, clear to translucent, fine to medium, angular to subrounded, moderate to good sorting, strong dolomitic cement, trace kaolinitic matrix, trace nodular pyrite, trace biotite, trace altered feldspar, hard, tight, dull orange mineral fluorescence only.
	10	SILTSTONE: As above.
2290	30	SANDSTONE: Off white, light brown, occasionally clear to translucent, fine to occasionally medium, angular to subangular, moderate dolomitic cement, trace to common kaolinitic matrix, trace muscovite, trace nodular pyrite, friable to hard, tight, dull orange mineral fluorescence only.
	50	SILTSTONE: Light to medium brown grey, olive grey, very argillaceous, common carbonaceous fragments, micromicaceous, trace lithic fragments, firm, blocky.
	20	COAL: Black, bituminous, slightly argillaceous, dull to subvitreous lustre, occasionally subconchoidal fracture, brittle to hard, blocky.
2295	10	SANDSTONE: Predominantly as above, becomes off white, fine to medium, trace dolomitic cement, common kaolinitic matrix, dull orange mineral fluorescence only.
	80	SILTSTONE: As above.
	10	COAL: As above.
2300	70	SILTSTONE: As above.
	30	COAL: As above.
2305	10	SANDSTONE: Off white, light grey, very fine to fine, subangular, good sorting, moderate siliceous cement, abundant kaolinitic matrix, trace nodular pyrite, trace lithic fragments, trace biotite, friable to moderately hard, tight, no fluorescence.
	90	SILTSTONE: Medium dark grey brown, dark olive grey, very argillaceous, micromicaceous, common coal fragments and microlaminations, trace disseminated pyrite, slightly arenaceous in part, firm to occasionally moderately hard, blocky to subfissile.

2310	Trace	SANDSTONE: As above.
	100	SILTSTONE: Predominantly as above, trace coal fragments with disseminated pyrite.
2315	100	SILTSTONE: Medium dark brown grey, dark olive grey, very argillaceous, trace off white fine arenaceous inclusions, trace carbonaceous fragments, trace disseminated pyrite, micromicaceous, soft to form, massive.
2320	100	SILTSTONE: As above.
2325	100	SILTSTONE: As above.
2330	60	SILTSTONE: As above.
	40	COAL: Black, bituminous, subvitreous lustre, subconchoidal fracture, brittle, hard, blocky.
2335	100	SILTSTONE: As above.
2340	10	SANDSTONE: Off white, white, very fine to fine, subangular, good sorting, abundant kaolinitic matrix, trace carbonaceous fragments, friable, tight, no fluorescence.
	90	SILTSTONE: As above.
2345	90	SILTSTONE: Predominantly as above, trace fine calcareous sand inclusions.
	10	COAL: As above.
2350	90	SILTSTONE: Predominantly as above, trace off white arenaceous inclusions.
	10	COAL: As above.
2355	100	SILTSTONE: Medium to dark grey brown, dark olive grey, very argillaceous grades to claystone, trace disseminated pyrite, trace carbonaceous/coaly fragments, micromicaceous, trace lithic fragments, occasionally very fine arenaceous inclusions, firm to soft, massive to blocky, occasionally subfissile.
2360	100	SILTSTONE: Predominantly as above, trace arenaceous inclusions.
2365	30	SANDSTONE: Off white, light grey, very fine to fine, subangular, good sorting, abundant kaolinitic matrix, trace altered feldspar, trace lithic fragments, trace disseminated pyrite, friable to moderately hard, tight to very poor porosity. FLUORESCENCE: 10% Dull patchy blue/white fluorescence, very faint weak cut, no residue.
	70	SILTSTONE: As above.
2370	10	SANDSTONE: As above, no fluorescence.
	80	SILTSTONE: As above.
	10	COAL: Black, bituminous, subvitreous to occasionally vitreous lustre, subconchoidal fracture, brittle to hard, blocky.
2375	20	SANDSTONE: Predominantly as above, becomes light brown, fine, moderately siliceous cement in part.
	80	SILTSTONE: Predominantly as above, becomes very argillaceous grades to claystone.

2380	70	SANDSTONE: Clear to translucent, off white, fine to medium, angular to subrounded, moderate sorting, trace pyritic cement, weak siliceous cement, moderate kaolinitic matrix, common coarse milky quartz float, trace nodular pyrite, trace rock fragments, loose, fair to good porosity, no fluorescence.
	30	SILTSTONE: As above.
2385	30	SANDSTONE: Predominantly as above, becomes fine, abundant kaolinitic matrix, very poor to nil porosity, no fluorescence.
	70	SILTSTONE: Predominantly as above, common off white arenaceous inclusions.
2390	10	SANDSTONE: As above.
	90	SILTSTONE: Predominantly as above, becomes medium dark brown grey, very argillaceous grades to claystone in part.
2395	30	SANDSTONE: Light brown, off white to cream, occasionally clear, fine, subangular, good sorting, strong dolomitic cement, moderate siliceous cement, trace kaolinitic matrix, common altered feldspar, trace biotite, trace carbonaceous/coaly fragments, trace to locally common nodular pyrite, hard, tight, dull orange mineral fluorescence only.
	70	SILTSTONE: Predominantly as above, becomes olive grey in part, common coal fragments.
2400	20	SANDSTONE: Light brown, off white, fine to occasionally medium, subangular, good sorting, strong dolomitic cement, trace to common kaolinitic matrix, trace coal fragments, trace altered feldspar, trace nodular pyrite, trace to common biotite, hard, tight, dull orange mineral fluorescence only.
	80	SILTSTONE: As above.
2405	100	SILTSTONE: As above.
2410	20	SANDSTONE: Clear to translucent, off white, very fine to fine, occasionally medium, subangular to subrounded, moderate sorting, abundant kaolinitic matrix, trace nodular pyrite, trace muscovite, friable, very poor porosity, no fluorescence.
	80	SILTSTONE: As above.
2415	10	SANDSTONE: Off white, light grey, very fine to fine, subangular, good sorting, trace siliceous cement, common kaolinitic matrix, trace lithic fragments, trace nodular pyrite, trace muscovite, friable, poor to nil porosity, no fluorescence.
	90	SILTSTONE: Medium brown, olive grey in part, moderately argillaceous, very arenaceous, common carbonaceous fragments, trace nodular & disseminated pyrite, trace biotite, firm, massive.
2420	30	SANDSTONE: Predominantly as above, trace coarse milky quartz float, common nodular pyrite, friable, tight, no fluorescence.
	70	SILTSTONE: As above.
2425	10	SILTSTONE: As above.
	90	COAL: Black, bituminous, slightly argillaceous, subvitreous lustre, subconchoidal fracture, brittle to hard, blocky.

2430	90	SILTSTONE: Light grey brown, medium brown grey, very argillaceous, slightly arenaceous, slightly micromicaceous, trace lithic fragments, trace carbonaceous/coaly fragments, soft, massive.
	10	COAL: As above.
2435	10	SANDSTONE: Clear to translucent, light grey, fine, subangular, good sorting, trace pyritic cement, trace to common kaolinitic/silty matrix becomes very silty locally grades to silty sandstone, friable, tight, no fluorescence.
	90	SILTSTONE: Predominantly as above, becomes moderately arenaceous.
2440	20	SANDSTONE: Predominantly as above, becomes off white, fine to occasionally medium, abundant kaolinitic matrix, occasionally medium milky quartz float, poor to nil porosity, no fluorescence.
	70	SILTSTONE: As above.
	10	COAL: As above.
2445	10	SANDSTONE: Off white, light brown grey, fine, subangular, good sorting, trace siliceous cement, weak calcareous cement, trace carbonaceous fragments, trace nodular pyrite, friable, very poor porosity, no fluorescence.
	80	SILTSTONE: Dark grey brown, dark olive grey, moderately argillaceous, common carbonaceous/coaly fragments, trace lithic fragments, micromicaceous, common arenaceous inclusions locally grades to silty sandstone, firm, blocky.
	10	COAL: As above.
2450	20	SANDSTONE: Predominantly as above, very fine to fine, common kaolinitic matrix, very poor porosity, no fluorescence.
	60	SILTSTONE: Predominantly as above, becomes medium brown, trace biotite.
	20	COAL: As above.
2455	70	SILTSTONE: As above.
	30	COAL: As above.
2460	90	SILTSTONE: Predominantly as above, common off white arenaceous inclusions.
	10	COAL: As above.
2465	90	SILTSTONE: Brown grey, olive grey, occasionally dark brown, moderately to very argillaceous, slightly micromicaceous, common carbonaceous fragments, trace nodular pyrite, locally slightly arenaceous, firm, moderately hard, blocky to subfissile.
	10	COAL: Black, bituminous, locally very argillaceous grades to carbonaceous shale, dull to subvitreous lustre, subconchoidal fracture, brittle to hard, blocky to subfissile in part.
2470	10	SANDSTONE: Clear to translucent, off white, fine, subangular to subrounded, good sorting, locally moderate siliceous/dolomitic cement, common kaolinitic matrix, trace nodular pyrite, trace muscovite, trace altered feldspar, friable to loose, very poor to nil porosity, dull orange mineral fluorescence only.
	90	SILTSTONE: Predominantly as above, locally common arenaceous inclusions.
	Trace	COAL: As above.

2475	10	SANDSTONE: Predominantly as above, becomes light brown, common dolomitic cement, hard, tight, dull orange mineral fluorescence only.
	80	SILTSTONE: Predominantly as above, becomes light grey in part.
	10	COAL: As above.
2480	20	SANDSTONE: Off white, light brown, occasionally light grey, very fine to predominantly fine, subangular, good sorting, locally trace dolomitic cement, abundant kaolinitic/argillaceous matrix grades to silty sandstone in part, trace nodular pyrite, trace carbonaceous specks, friable to occasionally hard, tight, trace dull orange mineral fluorescence only.
	70	SILTSTONE: Predominantly as above, becomes olive grey, light to medium brown grey.
	10	COAL: Predominantly as above, becomes slightly to non argillaceous, subvitreous lustre.
2485	30	SANDSTONE: Predominantly as above, trace coarse grained clear/milky quartz float.
	70	SILTSTONE: As above.
2490	Trace	SANDSTONE: Predominantly as above, becomes light brown.
	70	SILTSTONE: Predominantly as above, becomes medium brown grey, very argillaceous grades to claystone in part, common coal fragments & microlaminations.
	30	COAL: Black, occasionally brown black, bituminous, locally very argillaceous grades to carbonaceous shale, dull to subvitreous lustre, subconchoidal fracture in part, brittle to hard, blocky to occasionally subfissile.
2495	60	SILTSTONE: As above.
	40	COAL: As above.
2500	100	SILTSTONE: Light brown, light brown grey, very argillaceous grades to claystone, slightly micromicaceous, trace carbonaceous/coal fragments, locally slightly arenaceous, trace biotite, trace nodular pyrite, soft to occasionally firm, massive to blocky.
2505	20	SANDSTONE: off white, light brown, very fine to fine, subangular, good sorting, weak calcareous cement, moderate to common kaolinitic matrix, trace nodular pyrite, trace muscovite, trace carbonaceous fragments, friable, tight, no fluorescence.
	80	SILTSTONE: Light grey brown, medium brown, moderately argillaceous, locally arenaceous grades to silty sandstone in part, trace carbonaceous fragments, trace lithic fragments, firm, blocky.
2510	40	SILTSTONE: As above.
	60	COAL: Black, bituminous, dull to subvitreous lustre, subconchoidal fracture, hard, brittle, blocky.
2515	Trace	SANDSTONE: As above.
	80	SILTSTONE: Predominantly as above, common off white arenaceous inclusions.
	20	COAL: As above.

2520	90	SILTSTONE: As above.
	10	COAL: As above.
2525	10	SANDSTONE: Predominantly as above, becomes light brown, trace to common siliceous/dolomitic cement, hard, tight.
	90	SILTSTONE: Predominantly as above, becomes light brown grey.
2530	100	SILTSTONE: Predominantly as above, trace off white arenaceous inclusions.
2535	90	SILTSTONE: Medium brown grey, dark olive grey, very argillaceous locally grades to claystone, slightly micromicaceous, trace arenaceous inclusions in part, trace lithic fragments, soft, massive to blocky.
	10	COAL: As above.
2540	10	SANDSTONE: Light grey, light orange brown, fine, subangular, moderate sorting, common dolomitic cement, trace altered feldspar, rare glauconite, hard, tight, dull orange mineral fluorescence only.
	80	SILTSTONE: As above.
	10	COAL: As above.
2545	Trace	SANDSTONE: Predominantly as above, becomes off white.
	80	SILTSTONE: As above.
	20	COAL: As above.
2550	60	SILTSTONE: As above.
	40	COAL: As above.
2555	30	SILTSTONE: As above.
	70	COAL: As above.
2560	80	SILTSTONE: Light brown grey, occasionally medium brown grey, moderately argillaceous, slightly micromicaceous, moderately arenaceous, trace nodular pyrite, trace carbonaceous fragments, firm, blocky.
	20	COAL: As above.
2565	10	SANDSTONE: Clear to translucent, off white, fine to occasionally medium, subangular to subrounded, moderate sorting, common kaolinitic matrix, trace biotite, trace coaly fragments, friable, loose in part, poor porosity, no fluorescence.
	80	SILTSTONE: Olive grey, light brown grey, moderately argillaceous, slightly arenaceous, micromicaceous, trace carbonaceous fragments, trace lithic fragments, soft to firm, massive to blocky.
	10	COAL: As above.
2570	20	SANDSTONE: Clear to translucent, frosted, medium to occasionally coarse, angular to subangular, poor to moderate sorting, trace pyritic cement, trace kaolinitic matrix, trace coarse milky quartz, trace nodular pyrite, loose, fair porosity, no florescence.
	60	SILTSTONE: As above.
	20	COAL: Predominantly as above, becomes moderately to very argillaceous grades to carbonaceous shale.

2575	10	SANDSTONE: Off white to light grey, very fine to fine, subangular, good sorting, trace siliceous cement, common kaolinitic matrix, trace muscovite/biotite, trace lithic fragments, friable, very poor porosity, no fluorescence.
	80	SILTSTONE: Light brown, light grey brown, moderately to very argillaceous, trace biotite, trace carbonaceous specks, slightly arenaceous, firm, blocky to massive.
	10	COAL: Predominantly as above, becomes very argillaceous grades to carbonaceous shale.
2580	90	SILTSTONE: Predominantly as above, trace arenaceous inclusions.
	10	COAL: As above.
2585	80	SILTSTONE: Predominantly as above, trace nodular pyrite in part, trace arenaceous inclusions.
	20	COAL: As above.
2590	Trace	SANDSTONE: Off white, light brown, very fine to fine, subangular, good sorting, common siliceous cement, moderate kaolinitic matrix, trace coarse quartz float, hard, tight, o fluorescence.
	80	SILTSTONE: As above.
	20	COAL: As above.
2595	10	SILTSTONE: As above.
	90	COAL: As above.
2600	90	SILTSTONE: Light to medium brown grey, occasionally olive grey, moderately argillaceous, micromicaceous, trace carbonaceous fragments, common off white arenaceous inclusions, trace lithic fragments, soft, massive to subfissile.
	10	COAL: As above.
2605	80	SILTSTONE: Predominantly as above, trace nodular pyrite, common off white very fine arenaceous inclusions, firm, blocky.
	20	COAL: Predominantly as above, slightly argillaceous.
2610	70	SANDSTONE: Clear to translucent, off white, fine to medium, subangular to subrounded, good sorting, weak siliceous cement, trace kaolinitic matrix, common coaly fragments, trace nodular pyrite, trace muscovite, rare chlorite, friable to loose, good sorting, no fluorescence.
	30	SILTSTONE: Light brown grey, occasionally olive grey, moderately argillaceous to locally very argillaceous, trace carbonaceous specks, slightly micromicaceous, trace lithic fragments, occasionally mottled texture, firm, blocky to subfissile.

(Core chip descriptions from Core #1 2611-2627m.)

2611	SANDSTONE: Light grey, fine to occasionally medium, subangular, good sorting, moderate siliceous cement, trace to moderate kaolinitic matrix, common muscovite, trace glauconite, trace altered feldspar, trace rock fragments, hard, very poor to nil porosity, trace orange pin-point mineral fluorescence.

2612.85	SANDSTONE: Predominantly as above, becomes fine to predominantly medium, trace carbonaceous microlaminations, trace pinpoint orange mineral fluorescence only.
2613.85	SANDSTONE: Light grey to light brown, medium, subangular to subrounded, moderate sorting, weak to moderate siliceous cement, moderate kaolinitic matrix, common rock fragments, trace smoky/milky quartz, trace carbonaceous microlaminantions, trace muscovite, trace siderite, rare glauconite, moderately hard to hard, very poor porosity, trace pin point mineral fluorescence.
2614.85	SANDSTONE: Off white to light grey, fine, subangular, good sorting, strong siliceous cement, common lithic fragments, trace kaolinitic inclusions, common coaly fragments and abundant carbonaceous laminae, hard, tight, no fluorescence.
2616.85	SANDSTONE: Light grey, medium to occasionally coarse, subangular to subrounded, moderate sorting, strong siliceous cement, silty/argillaceous matrix, trace altered feldspar, trace muscovite, rare glauconite, trace to common carbonaceous fragments and microlaminations, trace disseminated pyrite, hard, very poor porosity, trace pin point mineral fluorescence only.
2617.85	SANDSTONE: Light grey, medium to coarse, angular to subrounded, moderate sorting, moderate to strong siliceous cement, trace silty/argillaceous matrix, trace nodular pyrite, common muscovite, common coaly fragments and microlaminations, trace siderite, rare glauconite, moderately hard to hard, poor to very poor porosity, trace pin point mineral fluorescence only.
2618.85	SANDSTONE: Light grey, coarse, subangular to subrounded, moderate sorting, trace kaolinitic matrix, trace rock fragments, common milky quartz, friable, good porosity, no fluorescence.
2619.85	SANDSTONE: Light to medium grey, medium to predominantly coarse to very coarse, angular to subrounded, poor to moderate sorting, moderate siliceous cement, common kaolinitic/silty matrix, trace muscovite, trace nodular pyrite, trace rock fragments, common altered feldspar, rare glauconite, trace rock fragments, moderately hard, poor porosity, trace pin orange point mineral fluorescence only.
2620.85	SANDSTONE: Predominantly as above, trace rose quartz, trace siderite, fair porosity, trace orange pin point mineral fluorescence only.
2621.85	SHALE: Dark grey, grey black, slightly silty, micromicaceous, very carbonaceous, hard, subfissile.
2622.85	SANDSTONE: Dark brown grey, very fine to fine, subangular, good sorting, strong siliceous cement, abundant argillaceous matrix, common muscovite, common carbonaceous fragments, ,trace kaolinitic inclusions, trace rock fragments, hard, tight, no fluorescence.

2623.85		SANDSTONE: Light grey, light brown, fine, subangular, good sorting, moderate to strong siliceous cement, trace kaolinitic matrix, common muscovite, trace altered feldspar, common coal fragments and microlaminations, rare glauconite, moderately hard to hard, very poor to nil porosity, no fluorescence.
2624.85		SHALE: Dark grey, grey black, slightly micromicaceous, very carbonaceous, common vitreous coal laminae, homogeneous, hard, subfissile.
2625.85		SHALE: Dark grey, grey black, slightly micromicaceous, trace coal specks, homogeneous, hard, subfissile.
2626.80		SHALE: As above.

(Re-commence cuttings descriptions from 2627m.)

2630	10	SANDSTONE: Clear to translucent, frosted, fine to medium, subangular to subrounded, poor sorting, moderate siliceous cement, common argillaceous matrix, trace coarse milky quartz, trace coal fragments, hard to occasionally loose, very poor to nil porosity, no fluorescence.
	80	SILTSTONE: Light to medium grey brown, dark olive grey in part, moderately to very argillaceous, common carbonaceous fragments, trace lithic fragments, common off white arenaceous inclusions, slightly micromicaceous, mottled texture in part, firm to occasionally moderately hard, massive to subfissile.
	10	COAL: Black, bituminous, slightly argillaceous in part, dull to subvitreous lustre in part, subconchoidal fracture, brittle to hard, blocky.
2635	10	SANDSTONE: As above.
	70	SILTSTONE: As above.
	20	COAL: As above.
2640	100	SILTSTONE: Predominantly as above, common off white arenaceous inclusions.
2645	90	SILTSTONE: Predominantly as above, becomes firm to occasionally hard.
	10	COAL: As above.
2650	10	SANDSTONE: Clear to translucent, off white, fine, subangular, good sorting, weak siliceous cement in part, abundant kaolinitic matrix, trace smoky quartz, trace biotite, friable, very poor to nil porosity, no fluorescence.
	90	SILTSTONE: Predominantly as above, arenaceous in part, grades to silty sandstone in part.
2655	30	SANDSTONE: Light brown, clear to translucent, fine, subangular, good sorting, moderate kaolinitic matrix in part, trace carbonaceous fragments, friable to loose, poor to nil porosity, no fluorescence.
	60	SILTSTONE: As above.
	10	COAL: As above.

2660	20	SANDSTONE: Off white, clear to translucent frosted, fine to occasionally medium, subangular to subrounded, moderate sorting, common kaolinitic/silty matrix, trace siliceous cement in part, trace muscovite, trace nodular pyrite, trace carbonaceous specks, friable to loose, poor to fair porosity, no fluorescence.
	40	SILTSTONE: Light to medium grey brown, occasionally dark brown grey, moderately to very argillaceous, trace carbonaceous flecks, slightly micromicaceous, trace lithic fragments, trace off white arenaceous inclusions, soft to firm, massive to blocky.
	40	COAL: Black, bituminous, subvitreous to occasionally vitreous lustre, slightly argillaceous in part, subconchoidal fracture, brittle to hard, blocky.
2665	10	SANDSTONE: As above.
	60	SILTSTONE: As above.
	30	COAL: As above.
2670	10	SANDSTONE: Predominantly as above, fine to medium, moderate kaolinitic matrix.
	70	SILTSTONE: As above.
	20	COAL: As above.
2675	40	SANDSTONE: Clear to translucent, frosted, light brown, medium, subangular to subrounded, moderate to good sorting, predominantly clean, trace silty/argillaceous matrix, trace nodular pyrite, loose, good porosity, no fluorescence.
	50	SILTSTONE: As above.
	10	COAL: As above.
2680	30	SANDSTONE: Predominantly as above, trace dolomitic cement in part, trace orange mineral fluorescence only.
	50	SILTSTONE: As above.
	20	COAL: As above.
2685	30	SANDSTONE: Clear to translucent, off white, fine to occasionally medium, subangular to subrounded, moderate sorting, trace siliceous cement, rare dolomitic cement, abundant kaolinitic matrix, trace nodular pyrite, trace rock fragments, trace muscovite, friable to loose, poor to fair porosity, trace orange mineral fluorescence only.
	50	SILTSTONE: As above.
	20	COAL: As above.
2690	70	SANDSTONE: Predominantly as above, becomes fine to coarse, poor sorting, common muscovite, trace nodular pyrite, trace altered feldspar, loose, fair to good porosity, trace orange mineral fluorescence.
	10	SILTSTONE: As above.
	20	COAL: As above.
2695	30	SANDSTONE: Off white, light brown, fine to coarse, angular to subrounded, poor sorting, strong dolomitic cement in part, moderately to locally abundant kaolinitic matrix, trace altered feldspar, trace coal fragments, trace muscovite, trace nodular pyrite, hard to loose in part, tight, common patchy orange mineral fluorescence only.
	40	SILTSTONE: As above.
	30	COAL: As above.

2700	30	SANDSTONE: Clear to translucent, off white, fine to medium, occasionally coarse, angular to subangular, poor sorting, moderate siliceous cement, locally strong dolomitic cement, trace to common kaolinitic matrix, common milky quartz, trace quartz overgrowths, hard, fractured grains, poor to occasionally fair porosity, trace orange mineral fluorescence only.
	50	SILTSTONE: Medium to dark brown grey, dark olive grey, very argillaceous grades to claystone, slightly micromicaceous, trace carbonaceous fragments, firm to moderately hard, blocky to subfissile.
	20	COAL: Black, bituminous, slightly argillaceous, subvitreous to occasionally vitreous lustre, subconchoidal fracture, brittle to hard, blocky.
2705	60	SANDSTONE: Predominantly as above, becomes fine to medium, trace dolomitic cement, occasionally coarse quartz float.
	30	SILTSTONE: Predominantly as above, very argillaceous grades to claystone.
	10	COAL: As above.
2710	70	SANDSTONE: Predominantly as above, becomes fine, trace to common kaolinitic matrix.
	10	SILTSTONE: As above.
	20	COAL: As above.
2715	40	SANDSTONE: Predominantly as above, becomes medium to coarse, common dolomitic cement, very poor to nil porosity, common orange mineral fluorescence.
	50	SILTSTONE: Predominantly as above, becomes very argillaceous grades to homogeneous claystone.
	10	COAL: As above.
2720	70	SANDSTONE: Clear to translucent, frosted, medium to coarse, angular to subangular, poor to moderate sorting, weak to moderate siliceous cement, trace to locally common kaolinitic matrix, trace to common nodular pyrite, trace coarse milky quartz, rare chlorite, trace quartz overgrowths, moderately hard, loose, fair to good porosity, trace orange mineral fluorescence only.
	30	SILTSTONE: Dark brown grey, dark olive grey, slightly siliceous, abundant argillaceous matrix locally grades to claystone, trace carbonaceous laminae, trace disseminated pyrite, firm to moderately hard, blocky to subfissile.
	Trace	COAL: Predominantly as above, becomes very argillaceous grades to carbonaceous shale in part.
2725	20	SANDSTONE: Predominantly as above, becomes fine to coarse, poor sorting, strong siliceous cement, trace nodular pyrite, poor porosity, no fluorescence.
	80	SILTSTONE: As above.
	Trace	COAL: As above.
2730	90	SANDSTONE: Predominantly as above, fine to coarse, common coarse milky quartz float, trace nodular pyrite.
	10	SILTSTONE: As above.

2735	90	SANDSTONE: Clear to translucent, frosted, medium to coarse, subangular to subrounded, moderate to good sorting, trace kaolinitic matrix, trace nodular pyrite, trace very coarse milky quartz float, trace rock fragments, loose, good porosity, no fluorescence.
	10	SILTSTONE: As above.
	Trace	COAL: As above.
2740	40	SANDSTONE: Clear to translucent, off white, frosted, fine to very coarse, angular to subangular, poor sorting, moderate siliceous cement, common kaolinitic matrix, trace pyritic cement and nodular, trace quartz overgrowths, trace muscovite, trace coal fragments, friable to loose, fair porosity, no fluorescence.
	50	SILTSTONE: Medium grey brown, olive grey, moderately argillaceous, slightly arenaceous in part, trace carbonaceous fragments,, slightly micromicaceous, firm, blocky to subfissile.
	10	COAL: As above.
2745	30	SANDSTONE: As above.
	50	SILTSTONE: As above.
	20	COAL: Predominantly as above, becomes very argillaceous in part grades to carbonaceous claystone.
2750	20	SANDSTONE: As above.
	80	SILTSTONE: As above.
2755	10	SANDSTONE: Predominantly as above, becomes very coarse, trace kaolinitic matrix, abundant milky quartz, loose, good porosity, no fluorescence.
	90	SILTSTONE: As above.
	Trace	COAL: As above.
2760	10	SANDSTONE: Predominantly as above, locally common kaolinitic matrix.
	90	SILTSTONE: Medium to dark grey brown, dark olive grey, very argillaceous, slightly arenaceous, trace carbonaceous fragments, firm, massive.
	Trace	COAL: As above.
2765	10	SANDSTONE: Predominantly as above, locally common dolomitic cement, trace nodular pyrite, hard aggregates, poor porosity, trace mineral fluorescence only.
	90	SILTSTONE: As above.
	Trace	COAL: As above.
2770	100	SILTSTONE: As above.
	Trace	COAL: As above.
2775	100	SILTSTONE: Medium to dark brown grey, olive grey in part, moderately argillaceous, very arenaceous, common off white arenaceous inclusions, slightly micromicaceous, trace carbonaceous/coal fragments, trace lithic fragments, soft, firm.
2780	90	SILTSTONE: As above.
	10	COAL: Black, bituminous, slightly argillaceous, subvitreous lustre, brittle to hard, blocky.

2785	90	SILTSTONE: Predominantly as above, becomes very arenaceous in part.
	10	COAL: As above.
2790	Trace	SANDSTONE: Off white, light grey, clear to translucent, fine to coarse, angular to subangular, poor sorting, common kaolinitic matrix, common very coarse milky quartz, trace carbonaceous fragments, hard, tight, no fluorescence.
	90	SILTSTONE: As above.
	10	COAL: As above.
2795	10	SANDSTONE: Off white to light grey, occasionally light brown, fine to medium, angular to subangular, moderate sorting, strong siliceous cement, moderate kaolinitic matrix, trace carbonaceous fragments, trace coarse to very coarse milky quartz float, friable, very poor to nil porosity, no fluorescence.
	80	SILTSTONE: Dark brown grey, olive grey, very argillaceous, common coaly fragments, arenaceous in part, slightly micromicaceous, firm, blocky to subfissile.
	10	COAL: As above.
2800	100	SILTSTONE: As above.
	Trace	COAL: As above.
2805	Trace	SANDSTONE: Predominantly as above, becomes very fine, common kaolinitic matrix.
	90	SILTSTONE: As above.
	10	COAL: As above.
2810	10	SANDSTONE: Light grey, light brown, clear to translucent, very fine to fine, angular to subangular, good sorting, moderate siliceous cement, common kaolinitic matrix, trace lithic fragments, trace carbonaceous fragments, trace nodular pyrite, trace biotite, friable to moderately hard, tight, no fluorescence.
	90	SILTSTONE: Predominantly as above, common coal fragments and laminae.
	Trace	COAL: As above.
2815	90	SILTSTONE: Predominantly as above, common off white arenaceous inclusions.
	10	COAL: As above.
2820	10	SANDSTONE: Off white, light grey, occasionally clear to translucent, fine to medium, angular to subangular, poor to moderate sorting, trace to moderate siliceous cement, trace pyritic cement, moderate kaolinitic/silty matrix, trace carbonaceous/coal fragments and microlaminations, friable to loose in part, very poor to fair porosity.
	90	SILTSTONE: As above.
	Trace	COAL: As above.
2825	Trace	SANDSTONE: As above.
	100	SILTSTONE: As above.
2830	10	SANDSTONE: Predominantly as above, becomes light brown in part, moderate siliceous cement, hard, tight, no fluorescence.
	90	SILTSTONE: Predominantly as above, common coal fragments and microlaminations.

2835	10	SANDSTONE: Predominantly as above, becomes fine to medium, subangular, trace nodular pyrite, friable to hard, tight, no fluorescence.
	80	SILTSTONE: As above.
	10	COAL: As above.
2840	10	SANDSTONE: Predominantly as above, trace lithic fragments, trace coal and carbonaceous fragments, poor porosity, no fluorescence.
	80	SILTSTONE: As above.
	10	COAL: As above.

Reached Total Depth of 2840m at 1500 hours, 11/10/1995.

APPENDIX 2

APPENDIX II

CORE DESCRIPTIONS

ESSO AUSTRALIA LTD
CORE DESCRIPTION

CORE No.:	1	**WELL:**	TURRUM-6 ST1
Interval cored:	2611-2627m	Recovered:	15.8m (99%)
Cut:	16m	Bit size:	7 7/8"
Bit type:	ARC-427	Date:	9-Oct-95
Described by:	Greg Clota		

Interval (m)	Depth & ROP (m/hr)	Graphic Shows	Descriptive Lithology
2611	40 32 24 18 8 0		2611m : SANDSTONE: Light grey, fine to occasionally medium, subangular, good sorting, moderate siliceous cement, trace to moderate kaolinitic matrix, common muscovite, trace glauconite, trace altered feldspar, trace rock fragments, hard, very poor to nil porosity, trace orange pin-point mineral fluorescence.
2612			2612.85m : SANDSTONE: Predominantly as above, becomes fine to predominantly medium, trace carbonaceous microlaminations, trace pinpoint orange mineral fluorescence only.
2613			2613.85m : SANDSTONE: Light grey to light brown, medium, subangular to subrounded, moderate sorting, weak to moderate siliceous cement, moderate kaolinitic matrix, common rock fragments, trace smoky/milky quartz, trace carbonaceous microlaminations, trace muscovite, trace siderite, rare glauconite, moderately hard to hard, very poor porosity, trace pin point mineral fluorescence.
2614			2614.85m : SANDSTONE: Off white to light grey, fine, subangular, good sorting, strong siliceous cement, common lithic fragments, trace kaolinitic inclusions, common coaly fragments and abundant carbonaceous laminae, hard, tight, no fluorescence.
2615			2616.85m : SANDSTONE: Light grey, medium to occasionally coarse, subangular to subrounded, moderate sorting, strong siliceous cement, silty/argillaceous matrix, trace altered feldspar, trace muscovite, rare glauconite, trace to common carbonaceous fragments and microlaminations, trace disseminated pyrite, hard, very poor porosity, trace pin point mineral fluorescence only.
2616			2617.85m : SANDSTONE: Light grey, medium to coarse, angular to subrounded, moderate sorting, moderate to strong siliceous cement, trace silty/argillaceous matrix, trace nodular pyrite, common muscovite, common coaly fragments and microlaminations, trace siderite, rare glauconite, moderately hard to hard, poor to very poor porosity, trace pin point mineral fluorescence only.
2617			2618.85m : SANDSTONE: Light grey, coarse, subangular to subrounded, moderate sorting, trace kaolinitic matrix, trace rock fragments, common milky quartz, friable, good porosity, no fluorescence.
2618			2619.85m : SANDSTONE: Light to medium grey, medium to predominantly coarse to very coarse, angular to subrounded, poor to moderate sorting, moderate siliceous cement, common kaolinitic/silty matrix, trace muscovite, trace nodular pyrite, trace rock fragments, common altered feldspar, rare glauconite, trace rock fragments, moderately hard, poor porosity, trace pin orange point mineral fluorescence only.
2619			2620.85m : SANDSTONE: Predominantly as above, trace rose quartz, trace siderite, fair porosity, trace orange pin point mineral fluorescence only.
2620			2621.85m : SHALE: Dark grey, grey black, slightly silty, micromicaceous, very carbonaceous, hard, subfissile.
2621			

ESSO AUSTRALIA LTD
CORE DESCRIPTION

CORE No.:	1 (continued)	WELL:	TURRUM-6 ST1
Interval cored:	2611.2627m	Recovered:	15.8M (99%)
Cut:	16m	Bit size:	9 7/8"
Bit type:	ARC-427	Date:	9-Oct-95
Described by:	Greg Clota		

Interval (m)	Depth & ROP (m/hr)	Graphic Shows	Descriptive Lithology
2622	40 32 24 16 8 0		2622.85m : SANDSTONE: Dark brown grey, very fine to fine, subangular, good sorting, strong siliceous cement, abundant argillaceous matrix, common muscovite, common carbonaceous fragments, trace kaolinitic inclusions, trace rock fragments, hard, tight, no fluorescence.
2623			2623.85m : SANDSTONE: Light grey, light brown, fine, subangular, good sorting, moderate to strong siliceous cement, trace kaolinitic matrix, common muscovite, trace altered feldspar, common coal fragments and microlaminations, rare glauconite, moderately hard to hard, very poor to nil porosity, no fluorescence.
2624			2624.85m : SHALE: Dark grey, grey black, slightly micromicaceous, very carbonaceous, common vitreous coal laminae, homogeneous, hard, subfissile.
2625			2625.85m : SHALE: Dark grey, grey black, slightly micromicaceous, trace coal specks, homogeneous, hard, subfissile.
2626			2626.80m : SHALE: As above.
2627			

APPENDIX 3

APPENDIX III

SIDEWALL CORE DESCRIPTIONS

SIDEWALL CORE DESCRIPTIONS

WELL NAME: Turrum-6 **GEOLOGIST:** Greg Clota

SWC No:	Depth (m)	Rec. (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
1	2819	15	B	SHALE: Dark brown, dark grey brown, slightly silty, slightly micromicaceous, trace to common coal fragments and inclusions (plant debris), moderately hard, subfissile.
2	2811	25	B	SHALE: Predominately as above, becomes moderately micromicaceous, trace coal fragments.
3	2789	25	B	SHALE: Very dark brown, dark olive grey, slightly micromicaceous, trace carbonaceous microlaminations, waxy texture, moderately hard to hard, subfissile.
4	2788	15	B	SANDSTONE: Off white, light grey, fine to predominantly medium, occasionally coarse, angular to subangular, moderate sorting, trace to moderate siliceous cement, common silty/kaolinitic matrix, trace coarse milky quartz, trace muscovite, trace coal fragments, friable, poor porosity, no fluorescence.
5	2787.5	20	B	SANDSTONE: Predominantly as above, becomes medium, trace to rare glauconite, moderately hard, very poor porosity, no fluorescence.
6	2781	20	B	SHALE: Dark brown, brown black, slightly micromicaceous, moderately carbonaceous/coaly, moderately hard, subfissile
7	2768	15	B	SHALE: Predominantly as above with laminated SANDSTONE: Off white to light grey, fine, subangular, good sorting, moderate siliceous cement, trace quartz overgrowths, trace glauconite, friable to moderately hard, tight, no fluorescence.
8	2759	15	B	SILTSTONE: Medium brown, moderately arenaceous grades to silty sandstone, trace carbonaceous microlaminations, abundant nodular pyrite and pyritic lenses, trace lithic fragments, hard, massive.
9	2750	15	B	SHALE: Dark brown, dark grey brown, moderately arenaceous, trace carbonaceous fragments, slightly micromicaceous, moderately hard, massive.
10	2748	20	B	SILTSTONE: Dark brown, slightly arenaceous, trace coaly/carbonaceous fragments and microlaminations, common muscovite, moderately hard, massive.
11	2727	20	B	SANDSTONE: Off white, light grey, fine to occasionally medium, subangular, good sorting, strong siliceous cement, common biotite and muscovite, trace lithic fragments, trace to rare glauconite, trace medium brown argillaceous microlaminations, moderately hard, tight, no fluorescence.

SWC No:	Depth (m)	Rec. (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
12	2722	20	B	SILTSTONE: Medium to dark brown, very argillaceous, common arenaceous inclusions, common muscovite, trace disseminated pyrite, rare glauconite, moderately hard, massive.
13	2718.8	25	B	SANDSTONE: Off white, light brown, medium to coarse, occasionally very coarse, angular to subrounded, poor to moderate sorting, strong siliceous cement, rare glauconite, trace rock fragments, trace altered feldspar, hard, very poor to nil porosity, no fluorescence.
14	2711.5	20	B	SILTSTONE: Dark brown, very argillaceous, trace lithic fragments, common off white fine arenaceous inclusions and laminations, moderately hard, massive.
15	2711	20	B	SANDSTONE: Light grey, light brown, fine to very fine, subangular, good sorting, common siliceous cement, common silty/argillaceous matrix, common muscovite, rare glauconite, common dark brown argillaceous laminae, friable to moderately hard, very poor porosity. FLUORESCENCE: 30% Dull yellow green patchy fluorescence, faint crush cut, trace ring residue.
16	2697.5	25	B	SHALE: Dark brown, slightly micromicaceous, trace very fine disseminated pyrite, trace lithic fragments, waxy texture in part, hard, subfissile.
17	2696.5	20	B	SILTSTONE: Medium brown, very arenaceous grades to silty sandstone, trace nodular pyrite, trace carbonaceous fragments, trace lithic fragments, moderately hard, massive.
18	2690	15	B	SANDSTONE: Off white, fine, subangular, good sorting, moderate siliceous cement, common kaolinitic matrix, common carbonaceous microlaminations, common muscovite, trace biotite, moderately hard, tight, no fluorescence.
19	2686.3	15	B	SANDSTONE: Off white, light brown, medium to coarse, angular to subangular, poor to moderate sorting, strong calcareous/dolomitic cement, abundant kaolinitic matrix, common muscovite, trace smoky quartz, moderately hard, tight, trace dull orange mineral fluorescence only.
20	2674.5	25	B	SANDSTONE: Light brown, medium, angular to subangular, good sorting, weak siliceous cement, moderate kaolinitic matrix and inclusions, common coal microlaminations, trace argillaceous laminae, trace rock fragments, trace smoky quartz, friable, fair porosity, no fluorescence.

SWC No:	Depth (m)	Rec. (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
21	2668.5	15	B	SILTSTONE: Medium brown, moderately argillaceous, common off white arenaceous inclusions and microlaminations, trace mica, trace coaly fragments, slightly siliceous, moderately hard, massive.
22	2667	15	B	SILTSTONE: Predominantly as above, occasionally trace arenaceous microlaminations.
23	2656	25	B	SANDSTONE: Off white, medium, subangular, moderate to good sorting, moderate siliceous cement, abundant kaolinitic matrix, trace quartz overgrowths, trace siderite, common milky quartz, moderately hard, tight, no fluorescence.
24	2653	20	B	SANDSTONE: Off white, light brown, fine to medium, subangular to subrounded, moderate sorting, common siliceous cement, common kaolinitic matrix, trace siderite, trace coal microlaminations, trace lithic fragments, trace smoky quartz, very poor to nil porosity, no fluorescence.
25	2651.2	20	B	SANDSTONE: Light grey, fine to medium, angular to subangular, moderate sorting, strong siliceous cement, common pyritic cement, trace siderite, trace coal/carbonaceous fragments and microlaminations, rare glauconite, friable to moderately hard, very poor to nil porosity, trace mineral fluorescence only.
26	2560	20	B	SANDSTONE: Off white to light grey, medium to coarse, angular to subangular, poor to moderate sorting, moderate siliceous cement, common kaolinitic matrix, abundant coal/carbonaceous microlaminations and stylolites, trace muscovite, trace altered feldspar, friable to moderately hard, very poor to nil porosity, no fluorescence.
27	2645	15	B	SILTSTONE: Medium brown, very argillaceous, abundant laminated off white very fine sandstone, slightly siliceous, common lithic fragments, trace carbonaceous fragments, hard, massive.
28	2640	15	B	SILTSTONE: Medium brown, very arenaceous grades to silty sandstone, common carbonaceous microlaminations, common lithic fragments, slightly siliceous, hard, massive.
29	2635	20	B	SILTSTONE: Medium to dark brown, very argillaceous,common coal fragments, slightly micromicaceous, moderately hard, subfissile to massive.
30	2631	20	B	SHALE: Dark brown, dark grey brown, slightly silty, trace carbonaceous flecks, had, subfissile.
31	2629	30	B	SHALE: Dark brown, dark olive grey, slightly micromicaceous, slightly siliceous, waxy texture, hard, subfissile.

SWC No:	Depth (m)	Rec. (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
32	2610.7	25	B	SANDSTONE: Off white, light brown, fine, subangular, good sorting, moderate siliceous cement, moderate silty/kaolinitic matrix, trace muscovite, trace carbonaceous microlaminations, rare biotite, trace quartz overgrowths, friable, poor to occasionally fair porosity, no fluorescence.
33	2609.5	20	B	SANDSTONE: Off white, light brown, fine to predominantly medium, angular to subangular, moderate sorting, strong siliceous cement, moderate kaolinitic matrix, trace coal microlaminations, rare glauconite, trace rock fragments, moderately hard, tight, no fluorescence.
34	2607.5	25	B	SHALE: Medium to dark brown grey, slightly micromicaceous, trace disseminated pyrite, slightly carbonaceous, waxy, hard, subfissile.
35	2606.5	25	B	SHALE: As above.
36	2591	25	B	SHALE: As above.
37	2590	25	B	SHALE: Predominantly as above, common coal fragments (plant debris) and microlaminations.
38	2577	25	B	SHALE: Predominantly as above, with coal laminae (plant debris).
39	2570	20	B	SHALE: Olive grey, medium to dark brown, slightly siliceous, homogeneous, waxy texture, hard, subfissile.
40	2567.4	20	B	SANDSTONE: White, medium to coarse, angular to subangular, moderate to poor sorting, weak siliceous cement, abundant kaolinitic matrix, trace muscovite, rare rock fragments, rare coal flecks, very poor porosity, no fluorescence.
41	2559	30	B	SHALE: Dark brown, olive grey, slightly siliceous, trace coal microlaminations, waxy texture, hard, subfissile.
42	2540	20	B	SHALE: As above, trace off white arenaceous inclusions.
43	2535	15	B	SHALE: Predominantly as above, becomes slightly silty.
44	2496.5	20	B	SHALE: Predominantly as above, slightly siliceous, trace coal laminae.
45	2466	20	B	SHALE: Medium grey, olive grey, slightly siliceous, slightly micromicaceous, rare carbonaceous fragments, homogeneous, waxy texture, hard, subfissile.
46	2439	30	B	SHALE: Dark brown, dark olive grey, slightly silty, trace arenaceous inclusions, slightly micromicaceous, hard, subfissile.
47	2407	20	B	SHALE: Dark grey brown, olive grey, slightly siliceous, slightly micromicaceous, rare disseminated pyrite, hard, subfissile.

SWC No:	Depth (m)	Rec. (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
48	2391.5	25	B	SHALE: Predominantly as above, slightly silty.
49	2374	15	B	SILTSTONE: Medium brown, very argillaceous grades to shale, trace off white arenaceous laminae, trace muscovite, hard, massive to subfissile.
50	2360	15	B	SHALE: Dark brown, olive grey, lightly siliceous, trace muscovite, slightly silty, trace arenaceous inclusions, hard, subfissile.
51	2303.5	30	B	SHALE: Olive grey, dark brown grey, slightly siliceous, rare off white arenaceous inclusions, homogeneous, waxy texture, hard, subfissile.
52	2283	20	B	SANDSTONE: Off white, light brown, very fine to fine, subangular, good sorting, moderate siliceous cement, common argillaceous/silty matrix, common argillaceous microlaminations, trace coal fragments, common muscovite, trace rock fragments, friable to moderately hard, very poor porosity, no fluorescence.
53	2276	25	B	SANDSTONE: Medium brown grey, very fine to fine, subangular, moderate to good sorting, abundant brown argillaceous matrix, common siliceous cement, hard, tight, no fluorescence. with interlaminated/interbedded SHALE: Dark brown, olive grey, slightly micromicaceous, homogeneous, hard, subfissile.
54	2253	25	B	SHALE: Dark brown, olive grey, trace disseminated and nodular pyrite, slightly siliceous, waxy texture, homogeneous, moderately hard to hard, subfissile.
55	2206.5	25	B	SHALE: Medium to dark grey, olive grey, slightly siliceous, trace off white arenaceous microlaminations, slightly micromicaceous, waxy texture, hard, subfissile.
56	2184	30	B	SHALE: Dark brown, dark grey brown, slightly silty, trace coal microlaminae in part, trace off white arenaceous inclusions, hard, subfissile.
57	2144	25	B	SHALE: As above.
58	1580.5	30	B	SANDSTONE: White, light grey, medium to predominantly coarse, subangular to subrounded, moderate sorting, clean, common very coarse milky quartz float, trace smoky quartz, very friable, very good porosity, no fluorescence.
59	1566	25	B	SANDSTONE: Predominantly as above, medium to coarse, locally moderate kaolinitic matrix, god porosity, no fluorescence.
60	1543	30	B	SANDSTONE: Clear to translucent, light brown, medium to very coarse, angular to subangular, poor sorting, predominantly clean, trace kaolinitic matrix n part, trace smoky quartz, trace rock fragments, very friable, good porosity, no fluorescence.

APPENDIX 4

APPENDIX IV

MDT RESULTS

ESSO AUSTRALIA LTD

WELL : TURRUM-6

OBSERVER : DODGE | CLOTA DATE : 12/10/95 RUN No. : 1

	CHAMBER 1 (lit.) 6 GALLON		CHAMBER 2 (lit.) 2¾ GALLON	
SEAT NO.	1		2	
DEPTH	2621.5	m	2621.5	m
A. RECORDING TIMES				
Tool Set	1620	hrs		hrs
Pretest Duration	2	mins		mins
Chamber Open	1622	hrs	16:30	hrs
Chamber Full	—	mins	3	mins
Seal Chamber	16:30	hrs	16:33	hrs
Fill Time	18	mins	4	mins
Finish Build Up	—	hrs	16:34	hrs
Build Up Time	—	mins	1	mins
Tool Retract	—	hrs		hrs
Total Time	—	mins		mins
B. SAMPLE PRESSURE				
Initial Hydrostatic	4525.2	psia	—	psia
Initial Formation Pressure (Pretest)	3783.7	psia	—	psia
Initial Flowing Pressure — THROTTLED	3000	psia	1967	psia
Final Flowing Pressure	3631	psia	2998	osia
Final Form'n Pressure	—	psia	3783.3	psia
Final Hydrostatic	—	psia	—	psia
C. TEMPERATURE				
Temp. @ Sample Depth (AMS)	110	deg C	110	deg C
Rm @ Sample Depth (AMS)	0.06	ohm-m	0.06	ohm-m
D. SAMPLE RECOVERY				
Surface Pressure	1800	psia	1350	psia
Volume Gas	159.1	cu ft	52.7	cu ft
Volume Oil	—	lit	—	lit
Volume Condensate	350 cc	lit	250cc	lit
Volume Water (Total)	MUD 100 cc	lit	MUD 250cc	lit
E. SAMPLE PROPERTIES				
Gas Composition				
C1	45279	ppm	58728	ppm
C2	21694	ppm	31405	ppm
C3	9094	ppm	16683	ppm
C4	1726	ppm	2150	ppm
C5	246	ppm	116	ppm
C6+	—	ppm		ppm
CO2/H2S	18 %/ —	ppm	16 %/ —	ppm
Oil/Cond. Properties	59.9 deg API @ 15.5	deg C	59.9 deg API @ 15.5	deg C
Colour	CLEAR/STRAW		CLEAR/STRAW	
Fluorescence	BLUE/WHITE		BLUE/WHITE	
~~GOR~~ CGR (bbl/mmscf)	13.8		29.9	
Pour Point	>0		>0	
Water Properties				
Resistivity	ohm-m @	deg C	ohm-m @	deg C
NaCl Equivalent		ppm		ppm
Cl-titrated		ppm		ppm
Tritium		DPM		DPM
pH				
Est. Water Type				
F. MUD FILTRATE PROPERTIES				
Resistivity	0.133 ohm-m @ 14	deg C	0.133 ohm-m @ 14	deg C
NaCl Equivalent	49,995	ppm	49,995	ppm
Cl-titrated	30,300	ppm	30,300	ppm
pH	8.6		8.6	
Tritium (in Mud)	—	DPM	—	DPM
G. GENERAL CALIBRATION				
Mud Weight	10.1	ppg	10.1	ppg
Calc. Hydrostatic	4515	psi	4515	psi
Serial No. (Preserved)	—		—	
Choke Size/Probe Type	VARIABLE		VARIABLE	
REMARKS				

ESSO AUSTRALIA LTD - PRESSURE DATA FORM

Well	TURRUM-6	Page	1 of 7
Date	12/10/95	Geologist-Engineer	Scott Dodge/Greg Clota
Tool Type (MDT, RFT)	Schlumberger MDT	KB (metres):	25
Gauge Type	CQG (+/- 2 psi + 0.01% rdg, 0.3 psi precision)	Probe type	Long nose
Pressure units (psia, psig)	PSIA	Temperature units (degF, degC)	degC

Run-Seat Number (P=Pretest S=Sample)	Depth m MDRKB	Depth m TVDSS	Initial Hydrostatic Pressure (PPg)	Time Set (HH:MM)	Minimum Flowing Pressure	Formation Pressure (PPg)	Temp	Time Retract (HH:MM)	Final Hydrostatic Pressure (PPg)	Delta Time (MM:SS)	Comments Including Test Quality and Fluid Type.
1/1 P	1479.9	1454.9	2569.7 10.19	4:02	1951.0	2055.6 8.15	74.6	4:08	2569.1 10.19	06:00	20cc pretests set md/cp=54.9
1/2 P	1486.0	1461.0	2580.6 10.19	4:11	2054.0	2057.0 8.12	74.9	4:18	2579.4 10.19	07:00	md/cp=1912.2
1/3 P	1488.5	1463.5	2584.5 10.19	4:24	2055.0	2057.4 8.11	74.9	4:29	2583.6 10.19	05:00	md/cp=4453.0
1/4 P	1494.3	1469.3	2594.0 10.19	4:34	2055.0	2060.0 8.09	75.1	4:40	2593.3 10.18	06:00	Partial seal failure md/cp=731.8
1/5 P	1500.1	1475.1	2604.1 10.19	4:45	2040.0	2059.0 8.06	75.6	4:51	2603.1 10.18	06:00	md/cp=701.6
1/6 P	1505.1	1480.1	2612.8 10.19	5:07	2056.0	2058.8 8.03	75.6	5:12	2612.6 10.19	05:00	md/cp=570.1
1/7 P	1512.5	1487.5	2625.6 10.19	5:14	2060.0	2063.0 8.00	75.9	5:20	2625.6 10.19	06:00	md/cp=5288.9
1/8 P	1520.3	1495.3	2639.4 10.19	5:23	2073.0	2073.9 8.01	76.0	5:27	2639.4 10.19	04:00	md/cp=17129.0
1/9 P	1534.3	1509.3	2663.6 10.19	5:30	2092.0	2093.4 8.01	76.0	5:35	2663.5 10.19	05:00	md/cp=14739.8
1/10 P	1565.2	1540.2	2717.3 10.19	5:44	2131.0	2133.1 8.00	76.3	5:48	2717.7 10.19	04:00	md/cp=3358.6

ESSO AUSTRALIA LTD - PRESSURE DATA FORM

Well	TURRUM-6	Page	2 of 7
Date	12/10/95	Geologist-Engineer	Scott Dodge/Greg Clota
Tool Type (MDT, RFT)	Schlumberger MDT	KB (metres):	25
Gauge Type	CQG (+/- 2 psi + 0.01% rdg, 0.3 psi precision)	Probe type	Long nose
Pressure units (psia, psig)	PSIA	Temperature units (degF, degC)	degC

Run-Seat Number (P=Pretest S=Sample)	Depth m MDRKB	Depth m TVDSS	Initial Hydrostatic Pressure	PPg	Time Set (HH:MM)	Minimum Flowing Pressure	Formation Pressure	PPg	Temp	Time Retract (HH:MM)	Final Hydrostatic Pressure	PPg	Delta Time (MM:SS)	Comments Including Test Quality and Fluid Type.
1/11 P	1575.0	1550.0	2734.3	10.19	5:52	2143.0	2146.7	8.00	76.6	5:55	2734.2	10.19	03:00	md/cp=1844.3
1/12 P	1580.8	1555.8	2744.3	10.19	5:57	2153.0	2154.8	8.00	76.9	6:04	2744.0	10.19	07:00	md/cp=10658.9
1/13 P	1602.3	1577.3	2781.3	10.19	6:09	2184.0	2185.7	8.01	77.9	6:15	2781.1	10.19	06:00	md/cp=6087.6
1/14 P	1615.1	1590.1	2803.2	10.19	6:17	2201.0	2203.6	8.01	78.0	6:23	2803.2	10.19	06:00	md/cp=2785.0
1/15 P	1638.0	1613.0	2842.3	10.18	6:25	2224.0	2236.4	8.01	78.7	6:32	2842.7	10.18	07:00	md/cp=1035.3
1/16 P	1646.8	1621.8	2857.9	10.18	6:34	2244.0	2248.7	8.01	78.6	6:40	2858.0	10.18	06:00	md/cp=1610.4
1/17 P	1662.5	1637.5	2884.9	10.18	6:42	2270.0	2272.8	8.02	79.2	6:48	2285.0	8.07	06:00	md/cp=3829.8
1/18 P	1670.8	1645.8	2899.4	10.18	6:50	2240.0	2284.2	8.02	79.9	6:56	2899.3	10.18	06:00	md/cp=1643.3
1/19 P	2256.2	2231.2	3905.0	10.16	7:20	3152.8	3215.4	8.36	90.9	7:23	3904.0	10.15	03:00	md/cp=113.5
1/20 P	2283.0	2258.0	3949.5	10.15	7:32	3249.4	3268.7	8.40	93.3	7:36	3949.3	10.15	04:00	md/cp=244.4

ESSO AUSTRALIA LTD - PRESSURE DATA FORM

Well	TURRUM-6	Page	3 of 7
Date	12/10/95	Geologist-Engineer	Scott Dodge/Greg Clota
Tool Type (MDT, RFT)	Schlumberger MDT	KB (metres):	25
Gauge Type	CQG (+/- 2 psi + 0.01% rdg. 0.3 psi precision)	Probe type	Long nose
Pressure units (psia, psig)	PSIA	Temperature units (degF, degC)	degC

Run-Seat Number (P=Pretest S=Sample)	Depth m MDRKB	Depth m TVDSS	Initial Hydrostatic Pressure (PPg)	Time Set (HH:MM)	Minimum Flowing Pressure	Formation Pressure (PPg)	Temp	Time Retract (HH:MM)	Final Hydrostatic Pressure (PPg)	Delta Time (MM:SS)	Comments Including Test Quality and Fluid Type.
1/21 P	2284.0	2259.0	3951.3 (10.15)	7:41	2834.2	3279.0 (8.43)	94.2	7:45	3950.8 (10.15)	04:00	Abort - supercharged md/cp=14.2
1/22 P	2284.5	2259.5	3952.0 (10.15)	7:48	2924.0	3270.7 (8.40)	95.3	7:55	3951.7 (10.15)	07:00	10cc pretests set md/cp=17.9
1/23 P	2379.0	2354.0	4112.2 (10.14)	8:02	3400.0	3405.5 (8.40)	96.5	8:12	4112.4 (10.14)	10:00	md/cp=1124.4
1/24 P	2383.7	2358.7	4121.0 (10.15)	8:15	3386.0	3412.6 (8.40)	97.6	8:20	4120.8 (10.15)	05:00	md/cp=197.9
1/25 P	2441.1	2416.1	4218.9 (10.14)	8:25	3641.0	3690.4 (8.87)	98.4	8:36	4218.7 (10.14)	11:00	md/cp=399.4
1/26 P	2441.0	2416.0	4218.9 (10.14)	8:40	3678.0	3690.4 (8.87)	99.3	8:44	4219.0 (10.14)	04:00	Verify test #25 md/cp=443.3
1/27 P	2567.0	2542.0	4433.1 (10.13)	8:53	3691.0	3703.8 (8.47)	102.9	9:07	4433.3 (10.14)	14:00	md/cp=295.0
1/28 P	2568.0	2543.0	4435.7 (10.14)	9:04	3701.0	3705.2 (8.47)	103.9	9:13	4435.6 (10.14)	09:00	md/cp=1145.1
1/29 P	2609.0	2584.0	4505.7 (10.13)	9:25	364.0	3791.8 (8.53)	104.6	9:36	4505.3 (10.13)	11:00	Low perm - S/C? md/cp=0.3
1/30 P	2615.1	2590.1	4515.9 (10.13)	9:42	334.0	359.0 (0.81)	107.1	9:46	- (-)	04:00	Abort - tight md/cp=n/a

ESSO AUSTRALIA LTD - PRESSURE DATA FORM

Well	TURRUM-6	Page	4 of 7
Date	12/10/95	Geologist-Engineer	Scott Dodge/Greg Clota
Tool Type (MDT, RFT)	Schlumberger MDT	KB (metres):	25
Gauge Type	CQG (+/- 2 psi + 0.01% rdg, 0.3 psi precision)	Probe type	Long nose
Pressure units (psia, psig)	PSIA	Temperature units (degF, degC)	degC

Run-Seat Number (P=Pretest S=Sample)	Depth m MDRKB	Depth m TVDSS	Initial Hydrostatic Pressure (PPg)	Time Set (HH:MM)	Minimum Flowing Pressure	Formation Pressure (PPg)	Temp	Time Retract (HH:MM)	Final Hydrostatic Pressure (PPg)	Delta Time (MM:SS)	Comments Including Test Quality and Fluid Type.
1/31 P	2616.0	2591.0	4517.6 10.13	9:50	1460.0	3785.0 8.49	107.4	9:56	4517.3 10.13	06:00	md/cp=1.9
1/32 P	2617.0	2592.0	4519.4 10.13	10:00	835.0	4111.0 9.22	108.8	10:07	4519.1 10.13	07:00	Supercharged md/cp=0.9
1/33 P	2616.8	2591.8	4519.3 10.14	10:10	3711.0	3783.2 8.48	109.1	10:15	4518.8 10.13	05:00	md/cp=73.4
1/34 P	2618.4	2593.4	4521.8 10.13	10:17	3710.0	3784.1 8.48	109.1	10:22	4521.4 10.13	05:00	md/cp=88.5
1/35 P	2621.3	2596.3	4526.6 10.13	10:24	3781.0	3784.8 8.47	109.6	10:32	4526.3 10.13	08:00	md/cp=925.3
1/36 P	2623.4	2598.4	4530.1 10.13	10:33	269.0	- -	110.3	10:39	4530.4 10.13	06:00	Tight-abort md/cp=n/a
1/37 P	2623.2	2598.2	4529.8 10.13	10:40	3681.0	3785.4 8.47	110.2	10:46	4529.6 10.13	06:00	md/cp=68.6
1/38 P	2650.5	2625.5	4575.5 10.13	10:56	2987.0	4057.0 8.98	111.0	11:02	4574.8 10.13	06:00	Seal failure md/cp=3.3
1/39 P	2650.2	2625.2	4575.1 10.13	11:06	-	4574.0 10.13	111.6	11:10	4574.9 10.13	04:00	Seal failure md/cp=n/a
1/40 P	2652.8	2627.8	4579.3 10.13	11:12	3657.0	3833.2 8.48	111.9	11:20	4579.0 10.13	08:00	20cc pretests set md/cp=36.6

ESSO AUSTRALIA LTD - PRESSURE DATA FORM

Well	TURRUM-6	Page	5 of 7
Date	12/10/95	Geologist-Engineer	Scott Dodge/Greg Clota
Tool Type (MDT, RFT)	Schlumberger MDT	KB (metres):	25
Gauge Type	CQG (+/- 2 psi + 0.01% rdg, 0.3 psi precision)	Probe type	Long nose
Pressure units (psia, psig)	PSIA	Temperature units (degF, degC)	degC

Run-Seat Number (P=Pretest S=Sample)	Depth m MDRKB	Depth m TVDSS	Initial Hydrostatic Pressure (PPg)	Time Set (HH:MM)	Minimum Flowing Pressure	Formation Pressure (PPg)	Temp	Time Retract (HH:MM)	Final Hydrostatic Pressure (PPg)	Delta Time (MM:SS)	Comments Including Test Quality and Fluid Type.
1/41 P	2654.6	2629.6	4582.2 (10.13)	11:25	3047.0	3842.7 (8.50)	112.0	11:32	4582.0 (10.13)	07:00	Abort - supercharged md/cp=4.8 10cc pretests set
1/42 P	2655.3	2630.3	4583.4 (10.13)	11:35	3763.0	3835.3 (8.48)	112.5	11:39	4583.3 (10.13)	04:00	md/cp=66.1
1/43 P	2653.8	2628.8	4580.9 (10.13)	11:44	1678.0	3834.3 (8.48)	112.6	11:47	4580.6 (10.13)	03:00	md/cp=3.2
1/44 P	2670.9	2645.9	4609.5 (10.13)	11:57	3721.0	3869.8 (8.50)	112.5	12:00	4609.5 (10.13)	03:00	md/cp=42.8
1/45 P	2676.1	2651.1	4618.8 (10.13)	12:05	2710.0	3870.2 (8.49)	113.0	12:10	4618.6 (10.13)	05:00	md/cp=4.2
1/46 P	2683.0	2658.0	4630.3 (10.13)	12:15	603.0	3887.1 (8.50)	113.5	12:27	4629.8 (10.13)	12:00	md/cp=1.3
1/47 P	2684.1	2659.1	4629.9 (10.12)	12:30	1627.0	3885.0 (8.49)	114.6	12:40	4629.6 (10.12)	10:00	md/cp=2.8
1/48 P	2702.0	2677.0	4660.5 (10.12)	12:45	2874.0	3840.5 (8.34)	114.9	12:55	4660.4 (10.12)	10:00	20cc pretests set md/cp=7.9
1/49 P	2704.6	2679.6	4666.3 (10.13)	13:00	3741.0	3844.3 (8.34)	115.4	13:04	4666.3 (10.13)	04:00	md/cp=77.0
1/50 P	2707.5	2682.5	4671.1 (10.12)	13:07	3689.0	- (-)	-	-	4671.2 (10.12)	-	Seal failure md/cp=n/a

ESSO AUSTRALIA LTD - PRESSURE DATA FORM

Well	TURRUM-6	Page	6 of 7
Date	12/10/95	Geologist-Engineer	Scott Dodge/Greg Clota
Tool Type (MDT, RFT)	Schlumberger MDT	KB (metres):	25
Gauge Type	CQG (+/- 2 psi + 0.01% rdg, 0.3 psi precision)	Probe type	Long nose
Pressure units (psia, psig)	PSIA	Temperature units (degF, degC)	degC

Run-Seat Number (P=Pretest S=Sample)	Depth m MDRKB	Depth m TVDSS	Initial Hydrostatic Pressure PPg	Time Set (HH:MM)	Minimum Flowing Pressure	Formation Pressure PPg	Temp	Time Retract (HH:MM)	Final Hydrostatic Pressure PPg	Delta Time (MM:SS)	Comments Including Test Quality and Fluid Type.
1/51 P	2707.5	2682.5	4671.1 10.12	13:12	3735.0	3848.2 8.34	116.5	13:15	4671.2 10.12	03:00	md/cp=58.9
1/52 P	2712.9	2687.9	4680.2 10.12	13:20	3414.0	3855.8 8.34	116.7	13:24	4680.2 10.12	04:00	md/cp=18.7
1/53 P	2718.7	2693.7	4689.9 10.12	13:26	164.0	452.0 0.98	117.1	13:34	- -	08:00	Tight md/cp=n/a
1/54 P	2718.5	2693.5	4690.5 10.13	13:35	-	- -	-	13:40	- -	05:00	Tight md/cp=n/a
1/55 P	2718.3	2693.3	4689.7 10.12	13:48	140.0	290.0 0.63	118.0	13:56	4689.3 10.12	08:00	Tight md/cp=n/a
1/56 P	2729.9	2704.9	4709.2 10.12	13:59	3838.0	3882.7 8.35	118.2	14:08	4708.9 10.12	09:00	md/cp=188.1
1/57 P	2735.3	2710.3	4718.5 10.12	14:05	3841.0	3890.2 8.35	118.3	14:17	4718.3 10.12	12:00	md/cp=113.8
1/58 P	2739.0	2714.0	4724.8 10.12	14:22	901.0	3895.2 8.35	119.2	14:30	4724.5 10.12	08:00	md/cp=2.8
1/59 P	2751.8	2726.8	4746.4 10.12	14:31	2619.0	4054.0 8.65	119.2	14:40	4746.3 10.12	09:00	Seal failure md/cp=n/a
1/60 P	2751.8	2726.8	4746.2 10.12	14:41	2857.0	3961.0 8.45		14:47	4745.9 10.12	06:00	md/cp=6.88

ESSO AUSTRALIA LTD - PRESSURE DATA FORM

Well	TURRUM-6	Page	7 of 7
Date	12/10/95	Geologist-Engineer	Scott Dodge/Greg Clota
Tool Type (MDT, RFT)	Schlumberger MDT	KB (metres):	25
Gauge Type	CQG (+/- 2 psi + 0.01% rdg, 0.3 psi precision)	Probe type	Long nose
Pressure units (psia, psig)	PSIA	Temperature units (degF, degC)	degC

Run-Seat Number (P=Pretest S=Sample)	Depth m MDRKB	Depth m TVDSS	Initial Hydrostatic Pressure	PPg	Time Set (HH:MM)	Minimum Flowing Pressure	Formation Pressure	PPg	Temp	Time Retract (HH:MM)	Final Hydrostatic Pressure	PPg	Delta Time (MM:SS)	Comments Including Test Quality and Fluid Type.
1/61 P	2754.7	2729.7	4751.1	10.12	14:50	147.0	3937.0	8.39	120.0	14:58	4750.8	10.12	08:00	Low perm - S/C? md/cp=1.3
1/62 P	2753.0	2728.0	4748.2	10.12	15:03	3272.0	3931.7	8.38	120.0	15:07	4747.8	10.12	04:00	md/cp=15.3
1/63 P	2772.7	2747.7	4781.8	10.12	15:17	169.0	3979.3	8.42	120.6	15:26	4781.1	10.12	09:00	Low perm - S/C? md/cp=1.5
1/64 P	2784.1	2759.1	4800.7	10.12	15:35	60.0	65.0	0.14	-	-	-	-	-	Abort -tight md/cp=n/a
1/65 P	2787.8	2762.8	4806.8	10.12	15:45	3501.0	4331.3	9.12	121.0	15:47	4806.1	10.12	02:00	md/cp=10.4
1/66 P	2784.2	2759.2	4800.6	10.12	15:53	2755.0	4525.0	9.54	121.0	15:55	-	-	02:00	5cc pretest set md/cp=1.1 Abort - S/C?

ESSO AUSTRALIA LTD

WELL : TURRUM-6

OBSERVER : DODGE/CLOTA DATE : 12/10/95 RUN No. : 1

	CHAMBER 1 (lit.) 1 GALLON		CHAMBER 2 (lit.)	
SEAT NO.	3			
DEPTH	2621.5	m		m
A. RECORDING TIMES				
Tool Set		hrs		hrs
Pretest Duration	—	mins		mins
Chamber Open	16:33	hrs		hrs
Chamber Full	4	mins		mins
Seal Chamber	16:45	hrs		hrs
Fill Time	12	mins		mins
Finish Build Up	16:45	hrs		hrs
Build Up Time	0	mins		mins
Tool Retract	16:45	hrs		hrs
Total Time	12	mins		mins
B. SAMPLE PRESSURE				
Initial Hydrostatic	—	psia		psia
Initial Formation Pressure (Pretest)	—	psia		psia
Initial Flowing Pressure	2944	psia		psia
Final Flowing Pressure	3774	psia		osia
Final Form'n Pressure	3784.5	psia		psia
Final Hydrostatic	4525.0	psia		psia
C. TEMPERATURE				
Temp. @ Sample Depth (AMS)	113	deg C		deg C
Rm @ Sample Depth (AMS)	0.06	ohm-m		ohm-m
D. SAMPLE RECOVERY				
Surface Pressure		psia		psia
Volume Gas		cu ft		cu ft
Volume Oil		lit		lit
Volume Condensate		lit		lit
Volume Water (Total)		lit		lit
E. SAMPLE PROPERTIES				
Gas Composition				
C1		ppm		ppm
C2		ppm		ppm
C3		ppm		ppm
C4		ppm		ppm
C5		ppm		ppm
C6+		ppm		ppm
CO2/H2S	% /	ppm	% /	ppm
Oil/Cond. Properties	deg API @	deg C	deg API @	deg C
Colour				
Fluorescence				
GOR				
Pour Point				
Water Properties				
Resistivity	ohm-m @	deg C	ohm-m @	deg C
NaCl Equivalent		ppm		ppm
Cl-titrated		ppm		ppm
Tritium		DPM		DPM
pH				
Est. Water Type				
F. MUD FILTRATE PROPERTIES				
Resistivity	0.133 ohm-m @ 14	deg C	ohm-m @	deg C
NaCl Equivalent	49,995	ppm		ppm
Cl-titrated	30,300	ppm		ppm
pH	8.6			
Tritium (in Mud)	—	DPM		DPM
G. GENERAL CALIBRATION				
Mud Weight	10.1	ppg		ppg
Calc. Hydrostatic	4515	psi		psi
Serial No. (Preserved)	MRSC BB90			
Choke Size/Probe Type	VARIABLE			
REMARKS	SAMPLE PRESERVED (1800 psi @ SURFACE)			

APPENDIX 5

APPENDIX V

VELOCITY SURVEY REPORT

See separate report; Schlumberger "Well Seismic Processing Report, Zero Offset VSP and Geogram, TURRUM-6".

APPENDIX 6

APPENDIX VI

SURVEY DATA

HALLIBURTON

Survey Report

Job No: 0041950020
Date: 12/10/95
Time: 12:58 am
Wellpath ID: TURRUM #6 ST1
Date Created: 1/10/95
Last Revision: 11/10/95

Calculated using the Minimum Curvature Method
Computed using WIN-CADDS REV2.1.B
Vertical Section Plane: 0.00 deg.

Survey Reference: STRUCTURE ORIGIN
Reference World Coordinates: Lat. 38.14.11 S - Long. 148.10.25 E
Reference GRID System: Australian (UTM) Zone: 55, Cent. Merid: 147.00.00 E
Reference GRID Coordinates: (m): 5767280.26 N 602709.96 E
North Aligned To: GRID NORTH
Offset, Reference To WellHead: (m): 7.00 N 0.00 E 0.00 TVD
Vertical Section Reference: STRUCTURE ORIGIN
Closure Reference: STRUCTURE ORIGIN
TVD Reference: STRUCTURE ORIGIN

ESSO AUSTRAIA LTD.
VIC/L3
OCEAN BOUNTY
TURRUM # 6 ST

Measured Depth (m)	Incl (deg.)	Drift Dir. (deg.)	TVD (m)	TOTAL Rectangular Offsets (m)	(m)	Closure Dist. (m)	Dir. (deg.)	Build Rate (dg/30m)	Walk Rate (dg/30m)	DLS (dg/30m)
0.00	0.00	0.00	0.00	7.00N	0.00E	7.00@	0.00	0.00	0.00	0.00
109.00	0.28	48.00	109.00	7.18N	0.20E	7.18@	1.58	0.08	0.00	0.08
381.00	0.23	254.00	381.00	7.47N	0.17E	7.47@	1.28	-0.01	-16.99	0.05
653.00	0.48	86.00	653.00	7.40N	0.78E	7.44@	6.01	0.03	-18.53	0.08
662.20	0.30	105.30	662.20	7.40N	0.84E	7.45@	6.48	-0.59	62.93	0.72
691.70	0.30	109.80	691.70	7.35N	0.99E	7.42@	7.65	0.00	4.58	0.02
722.60	0.30	110.60	722.60	7.30N	1.14E	7.38@	8.88	0.00	0.78	0.00
750.20	0.30	118.10	750.19	7.24N	1.27E	7.35@	9.96	0.00	8.15	0.04
779.90	0.20	108.50	779.89	7.18N	1.39E	7.32@	10.94	-0.10	-9.70	0.11
808.50	0.30	107.10	808.49	7.14N	1.51E	7.30@	11.91	0.10	-1.47	0.11
838.00	0.30	87.90	837.99	7.13N	1.66E	7.32@	13.10	0.00	-19.53	0.10
867.00	0.40	93.80	866.99	7.12N	1.84E	7.35@	14.45	0.10	6.10	0.11
954.20	0.60	74.00	954.19	7.23N	2.58E	7.67@	19.63	0.07	-6.81	0.09
1043.90	0.60	95.70	1043.89	7.31N	3.50E	8.10@	25.57	0.00	7.26	0.08
1132.00	0.60	79.90	1131.98	7.34N	4.41E	8.57@	30.98	0.00	-5.38	0.06
1217.60	0.80	81.10	1217.57	7.52N	5.44E	9.28@	35.91	0.07	0.42	0.07
1305.80	0.70	72.90	1305.77	7.77N	6.56E	10.17@	40.20	-0.03	-2.79	0.05
1394.10	1.00	58.50	1394.06	8.33N	7.74E	11.37@	42.89	0.10	-4.89	0.12
1415.60	1.30	196.70	1415.55	8.20N	7.83E	11.33@	43.68	0.42	192.84	3.00
1421.30	2.10	206.70	1421.25	8.04N	7.76E	11.18@	43.99	4.21	52.63	4.48
1436.00	2.90	203.20	1435.94	7.46N	7.49E	10.57@	45.14	1.63	-7.14	1.66
1450.40	3.40	208.80	1450.32	6.75N	7.15E	9.83@	46.63	1.04	11.67	1.22
1478.50	3.10	204.30	1478.37	5.33N	6.43E	8.35@	50.37	-0.32	-4.80	0.42
1508.00	3.00	196.50	1507.83	3.86N	5.88E	7.04@	56.74	-0.10	-7.93	0.43
1538.00	3.00	199.50	1537.79	2.37N	5.40E	5.89@	66.33	0.00	3.00	0.16
1567.40	2.80	201.30	1567.15	0.97N	4.88E	4.98@	78.74	-0.20	1.84	0.22
1597.80	2.80	204.80	1597.51	0.39S	4.30E	4.32@	95.24	0.00	3.45	0.17

HALLIBURTON

Survey Report

Measured Depth (m)	Incl (deg.)	Drift Dir. (deg.)	TVD (m)	TOTAL Rectangular Offsets (m)	(m)	Closure Dist. (m)	Dir. (deg.)	Build Rate (dg/30m)	Walk Rate (dg/30m)	DLS (dg/30m)
1626.20	2.60	206.20	1625.88	1.60 S	3.72 E	4.05	@113.27	-0.21	1.48	0.22
1656.90	2.70	198.50	1656.55	2.91 S	3.19 E	4.32	@132.42	0.10	-7.52	0.36
1684.70	2.90	198.30	1684.32	4.20 S	2.76 E	5.03	@146.71	0.22	-0.22	0.22
1701.00	3.30	196.50	1700.59	5.04 S	2.50 E	5.63	@153.66	0.74	-3.31	0.76
1744.90	2.50	195.20	1744.44	7.18 S	1.89 E	7.42	@165.28	-0.55	-0.89	0.55
1771.20	2.10	200.10	1770.71	8.18 S	1.57 E	8.33	@169.14	-0.46	5.59	0.51
1800.90	1.10	233.50	1800.40	8.86 S	1.15 E	8.94	@172.58	-1.01	33.74	1.34
1829.10	1.50	230.20	1828.60	9.26 S	0.65 E	9.28	@175.97	0.43	-3.51	0.43
1858.70	1.20	230.80	1858.19	9.71 S	0.11 E	9.71	@179.32	-0.30	0.61	0.30
1916.90	1.30	211.40	1916.37	10.65 S	0.70W	10.68	@183.77	0.05	-10.00	0.22
1945.60	1.10	210.30	1945.07	11.17 S	1.01W	11.22	@185.17	-0.21	-1.15	0.21
1975.60	1.20	213.60	1975.06	11.68 S	1.33W	11.76	@186.49	0.10	3.30	0.12
2004.60	1.40	211.90	2004.05	12.23 S	1.68W	12.35	@187.84	0.21	-1.76	0.21
2034.00	1.30	204.00	2033.45	12.84 S	2.01W	13.00	@188.89	-0.10	-8.06	0.22
2067.10	0.50	215.50	2066.54	13.30 S	2.25W	13.49	@189.58	-0.73	10.42	0.74
2093.40	0.40	210.30	2092.84	13.48 S	2.36W	13.68	@189.93	-0.11	-5.93	0.12
2158.60	0.60	156.50	2158.04	13.99 S	2.34W	14.18	@189.49	0.09	-24.75	0.22
2187.80	0.70	167.10	2187.24	14.30 S	2.24W	14.47	@188.89	0.10	10.89	0.16
2235.90	0.90	155.40	2235.33	14.93 S	2.01W	15.07	@187.68	0.12	-7.30	0.16
2267.40	0.90	162.00	2266.83	15.39 S	1.83W	15.50	@186.80	0.00	6.29	0.10
2297.20	1.10	165.00	2296.62	15.89 S	1.69W	15.98	@186.07	0.20	3.02	0.21
2325.70	0.80	167.70	2325.12	16.35 S	1.58W	16.42	@185.50	-0.32	2.84	0.32
2354.50	0.60	175.20	2353.92	16.69 S	1.52W	16.76	@185.20	-0.21	7.81	0.23
2374.20	0.50	165.50	2373.62	16.88 S	1.49W	16.95	@185.04	-0.15	-14.77	0.21
2394.20	1.00	188.90	2393.62	17.14 S	1.49W	17.20	@184.99	0.75	35.10	0.86
2441.90	1.20	167.40	2441.31	18.04 S	1.45W	18.09	@184.60	0.13	-13.52	0.29
2499.90	1.50	171.40	2499.29	19.38 S	1.20W	19.42	@183.56	0.16	2.07	0.16
2529.10	1.50	184.70	2528.48	20.14 S	1.18W	20.17	@183.35	0.00	13.66	0.36
2557.30	1.80	214.20	2556.67	20.87 S	1.46W	20.92	@183.99	0.32	31.38	0.95
2616.30	2.30	203.40	2615.63	22.73 S	2.45W	22.86	@186.15	0.25	-5.49	0.32
2675.10	2.60	219.50	2674.38	24.84 S	3.77W	25.12	@188.62	0.15	8.21	0.38
2734.00	3.10	216.00	2733.21	27.16 S	5.55W	27.72	@191.55	0.25	-1.78	0.27
2763.20	3.20	217.40	2762.36	28.44 S	6.51W	29.18	@192.89	0.10	1.44	0.13
2791.30	3.00	212.20	2790.42	29.69 S	7.38W	30.59	@193.96	-0.21	-5.55	0.37
2821.50	3.60	209.50	2820.57	31.18 S	8.27W	32.26	@194.85	0.60	-2.68	0.62
2840.00	3.97	208.25	2839.03	32.25 S	8.86W	33.45	@195.35	0.60	-2.03	0.61

APPENDIX 7

APPENDIX VII

MUD LOG

PE 600665

PE600665

This is an enclosure indicator page.
The enclosure PE600665 is enclosed within the container PE900855 at this location in this document.

The enclosure PE906508 has the following characteristics:

ITEM_BARCODE	= PE600665
CONTAINER_BARCODE	= PE900855
NAME	= Halliburton Mud Log
BASIN	= GIPPSLAND
PERMIT	= VIC/L3
TYPE	= WELL
SUBTYPE	= MUD_LOG
DESCRIPTION	= Halliburton Formation Evaluation Log (enclosure from WCR vol.1) for Turrum-6 and Turrum-6ST1
REMARKS	=
DATE_CREATED	= 30/09/95
DATE_RECEIVED	=
W_NO	= W1146
WELL_NAME	= TURRUM-6
CONTRACTOR	= HALLIBURTON
CLIENT_OP_CO	= ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)