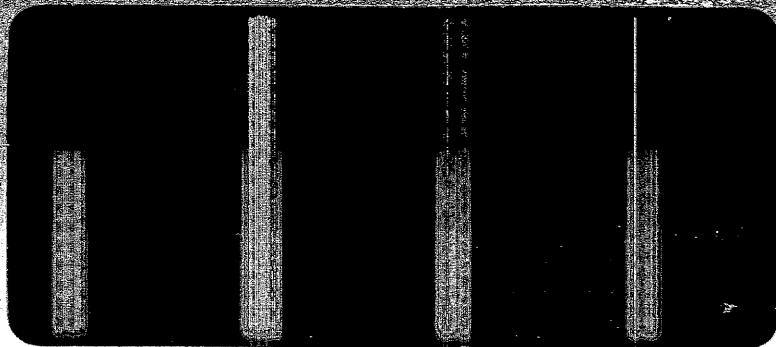


DEPT. NAT. RES & ENV



PE900879



WCR VOL 1

SMILER - 1

W1122

Esso Australia Ltd.

16 JAN 1996

PETROLEUM DIVISION

WELL COMPLETION REPORT

SMILER-1

VOLUME 1

BASIC DATA

GIPPSLAND BASIN, VICTORIA

ESSO AUSTRALIA LTD

Compiled by: G. Clota  
P.J. Burnett

# WELL COMPLETION REPORT

## *VOLUME 1: BASIC DATA*

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1. WELL DATA RECORD

LOCATION : Latitude : 38° 28' 55.18" South  
Longitude : 148° 23' 17.09" East  
X= 621071.0mE  
Y=5739777.0mN  
Map Projection: UTM Zone 55  
Geographical Location : Bass Strait,  
Victoria  
Field : Smiler

PERMIT : Vic/L5

ELEVATION : 25m

WATER DEPTH : 122m

TOTAL DEPTH : 2607m (Driller) 2611.5m (Logger)

PLUG BACK TYPE : Cement Plug

REASONS FOR PLUGGING BACK : Plug and Abandon

MOVE IN : Released from previous job on 30/06/95  
0030 hours  
Begin dropping anchors 02/07/95 0756 hours

SPUDED : 02/07/95 2030 hours

REACHED TD : 11/07/95 1415 hours

RIG RELEASED : 16/07/95 2330 hours

OPERATOR : Esso Australia Resources Ltd.

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

ESSO INTEREST : 50%

OTHER INTEREST : 50% BHP Petroleum (Australia) Ltd.

CONTRACTOR : Diamond Offshore General Company

RIG NAME : Ocean Bounty

EQUIPMENT TYPE : Semi-submersible

TOTAL RIG DAYS : 16.9

DRILLING AFE NO : L61015105

TYPE COMPLETION : Plugged and Abandoned

WELL CLASSIFICATION : Wildcat

## 2. OPERATIONS SUMMARY

### 1. MOVING/MOORING

The Ocean Bounty was towed whilst ballasted down from the Orange Roughy location by the Maersk Bona Vista and the Lady Dawn. The rig was at the Smiler location with the #7 anchor on bottom at 0756 hours on the 2nd of July, 1995. After running and tensioning the anchors the final rig location was 6m on a bearing of 187°T from the called location. The water depth was 122m.

### 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 Smiler-1 at 2030 hours on the 2nd July, 1995. The 36" hole section was drilled from 147m to 179.5m. 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 was at 170m was 0.1°/260°.

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<sub>2</sub>. The shoe was set at 179.5m.

#### 17½" Hole/13¾" Casing

A Smith 17½" MSDSHL was made up and drilled out the float shoe. Drilling proceeded from 179.5m to 760m. Hi-vis sweeps were pumped at 15m intervals during the drilling of the interval. Single shot surveys were run at the following intervals, 470m 0.2°/264° and 754m 0.45°/88°.

A wiper trip was made to the 30" casing shoe and the well was displaced with hi-vis mud prior to tripping out and rigging up the wireline loggers. Suite #1 Run #1 was LDL-AS-GR-CAL-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 guideframe.

49 joints of 68lb/ft K55 13¾" casing plus 1 joint of 20" 129lb/ft X-56 casing and the 18¾" wellhead joint were run with the shoe landed at 747m. The casing was cemented with a lead of 1500 sacks of class 'G' cement plus 0.45 GPS Econolite (12.5ppg) and a tail of 860 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 760m. New formation was drilled from 760m to 763m where the hole was circulated clean and displaced with a KCl/PHPA mud system. A Phase II PIT was performed (EMW=13.51ppg) and then drilling proceeded from 763m. At 1458m there was a 1200psi pressure loss and 20klb string weight loss therefore the drillstring was tripped for a suspected twist-off. The jars had parted at the mandrel. An overshot fishing

assembly was made up and tripped into the hole. The fish was successfully engaged and tripped to surface. The jars were moved two stands higher in the BHA and the same bit and mud motor were tripped into the hole and drilled ahead from 1458m to 1531m. There was a 950psi standpipe pressure and 30klb drillstring weight loss at 1531m. On tripping the drillpipe the jars had twisted off at the bottom of the mandrel, as before. An overshot fishing assembly with basket grapple was made up, as before and successfully recovered the fish. The jars were laid out of the BHA and drilling continued with the same bit and tandem mud motor from 1531m to 2607m TD.

A wiper trip was made to the 13<sup>3</sup>/<sub>8</sub>" casing and the hole was circulated clean prior to tripping the drillstring for Suite #2 of the wireline logging programme. AS-DLL-MSFL-GR-AMS-SP, SHDT-LDL-CNL-NGL-AMS, VSP AND CST-GR.

After the wireline loggers were rigged down open ended drillpipe was run into the hole and cement plugs were spotted at the following intervals, 2607-2424m and 780-591m. An EZSV bridge plug was run on wireline and set at 240m, and a final cement plug was spotted from 240-160m. Smiler-1 was plugged and abandoned and the Ocean Bounty was released at 2330 hours on 16 July, 1995.

### 3. CASING DATA

Casing OD	Interval, m (MD RT)	Nom. ID (inches)	Drift ID (inches)	Weight (ppf)	Grade	Connection	API & Manufacturer Performance Properties without Safety Factors			
							Tensile Rating (kips)	Conn. Burst (psi)	P. Body Burst (psi)	P. Body Collapse (psi)
30"	ML145-179.5 (shoe 179.5)	28	27	309.72	X-52	DQ SF-60	2130	1500	3189	1631
20" x 13-3/8"	ML143.5- 164  164 - 747 (shoe @ 747)	18.75  12.415	18.25 C  12.259	129.33  68	X-56  K-55	DQ HD-90  BTC	2250 C  1069 P	3000  3450	3220  3450	1449  1950

**Notes:**

Casing designs were based on the following Safety Factors:

Tensile : Pipe Body = 1.333; Connection = 1.5

Burst : 30", 20", 13-3/8" & 9-5/8" Prot=1.375; 9-5/8" if used for Prod only=1.25

Collapse : 30", 20", 13-3/8" & 9-5/8" Prot = 1.0; 9-5/8" if used for Prod = 1.125

30" Casing string was run as follows:

30" DQ WH Housing w/ 30" OD x 1.00" WT x 11.5m Grade B extension w/ DQ SF-60 Quik-Stab box down

Intermediate Jt, 30" OD x 1.000" WT, X-52 , Range III w/ DQ SF-60 pin x box

Shoe Joint, 30" OD x 1.000" WT, X-52 , Range III w/ DQ-SF-60 pin up x Halliburton Float Shoe down

One intermediate joint of 20" casing was run below the 18-3/4" wellhead housing extension joint to provide sufficient room for cutting 20" & 30" casing strings during P & A. The 20" x 13-3/8" X-O swedge below the 20" intermediate joint crossed over to 13-3/8". All casing below the X-O was 13-3/8" 68 ppf, K-55, BTC.

4. CEMENTING DATA

Casing OD	Depth (m MD RT)	Slurry Composition	Quantity (sacks)	Slurry Volume (bbls)	Slurry Density (ppg)	Mix Water (gal/sk)	Yield (ft <sup>3</sup> /sack)	Notes
30"	shoe 179.5	Class G + 2% CaCl <sub>2</sub>	800	164	15.8	5.0 SW	1.15	Observed full returns
20" x 13-3/8"	shoe 747	Lead: Class G + 0.45 gal/sk Econolite Liquid Extender	1500	582	12.5	12.31 SW (total = 12.76 gps)	2.18	Observed full returns, bumped plug.
		Tail: Class G "neat"	860	176	15.8	5.0 SW	1.15	
Plug 1	2607-2424	Class G + .23 gps Hallad 322SL	428	88	15.8	5.0 FW	1.15	circulate at 2325m with a little cement rtns
Plug 2	760-634	Class G neat	500	102	15.8	5.0 SW	1.15	tag plug at 591
EZSV Bridge Plug	240	wireline set						tag plug at 240
Plug 3	240-160	Class G +2% CaCl	175	36	15.8	5.0 SW	1.15	reverse out at 160 w/ cement rtns



5. SAMPLES, CONVENTIONAL CORES, SIDEWALL CORES

<u>Interval (m)</u>	<u>Type</u>
760 - 2607	Cuttings samples - 3 sets of washed and oven dried and 1 set of lightly washed and air dried cuttings.  Samples from 760 - 1500m at 30m intervals. Samples from 1500 - 2050m at 10m intervals. Samples from 2050 - 2607m at 5m intervals.

6. WIRELINE LOGS AND SURVEYS

Type	Scale	From	To
<i>Suite 1</i>			
AS-LDL-CAL-GR-AMS	1:200	757	170
<i>Suite 2</i>			
AS-DLL-MSFL-GR-SP-AMS	1:200	2608	746.5
SHDT-LDL-CNL-NGL-AMS	1:200	2611	746.5
VSP	(29 levels)		
CST-GR (Sidewall Cores)	30 Shots / 30 Recovered		

## SUMMARY OF LOGGING OPERATIONS

Well : Smiler-1  
 Total Depth : Suite #1 760m; Suite #2 2611.5m  
 RT-MSL : 25m  
 Water Depth : 122m

Date	Job	Run	Log	TD (Driller)	Log TD (Logger)	BOTD mDRT	TOPD mDRT	BS	MUD	RMF	Remarks
04-Jul-95	1	1	LDL-AS-GR-AMS	760	760	757	170	17.5	Seawater Gel	0.55 @ 12C	Riserless logging
12-Jul-95	2	1	AS-DLL-MSFL-GR-AMS	2607	2611.5	2608	746.5	12.25	KCI/PHPA/Polymer	0.086 @ 16C	
12-Jul-95	2	1	SHDT-LDL-CNL-NGL-AMS	2607	2611.5	2611	746.5	12.25	KCI/PHPA/Polymer	0.086 @ 16C	FMI not functioning at time of log
13-Jul-95	2	1	VSP	2607	2611.5	2606	742	12.25	KCI/PHPA/Polymer	0.086 @ 16C	
13-Jul-95	2	1	CST-GR	2607	2611.5	2595	1242	12.25	KCI/PHPA/Polymer	0.086 @ 16C	

7. TEMPERATURE RECORD

Logging Run	Depth (m)	Max Recorded Temperature °C	Time After Circulation Stopped (t) (hours)
<i>Suite 1</i>			
LDL-AS-CAL-GR-AMS	740	23	4.5
<i>Suite 2</i>			
AS-DLL-MSFL-GR-AMS	2579	76	9.8
SHDT-LDL-CNL-NGL-AMS	2592	84	16.7
VSP	2606	89	22.8
CST'S			

*See Figure 4*

**FIGURES**

PE906442

This is an enclosure indicator page.  
The enclosure PE906442 is enclosed within the  
container PE900879 at this location in this  
document.

The enclosure PE906442 has the following characteristics:

ITEM\_BARCODE = PE906442  
CONTAINER\_BARCODE = PE900879  
NAME = Locality Map  
BASIN = GIPPSLAND  
PERMIT = VIC/L5  
TYPE = GENERAL  
SUBTYPE = PROSPECT\_MAP  
DESCRIPTION = Locality Map showing Smiler-1  
REMARKS =  
DATE\_CREATED = 9/01/96  
DATE\_RECEIVED = 16/01/96  
W\_NO = W1122  
WELL\_NAME = SMILER-1  
CONTRACTOR =  
CLIENT\_OP\_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

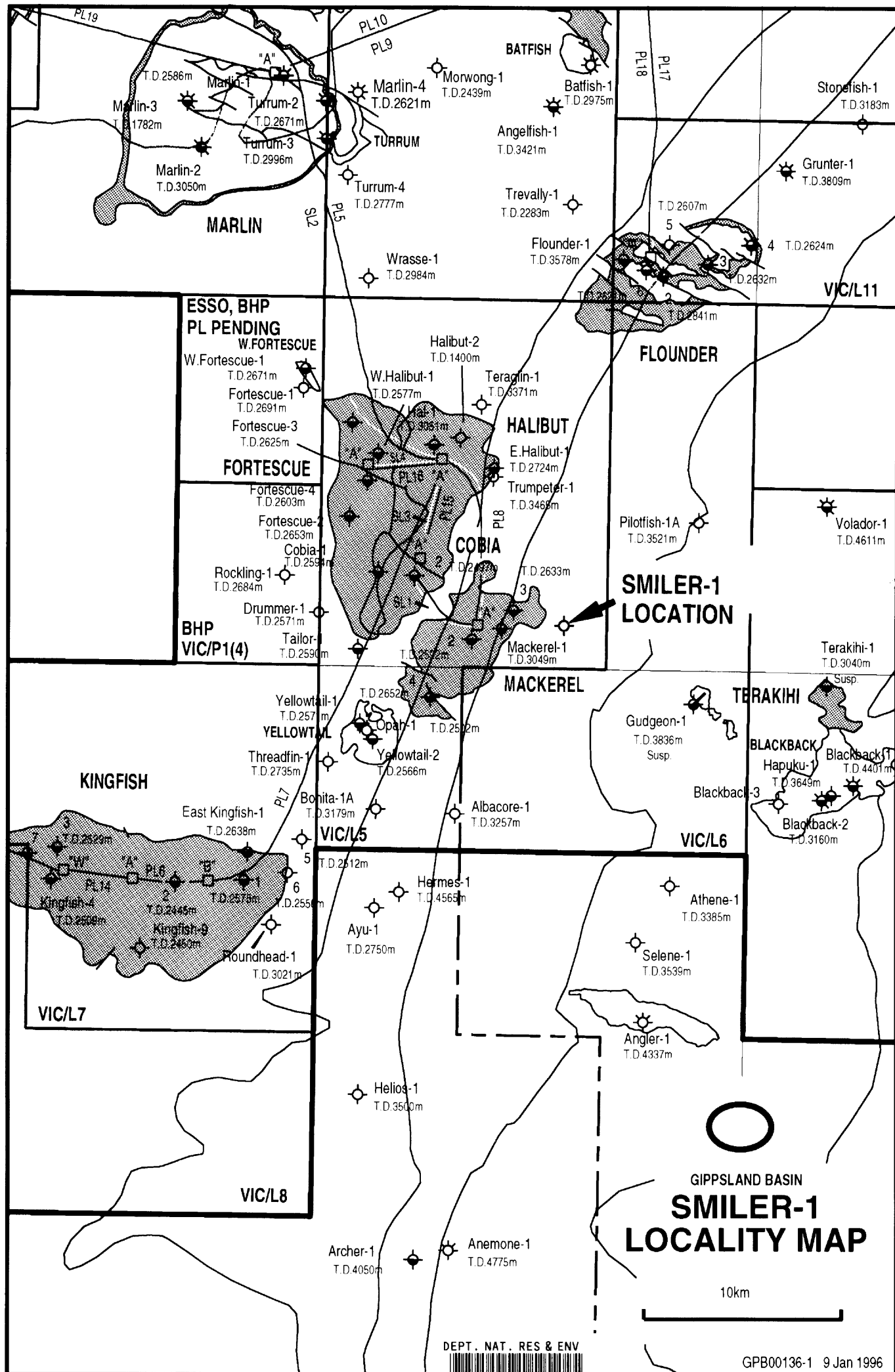
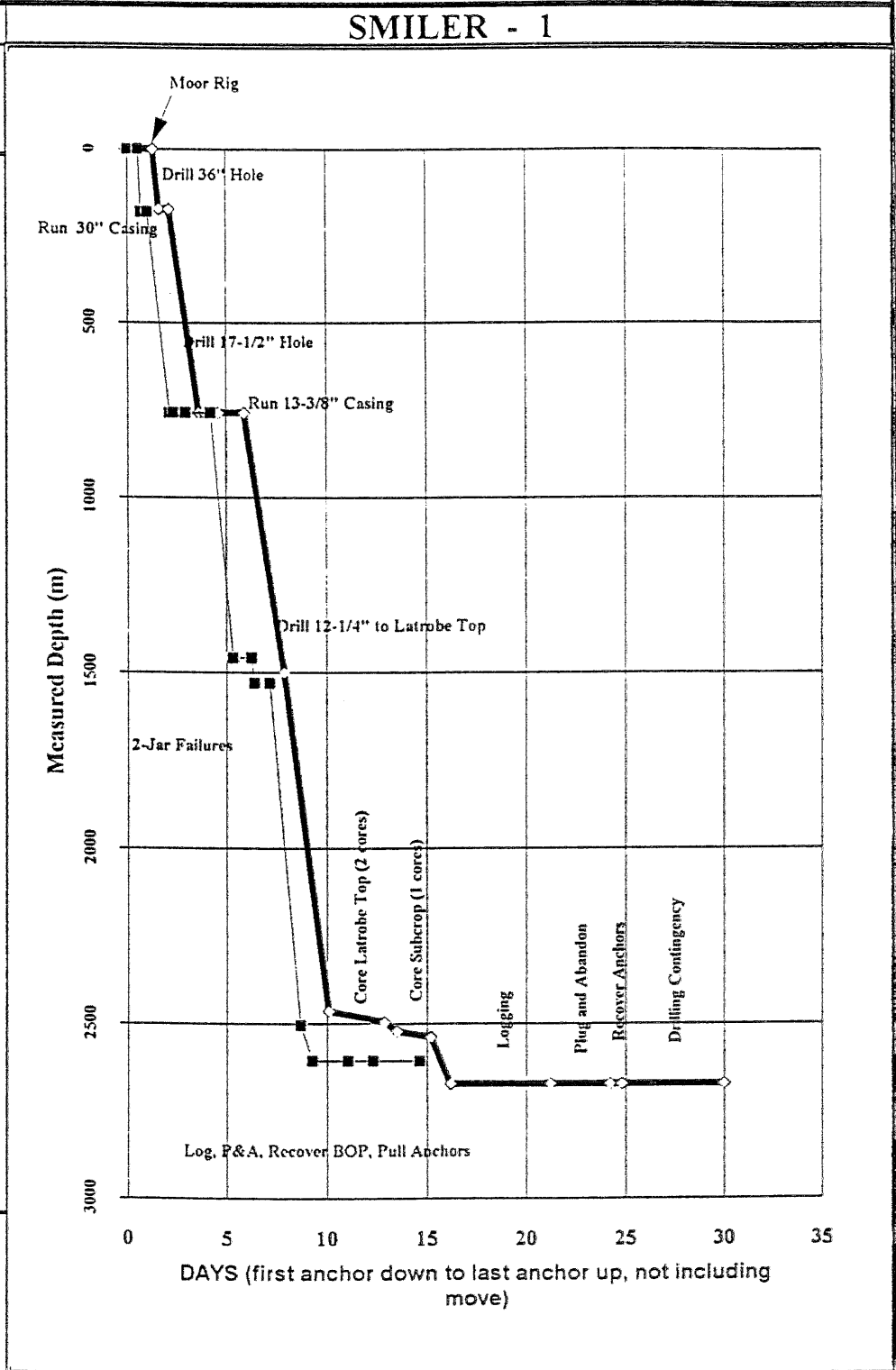


FIGURE 1

# Well Progress Curve

## SMILER - 1

Lithology		Casing	
Plan	Actual	Plan	Actual
ML+13SRT	NL+147RT		
ML-110SS	ML-122SS		
Gippsland limst, siltst		30" @ 171m MD	30" @ 179.5m MD
		13-3/8" @ 750 MD 750 TVD	13-3/8" @ 747 MD 747 TVD
2250m RT	2236m RT		
-2225m SS	-2211m SS		
Lakes Entrance			
2463m RT	2505m RT		
-2438m SS	-2480m SS		
Latrobe			
2521m RT		9-5/8" @ 2675mMD	Not included in DIIB
-2496m SS	Subcrop		
2675m RT	2607m RT		
-2650m SS	-2582m SS		
TD			



Planning Basis: core, log, P&A  
Vertical well TVD & MD 2675m RT

Actual: dry hole short log, P & A  
Vertical well TVD 2606.4m, MD 2607m



# ESSO AUSTRALIA LTD.

## SMILER-1 - FINAL PLUG AND ABANDONMENT SKETCH

ALL DEPTHS FROM RIG FLOOR MD = TVD

MSL @ 25 m RT

WATER DEPTH = 122 m

ML @ 147m RT

TOC @ SEAFLOOR  
BOTH CASINGS  
20" x 13-3/8" XO SWEDGE  
@ 164m

12-1/4" x 26" x 36"  
HOLE TO 179.5m

30" & 20" CUT @ 152m

PLUG 3 (240 - 160m)

30" 309.72 ppf X-52 & "B"  
ST-2 @ 179.5m

BRIDGE PLUG @ 240m  
tagged at 240m

INHIBITED MUD  
9.6 PPG

13-3/8" 68 ppf K-55 BTC @ 747m

17-1/2" HOLE  
TO 760m

PLUG 2 (780 -634m)  
tag at 591m

MUD 9.6 PPG

KCL/PHPA MUD

VERTICAL HOLE

LATROBE TOP @ 2505M  
NO HYDROCARBON SHOWS

PLUG (2607 - 2424m)

12-1/4" HOLE TO 2607m  
DEPTHS "m" = METERS

## SMILER 1 EXTRAPOLATED BOTTOM HOLE TEMPERATURE

Extrapolated BHT = 98 C

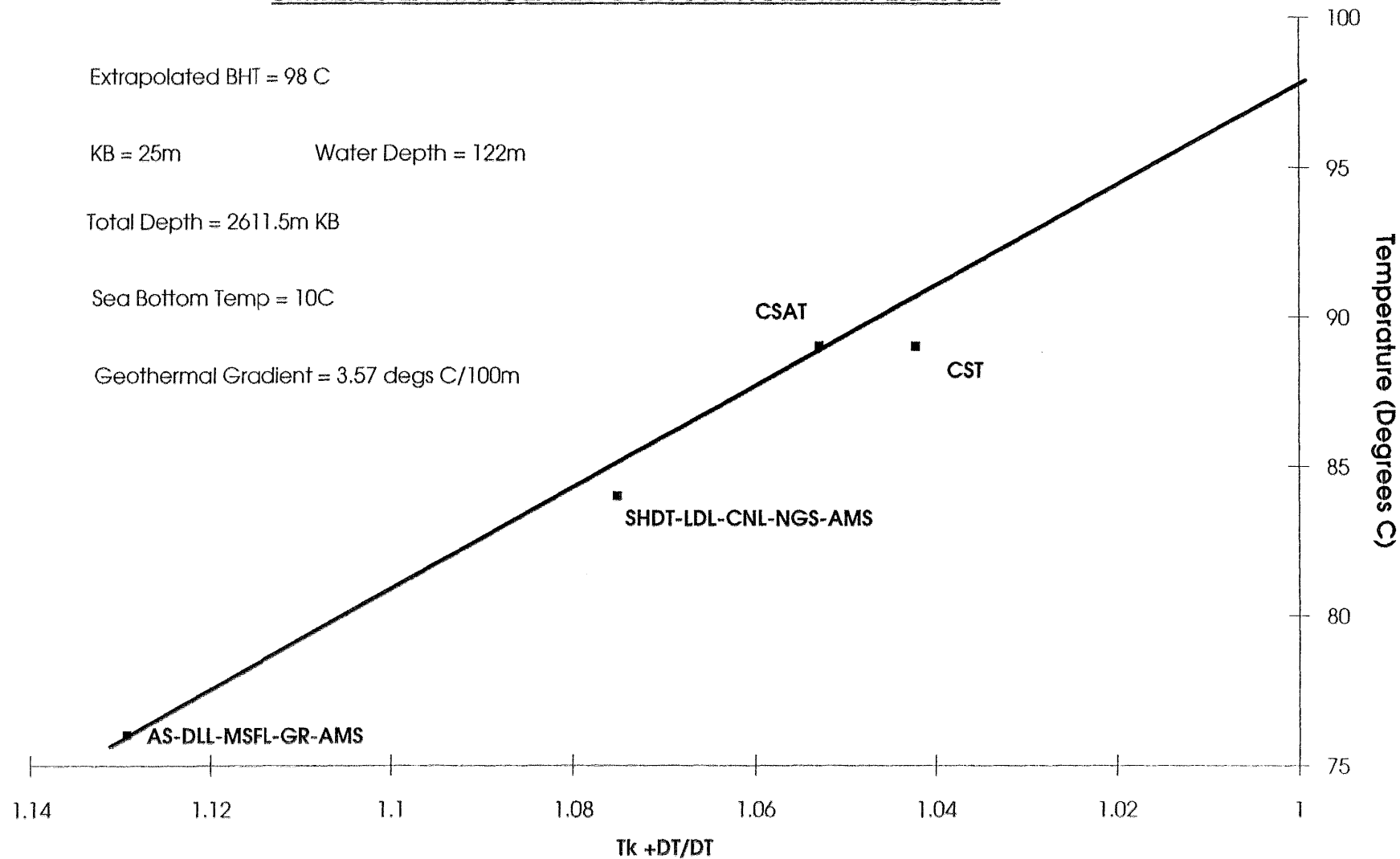
KB = 25m

Water Depth = 122m

Total Depth = 2611.5m KB

Sea Bottom Temp = 10C

Geothermal Gradient = 3.57 degs C/100m



# APPENDICES

# APPENDIX 1



5th Cut  
A4 Dividers  
Re-order Code 97052

**APPENDIX I**

***LITHOLOGY DESCRIPTIONS***

## LITHOLOGY DESCRIPTIONS

<u>Depth</u>	<u>%</u>	<u>Description</u>
		(First sample returns after running riser at 760m)
790	100	<u>LIMESTONE</u> : Light brown grey, pale grey, calcilutite, slightly silty, micritic, trace carbonaceous specks, soft to dispersive, massive to amorphous.
820	100	<u>LIMESTONE</u> : Predominantly as above, rare glauconite, trace light brown slightly dolomitic calcarenite inclusions.
850	100	<u>LIMESTONE</u> : As above.
880	100	<u>LIMESTONE</u> : Pale grey, light brown grey, calcilutite grading to calcisiltite, micritic, common carbonaceous specks, trace fine calcareous sand, trace to rare forams, soft to firm, massive to blocky.
910	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite locally grades to calcarenite.
940	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite, common very fine calcareous sand in part.
970	100	<u>LIMESTONE</u> : Light brown, pale grey, calcisiltite becomes very argillaceous grades to calcilutite, micritic, common carbonaceous specks, common fine calcareous sand, trace forams, firm, massive to blocky in part.
1000	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite becomes increasingly argillaceous grades to calcilutite, trace medium brown slightly dolomitic inclusions.
1030	100	<u>LIMESTONE</u> : Off white to pale grey, light brown, calcilutite, slightly silty, common carbonaceous fragments, trace forams, firm to slightly dispersive, massive.
1060	100	<u>LIMESTONE</u> : As above.
1090	100	<u>LIMESTONE</u> : Light grey, light brown grey, calcilutite, locally very silty, micritic, trace carbonaceous specks, trace fine calcareous sand, trace light to medium brown dolomitic inclusions, firm to slightly dispersive, massive to amorphous.
1120	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, with white calcite spar inclusions, becomes very silty grades to calcisiltite in part.

- 1150 100 LIMESTONE: Predominantly as above, becomes olive grey in part, calcilutite grades to calcisiltite, trace forams, rare glauconite.
- 1180 100 LIMESTONE: Light grey, grey brown, calcilutite, moderately silty, common carbonaceous specks, trace free white calcite infill, trace light brown cryptocrystalline dolomitic inclusions, firm, soft, massive to blocky.
- 1210 100 LIMESTONE: Predominantly as above, calcilutite, becomes olive grey in part.
- 1240 100 LIMESTONE: Predominantly as above, calcilutite grades to calcisiltite, trace ooids, trace glauconite, locally common very fine calcareous sand.
- 1270 100 LIMESTONE: Predominantly as above, calcisiltite becomes very arenaceous grades to calcarenite in part.
- 1300 100 LIMESTONE: Light brown, grey brown, calcisiltite, micritic, common very fine calcareous sand, trace free white calcite spar, trace carbonaceous specks, trace forams, firm, massive to blocky.
- 1330 100 LIMESTONE: Predominantly as above, calcisiltite grades to calcarenite, common microcrystalline spar cement, firm to moderately hard, massive to blocky.
- 1360 100 LIMESTONE: Grey brown, light brown, calcarenite, very fine to fine, microcrystalline cement, slightly argillaceous, trace carbonaceous fragments, rare glauconite, firm to moderately hard, blocky.
- 1390 100 LIMESTONE: Predominantly as above, calcarenite becomes increasingly silty/argillaceous grades to calcisiltite.
- 1420 100 LIMESTONE: Light brown, grey brown, calcisiltite, moderately argillaceous, micritic, trace carbonaceous specks, rare loose coarse quartz grains, trace light to medium brown calcarenite inclusions, soft to firm, massive.
- 1450 100 LIMESTONE: Predominantly as above, calcisiltite, moderately argillaceous, occasionally trace light brown calcarenite inclusions.

1480	100	<u>LIMESTONE</u> : Grey brown, olive grey, calcarenite, fine, slightly argillaceous, microcrystalline to spar cement, rare glauconite, trace carbonaceous specks, trace medium brown cryptocrystalline dolomitic inclusions, moderately hard, occasionally hard, blocky.
1500	100	<u>LIMESTONE</u> : Predominantly as above, fine to occasionally medium grained, trace fossil fragments, rare forams, firm to moderately hard, blocky.
1510	100	<u>LIMESTONE</u> : Predominantly as above, becomes medium grey in part, becomes fine to very fine grained, micritic cement, slightly dolomitic, moderately hard to hard in part.
1520	100	<u>LIMESTONE</u> : Light to medium grey, brown grey, calcisiltite grades to calcarenite, micritic, moderately argillaceous in part, trace carbonaceous specks, rare glauconite, firm to moderately hard, blocky to massive.
1530	100	<u>LIMESTONE</u> : Predominantly as above, becomes olive grey, calcisiltite, rare glauconite, common carbonaceous fragments, trace fossil fragments, moderately hard, blocky.
1540	100	<u>LIMESTONE</u> : Brown grey, olive grey in part, calcarenite becomes moderately silty, grades to calcisiltite, very fine to fine, microcrystalline to occasionally sparry, trace carbonaceous specks, rare biotite, firm to moderately hard, blocky.
1550	100	<u>LIMESTONE</u> : As above.
1560	100	<u>LIMESTONE</u> : Grey brown, light brown, calcisiltite grades to calcarenite, very fine to fine, slightly argillaceous, microcrystalline, trace carbonaceous specks, rare forams, moderately hard, blocky.
1570	100	<u>LIMESTONE</u> : As above.
1580	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, becomes fine, occasionally sucrosic texture, moderately hard, blocky tight.
1590	100	<u>LIMESTONE</u> : As above.
1600	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, trace biotite, rare glauconite.
1610	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, fine, rare glauconite, trace biotite in part, trace fossil fragments.



1620	100	<u>LIMESTONE</u> : Light grey, brown grey, calcisiltite, common very fine calcareous sand grades to calcarenite in part, micritic, trace ooids, trace fossil fragments, rare glauconite, moderately hard, blocky.
1630	100	<u>LIMESTONE</u> : As above.
1640	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite grades to calcarenite.
1650	100	<u>LIMESTONE</u> : Brown grey, light brown, calcarenite, fine, microcrystalline, slightly sparry, trace fossil fragments, trace carbonaceous specks, trace biotite, rare glauconite, moderately hard, blocky.
1660	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite becomes moderately argillaceous/silty grades to calcisiltite.
1670	100	<u>LIMESTONE</u> : As above.
1680	100	<u>LIMESTONE</u> : Olive grey, grey brown, calcisiltite, moderately argillaceous, trace glauconite, trace carbonaceous specks, rare biotite, trace light brown to off white calcarenite inclusions, firm to moderately hard, blocky.
1690	100	<u>LIMESTONE</u> : As above.
1700	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite becomes increasingly argillaceous grades to calcilutite.
1710	100	<u>LIMESTONE</u> : Predominantly as above, becomes medium grey in part, calcisiltite becomes very argillaceous in part grades to calcilutite.
1720	100	<u>LIMESTONE</u> : Light brown, olive grey, grey brown, calcisiltite, moderately argillaceous, micritic, fine calcareous sand in part grades to calcarenite, trace carbonaceous specks, firm to moderately hard.
1730	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite becomes very argillaceous grades to calcilutite in part.
1740	100	<u>LIMESTONE</u> : Pale brown, light grey brown, calcisiltite, very argillaceous, trace carbonaceous specks, trace biotite, slightly arenaceous in part, firm to moderately hard, massive to blocky.
1750	100	<u>LIMESTONE</u> : Predominantly as above, trace light brown fine to medium grained sparry calcarenitic inclusions.

1760	100	<u>LIMESTONE</u> : Predominantly as above, common calcarenite inclusions.
1770	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite grades to calcarenite, trace disseminated pyrite, trace coarse quartz grains.
1780	100	<u>LIMESTONE</u> : As above.
1790	100	<u>LIMESTONE</u> : Light brown, grey brown, calcisiltite, moderately argillaceous, slightly glauconitic, common fine calcarenite inclusions, common carbonaceous specks, trace biotite, firm to moderately hard, blocky.
1800	100	<u>LIMESTONE</u> : Light brown, grey brown, calcarenite, fine, micritic, slightly dolomitic in part, trace carbonaceous specks, trace fossil fragments, trace biotite, moderately hard, blocky.
1810	100	<u>LIMESTONE</u> : As above.
1820	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, becomes fine to occasionally medium, trace brown cryptocrystalline dolomitic inclusions.
1830	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, trace microglauconite.
1840	100	<u>LIMESTONE</u> : As above.
1850	100	<u>LIMESTONE</u> : Light brown, grey brown, off white, calcarenite, very fine to fine, microcrystalline, moderately argillaceous in part, trace glauconite, trace carbonaceous fragments, rare biotite, moderately hard, blocky.
1860	100	<u>LIMESTONE</u> : As above.
1870	100	<u>LIMESTONE</u> : Predominantly as above, trace medium brown dolomitic inclusions.
1880	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite grades to calcisiltite.
1890	100	<u>LIMESTONE</u> : Light brown, grey brown, off white, calcisiltite becomes very fine grained grades to calcarenite, microcrystalline and micritic cement, trace carbonaceous specks, trace lithic fragments, firm to moderately hard, blocky.
1900	100	<u>LIMESTONE</u> : As above.

1910	100	<u>LIMESTONE</u> : Light brown, off white, olive grey in part, calcisiltite becomes very fine grained grades to calcarenite in part, moderately argillaceous, trace carbonaceous specks, trace lithic fragments, trace biotite in part, firm to moderately hard, blocky.
1920	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite grades to calcarenite, slightly dolomitic in part.
1930	100	<u>LIMESTONE</u> : Light to medium brown, brown grey, calcarenite, fine, sparry cement, slightly argillaceous, trace carbonaceous specks, sucrosic texture in part, trace fossil fragments, firm to moderately hard, blocky.
1940	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, slightly dolomitic in part.
1950	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite grades to calcisiltite.
1960	100	<u>LIMESTONE</u> : As above.
1970	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite grades to calcisiltite, trace glauconite.
1980	100	<u>LIMESTONE</u> : Medium brown, brown grey, calcisiltite, moderately argillaceous, micritic, trace carbonaceous fragments, rare fossil fragments, trace free quartz float, trace light brown to off white very fine grained calcarenite inclusions, firm, blocky.
1990	100	<u>LIMESTONE</u> : Grey brown, light brown, calcarenite, very fine to fine, microcrystalline, trace glauconite, trace carbonaceous fragments, trace biotite, rare fossil fragments, firm to moderately hard, blocky.
2000	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, becomes medium brown in part, common fossil fragments, trace glauconite, moderately argillaceous in part.
2010	100	<u>LIMESTONE</u> : Predominantly as above, calcarenite, becomes very fine, moderately argillaceous, trace white calcite infill.
2020	100	<u>LIMESTONE</u> : Olive grey, grey brown, calcisiltite, micritic, moderately argillaceous, trace carbonaceous fragments, trace glauconite, slightly arenaceous grades to calcarenite in part, firm to moderately hard, blocky.

2030	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite, trace biotite, trace lithic fragments.
2040	100	<u>LIMESTONE</u> : Grey brown, olive grey in part, calcisiltite locally very argillaceous grades to calcilutite, micritic, trace carbonaceous specks, trace fine to medium calcareous sand, rare glauconite, firm, blocky.
2050	100	<u>LIMESTONE</u> : Predominantly as above, calcisiltite, occasionally fine to medium calcareous sand, trace nodular pyrite.
2055	100	<u>LIMESTONE</u> : Light to medium grey, olive grey, calcilutite, moderately silty, micritic, trace carbonaceous specks, trace medium calcareous sand, firm to moderately hard, blocky.
2060	100	<u>LIMESTONE</u> : As above.
2065	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace free white calcite infill.
2070	100	<u>LIMESTONE</u> : As above.
2075	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, becomes medium grey, trace ooids.
2080	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace free smoky coarse quartz.
2085	100	<u>LIMESTONE</u> : light to predominantly medium grey, calcilutite, slightly silty, micritic, trace carbonaceous specks, trace light brown calcarenitic inclusion, firm to moderately hard, blocky.
2090	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace smoky coarse fractured quartz grains.
2095	100	<u>LIMESTONE</u> : Predominantly as above, trace fossil fragments.
2100	100	<u>LIMESTONE</u> : Predominantly as above, trace fossil fragments, trace smoky coarse fractured quartz grains.
2105	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace fine to medium, calcareous sand.
2110	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace forams.
2115	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, becomes medium grey, rare nodular pyrite.

2120	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace bivalve fragments, rare nodular pyrite.
2125	100	<u>LIMESTONE</u> : Light to medium grey, olive grey in part, calcilutite, micritic, slightly silty, trace ooids, rare forams, trace gastropods, rare nodular pyrite, trace carbonaceous specks, firm to moderately hard in part, blocky.
2130	100	<u>LIMESTONE</u> : As above.
2135	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, moderately silty in part grades to calcisiltite.
2140	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite grades to calcisiltite, trace biotite.
2145	100	<u>LIMESTONE</u> : As above.
2150	100	<u>LIMESTONE</u> : Predominantly as above, trace forams.
2155	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite trace gastropods and forams.
2160	100	<u>LIMESTONE</u> : Predominantly as above, trace gastropods and forams, trace carbonaceous and lithic fragments.
2165	100	<u>LIMESTONE</u> : Light to medium grey, olive grey in part, calcilutite, slightly silty, micritic, trace light brown fine grained calcarenite inclusions, trace nodular pyrite and fossil fragments with pyritic replacement, firm, blocky.
2170	100	<u>LIMESTONE</u> : As above.
2175	100	<u>LIMESTONE</u> : Predominantly as above, becomes medium grey, calcilutite grades in part to calcisiltite, trace disseminated and nodular pyrite.
2180	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, trace ooids.
2185	100	<u>LIMESTONE</u> : grey brown, light to medium grey, calcilutite, micritic, slightly silty, trace disseminated pyrite, trace white calcite infill and free calcite spar, trace off white to light brown fine grained sucrosic calcarenite inclusions, firm, blocky.
2190	100	<u>LIMESTONE</u> : As above.
2195	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite grades to calcisiltite.

2200	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite grades to calcisiltite, trace fine calcareous sand, firm, blocky to massive.
2205	100	<u>LIMESTONE</u> : As above.
2210	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite grades to calcisiltite, trace disseminated pyrite.
2215	100	<u>LIMESTONE</u> : Preominantly as above calcilutite, trace carbonaceous microlaminations in part.
2220	100	<u>LIMESTONE</u> : Calcilutite as above.
2225	100	<u>LIMESTONE</u> : Light brown grey, grey brown, calcilutite, slightly silty, micritic, becomes increasingly argillaceous grades to calcareous claystone in part, trace carbonaceous specks and microlaminations, firm to moderately hard in part, blocky.
2230	100	<u>LIMESTONE</u> : As above.
2235	100	<u>LIMESTONE</u> : Predominantly as above, calcilutite, occasionally trace fine calcareous sand, trace disseminated and nodular pyrite, trace orange/brown cryptocrystalline inclusions,
2240	80	<u>LIMESTONE</u> : As above, calcilutite.
	20	<u>CLAYSTONE</u> : Medium grey, olive grey, slightly silty, moderately calcareous, rare lithic fragments, slightly micromicaceous, waxy texture in part, moderately hard, blocky.
2245	70	<u>LIMESTONE</u> : As above.
	30	<u>CLAYSTONE</u> : As above.
2250	70	<u>LIMESTONE</u> : As above.
	30	<u>CLAYSTONE</u> : As above.
2255	80	<u>LIMESTONE</u> : Predominantly as above, becomes slightly dispersive in part, massive to blocky.
	20	<u>CLAYSTONE</u> : Predominantly as above trace carbonaceous microlaminations.
2260	80	<u>LIMESTONE</u> : As above.
	20	<u>CLAYSTONE</u> : Trace disseminated pyrite.

2265	60	<u>LIMESTONE</u> : Light brown, pale grey, calcilutite, slightly silty, trace fine calcareous sand, trace fossil fragments, trace disseminated pyrite, firm to slightly dispersive, massive to blocky.
	40	<u>CLAYSTONE</u> : Olive grey, medium brown grey, moderately to slightly calcareous, trace disseminated pyrite, rare glauconite, slightly micromicaceous, firm to occasionally moderately hard, blocky.
2270	60	<u>LIMESTONE</u> : As above.
	40	<u>CLAYSTONE</u> : As above.
2275	70	<u>CLAYSTONE</u> : Predominantly as above, trace glauconite, rare forams.
	30	<u>LIMESTONE</u> : Predominantly as above, trace white calcite infill.
2280	70	<u>CLAYSTONE</u> : As above.
	30	<u>LIMESTONE</u> : As above.
2285	80	<u>CLAYSTONE</u> : As above.
	20	<u>LIMESTONE</u> : As above.
2290	80	<u>CLAYSTONE</u> : As above.
	20	<u>LIMESTONE</u> : As above.
2295	90	<u>CLAYSTONE</u> : Predominantly as above, occasionally slightly arenaceous in part, trace glauconite.
	10	<u>LIMESTONE</u> : As above.
2300	90	<u>CLAYSTONE</u> : As above.
	10	<u>LIMESTONE</u> : As above.
2305	60	<u>CLAYSTONE</u> : Medium grey, olive grey, light brown grey, moderately calcareous grades to calcilutite in part, slightly silty, trace carbonaceous fragments, slightly micromicaceous, trace nodular and disseminated pyrite, moderately hard, soft to firm, massive to blocky.
	40	<u>LIMESTONE</u> : Light grey, pale brown, calcilutite, slightly silty, micritic, trace forams, trace Bryozoan fragments, soft to firm, massive.
2310	60	<u>CLAYSTONE</u> : As above.
	40	<u>LIMESTONE</u> : As above.
2315	80	<u>CLAYSTONE</u> : Predominantly as above, becomes light brown grey.
	20	<u>LIMESTONE</u> : As above.

2320	80 20	<u>CLAYSTONE</u> : Predominantly as above, trace glauconite. <u>LIMESTONE</u> : As above.
2325	90 10	<u>CLAYSTONE</u> : As above. <u>LIMESTONE</u> : As above.
2330	100 Trace	<u>CLAYSTONE</u> : As above. <u>LIMESTONE</u> : As above.
2335	100	<u>CLAYSTONE</u> : Olive grey, brown grey, moderately to locally very calcareous grades to calcilutite in part, slightly silty, trace disseminated pyrite, slightly micromicaceous, waxy texture in part, firm to moderately hard in part, blocky.
2340	100	<u>CLAYSTONE</u> : As above.
2345	100	<u>CLAYSTONE</u> : As above.
2350	100	<u>CLAYSTONE</u> : As above.
2355	100	<u>CLAYSTONE</u> : Predominantly as above, trace forams, trace fine calcareous sand.
2360	100	<u>CLAYSTONE</u> : Predominantly as above, trace forams, trace fine calcareous sand, trace white calcite infill, moderately hard, blocky.
2365	100	<u>CLAYSTONE</u> : As above.
2370	100	<u>CLAYSTONE</u> : As above.
2375	100	<u>CLAYSTONE</u> : Light to medium grey, brown grey, slightly calcareous, slightly silty in part, trace disseminated and nodular pyrite, trace forams, trace lithic fragments in part, trace carbonaceous specks, firm, blocky.
2380	100	<u>CLAYSTONE</u> : Predominantly as above, trace fine to medium calcareous sand.
2385	100	<u>CLAYSTONE</u> : Predominantly as above, trace fossil fragments and forams.
2390	100	<u>CLAYSTONE</u> : Predominantly as above, medium grey, homogeneous, waxy texture in part, blocky.
2395	100	<u>CLAYSTONE</u> : As above.



2400	100	<u>CLAYSTONE</u> : Light grey, brown grey, moderately calcareous in part, slightly silty, trace disseminated and nodular pyrite, slightly micromicaceous, trace fine calcareous sand, firm, blocky.
2405	100	<u>CLAYSTONE</u> : As above.
2410	100	<u>CLAYSTONE</u> : Predominantly as above, rare glauconite.
2415	100	<u>CLAYSTONE</u> : Predominantly as above common nodular pyrite.
2420	100	<u>CLAYSTONE</u> : Predominantly as above, trace fossil fragments.
2425	100	<u>CLAYSTONE</u> : Predominantly as above, trace fine calcareous sand.
2430	100	<u>CLAYSTONE</u> : Predominantly as above, trace forams.
2435	100	<u>CLAYSTONE</u> : As above.
2440	100	<u>CLAYSTONE</u> : Light to medium grey, brown grey, moderately calcareous in part, slightly silty, slightly micromicaceous, trace biotite, trace nodular pyrite, trace fossil fragments, trace fine to medium calcareous sand, firm, locky to massive.
2445	100	<u>CLAYSTONE</u> : As above.
2450	100	<u>CLAYSTONE</u> : Predominantly as above, becomes very calcareous grades to calcilutite, slightly dispersive.
2455	100	<u>CLAYSTONE</u> : Predominantly as above, grades to calcilutite, soft to firm, slightly dispersive, massive to blocky.
2460	100	<u>CLAYSTONE</u> : Grey brown, light grey, slightly silty, moderately argillaceous, trace carbonaceous microlaminations, trace biotite, trace nodular pyrite, firm, blocky.
2465	100	<u>CLAYSTONE</u> : Predominantly as above, common nodular pyrite.
2470	100	<u>CLAYSTONE</u> : As above.
2475	100	<u>CLAYSTONE</u> : Predominantly as above, locally abundant forams.
2480	100	<u>CLAYSTONE</u> : As above.

2485	100	<u>CLAYSTONE</u> : Predominantly as above, trace forams and pyrite nodules.
2490	100	<u>CLAYSTONE</u> : As above.
2495	100	<u>CLAYSTONE</u> : Light to medium grey, grey brown, moderately calcareous, silty in part, common white calcite infill and spar, trace shelly fossil fragments, trace carbonaceous fragments, trace lithic fragments, trace fine calcareous sand, trace nodular pyrite, firm, massive to blocky.
2500	100	<u>CLAYSTONE</u> : As above.
2505	10	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to very coarse, subangular to subrounded, poor sorting, strong siliceous cement, common dolomitic cement in part, common glauconite, trace to common nodular pyrite, loose, hard aggregates, poor porosity, no fluorescence.
	90	<u>CLAYSTONE</u> : As above.
2510	20	<u>SANDSTONE</u> : As above.
	10	<u>SILTSTONE</u> : Light brown, slightly argillaceous and arenaceous, trace light grey weathered clay inclusions, soft to firm, massive.
	70	<u>CLAYSTONE</u> : As above.
2515	70	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to very coarse, angular to subrounded, poor sorting, trace kaolinitic matrix, trace siliceous cement, common nodular pyrite, trace glauconite, common granular milky quartz float, good porosity, no fluorescence.
	30	<u>SILTSTONE</u> : As above.
	Trace	<u>CLAYSTONE</u> : As above.
2520	90	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to very coarse, granular in part, subangular to subrounded, poor sorting, trace kaolinitic matrix, trace glauconite, trace carbonaceous fragments, trace nodular pyrite, common granular milky quartz, good porosity, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2525	100	<u>SANDSTONE</u> : Predominantly as above, becomes very coarse to granular, trace pyritic cement, trace glauconite, loose, good porosity, no fluorescence.
2530	100	<u>SANDSTONE</u> : Predominantly as above, becomes coarse to very coarse, common milky quartz.

2535	20	<u>SANDSTONE</u> : Predominantly as above, medium to coarse, rounded to subangular, moderate sorting, good porosity, no fluorescence.
	80	<u>SILTSTONE</u> : Light to medium grey, occasionally light brown grey, moderately arenaceous, trace biotite, trace carbonaceous fragments, trace lithic fragments, slightly siliceous, moderately hard to hard, blocky.
2540	10	<u>SANDSTONE</u> : Predominantly as above, becomes fine to medium, occasionally coarse milky quartz float, common kaolinitic matrix, poor porosity, no fluorescence.
	90	<u>SILTSTONE</u> : Brown grey, moderately argillaceous, trace disseminated pyrite, trace biotite, firm, massive to blocky.
2545	10	<u>SANDSTONE</u> : Clear to translucent, frosted, fine, angular to subrounded, good sorting, trace kaolinitic matrix, trace biotite, poor porosity, no fluorescence
	90	<u>SILTSTONE</u> : Brown grey, occasionally medium brown, slightly argillaceous, moderately arenaceous, trace biotite, trace white fine grained arenaceous inclusions with sucrosic texture, soft to firm, massive to blocky.
2550	30	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to coarse, subangular to subrounded, moderate sorting, common kaolinitic matrix, trace glauconite, common smoky quartz, trace biotite, loose, good porosity, no fluorescence.
	70	<u>SILTSTONE</u> : Predominantly as above, occasionally dark brown.
2555	90	<u>SANDSTONE</u> : Clear to translucent, frosted, fine to medium, occasionally coarse, angular to subrounded, argillaceous matrix, trace biotite, trace carbonaceous fragments, trace nodular pyrite, sucrosic texture, loose, fair to good porosity, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2560	90	<u>SANDSTONE</u> : Predominantly as above, becomes coarse to very coarse, common kaolinitic matrix, trace to common nodular pyrite, loose, good porosity, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2565	100	<u>SANDSTONE</u> : Clear to translucent, frosted, medium to coarse, angular to subrounded, moderate sorting, trace kaolinitic matrix, common nodular pyrite, trace carbonaceous fragments, trace very coarse milky quartz float, trace lithic fragments, loose, good porosity, no fluorescence.
2570	100	<u>SANDSTONE</u> : Predomonantly as above, trace kaolinitic clasts.

2575	100	<u>SANDSTONE</u> : Predominantly as above, common very coarse milky quartz float.
2580	100	<u>SANDSTONE</u> : Predominantly as above, becomes fine to medium, subangular to rounded in part, good sorting, trace coarse milky/smoky quartz, good porosity, no fluorescence.
2585	100	<u>SANDSTONE</u> : As above, fine to medium.
2590	90	<u>SANDSTONE</u> : Clear to translucent, frosted, fine to medium, subangular to subrounded, good sorting, trace calcareous cement, trace lithic and carbonaceous clasts, trace coarse milky quartz float, common glauconite, loose, good sorting, no fluorescence.
	10	<u>SILTSTONE</u> : Light to medium grey, moderately argillaceous, slightly arenaceous, trace carbonaceous fragments, trace biotite, micromicaceous, firm, blocky.
2595	70	<u>SANDSTONE</u> : Predominantly as above, common glauconite.
	30	<u>SILTSTONE</u> : As above becomes slightly dispersive.
2600	90	<u>SANDSTONE</u> : Predominantly as above, becomes fine to medium, angular to subrounded, trace to comon glauconite, loose, good porosity, no fluorescence.
	10	<u>SILTSTONE</u> : As above.
2605	90	<u>SANDSTONE</u> : As above.
	10	<u>SILTSTONE</u> : As above.
2607	70	<u>SANDSTONE</u> : As above.
	30	<u>SILTSTONE</u> : Medium to dark grey, very argillaceous, trace carbonaceous fragments, micromicaceous, soft to firm, massive to blocky.

Smiler-1 reached a total depth of 2607m at 1415 hours 11th July, 1995.

# APPENDIX 2



5th Cut  
A4 Dividers  
Re-order Code 97052

**APPENDIX II**

***SIDEWALL CORE DESCRIPTIONS***

SIDEWALL CORE DESCRIPTIONS

WELL NAME: Smiler-1

GEOLOGIST: Greg Clota

SWC No:	Depth (m)	REC (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
1	2595	15	B	<u>SANDSTONE</u> : Light to medium grey, medium to very coarse, angular to subangular, poor sorting, weak calcareous cement, common argillaceous matrix, trace glauconite, rare to trace disseminated pyrite and pyritic cement, trace biotite, trace red lithic inclusions, friable, poor porosity, no fluorescence.
2	2576	15	B	<u>SANDSTONE</u> : White, off white, fine to medium, subangular to subrounded, good sorting, trace kaolinitic matrix, trace smoky quartz, trace biotite, friable, fair porosity, no fluorescence.
3	2556	20	B	<u>SANDSTONE</u> : Off white to light grey, medium to coarse, subangular to subrounded, moderate to good sorting, trace smoky quartz, trace rock fragments, friable, good porosity, no fluorescence.
4	2551	25	B	<u>SANDSTONE</u> : Light brown grey, light grey, fine to granular, angular to subrounded, poor sorting, abundant kaolinitic/silty matrix, rare to trace pyritic cement, common smoky quartz, firm to moderately hard, poor to nil porosity, no fluorescence.
5	2547	20	B	<u>SILTSTONE</u> : Medium dark grey, olive grey, moderately arenaceous, moderately argillaceous, trace coaly fragments, micromicaceous, trace coarse grained quartz float, trace lithics, moderately hard, massive.
6	2545	15	B	<u>SILTSTONE</u> : Predominantly as above with off white fine grained arenaceous inclusions.
7	2544	15	B	<u>SILTSTONE</u> : Olive grey, medium brown grey, very argillaceous, slightly arenaceous, trace lithics, trace biotite, moderately hard, massive.
8	2539	15	B	<u>SANDSTONE</u> : Off white to light grey, fine, subangular, good sorting, common kaolinitic/silty matrix, common biotite, trace muscovite, rare rock fragments, trace chlorite, friable to moderately hard, very poor porosity, no fluorescence.
9	2536	15	B	<u>SANDSTONE</u> : As above, no fluorescence.
10	2532.5	25	B	<u>SANDSTONE</u> : Off white to light grey, medium, subangular, good sorting, very weak siliceous cement, trace nodular pyrite, trace biotite, trace smoky quartz, trace rock fragments, friable, fair porosity, no fluorescence.

SWC No:	Depth (m)	REC (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
11	2525	25	B	<u>SANDSTONE</u> : Off white, pale brown, fine to medium, angular to subrounded, moderate sorting, abundant kaolinitic/silty matrix, trace glauconite, trace rock fragments, trace biotite, trace coarse milky quartz float, firm to moderately hard, very poor to nil porosity, no fluorescence.
12	2520	15	B	<u>SANDSTONE</u> : Light brown, light grey, medium to very coarse, subangular to subrounded, poor sorting, abundant argillaceous matrix (matrix supported), trace glauconite, trace nodular pyrite and pyritic cement, trace biotite, moderately hard, tight, no fluorescence. Sandstone grades to greywacke.
13	2514	25	B	<u>SANDSTONE</u> : Light grey, coarse to granular, subangular to subrounded, moderate sorting, common kaolinitic matrix, common glauconite, common smoky/milky quartz, trace disseminated pyrite, moderately hard, tight, no fluorescence.
14	2511.5	25	B	<u>SANDSTONE</u> : Light grey, fine to medium, subangular, moderate sorting, common silty/argillaceous matrix, abundant glauconite, common very coarse to granular milky quartz float, trace rock fragments, friable to moderately hard, poor porosity, no fluorescence.
15	2509	30	B	<u>SANDSTONE</u> : Light grey, medium to coarse, angular to subangular, moderately sorted, common kaolinitic/silty matrix, trace to common pyrite cement, common glauconite, trace biotite, trace smoky quartz, friable to moderately hard, poor porosity. <u>FLUORESCENCE</u> : 20% moderately bright patchy yellow green fluorescence, very faint cut, trace to nil ring residue.
16	2508	15	B	<u>CLAYSTONE</u> : Dark grey, dark brown grey, slightly calcareous, slightly silty, abundant nodular and disseminated pyrite, trace weathered feldspar, firm, massive.
17	2507.5	15	B	<u>CLAYSTONE</u> : Light orange brown, buff, common glauconite, common orange brown dolomitic inclusions, trace dark grey argillaceous pyritic inclusions, moderately hard, fractured, massive to subfissile. Trace orange mineral fluorescence only.
18	2505	15	B	<u>CLAYSTONE</u> : Medium grey, medium brown grey, slightly silty, moderately calcareous, trace lithic fragments, firm, blocky to subfissile.



SWC No:	Depth (m)	REC (mm)	Bought Reject	Lithological Description, Fluorescence etc ...
19	2503	20	B	<u>CLAYSTONE</u> : Medium grey, grey brown, very calcareous grades to calcilutite, slightly silty, slightly arenaceous, moderately hard, massive.
20	2501	20	B	<u>CALCAREOUS CLAYSTONE</u> : Medium grey, trace silt, homogeneous, slightly waxy texture, hard, subfissile, grades to calcilutite.
21	2499	25	B	<u>LIMESTONE</u> : Medium grey, calcilutite, moderately argillaceous, micritic, micromicaceous, trace calcite spar, hard, blocky, subfissile.
22	2497	20	B	<u>LIMESTONE</u> : Predominantly as above, grades to calcareous claystone.
23	2495	25	B	<u>CALCAREOUS CLAYSTONE</u> : Medium to dark grey, slightly silty, trace fine grained nodular pyrite, moderately hard, massive.
24	2490	20	B	<u>LIMESTONE</u> : Medium grey, brown grey, slightly silty, very argillaceous, micritic, homogeneous, waxy texture, subfissile.
25	2487	15	B	<u>CALCAREOUS CLAYSTONE</u> : Medium brown grey, moderately silty, slightly arenaceous, trace disseminated pyrite, slightly micromicaceous, firm to plastic, massive.
26	2485	10	B	<u>LIMESTONE</u> : Light to medium brown grey, calcilutite, moderately argillaceous, micritic, trace carbonaceous specks, slightly arenaceous, firm to moderately hard, massive.
27	2475	25	B	<u>CALCAREOUS CLAYSTONE</u> : Light to medium grey, trace silt, trace carbonaceous specks, homogeneous, waxy texture, moderately hard, massive to subfissile.
28	1450.5	25	B	<u>LIMESTONE</u> : Grey brown, calcilutite, micritic, trace shelly fragments, trace white calcareous inclusions, moderately hard, blocky.
29	1323	20	B	<u>LIMESTONE</u> : As above.
30	1242	30	B	<u>LIMESTONE</u> : Light to medium grey, calcilutite, micritic slightly silty, slightly micromicaceous, firm to plastic, massive.

**Comments:** Shot 30. Recovered 30(100%). Most cores are broken or crumbly.

# APPENDIX 3



5th Cut  
A4 Dividers  
Re-order Code 97052

## APPENDIX III

### **VELOCITY SURVEY REPORT**

*See separate report; Schlumberger "Well Seismic Processing Report, Zero Offset VSP and Geogram, SMILER-1".*

PE906443

# APPENDIX 4



5th Cut  
A4 Dividers  
Re-order Code 97052

*APPENDIX IV*

*MUDLOG*

PE600704

This is an enclosure indicator page.  
The enclosure PE600704 is enclosed within the  
container PE900879 at this location in this  
document.

The enclosure PE600704 has the following characteristics:

ITEM\_BARCODE = PE600704  
CONTAINER\_BARCODE = PE900879  
NAME = Formation Evaluation Log Drilling  
Systems  
BASIN = GIPPSLAND  
PERMIT =  
TYPE = WELL  
SUBTYPE = WELL\_LOG  
DESCRIPTION = Formation Evaluation Log Drilling  
Systems  
REMARKS =  
DATE\_CREATED = 11/07/95  
DATE\_RECEIVED = 16/01/96  
W\_NO = W1122  
WELL\_NAME = Smiler-1  
CONTRACTOR = HALLIBURTON  
CLIENT\_OP\_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)