



DEPT. NAT. RES & ENV

PE900434

WELL COMPLETION REPORT

TRITON - 1 **W766**

OIL and GAS DIVISION

28 OCT 1982

306 PAGES.
13 ENCLOSURES.

WELL COMPLETION REPORT

TRITON - 1 W766

OIL and GAS DIVISION

28 OCT 1982

**OTWAY BASIN
VICTORIA**

ESSO AUSTRALIA LIMITED

TRITON # 1

WELL COMPLETION REPORT

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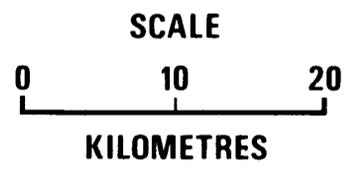
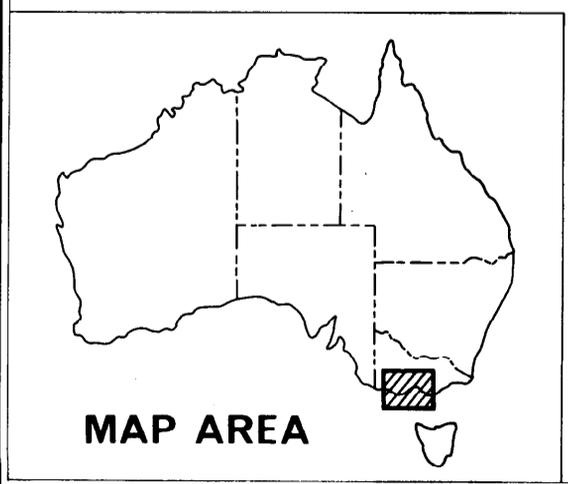
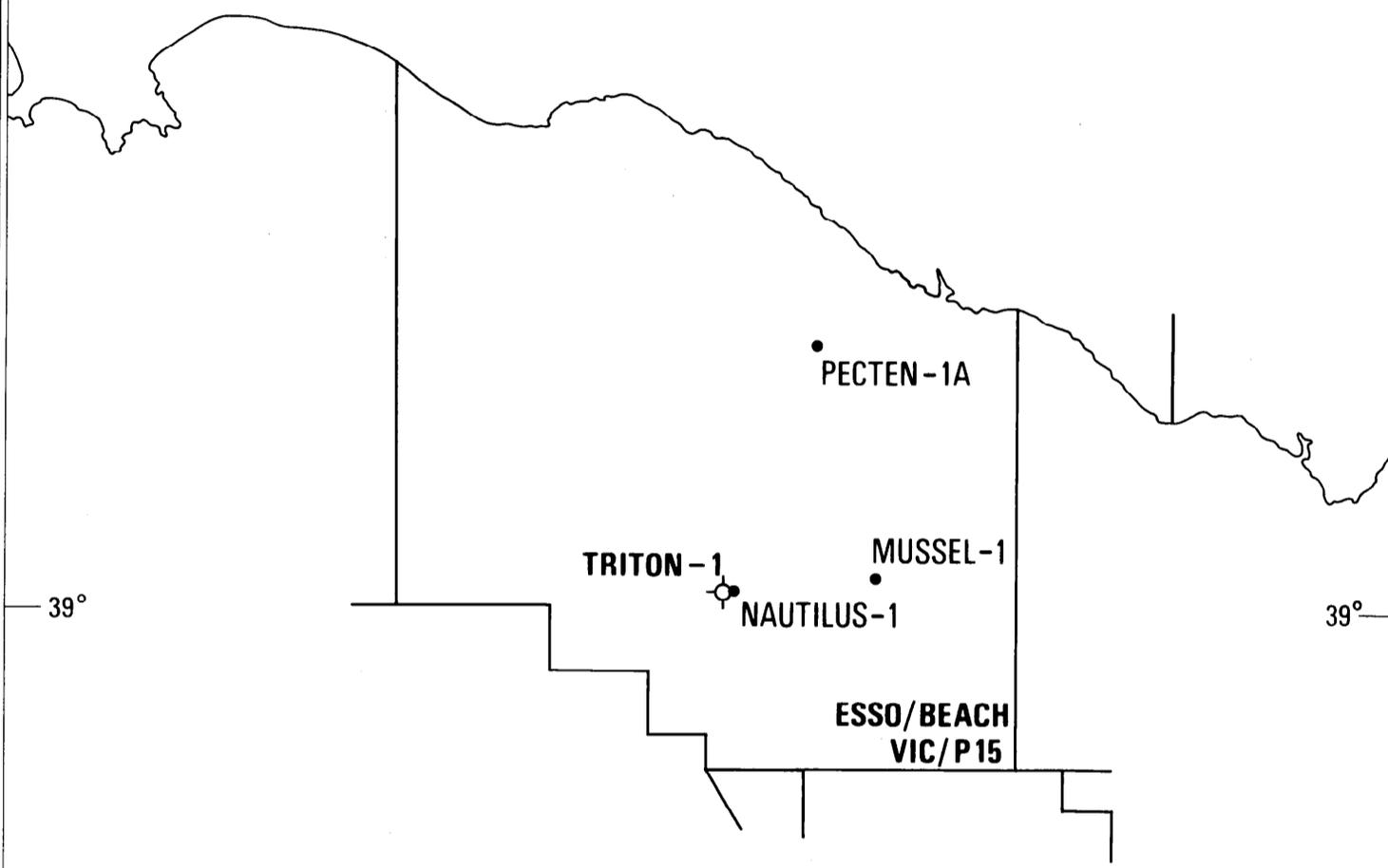
1. Mudlogging Report - Core Laboratories, Extended Service Report
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FIGURES

Figure 1

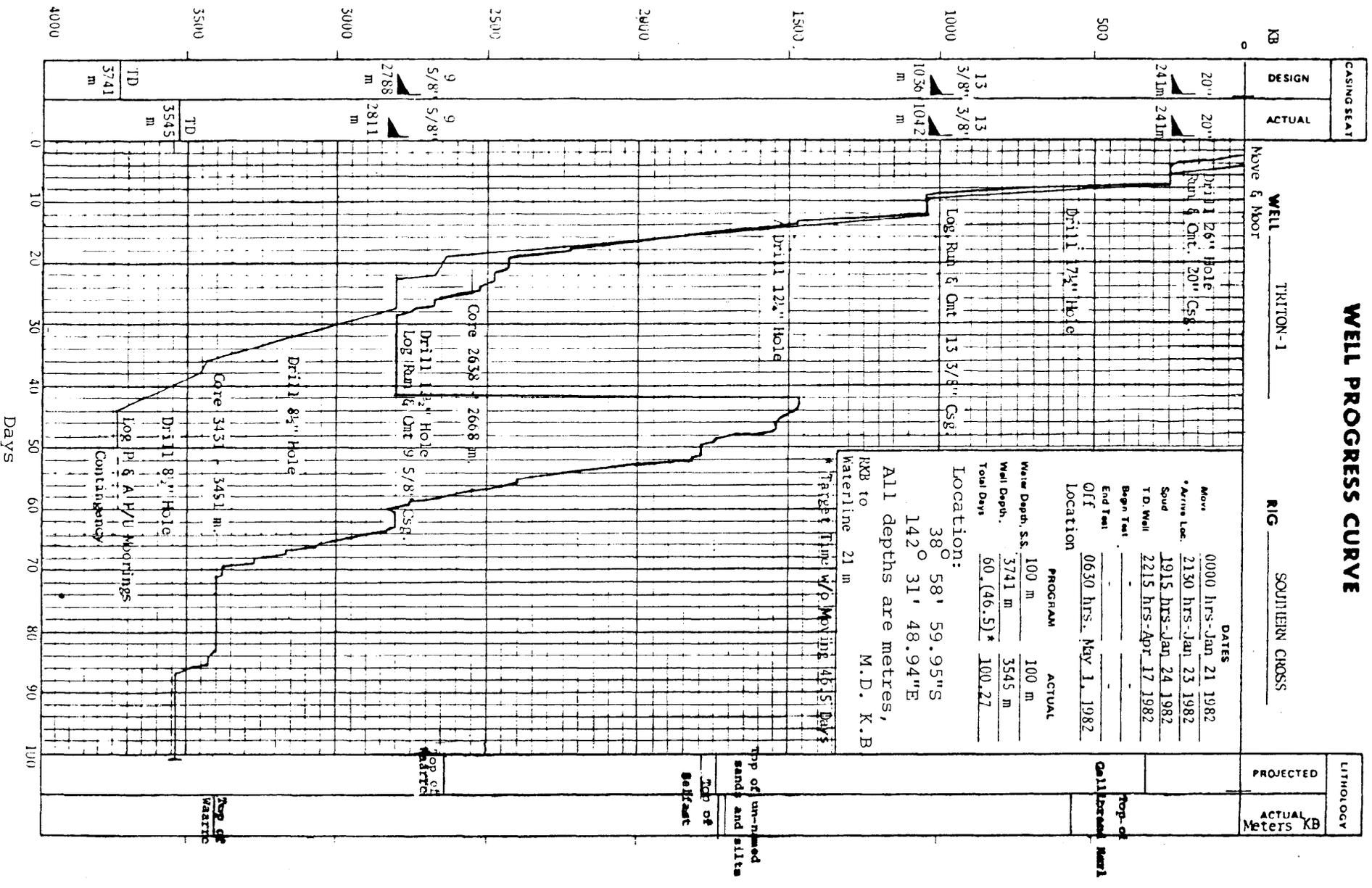
LOCALITY MAP TRITON-1

VICTORIA



143°

Figure 2



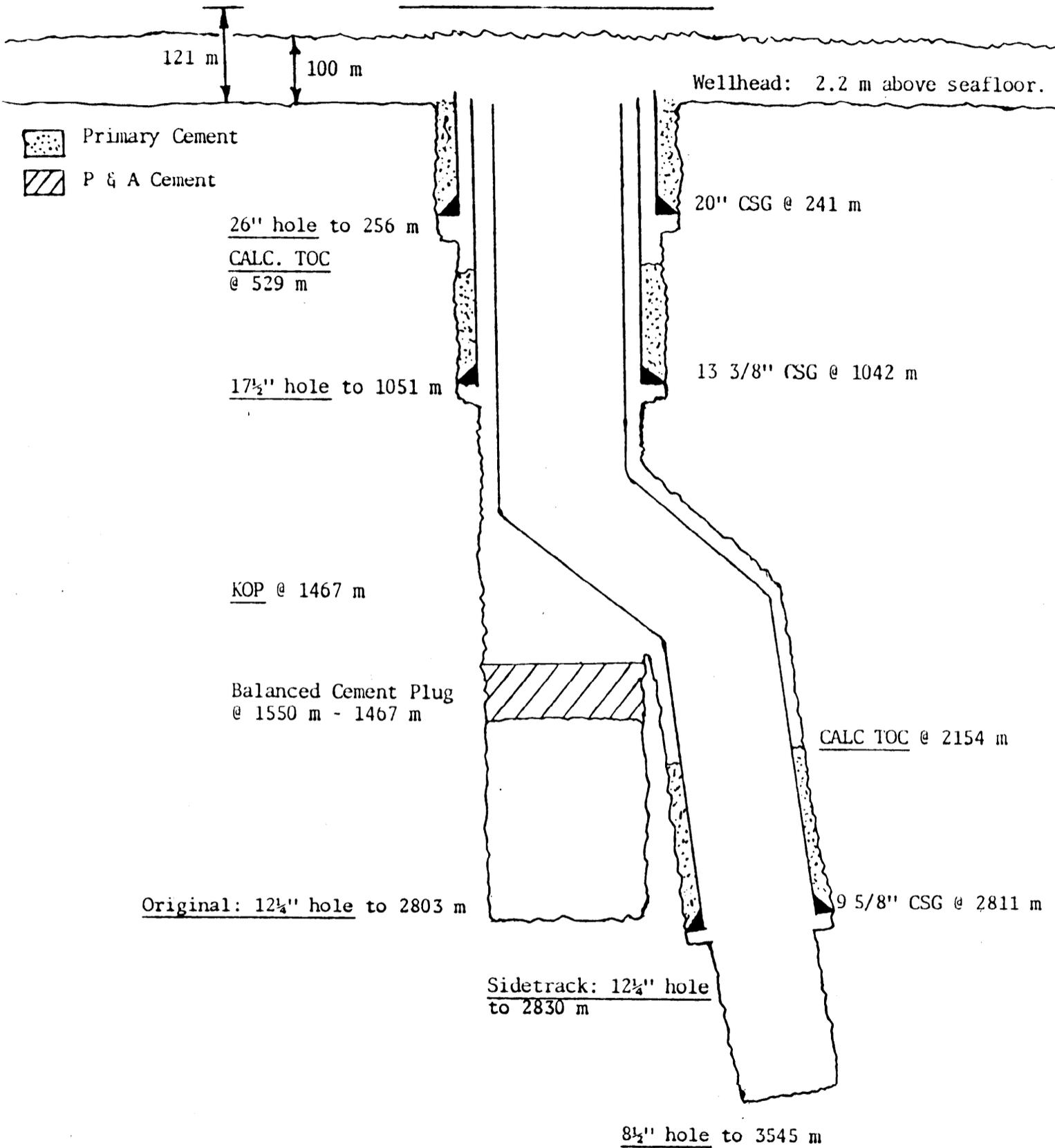
WELLBORE SCHEMATIC

FIGURE 3

WELL: TRITON-1

RIG: SOUTHERN CROSS

RKB



All Depths are in meters M.D. KB

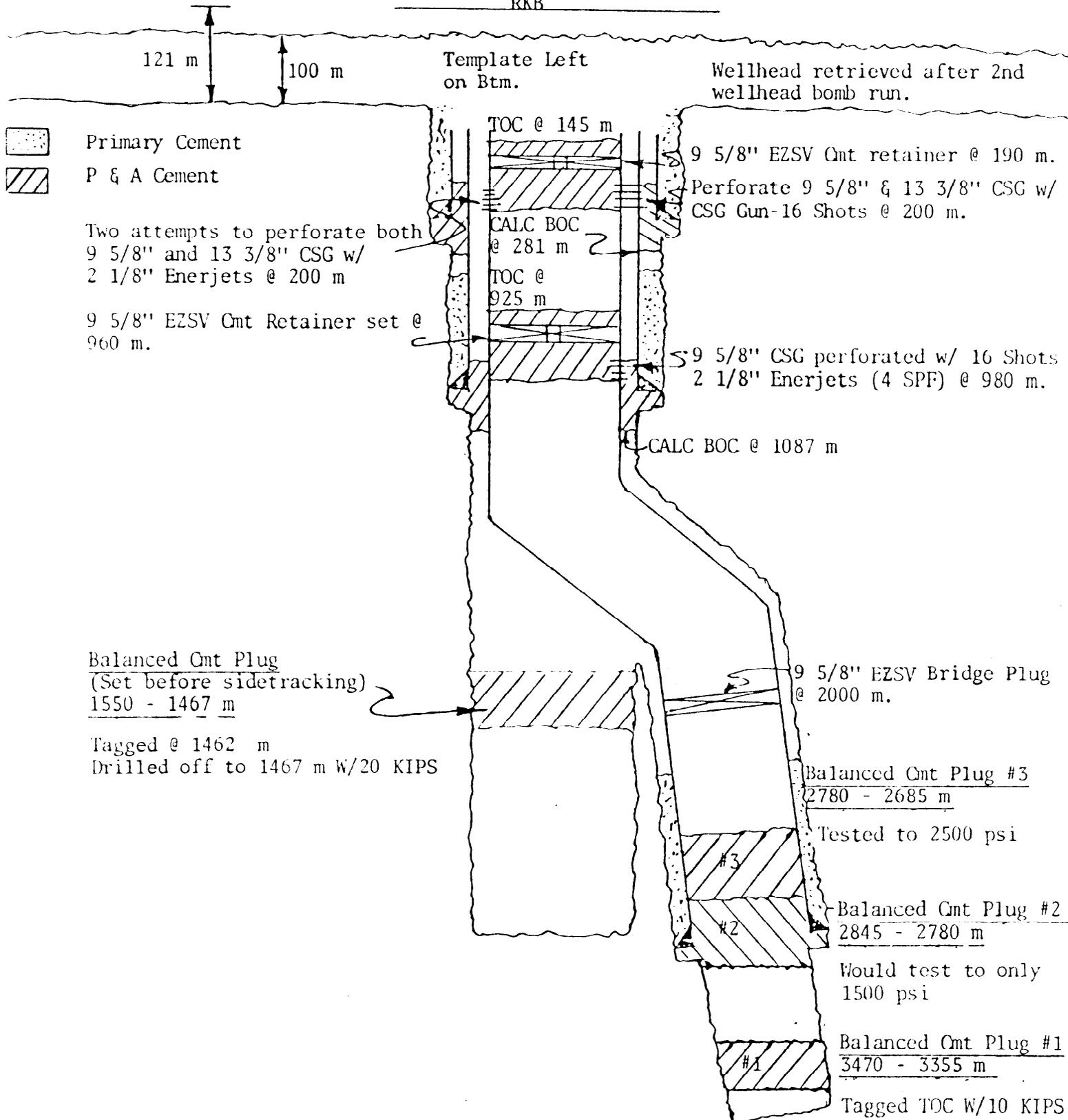
ABANDONMENT SCHEMATIC

FIGURE 4

WELL: TRITON-1

RIG: SOUTHERN CROSS

RKB



All Depths are in Meters M.D. KB

STRATIGRAPHIC TABLE

Figure 5

MM YEARS	EPOCH	SERIES	FORMATION HORIZON	PALYNOLOGICAL ZONATION	PLANKTONIC FORAMINIFERAL ZONATIONS	DINOFLAGELLATE ZONES	DRILL DEPTH *	SUBSEA DEPTH *	THICKNESS			
				SPORE-POLLEN Dettmann & Playford (1969) Stover & Partridge (1973)	D. Taylor	Helby, Morgan, & Partridge (In preparation)	(Metres)	(Metres)	(Metres)			
0	PLEIST	E M L E L	Seafloor									
5			PLIO									
10	MIOCENE	MIDDLE LATE			A1			Not Sampled				
						A2						
						A3						
						A4						
15	MIOCENE	MIDDLE LATE			B1							
						B2						
						C						
						D1						
20	MIOCENE	EARLY	PORT CAMPBELL LIMESTONE		D2							
						E1		250	229	320 +		
						E2		570	549			
						F						
25	OLIGOCENE	LATE	GELLIBRAND MARL	<i>P. tuberculatus</i>								
								G				
								H1				
								H2				
30	OLIGOCENE	EARLY	UN-NAMED SANDS (AND SILTS)	<i>P. tuberculatus</i>								
								I1				
								I2				
								J1				
35	OLIGOCENE	EARLY	UN-NAMED SANDS (AND SILTS)	<i>P. tuberculatus</i>								
								J2		(1717)		
								Upper <i>N. asperus</i>		1716.4	1695.4	
								Middle <i>N. asperus</i>		1729.4	1708.4	13
40	Eocene	LATE	UN-NAMED SANDS (AND SILTS)	<i>P. tuberculatus</i>								
								Lower <i>N. asperus</i>		(1730)		
								<i>P. asperopolus</i>				
								Upper <i>M. diversus</i>				
45	Eocene	MIDDLE	UN-NAMED SANDS (AND SILTS)	<i>P. tuberculatus</i>								
								Middle <i>M. diversus</i>				
								Lower <i>M. diversus</i>				
								Upper <i>L. balmei</i>				
50	Eocene	EARLY	UN-NAMED SANDS (AND SILTS)	<i>P. tuberculatus</i>								
								Lower <i>L. balmei</i>				
55	PALEOCENE	LATE	UN-NAMED SANDS (AND SILTS)	<i>P. tuberculatus</i>								
60	PALEOCENE	EARLY	UN-NAMED SANDS (AND SILTS)	<i>P. tuberculatus</i>								
65	UPPER CRETACEOUS	MAASTRICHTIAN	BELFAST MUDSTONE	<i>P. tuberculatus</i>								
								<i>Tricolpites longus</i>		1729.4	1708.4	
								<i>Tricolporites lilliei</i>		(1730)		
								<i>Nothofagidites senectus</i>				
70	UPPER CRETACEOUS	SANTONIAN	BELFAST MUDSTONE	<i>P. tuberculatus</i>								
								<i>Tricolpites pachyexinus</i>				
								<i>Clavifera triplex</i>				
								<i>Tricolpites pachyexinus</i>				
75	UPPER CRETACEOUS	CONIACIAN	BELFAST MUDSTONE	<i>P. tuberculatus</i>								
								<i>Clavifera triplex</i>				
								<i>Clavifera triplex</i>				
								<i>Clavifera triplex</i>				
80	UPPER CRETACEOUS	TURONIAN	BELFAST MUDSTONE	<i>P. tuberculatus</i>								
								<i>Clavifera triplex</i>				
								<i>Clavifera triplex</i>				
								<i>Clavifera triplex</i>				
85	UPPER CRETACEOUS	CENOMANIAN	WAARE FORMATION	<i>P. tuberculatus</i>								
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				
90	UPPER CRETACEOUS	CENOMANIAN	WAARE FORMATION	<i>P. tuberculatus</i>								
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				
95	UPPER CRETACEOUS	CENOMANIAN	WAARE FORMATION	<i>P. tuberculatus</i>								
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				
100	UPPER CRETACEOUS	CENOMANIAN	WAARE FORMATION	<i>P. tuberculatus</i>								
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				
								<i>Appendicisporites distocarinatus</i>				

* Depths are True Vertical Depths ; () indicates Measured Depths

FIGURE 6

TRITON-1

STRATIGRAPHY BEFORE AND AFTER DRILLING

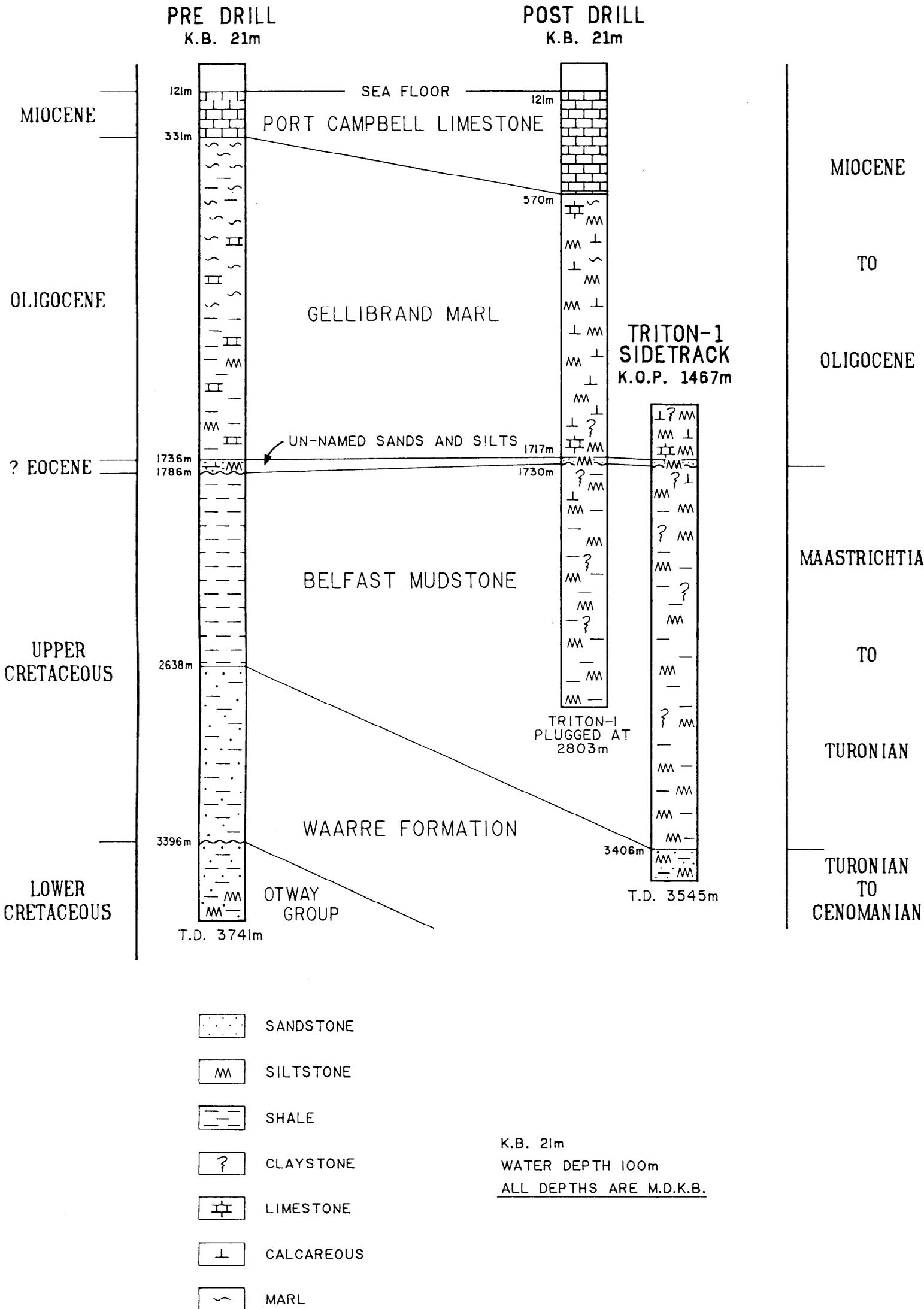
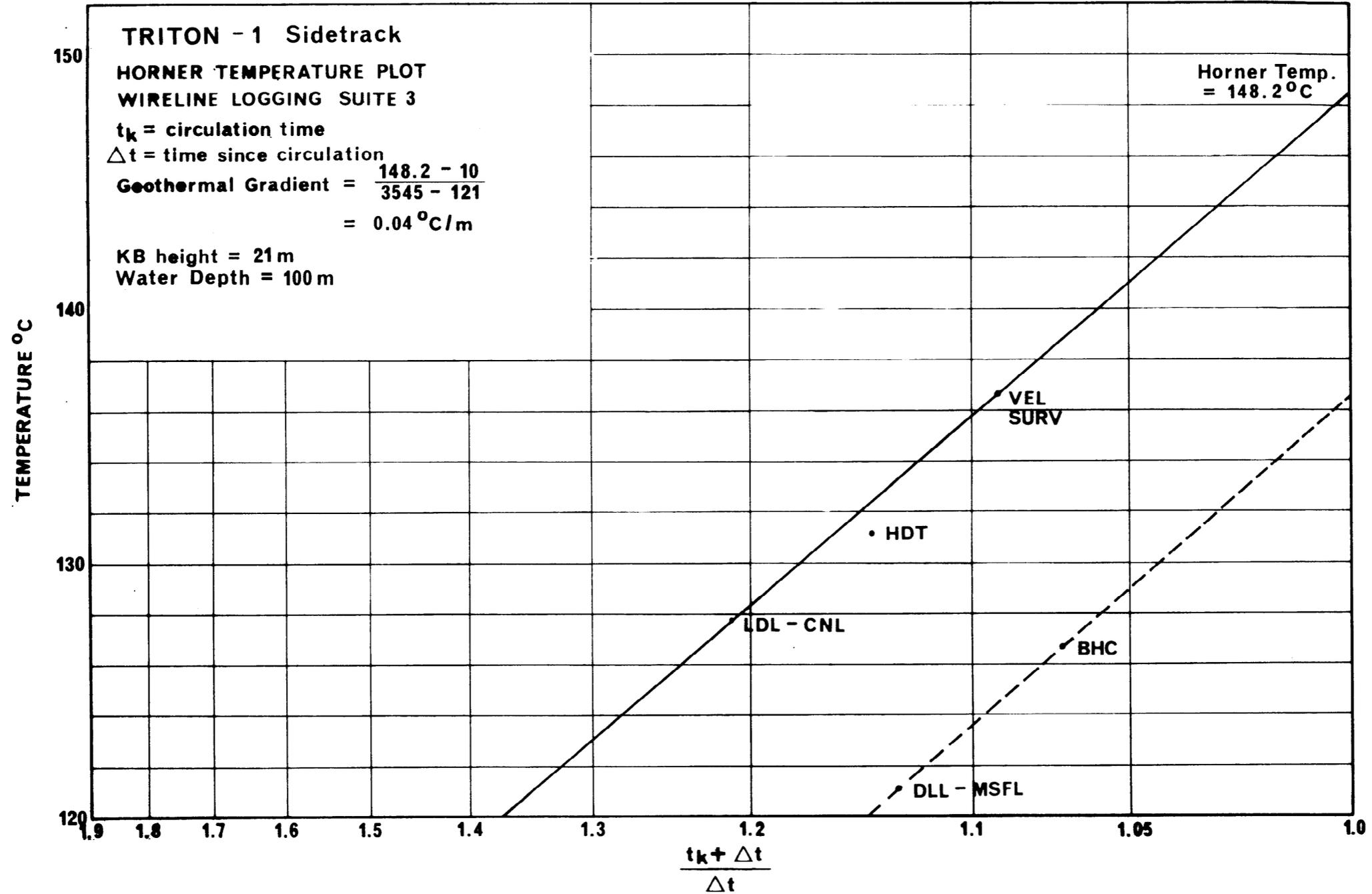


Figure 7



PE600502

This is an enclosure indicator page.
The enclosure PE600502 is enclosed within the
container PE900434 at this location in this
document.

The enclosure PE600502 has the following characteristics:

- ITEM-BARCODE = PE600502
- CONTAINER_BARCODE = PE900434
 - NAME = Triton 1 sidetrack Grapholog (Mud Log)
 - BASIN = OTWAY
 - PERMIT = VIC/P15
 - TYPE = WELL
 - SUBTYPE = MUD-LOG
- DESCRIPTION = Triton 1 sidetrack Grapholog (Mud Log)
- REMARKS =
- DATE-CREATED = 17/04/82
- DATE-RECEIVED = 30/10/82
- W_NO = W766
- WELL-NAME = Triton 1 sidetrack
- CONTRACTOR = Corelab
- CLIENT_OP_CO = Esso

(Inserted by DNRE - Vic Govt Mines Dept)

PE900585

This is an enclosure indicator page.
The enclosure PE900585 is enclosed within the
container PE901824 at this location in this
document.

The enclosure PE900585 has the following characteristics:

- ITEM-BARCODE = PE900585
- CONTAINER_BARCODE = PE901824
- NAME = Triton 1 Grapholog (Mud Log)
- BASIN = OTWAY
- PERMIT = VIC/P15
- TYPE = WELL
- SUBTYPE = MUD-LOG
- DESCRIPTION = Triton 1 Grapholog (Mud Log)
- REMARKS =
- DATE-CREATED = 3/03/82
- DATE-RECEIVED = 30/10/82
- W_NO = W766
- WELL-NAME = Triton-1
- CONTRACTOR = Corelab
- CLIENT_OP_CO = ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

RFT PRETEST PRESSURES

SERVICE COMPANY:SCHLUMBERGER.....RFT RUN. NO:1.....

WELL :TRITON-1 SIDETRACK.....
 DATE :20.4.82.....
 OBSERVERS : S. TWARTZ.....

SEAT NO.	DEPTH	DEPTH (Ss)	REASON 1 FOR TEST	GAUGE 2	TEMP 3 CORR.	UNITS 4	IHP		FORMATION PRESSURE		FHP		TEST RESULT
							psi	ppg	psi	ppg	psi	ppg	
1/1	3531.5	3510.5	PT	SCH	Y	G	9242 = 15.39		8990 = 15.00		9260 = 15.42		TIGHT; INVALID
				HP	N	A	9272 = 15.44		VERY SLOW				
1/2	3531.5	3510.5	PT	SCH	Y	G	9230 = 15.37		8895 = 14.84		9260 = 15.42		TIGHT; INVALID
				HP	N	A	9292 = 15.48		8923 = 14.89		9275 = 15.45		
1/3	3530.5	3509.5	PT	SCH	Y	G	9238 = 15.39		TIGHT + SLOW		9247 = 15.41		TIGHT; INVALID
				HP	N	A	9272 = 15.45		LEAK		9281 = 15.46		
1/4	3532.0	3511	PT	SCH	Y	G	9238 = 15.39		8888 = 14.83		9245 = 15.40		TIGHT; INVALID
				HP	N	A	9299 = 15.50		TIGHT		9286 = 15.47		
1/5	3531.5	3510.5	PT	SCH	Y	G	9240 = 15.39		9189 = 15.34		9243 = 15.40		TIGHT; INVALID
				HP	N	A	9284 = 15.46		TIGHT		9280 = 15.46		
1/6	3483.7	3462.7	PT	SCH	Y	G	9084 = 15.34		8899 = 15.06		9092 = 15.35		TIGHT; INVALID
				HP	N	A	-		TIGHT		9120 = 15.40		
1/7	3468.5	3447.5	PT	SCH	Y	G	9045 = 15.34		TIGHT		9049 = 15.35		TIGHT; INVALID
				HP	N	A	-		TIGHT		9076 = 15.39		

1. Pressure Test = PT
 Sample & Pressure Test = SPT

2. Gauges = SCH = Schlumberger Strain Gauge
 = HP = Hewlett Packard

3. Yes = Y
 No = N

4. PSIA = A
 PSIG = G

RFT PRETEST PRESSURES

SERVICE COMPANY:SCHLUMBERGER.....RFT RUN. NO:1.....

WELL : ..TRITON-1 SIDETRACK...

DATE : ..20.4.82.....

OBSERVERS : ..S. TWARTZ.....

SEAT NO.	DEPTH	DEPTH (Ss)	REASON 1 FOR TEST	GAUGE 2	TEMP 3 CORR.	UNITS 4	IHP		FORMATION PRESSURE		FHP		TEST RESULT
							psi	ppg	psi	ppg	psi	ppg	
1/8	3419.5	3398.5	S	SCH	Y	G	8900	= 15.31	8575	= 14.78	8920	= 15.34	INVALID TEST
				HP	N	A			8595.6	= 14.82			

1. Pressure Test = PT
Sample & Pressure Test = SPT

2. Gauges = SCH = Schlumberger Strain Gauge
= HP = Hewlett Packard

3. Yes = Y
No = N

4. PSIA = A
PSIG = G

RFT SAMPLE TEST REPORT

WELL : TRITON-1 SIDETRACK

OBSERVER : S. TWARTZ

DATE : 20.4.82

RUN NO.: 1

	CHAMBER 1 (2 3/4 gal.)	CHAMBER 2 (lit.)
SEAT NO.	1/8	
DEPTH	3419.5m	
A. RECORDING TIMES		
Tool Set		
Pretest Open		
Time Open		
Chamber Open		
Chamber Full		
Fill Time	10 mins.	
Start Build up	not reached	
Finish Build up	not reached	
Build Up time	not reached	
Seal Chamber	not reached	
Tool Retract		
Total Time	35 mins.	hrs.
B. SAMPLE PRESSURES		
IHP	8900 psig	psig
ISIP	8612.60 8624 8628 psig	
Initial Flowing Press.	8605.21 8618 8623 psig	
Final Flowing Press.		
Sampling Press. Range		
FSIP		
FHP	9260 psig	
Form.Press.(Horner)		
C. TEMPERATURE		
Depth Tool Reached	3531.5 m	m
Max.Rec.Temp.	°C	°C
Time Circ. Stopped	hrs.	hrs.
Time since Circ.	hrs.	hrs.
Form.Temp.(Horner)	°C	°C
D. SAMPLE RECOVERY		
Surface Pressure	psig	psig
Amt Gas	0 lit.	lit.
Amt oil	lit.	lit.
Amt Water	lit.	lit.
Amt Others	8500 ml lit.	lit.
E. SAMPLE PROPERTIES		
Gas Composition		
C1	ppm	ppm
C2	ppm	ppm
C3	ppm	ppm
TC4/nC4	ppm	ppm
C5	ppm	ppm
C6+	ppm	ppm
CO2/H2S	ppm	ppm
Oil Properties	°API @ °C	°API @ °C
Colour		
Fluorescence		
GOR		
Water Properties		
Resistivity	@ °C	@ °C
NaCl Equivalent	ppm	ppm
Cl-titrated	ppm	ppm
NO3	ppm	ppm
Est.Water Type		
Mud Properties		
Resistivity	@ °C	@ °C
NaCl Equivalent	ppm	ppm
Cl- titrated	ppm	ppm
Calibration		
Calibration Press.	psig	psig
Calibration Temp.	°C	°C
Hewlett Packard No.		
Mud weight		
Calc.Hydrostatic		
RFT Chokesize	0.020"	
REMARKS	opened and closed chamber 3 times. See attached note.	

TRITON-1 SIDETRACK, and
 8. TRITON-1 TEMPERATURE RECORD

LOGGING RUN	THERMOMETER DEPTH (m)	MAX. RECORDED TEMPERATURE (C°)	CIRCULATION TIME (t_k) (hours)	TIME AFTER CIRCULATION STOPPED (t)	HORNER* TEMPERATURE (C°)	GEOHERMAL GRADIENT (C°/km)
Suite 1 Run 1 DIL-BHC-GR	1051m	41.1		4.50	-	-
Suite 2 Run 2 DIL-BHC-Cal-GR	2450m	78.8		11.50	-	-
Suite 3 Run 1 DLL-MSFL-GR-SP	3540m	121.0	1.75	13.00	136.4	36.7
Suite 3 Run 1 BHC-GR-SP	3542m	126.6	1.75	26.33	136.4	36.7
Suite 3 Run 1 LDL-CNL-GR	3542m	127.7	2.00	9.50	148.2	40.3
Suite 3 Run 1 HDT	3545m	131.1	2.00	14.00	148.2	40.3

TRITON-1 SIDETRACK and
TRITON-1
TEMPERATURE RECORD

LOGGING RUN	THERMOMETER DEPTH (m)	MAX. RECORDED TEMPERATURE (C°)	CIRCULATION TIME (t _k) (hours)	TIME AFTER CIRCULATION STOPPED (t)	HORNERS* TEMPERATURE (C°)	GEO THERMAL GRADIENT (C°/km)
Suite 3 Run 1 CST	3533.5m	143.3	2.00	14.00	invalid	invalid
Suite 3 Run 1 Vel Survey	3545m	136.5	2.00	22.0	148.2	40.3

ESSO AUSTRALIA LTD.
COMPLETION REPORT

1. WELL DATA RECORD

LOCATION

WELL NAME Triton-1 and Triton-1 Sidetrack	STATE VIC.	PERMIT or LICENCE VIC/P15	GEOLOGICAL BASIN Otway Basin	FIELD -
CO-ORDINATES LATITUDE 38 ⁰ 58' 59.95"S LONGITUDE 142 ⁰ 31' 48.94"E X 632,543 Y 5,683,946		MAP PROJECTION AMG Zone 54 Central Meridian 141 ⁰	GEOGRAPHICAL LOCATION Offshore South Western Victoria	
<u>ELEVATIONS & DEPTHS</u>				
ELEVATIONS KB 21m ASL S.F. 100m BSL		WATER DEPTH 100m	TOTAL DEPTH 3537.85m TVD KB MEASURED DEPTH 3545m MD KB	Average Angle 3 ⁰
		PLUG BACK TYPE Balanced plug	REASONS FOR PLUGGING BACK Abandonment	
<u>DATES</u>				
MOVE IN 20/1/82	RIG UP 23/1/82	SPUDED 24/1/82		
RIG DOWN COMPLETE 1/5/82	RIG RELEASED 1/5/82	PRODUCTION UNIT - RIG UP N/A		
PRODUCTION UNIT - RIG DOWN N/A		INITIAL PRODUCTION ESTABLISHED N/A		
<u>MISCELLANEOUS</u>				
OPERATOR ESSO EXPLORATION & PROD. AUSTRALIA	PERMITTEE or LICENCE ESSO EXPLORATION & PROD. AUSTRALIA & BEACH PETROLEUM N.I.	ESSO INTEREST 50%	OTHER INTEREST 50%	
CONTRACTOR SOUTH SEAS DRILLING CO.	RIG NAME SOUTHERN CROSS	EQUIPMENT TYPE SEMI-SUBMERSIBLE		
TOTAL RIG DAYS 101	DRILLING AFE NO. 28-00-308-231-802	COMPLETION NO. -	TYPE COMPLETION P & A	
LAHEE WELL CLASSIFICATION	Before Drilling After Drilling	New Field Wildcat Dry Hole		

2. CASING DATA

WELL: TRITON-1

CSG O.D. IN.	WT LBS/FT	GRADE	CONN.	CSG LENGTH METRES	SHOE DEPTH R.K.B.	CENTRALIZER POSITION	REMARKS
24"	670		CC	11			Pile Joint
20"	129	X52	CCxJV	13			Crossover Joint
20"	94	X52	JVxJV	98	240	Across collars on first five joints	8 Joints (including shoe Jnt.)
13 3/8"	54.5	K55	BTC	921	1042	Across collars on first six collars and first six collars inside 20" shoe.	77 Joints (including 2 Float Jnts).
9 5/8"	47.0	N-80	BTC	2690	2811	Across collars on first six collars and first six collars inside 13 3/8" Shoe.	230 Joints (including 2 Float Jnts)

3. CEMENT DATA
WELL: TRITON-1

DATE	DEPTH METRES	TYPE JOB	TYPE CEMENT	AMOUNT	ADDITIVES	REMARKS
Jan. 25	241	20" Csg.	Class 'N'	627 sx	2% CaCl ₂ 12% Gel. Freshwater	Lead Slurry 1.47 SG (12.3 ppg)
			Class 'N'	350sx	Neat w/ seawater	Tail Slurry 1.87 SG (15.6 ppg)
Jan. 31	1042	13 3/8" Csg	Class 'N'	850 sx	Freshwater	Lead Slurry 1.87 SG (15.6 ppg)
		13 3/8"Csg	Class 'N'	200 sx	Seawater	Tail Slurry 1.87 SG (15.6 ppg)
Mar. 4	1550 1467	Balance Cmt Plug for Sidetrack	Class 'N'	300 sx	0.8% CFR2 0.6% HR6L Freshwater	Tagged @ 1462.5m Drilled off to 1467m W/20KIPS High Density Plug 16.2 ppg
Mar. 23	2811	9 5/8" Csg	Class 'N'	600 sx	2.2% HR6L Freshwater	15.6 ppg
Apr. 4	2750 2700	Balance Cmt Plug set while repair- ing BOP	Class 'N'	60sx	Freshwater	15.6 ppg Tested to 2500 psi
Apr. 21	3470 3355	P & A Balance O.H. Cmt Plug	Class 'N'	178 sx	2.4% HR6L Freshwater	TAG TOC W/10KIPS 15.6 ppg
Apr. 22	2845 2780	P & A Balance 9 5/8" Shoe Plug	Class 'N'	110 sx	2.0% HR6L Freshwater	15.6 ppg Would test only to 1500 psi
Apr. 22	2780 2685	P & A Balance Back- up for 9 5/8" Shoe Plug	Class 'N'	110 sx	2.0% HR6L Freshwater	15.6 ppg tested to 2500 psi
Apr. 23	1087 925	P & A 9 5/8" Perf. Squeeze @ 13 3/8" Shoe	Class 'N'	230 sx	Freshwater	15.6 ppg

CEMENT DATAWELL: TRITON-1

DATE	DEPTH METRES	TYPE JOB	TYPE CEMENT	AMOUNT	ADDITIVES	REMARKS
Apr. 23	281 145	P & A 9 5/8" & 13 3/8" Perf. Squeeze @ 20" Shoe	Class 'N'	295 sx	Freshwater	15.66 ppg

WELL: TRITON-1 (See also TRITON-1 SIDETRACK)

4. SAMPLES, CONVENTIONAL CORES, SIDEWALL CORES			
INTERVAL	TYPE	INTERVAL	TYPE
250m - 810m	10m cuttings samples, washed and dried. 10m cuttings samples, unwashed.	810m - 2803m cont. 250m - 2803m	5m cuttings samples, unwashed. 15m composite cuttings samples, canned wet (Geochem)
810m - 2803m	5m cuttings samples, washed and dried.		

5. WIRELINE LOGS AND SURVEYS			
Type & Scale	From To	Scale	Max. Recorded Temperature
X SUITE 1: DIL-BHC-GR DIL-BHC-GR	1051 to 120M	1:200	41.1°C
	1051 to 120M	1:500	41.1°C
X SUITE 2: DIL-BHC-CAL-GR DIL-BHC-CAL-GR	2450 to 1042M	1:200	78.8°C
	2450 to 1042M	1:500	78.8°C

WELL: TRITON-1 SIDETRACK

4. SAMPLES, CONVENTIONAL CORES, SIDEWALL CORES			
INTERVAL	TYPE	INTERVAL	TYPE
1475m - 1815m and 1825m - 3545m	5m cuttings samples, washed and dried.	2840m - 3533.5m	Sidewall Cores (CST) Attempted: 51 Recovered: 37
	5m cuttings samples, unwashed.		
1815m - 1825m	No Samples.		
1475m - 3545m	15m composite cuttings samples, canned wet (Geochem)		

5. WIRELINE LOGS AND SURVEYS			
Type & Scale	From To	Scale/Details	Max. Recorded Temperature
VEL. SURV. RUN 1	2785 to 333M	13 LEVELS	
<u>SUITE 3:</u>			
✓ X DLL-MSFL-GR-SP	3540 to 1000M	1:200	121.0°C
✓ X DLL-MSFL-GR-SP	3542 to 1000M	1:500	121.0°C
✓ ✓ BHC-GR-SP	3542 to 2810M	1:200	126.6°C
✓ ✓ BHC-GR-SP	3542 to 2810M	1:500	126.6°C
✓ ✓ LDL-CNL-GR	3542 to 2810M	1:200	127.7°C
✓ ✓ LDL-CNL-GR	3542 to 2810M	1:500	127.7°C
X HDT	3545 to 3300M	1:200	131.1°C
RFT RFT	3532 to 3468M at 3420M	PRETESTS) ALL UNSUCCESSFUL SAMPLE)	
CST VEL. SURV. RUN 2	3533.5 to 2840M 3540 to 608M	1:200 REC'Y 37/51 12 LEVELS	143.3°C

6. GEOLOGICAL ANALYSIS

A. Stratigraphy

The stratigraphy of the section drilled by Triton-1 was essentially as predicted (Figure 6) with the exceptions that the Belfast Mudstone was thicker than interpreted from seismic, and the Waarre Sandstone did not contain the reservoir quality sandstone expected. A summary of the stratigraphy is given in Figure 5. The stratigraphic analysis is based on cuttings samples, sidewall cores, analyses of wireline logs, palynology and micropalaeontology.

The formation nomenclature published in "A Review of the Otway Basin", BMR Report Number 134, compiled by M.A. Reynolds has been used whenever possible.

AGE	UNIT/HORIZON	MD KB	DEPTH (m)		TVD Subsea	THICKNESS (m)
			MD Subsea	TVD KB		
Mid to Early Miocene	Port Campbell Limestone	250	229	250	229	320+
Early Miocene to Early Oligocene	Gellibrand Marl	570	549	570	549	1146.4
Early Oligocene	Un-named sands and silts	1717	1696	1716.4	1695.4	13m
Unconformity						
Maastrichtian to Turonian	Belfast Mudstone	1730	1709	1729.4	1708.4	1669.9
Turonian to Cenomanian	Waarre Formation	3406	3385	3399.3	3378.3	138.6+
	TOTAL DEPTH	3545	3524	3537.9	3516.9	

The following is a brief geological discussion of each unit. The first sample was taken at 250m after the 508mm (20") casing had been set.

Port Campbell Limestone (?SF-570mKB) Mid to Early Miocene

The Port Campbell Limestone consists of a skeletal calcarenite composed mainly of bryozoa fragments. With depth the unit becomes more argillaceous and less fossiliferous. The top of the unit occurs above the 508mm (20") casing shoe where the final samples were taken, probably at the sea floor.

Limestone: Calcarenite: white to medium grey, hard becoming friable with depth, abundant skeletal fragments, (mainly bryozoans with occasional bivalve fragments and echinoid spines), that become less numerous with depth, micritic matrix becomes argillaceous towards the base of the unit.

Gellibrand Marl (570m-1717mKB) Early Miocene to Early Oligocene

The unit grades from a marly limestone, through calcisiltite, to a siltstone that in parts, is only slightly calcareous.

Limestone: Calcarenite: as for the Port Campbell Limestone, however, becoming less fossiliferous and more argillaceous. Grading to calcisiltite.

Marl: Medium to light grey, gummy, calcareous, argillaceous.

Calcisiltite: Light grey to medium grey, firm to hard, slightly to very argillaceous matrix, calcareous cement, with only a minor fossil fragment content. Grades to calcareous siltstone.

Calcareous Siltstone: Light to medium grey, firm to hard, blocky, slightly to moderately argillaceous, very calcareous in parts, with traces of glauconite, pyrite, carbonaceous flecks and fossil fragments.

Siltstone: Medium grey, firm to hard, blocky becoming sub-fissile with depth, slightly to very calcareous. Grades to calcareous siltstone in parts. Contains minor amounts of very soft, gummy, water sensitive claystone. Contains traces of pyrite, carbonaceous flecks, fossil fragments.

Interbedded with the calcareous siltstone and the siltstone are occasional thin layers of Sandstone: clear, medium to coarse grained, sub-angular to wellrounded quartz grains.

Un-named sands and silts (1717m-1730mKB) Early Oligocene

Sandstone: Clear, occasionally milky; sub-angular to sub-rounded very fine to very coarse grained, mainly medium to coarse grained, very poorly sorted; rare aggregates of very fine quartz grains with a calcareous cement, very little interstitial clay, abundant glauconite pellets.
No hydrocarbon shows.

This sand is approximately 3m thick, the remainder of the unit consists of siltstone and claystone.

Siltstone: Medium dark grey to brownish grey, firm to hard, blocky to sub-fissile, calcareous with an argillaceous matrix, and a trace of carbonaceous flecking.

Claystone: Brown to grey, very soft, gummy, water sensitive clays, slightly calcareous, with a trace of carbonaceous flecking.

The description above, as well as the formation tops for the un-named sands and silts and the Belfast Mudstone, given throughout this report (eg. in all stratigraphic tables, on the well completion log etc.) relate to Triton-1 (the original hole).

In the sidetracked hole, siltstone, sandstone, claystone, and limestone occur in varying percentages throughout the interval 1690m-1740m KB.

The section from 1690m-1717m KB is interpreted as Gellibrand Marl sediments that contain possible reworked sand. The un-named sands and silts unit is assumed to occur between 1717m and 1730m KB (as in Triton-1). The occurrence of sand and non-Belfast type silt below 1730 KB is probably due to down hole contamination. Palaeontological studies (see Appendix 4) have indicated "moderate to severe down hole contamination" below 1725mKB.

Thus, it appears that the un-named sands and silts unit is locally variable-possibly the result of localised channelling.

Belfast Mudstone (1730m-3406m MDKB) Maastrichtian to Turonian

The Belfast Mudstone consists of siltstones and shales, occasionally interbedded with thin sandstone beds.

Siltstone: Brown to dark grey, firm to hard, blocky to sub-fissile, argillaceous, slightly calcareous at the top of the unit; quickly becoming non-calcareous, very carbonaceous, occasionally quartzose. With traces of pyrite, glauconite, and mica.

In parts the siltstone grades to claystone: light brown to light grey, soft, gummy, water sensitive clays, slightly calcareous in parts, with very fine carbonaceous flecking.

Shale: Medium to dark grey, firm to hard, sub-fissile to fissile, non-calcareous, common carbonaceous flecking and parting, with a trace of pyrite.

Sandstone: White to medium grey, very fine to fine grained, sub-angular to sub-rounded quartz grains, poorly sorted, friable to moderately hard, occasionally argillaceous, with calcareous cement, carbonaceous flecking and traces of glauconite and pyrite. No hydrocarbon shows.

The unit also contains traces of:

Limestone: white to light grey, slightly argillaceous in parts, with traces of glauconite and carbonaceous flecking.

Dolomite: buff to brown, hard, blocky.

Bivalves: fragments of the bivalve Inoceramus, light brown, prismatic calcite crystals.

The section from 1730m-3406m MDKB has been identified as Belfast Mudstone, as it can be described in accordance with Hawkins and Dellenbach's description, (in "A Review of the Otway Basin", 1971, BMR Report NO. 134),: of "a massive dark grey mudstone, containing occasional minor sandy beds, and the following characteristic accessory minerals: glauconite, pyrite and carbonaceous matter".

No section corresponding to Hawkins and Dellenbach's description of characteristic Flaxmans beds ie. "sandstone and sandy mudstone; the sandstone containing quartz, feldspars, and lithic fragments; and the sandy mudstone containing ferruginous chlorite oolites and pellets, with related siderite and minor phosphate, all of which are diagnostic for the formation", was encountered in Triton-1 Sidetrack.

The Waarre Formation is a sequence of quartz sandstones finely interbedded with carbonaceous shales and claystones.

Sandstone: Consists of both quartz grain aggregates and loose quartz fragments.

Quartz aggregates: clear to translucent, very fine to fine occasionally medium grained, sub-angular to sub-rounded quartz grains; the grains are well cemented by a calcareous and possibly siliceous cement; carbonaceous flecks are commonly included within the aggregates. There is evidence of the development of secondary quartz overgrowths. With increasing depth: the carbonaceous fragments become very common as do clasts of carbonaceous shale; the aggregates become less well cemented, the cement grades to an argillaceous and/or calcareous matrix. No hydrocarbon shows; no visual porosity.

Loose Quartz fragments: clear to translucent, fine to coarse grained, sub-angular to sub-rounded some of the quartz grains are encrusted with pyrite. With increasing depth (ie. below 3450m) the loose quartz becomes translucent, angular to occasionally sub-angular, of five to granule size (predominantly medium to coarse grain size); there are signs of fracturing within the quartz cuttings, and very occasionally of relic sub-angular to sub-rounded quartz grains surrounded by silica cement.

The loose quartz fragments appear to have been fractured (by the bit) from a strongly silicified sandstone, containing only sub-angular to sub-rounded quartz grains and silica cement. This siliceous sandstone is very finely interbedded with the carbonaceous, quartz aggregate sandstone described above, shale and claystone.

Shale: medium dark grey to dark grey, firm to hard, occasionally slightly calcareous, with common carbonaceous matter, tending to silty in parts. With traces of glauconite, muscovite, pyrite, and occasional chlorite. Shows fine interbedding with angular quartz fragments.

Claystone: White to very light grey, soft, gummy, contains fine to medium sized quartz grains, carbonaceous and shaley laminae, calcareous matrix. Shows fine interbedding with sandstone.

B. Porosity and Permeability

Log analysis of sands within the Waarre Formation in Triton-1 indicate very low porosities, in the range from 1 to 7 percent (see Appendix 6). This is supported by the low visible porosity in the cuttings. No conventional cores were cut, and the sidewall cores from these sands are unsuitable for porosity determination due to intense shattering.

Permeability in the sand section is also very low: eight pressure tests attempted below 3415m failed, and an RFT run at 3419.5m recovered 8.5 litres of mud (see Summary of Formation Test Programme - Section 7).

Caved cuttings chips have been examined both petrographically and by scanning electron microscope (SEM) (see Appendix 9). These studies indicate the Waarre Formation sands in Triton-1 have low porosity for the following reasons:

- i. well-developed films of illite occur over the detrital grains;
- ii. a high percentage (about 40%) of detrital grains are sedimentary or metamorphic rock fragments which have been deformed into the original pores by compaction; and
- iii. remaining porosity has been occluded by a combination of kaolin formation, carbonate (possible siderite) cement, and minor quartz overgrowths.

C. Hydrocarbon Indications

Hotwire gas shows of up to 15 units were observed over most of the section drilled, that is over the intervals 250m - 3308m and 3430m - 3545m. A maximum of 600 units was recorded in the lower portion of the Belfast Mudstone at 3404m.

A summary of the hotwire gas shows recorded is as follows:

<u>Interval</u>	<u>Hot Wire Units</u>	<u>Chromatograph</u>					
		C ₁	C ₂	C ₃	C ₄	C ₅	C ₆
250m-730m	-	-	-	-	-	-	-
730m-846m	0.5-2.6	400-2500	-	-	-	-	-
846m-1052m	2-12.5	1000-5800	0-600	-	-	-	-
1052m-2035m	0.1-8	20-5000	0-40	0-10	-	-	-
2035m-2530m	0.5-9	100-7900	0-350	0-89	0-16	0-32	0-64
2530m-3060m	0.5-8	200-3800	4-280	0-180	0-60	-	-
3060m-3308m	2-14	850-4930	20-350	0-90	-	-	-
3308m-3430m	2-600	300-417000	0-2500	0-1000	0-200	0-10	-
3430m-3545m	1-15	390-9000	0-Tr	-	-	-	-

None of the sandstones encountered showed any hydrocarbon fluorescence or cut. The high gas readings (around 3404m) are believed to be the result of an abnormally pressured zone within the Belfast Mudstone and possibly the Waarre Formation (see Appendix 7). Electric log evaluation (see Appendix 6) has shown: a) all sands below 3390m to be water wet, and b) the gas encountered in the deeper section of the well appears to be derived from shales or very tight sands. Log analysis has shown no significant gas saturation.

D. Relevance to the Occurrence of Hydrocarbons

1. Triton-1 has shown that the Waarre Formation is not prospective as a reservoir due to porosity occlusion where:

- a) there is a high percentage of unstable argillaceous rock fragments, and the Waarre Formation has been deeply buried resulting in excessive mechanical compaction.

This is likely to occur south of the Mussel Platform where there appears to have been a lack of reworking and winnowing of the sediments, as occurred on the higher structural blocks during Waarre deposition; and where there is also a very thick (eg. 1686m in Triton-1) section of Belfast Mudstone, resulting in the Waarre being buried under more than 3,400m of sediment.

The analysis of samples of the Waarre sandstones by scanning electron microscope (SEM), lead Duddy (see Appendix 9), to conclude that the deformation of rock fragments into the original pore spaces was the primary cause of porosity occlusion.

- b) diagenetic processes have resulted in the formation of illite grain coating cement, kaolinite pore fills and quartz overgrowths.

The diagenetic processes that have operated in this area appear to show a strong depth dependence. This is probably a reflection of different burial histories compared with the shallower sands, as well as the lithological depth dependence noted above.

Duddy (see Appendix 9) states that "most of the small amount of porosity remaining, (after mechanical compaction has deformed argillaceous rock fragments into the pore spaces), is occluded by (in order of decreasing importance): illite grain coating cement, kaolinite pore fills, and quartz overgrowths." The illite cement, which Duddy believes formed early in the burial history, would mean an effective permeability close to zero.

Porosities in the Waarre Formation sands from eastern Otway Basin wells show a strong depth dependence. In particular sands below approximately two to three thousand metres show a rapid decline in porosity.

2. Samples from the Belfast Formation have moderately rich total organic carbon values, and might therefore be expected to have good hydrocarbon source rock potential.

However, elemental analysis shows that the organic matter type is quite hydrogen poor, with most samples only rating as gas prone (see Appendix 8).

3. The top of organic maturity in Triton-1 occurs at about 2900m, and by T.D. (3545m) the sediments have reached the peak hydrocarbon generation zone (see Appendix 8).

E. GEOPHYSICAL ANALYSIS

The Triton structure is covered by a square grid of seismic data of approximately 1.25 kilometre line spacing. The well was drilled on shotpoint 2570 on line OE80A-1039. Data quality is fair to good over the structure.

Velocity control for the OE80A survey is provided by velocity analysis every 2.5 kilometres. Noise and multiples result in generally poor velocity picks below the base of the Tertiary section at 1.30 seconds two way time.

Three seismic horizons have been mapped over the Triton structure. These are:-

- i) The red horizon, "2000" : predicted prior to drilling to be the top of the Otway Group. However, the results of Triton-1 Sidetrack show this horizon, at 2.29 seconds two-way time, to be a reflector near the top of the Waarre Formation (see Enclosure 1).
- ii) The yellow horizon, "1800" : originally mapped as the top of the Waarre Formation, the yellow horizon now appears to represent an intra-Belfast reflector. The yellow horizon cannot be precisely tied to the well due to the lack of logs between 2450m and 2811m.
- iii) The orange horizon, "1400" : a strong reflection at 1.30 seconds two-way time corresponds to the base of the Tertiary section in Triton-1.

A positive (black) reflection at approximately 2.38 seconds marks the top of the Waarre Formation sands and silts.

Triton-1 results and a synthetic seismic trace are displayed with the seismic interpretation on Enclosure 5.

F. Structure

The Otway Basin was initiated by rifting, probably during the Late Jurassic, resulting in a major intra-cratonic graben. Shear movement along the graben during the late Albian gave rise to a series of en echelon NE-SW trending anticlines along its northern margin. Continued movement led to the eventual collapse and extensive normal faulting of the central graben, allowing the initiation of transgressive marine sedimentation.

The Triton structure is located approximately 3 kilometres south of the bounding fault system of the Mussel Platform. The Mussel Platform is a major structural element occupying most of the central and eastern part of VIC/P15. A north-west trending high block, it continues east until it merges with the offshore extension of the Otway Ranges just to the east of VIC/P15. A SW trending anticline at the "red seismic horizon" level has been broken up by predominantly NW trending normal faults, downthrown to the southwest, into a series of rotated fault blocks. Prior to drilling, the "red horizon" ("2000") (See Enclosure 1) was predicted to be the top of the Otway Group; however, the results of Triton-1 Sidetrack show this horizon to be very close to the top of the Waarre Formation. Structural closure over an area of 6.6 kilometres² has been mapped on the "red horizon", with a maximum vertical closure to the order of 250 metres.

Reactivation of faults during the Late Cretaceous - Early Tertiary modified the drape closure on the "yellow horizon" ("1800"). The "yellow horizon", which had been predicted pre-drill to be the top of a Waarre Formation equivalent, has now been interpreted as an intra-Belfast reflector.

7. SUMMARY OF FORMATION TEST PROGRAMME

TRITON-1 SIDETRACK

RFT NO. 1

TEST	SEAT	DEPTH (METRES) K.B.	CHAMBER	RECOVERY (LITRES)					HEWLETT-PACKARD FORMATION PRESSURE		HEWLETT-PACKARD HYDROSTATIC PRESSURE		HORIZONTAL PERMEABILITY millidarcys	REMARKS
				OIL	COND.	GAS	FORMATION WATER	FILTRATE	MPa _g	Psi _g	MPa _g	Psi _g		
RFT	1/8	3419.5	10.45 1	Nil	Nil	Nil	Nil	Nil	59.161	8580.6	61.501	8920		Tight, inadequate seal, test invalid.

APPENDIX 1

LITHOLOGICAL DESCRIPTIONS

Triton - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
250 - 260	100	<u>LIMESTONE</u> : white to light grey, occasionally light brown, hard, ranges from micrite to calcarenite, considerable skeletal grains (mainly bryozoans), rare ribbed bivalve fragments. Considerable cement contamination from casing shoe.
260 - 270	100	<u>LIMESTONE</u> : as above.
270 - 280	100	<u>LIMESTONE</u> : as above.
280 - 290	100	<u>LIMESTONE</u> : as above, mainly calcarenite, with abundant fossil fragments (mainly bryozoans). Rare calcarenite with glauconite in pore spaces. Occasionally echinoid spines. Moderate to good visual porosity.
290 - 300	100	<u>LIMESTONE</u> : as above.
300 - 310	100	<u>LIMESTONE</u> : as above, about half calcarenite, half skeletal.
310 - 320	100	<u>LIMESTONE</u> : white to light grey, hard, coarse to very coarse, dominantly very coarse, poorly sorted, calcareous cement, skeletal limestone, mainly bryozoa, few echinoid spines and bivalve fragments, cement contamination from casing shoe.
320 - 330	100	<u>LIMESTONE</u> : white to medium light grey, firm to hard, mainly calcarenite, fine to coarse, mainly medium, moderate sorting, trace glauconite present in calcarenite aggregates, aggregates are becoming argillaceous ("dirty") with depth, skeletal material (mainly bryozoans) continues but is decreasing. Occasional coral fragments.
330 - 340	100	<u>LIMESTONE</u> : as above.
340 - 350	100	<u>LIMESTONE</u> : as above.
350 - 360	100	<u>LIMESTONE</u> : as above, with medium to very coarse grain size, dominantly coarse.
360 - 370	100	<u>LIMESTONE</u> : white to medium grey, hard, fine to very coarse, dominantly medium, poorly sorted, calcareous cement, trace glauconite in calcarenite aggregates, small amount skeletal material (bryozoa).
370 - 380	100	<u>LIMESTONE</u> : as above, and becoming argillaceous.
380 - 390	100	<u>LIMESTONE</u> : as above, moderately well sorted.
390 - 400	100	<u>LIMESTONE</u> : medium light grey to medium grey, friable to hard, fine to coarse, mainly fine, well sorted argillaceous matrix, (wackstone), quite "dirty" appearance, rare glauconite flecks and very fine pellets, very rare fossil material (probably cavings).
400 - 410	100	<u>LIMESTONE</u> : as above.
410 - 420	100	<u>LIMESTONE</u> : as above, slightly more fossil fragments (bryozoa, rare echinoid spines).

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
420 - 430	100 trace	<u>LIMESTONE</u> : as above. <u>SANDSTONE</u> : quartz grains with red mineral staining.
430 - 440	100	<u>LIMESTONE</u> : as above, increasing fossil fragments (bryozoans), probably calcified worm tubes, echinoid spines.
440 - 450	100	<u>LIMESTONE</u> : as above.
450 - 460	100	<u>LIMESTONE</u> : as above, continuing about 30% fossil fragments.
460 - 470	100	<u>LIMESTONE</u> : as above.
470 - 480	100	<u>LIMESTONE</u> : Calcilutite to calcarenite, white to medium light grey, firm to hard, silt to fine sand size, moderately to well sorted, micritic matrix, trace glauconite, minor argillaceous material in matrix, limestone is becoming more cemented, and has only poor visual porosity, fossil fragments continue (about 30% of sample) - appear more worn than in shallower samples. still mainly bryozoans, rare forams (probably benthic), rare grains appear oolitic.
480 - 490	100	<u>LIMESTONE</u> : as above.
490 - 500	100	<u>LIMESTONE</u> : as above.
500 - 510	100	<u>LIMESTONE</u> : as above.
510 - 520	100	<u>LIMESTONE</u> : as above.
520 - 530	100	<u>LIMESTONE</u> : as above.
530 - 540	100	<u>LIMESTONE</u> : as above.
540 - 550	100	<u>LIMESTONE</u> : as above.
550 - 560	100 trace	<u>LIMESTONE</u> : white to medium light grey, calcilutite to calcarenite, silt to fine, firm to hard, well sorted, often has micritic matrix, some very argillaceous, poor visual porosity, rare very fine probably carbonaceous flecks, trace glauconite. Now have only about 10% fossil fragments (mainly bryozoans). <u>SANDSTONE</u> : clear, medium to coarse, moderately rounded quartz grains.
560 - 570	100	<u>LIMESTONE</u> : as above.
570 - 580	50 50	<u>LIMESTONE</u> : as above, limestone is fairly argillaceous, trace possible fish tooth, trace echinoid spines, some slightly pyritised. <u>MARL</u> : medium light grey, comes over shakers as gumbo.
580 - 590	50	<u>LIMESTONE</u> : as above.
	50	<u>MARL</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
590 - 600	40	<u>LIMESTONE</u> : as above, moderately argillaceous, calcilutite to calcarenite, fossil fragments less common (now less than 10%) and are cemented into limestone aggregates, trace bryozoan fragments, trace corals, trace forams.
	60	<u>MARL</u> : as above.
	trace	<u>SANDSTONE</u> : quartzose.
600 - 610	40	<u>LIMESTONE</u> : as above, some very argillaceous, mainly calcilutite grading to fine calcarenite, continuing about 10% fossil fragments (bryozoans, echinoid spines, single corals).
	60	<u>MARL</u> : as above.
	trace	<u>SILTSTONE</u> : buff to tan, very argillaceous, quartzose, hard, calcareous, trace carbonaceous flecks.
610 - 620	50	<u>LIMESTONE</u> : as above.
	50	<u>MARL</u> : as above.
	trace	<u>SILTSTONE</u> : as above.
620 - 630	70	<u>LIMESTONE</u> : light grey to medium grey, calcilutite grading to calcarenite, slightly to very argillaceous, firm to hard, silt to fine grain size, well sorted, rare glauconite, rare carbonaceous material. Poor to no visual porosity in aggregates. Fossil fragments have increased to about 30 - 40% of limestone in sample, abundant echinoid spines and bryozoans, minor single coral fragments, common forams.
	30	<u>MARL</u> : medium to light grey, calcareous, argillaceous, forms gumbo over shakers,
	630 - 640	60
640 - 650	40	<u>MARL</u> : as above.
	50	<u>LIMESTONE</u> : as above, about 10% fossil fragments.
650 - 655	50	<u>MARL</u> : as above.
	50	<u>LIMESTONE</u> : as above.
655 - 660	50	<u>MARL</u> : as above.
	60	<u>LIMESTONE</u> : as above, becoming very argillaceous, less than 10% fossil fragments.
660 - 670	40	<u>MARL</u> : as above.
	70	<u>CALCISILTITE</u> : grading to calcareous siltstone; medium light grey to light brown-grey, firm to hard, silt to fine grained, well sorted, slightly to very argillaceous matrix, calcareous cement, appears fairly uniform, minor fossil fragments only.. Has graded from limestone above (has become more argillaceous with depth).

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
660 - 670 (contd)	30	<u>MARL</u> : as above.
670 - 680	70	<u>CALCISILTITE</u> : as above.
	30	<u>MARL</u> : as above.
680 - 690	60	<u>CALCISILTITE</u> : as above.
	40	<u>MARL</u> : as above.
	trace	<u>SANDSTONE</u> : clear, medium to coarse, well rounded quartz grains.
690 - 700	70	<u>CALCISILTITE</u> : as above.
	30	<u>MARL</u> : as above, forms gumbo.
700 - 710	60	<u>CALCISILTITE</u> : as above.
	40	<u>MARL</u> : as above.
710 - 720	60	<u>CALCISILTITE</u> : white to medium light grey, becoming slightly cleaner (less argillaceous) than at 670 m, firm to hard, fine to silt sized grains, well sorted, non to moderately argillaceous matrix, calcareous cement, some similar to limestone as at 630 m but less fossiliferous, rare dark, fine carbonaceous flecks, trace glauconite, poorly preserved fossil fragments - mainly probably echinoid spines, some corals, some bryozoans, some slightly pyritised, trace forams (?benthic).
	40	<u>MARL</u> : medium to light grey, calcareous, argillaceous forms gumbo.
720 - 730	70	<u>CALCISILTITE</u> : as above.
	30	<u>MARL</u> : as above.
730 - 740	70	<u>CALCISILTITE</u> : as above.
	30	<u>MARL</u> : as above, with trace microcrystalline pyrite aggregates.
740 - 750	70	<u>CALCISILTITE</u> : grading to calcareous siltstone, light grey to medium grey, firm to hard, slightly to very argillaceous matrix, occasionally pyritised tubes (possibly burrows) some fossil fragments (mainly bryozoans)
	30	<u>MARL</u> : as above.
750 - 760	70	<u>CALCISILTITE</u> : as above.
	30	<u>MARL</u> : as above.
760 - 770	80	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : as above.
	20	<u>MARL</u> : as above, trace microcrystalline pyrite aggregates.
770 - 780	70	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : as above, less than 10% fossil fragments.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
770 - 780 (contd)	30	<u>MARL</u> : as above.
780 - 790	80	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : as above.
	20	<u>MARL</u> : as above.
790 - 800	90	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : as above.
	10	<u>MARL</u> : as above.
800 - 810	90	<u>CALCAREOUS SILTSTONE</u> : medium light grey, firm to hard, clay to very fine, very argillaceous matrix, calcareous cement, some grades to cleaner calcilutite (as had been present before) trace fossil fragments, mostly worn, coals, forams, probably bryozoans, trace glauconite, trace pyrite.
	10	<u>MARL</u> : as above.
810 - 815	100	<u>CALCAREOUS SILTSTONE</u> : as above, with trace fossil fragments.
815 - 820	100	<u>CALCAREOUS SILTSTONE</u> : as above, some grading to cleaner calcilutite.
820 - 825	100	<u>CALCAREOUS SILTSTONE</u> : as above.
825 - 830	100	<u>CALCAREOUS SILTSTONE</u> : as above.
830 - 835	100	<u>CALCAREOUS SILTSTONE</u> : as above, continuing trace abraded fossil fragments, some very broken up, and incorporated in siltstone aggregates.
835 - 840	100	<u>CALCAREOUS SILTSTONE</u> : as above.
840 - 845	100	<u>CALCAREOUS SILTSTONE</u> : as above.
845 - 850	100	<u>CALCAREOUS SILTSTONE</u> : as above.
850 - 855	100	<u>CALCAREOUS SILTSTONE</u> : light grey to medium light grey, occasionally pale green, firm to hard, mostly very argillaceous matrix, some cleaner, grades to calcisiltite, calcareous cement, trace glauconitic flecks, trace fossil fragments (bryozoans), mostly abraded, trace pyrite.
	trace	<u>SANDSTONE</u> : medium to coarse, rounded to sub-rounded quartz grains.
855 - 860	100	<u>SILTSTONE</u> : calcareous, as above, becoming slightly less calcareous with depth, trace forams (well worn).
860 - 865	100	<u>SILTSTONE</u> : as above grading to Calcareous Siltstone as above.
865 - 870	100	<u>SILTSTONE</u> : grading to Calcareous Siltstone as above, trace pyrite aggregates, trace fossil fragments, polished foram test, abraded bryozoans and probably coral fragments.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
870 - 875	100	<u>SILTSTONE</u> : grading to calcareous siltstone as above, minor amounts of calcisiltite, trace fossil fragments.
875 - 880	50	<u>SILTSTONE</u> : medium grey, hard, blocky, argillaceous matrix calcareous, trace glauconite, trace probable carbonaceous flecks.
	50	<u>CALCAREOUS SILTSTONE</u> : grading to calcisiltite, light grey to medium light grey, firm to hard, blocky, slightly to moderately argillaceous, trace glauconite, trace very fine disseminated pyrite, trace carbonaceous flecks, calcareous cement, trace fossil fragments, mainly bryozoans and echinoid spines.
880 - 885	50	<u>SILTSTONE</u> : as above.
	50	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, trace fossil fragments, trace crystalline pyrite aggregates.
885 - 890	70	<u>SILTSTONE</u> : as above.
	30	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, trace fossil fragments.
890 - 895	60	<u>SILTSTONE</u> : as above.
	40	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, trace fossil fragments, fairly well worn, also solitary coral fragment.
895 - 900	60	<u>SILTSTONE</u> : as above.
	40	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, trace fossil fragments.
900 - 905	70	<u>SILTSTONE</u> : as above.
	30	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, fossils becoming rarer.
905 - 910	80	<u>SILTSTONE</u> : as above.
	20	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
910 - 915	70	<u>SILTSTONE</u> : medium grey, rare pale green, firm to hard, blocky, argillaceous matrix, calcareous cement, trace very fine glauconite, trace very fine carbonaceous material.
	30	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : light grey to medium light grey, firm to hard, blocky, trace slightly argillaceous matrix, very calcareous, trace very fine glauconite, trace very fine carbonaceous material, trace very fine disseminated pyrite, trace poorly preserved fossils, mainly bryozoans with rare forams.
915 - 920	60	<u>SILTSTONE</u> : as above.
	40	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
920 - 925	80	<u>SILTSTONE</u> : as above
	20	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, with trace fossil fragments.
	trace	<u>SANDSTONE</u> : clear, medium to very coarse, well rounded quartz grains.
925 - 930	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, trace fossils, abraded.
	trace	<u>SANDSTONE</u> : as above.
930 - 935	100	<u>SILTSTONE</u> : as above, with trace fossil fragments, mainly bryozoans.
	trace	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
935 - 940	100	<u>SILTSTONE</u> : as above with trace bryozoans and forams.
	trace	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
940 - 945	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, with trace fossils.
945 - 950	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
950 - 955	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
955 - 960	80	<u>SILTSTONE</u> : medium grey, occasionally pale green, firm to hard, blocky, argillaceous matrix, slightly to moderately calcareous, trace very fine carbonaceous specks, trace fine glauconite flecks, rare pyrite.
	20	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : light grey to medium light grey, firm to hard, blocky, trace slightly argillaceous matrix, trace glauconite, trace very fine carbonaceous specks, trace very fine disseminated pyrite, trace forams and bryozoans.
960 - 965	80	<u>SILTSTONE</u> : as above.
	20	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
965 - 970	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
970 - 975	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, with trace forams and bryozoans.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
970 - 975 (contd)	trace	<u>SANDSTONE</u> : clear, medium to very coarse, subangular to subrounded quartz grains.
975 - 980	90	<u>SILTSTONE</u> : as above, hard, trace pyrite aggregates.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
980 - 985	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCAREOUS SILTSTONE/CALCISILTITE</u> : as above, trace fossil fragments.
	trace	<u>SANDSTONE</u> : as above.
985 - 990	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE</u> : as above, trace pyrite.
990 - 995	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE</u> : as above, trace pyrite.
	trace	<u>SANDSTONE</u> : loose quartz grains.
995 - 1000	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCISILTITE</u> : as above, with trace forams and bryozoans.
	trace	<u>SANDSTONE</u> : loose quartz grains.
1000 - 1005	70	<u>SILTSTONE</u> : as above.
	30	<u>CALCISILTITE</u> : as above.
1005 - 1010	80	<u>SILTSTONE</u> : as above.
	20	<u>CALCISILTITE</u> : as above, trace forams and bryozoans.
1010 - 1015	80	<u>SILTSTONE</u> : as above.
	20	<u>CALCISILTITE</u> : as above.
1015 - 1020	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE</u> : as above, trace fossil fragments.
1020 - 1025	100	<u>SILTSTONE</u> : as above, trace fossil fragments, mainly bryozoans.
	trace	<u>CALCISILTITE</u> : as above.
1025 - 1030	90	<u>SILTSTONE</u> : medium grey, occasionally greenish, hard, blocky to occasionally subfissile, argillaceous matrix, calcareous cement, trace glauconite, trace very fine carbonaceous material, occasionally pyrite, occasionally calcite patches.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1025 - 1030 (contd)	10	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : light grey to medium light grey, occasionally pale green, firm to hard, blocky, trace to moderate argillaceous matrix, occasionally glauconite, rare very fine carbonaceous material.
1030 - 1035	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : clear, coarse to very coarse, subangular to rounded quartz grains.
1035 - 1040	80	<u>SILTSTONE</u> : as above.
	20	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : as above.
1040 - 1045	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCISILTITE</u> : as above.
	trace	<u>SANDSTONE</u> : quartzose, as above.
1045 - 1050	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE</u> : as above.
1050 - 1055	90	<u>SILTSTONE</u> : medium light grey to medium grey, blocky to subfissile, firm to hard, argillaceous matrix, moderate to very calcareous, some grades to calcisiltite, trace very fine glauconite, trace very fine carbonaceous flecks.
	10	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : light grey to medium light grey, firm to hard, blocky to subfissile, some with argillaceous matrix, trace very fine glauconite.
1055 - 1060	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE/CALCAREOUS SILTSTONE</u> : as above.
1060 - 1065	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCISILTITE</u> : as above.
1065 - 1070	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCISILTITE</u> : as above. Note: some gumbo coming over shakers either from claystone beds or argillaceous material in siltstone matrix. It is medium grey, very soft, calcareous, trace carbonaceous flecks.
1070 - 1075	80	<u>SILTSTONE</u> : as above.
	20	<u>CALCISILTITE</u> : as above.
1075 - 1080	90	<u>SILTSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>ft</u>	<u>DESCRIPTION</u>
1075 - 1080 (contd)	10	<u>CALCISILTITE</u> : as above.
1080 - 1085	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE</u> : as above.
1085 - 1090	100	<u>SILTSTONE</u> : as above, with trace pyrite.
	trace	<u>CALCISILTITE</u> : as above. Minor gumbo continuing.
1090 - 1095	90	<u>SILTSTONE</u> : as above.
	10	<u>CALCISILTITE</u> : as above with minor hard crystalline calcite.
1095 - 1100	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCISILTITE</u> : as above.
1100 - 1105	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCISILTITE</u> : as above, rare microcrystalline calcite grains. Minor gumbo continuing.
1105 - 1110	100	<u>SILTSTONE</u> : as above, containing minor amounts of gumbo, medium light grey, very soft, water sensitive claystone, slightly silty.
1110 - 1115	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : gumbo, with trace fossil fragments, mainly worn, some forams.
1115 - 1120	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : gumbo.
1120 - 1125	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : gumbo.
1125 - 1130	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : gumbo.
	trace	<u>CALCISILTITE</u> : as above.
1130 - 1135	100	<u>SILTSTONE</u> : as above.
	Minor	<u>CLAYSTONE</u> : gumbo.
	trace	<u>CALCILUTITE</u> : as above.
1135 - 1140	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : gumbo.
	trace	<u>CALCILUTITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>ft</u>	<u>DESCRIPTION</u>
1140 - 1145	80	<u>SILTSTONE</u> : medium grey, hard, blocky to subfissile, argillaceous matrix, moderate to very calcareous cement, some grading to calcisiltite and silty micrite, trace fine to very fine glauconite grains, very rare carbonaceous flecks.
	20	<u>CLAYSTONE</u> : light grey, very soft, forms gumbo, swelling clays, very calcareous, trace very fine disseminated carbonaceous material.
1145 - 1150	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1150 - 1155	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1155 - 1160	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1160 - 1165	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1165 - 1170	50	<u>SILTSTONE</u> : as above, some grading to very fine silty sandstone.
	50	<u>CLAYSTONE</u> : as above.
1170 - 1175	60	<u>SILTSTONE</u> : as above, some grades to very fine silty sandstone.
	40	<u>CLAYSTONE</u> : as above.
1175 - 1180	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1180 - 1185	70	<u>SILTSTONE</u> : as above, some grading to very fine silty sandstone, still trace grading to calcisiltite.
	30	<u>CLAYSTONE</u> : as above.
1185 - 1190	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1190 - 1195	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1195 - 1200	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above, with trace foram fossil fragments, very well worn.

LITHOLOGICAL DESCRIPTIONS

TRITON-1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1200 - 1205	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1205 - 1210	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1210 - 1215	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above, with a rare trace of well worn foram fossils.
1215 - 1220	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1220 - 1225	80	<u>SILTSTONE</u> : as above, some grading to calcilutite.
	20	<u>CLAYSTONE</u> : as above.
1225 - 1230	80	<u>SILTSTONE</u> : medium grey to medium dark grey, occasionally light grey, firm to hard, blocky, occasionally subfissile, argillaceous matrix, moderate to very calcareous, some grades to calcisiltite, grades to very fine silty sandstone, occasionally carbonaceous material, glauconite becoming rare.
	20	<u>CLAYSTONE</u> : light grey, soft, gummy, forms gumbo, calcareous, trace carbonaceous material.
1230 - 1235	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1235 - 1240	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
1240 - 1245	80	<u>SILTSTONE</u> : as above, grading to very fine silty sandstone.
	20	<u>CLAYSTONE</u> : as above, with trace benthonic forams.
1245 - 1250	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1250 - 1255	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above, with trace forams.
1255 - 1260	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above, with trace foram fragments.
1260 - 1265	90	<u>SILTSTONE</u> : as above, with trace very well worn bryozoan fragments, and forams.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : quartzose.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1265 - 1270	80	<u>SILTSTONE</u> : medium grey to medium dark grey, hard, blocky to subfissile, argillaceous matrix, moderate to very calcareous, some grades to argillaceous calcisiltite, some grades to silty sandstone, trace carbonaceous flecks, rare very fine glauconite flecks.
	20	<u>CLAYSTONE</u> : light grey, very soft, calcareous, trace carbonaceous material, becomes gumbo.
1270 - 1275	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
1275 - 1280	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
1280 - 1285	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above, with trace of forams.
1285 - 1290	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1290 - 1295	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1295 - 1300	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1300 - 1305	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1305 - 1310	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : very fine quartz grains.
1310 - 1315	90	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
1315 - 1320	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1320 - 1325	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1325 - 1330	70	<u>SILTSTONE</u> : medium grey to medium dark grey, hard, blocky to subfissile, moderate to very calcareous, some grades to medium light grey calcisiltite, argillaceous matrix, trace carbonaceous flecks, rare very fine glauconite flecks, some siltstone grading to very fine silty quartz sandstone.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1325 - 1330 (contd)	30	<u>CLAYSTONE</u> : light grey to medium light grey, very soft (forms gumbo), calcareous, trace carbonaceous material.
1330 - 1335	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1335 - 1340	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1340 - 1345	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1345 - 1350	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1350 - 1355	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1355 - 1360	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1360 - 1365	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1365 - 1370	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, rare trace of poorly preserved forams.
1370 - 1375	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1375 - 1380	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1380 - 1385	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1385 - 1390	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above, trace forams.
1390 - 1395	60	<u>SILTSTONE</u> : medium grey to medium dark grey, hard, mainly blocky (some subfissile) moderate to very calcareous, very argillaceous matrix, some slightly sandy and some grades to calcisiltite, trace carbonaceous material, rare very fine pale to medium green glauconite flecks.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1390 - 1395 (contd)	40	<u>CLAYSTONE</u> : light grey to medium light grey, very soft, like gumbo over shakers, water sensitive clays, very calcareous, trace carbonaceous material.
1395 - 1400	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1400 - 1405	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1405 - 1410	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1410 - 1415	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1415 - 1420	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1420 - 1425	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, with trace worn forams.
1425 - 1430	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above, with trace worn forams.
1430 - 1435	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, with rare trace of worn forams.
1435 - 1440	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1440 - 1445	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1445 - 1450	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1450 - 1455	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1455 - 1460	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1460 - 1465	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1465 - 1470	50	<u>SILTSTONE</u> : medium grey to medium dark grey, hard, blocky, occasionally subfissile, moderate to very calcareous, argillaceous matrix, some grades to argillaceous calcisiltite, some slightly sandy, trace carbonaceous flecks, trace fine glauconite.
	50	<u>CLAYSTONE</u> : light grey to medium light grey, very soft, water sensitive, calcareous, trace carbonaceous flecks.
1470 - 1475	50	<u>SILTSTONE</u> : as above, rare pyritic patches.
	50	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : clear, medium, subangular quartz grains.
1475 - 1480	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, with trace well worn forams.
1480 - 1485	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, with trace well worn forams.
1485 - 1490	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, with trace forams.
1490 - 1495	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1495 - 1500	60	<u>SILTSTONE</u> : medium grey to medium dark grey to brownish grey, hard, blocky to subfissile, argillaceous matrix, trace carbonaceous flecks, minor glauconite, becoming very rare, moderate to very calcareous, some slightly sandy, rare pyritic patches.
	40	<u>CLAYSTONE</u> : light grey to medium light grey, very soft, water sensitive clays, calcareous, trace very fine carbonaceous flecks.
1500 - 1505	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above, with trace well worn forams, some appear to be recrystallised.
1505 - 1510	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1510 - 1515	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1515 - 1520	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above, with trace well worn forams.
1520 - 1525	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, with trace well worn forams.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1525 - 1530	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1530 - 1535	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1535 - 1540	60	<u>SILTSTONE</u> : medium grey to medium dark grey to brownish grey, firm to hard, blocky to subfissile, moderate to very calcareous, argillaceous matrix, some slightly sandy, trace carbonaceous material, very rare medium green very fine glauconite.
	40	<u>CLAYSTONE</u> : light grey to medium light grey, very soft, water sensitive clays, calcareous, trace carbonaceous material.
1540 - 1545	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1545 - 1550	70	<u>SILTSTONE</u> : as above, rare pyritic patches.
	30	<u>CLAYSTONE</u> : as above.
1550 - 1555	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1555 - 1560	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1560 - 1565	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1565 - 1570	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1570 - 1575	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1575 - 1580	60	<u>SILTSTONE</u> : medium grey to medium dark grey to brownish grey, firm to hard, blocky to subfissile, argillaceous, moderate to very calcareous, trace carbonaceous material, very rare medium grained glauconite, trace forams, with some other badly worn fossils, possibly corals.
	40	<u>CLAYSTONE</u> : light grey, very soft, gummy, water sensitive clays, calcareous, trace carbonaceous material.
1580 - 1585	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1585 - 1590	70	<u>SILTSTONE</u> : as above, occasional pyritic patches.
	30	<u>CLAYSTONE</u> : as above.
1590 - 1595	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above, with trace well worn forams.
1595 - 1600	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1600 - 1605	40	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1605 - 1610	30	<u>LIMESTONE</u> : light grey, firm to hard, slightly to moderately argillaceous, mostly fairly clean, slightly recrystallised, appears micritic, trace carbonaceous flecks in matrix.
	40	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1610 - 1615	20	<u>LIMESTONE</u> : as above.
	50	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1615 - 1620	10	<u>LIMESTONE</u> : as above.
	50	<u>SILTSTONE</u> : as above, occasional pyritic patches.
	40	<u>CLAYSTONE</u> : as above.
1620 - 1625	10	<u>LIMESTONE</u> : as above.
	50	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1625 - 1630	10	<u>LIMESTONE</u> : as above, with trace forams.
	60	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1630 - 1635	10	<u>LIMESTONE</u> : as above.
	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1635 - 1640	trace	<u>LIMESTONE</u> : as above.
	50	<u>SILTSTONE</u> : as above, occasionally with pyritic patches.
	50	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1640 - 1645	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1645 - 1650	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1650 - 1655	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1655 - 1660	80	<u>SILTSTONE</u> : as above, occasionally pyritic patches.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1660 - 1665	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1665 - 1670	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1670 - 1675	40	<u>SILTSTONE</u> : medium grey to medium dark grey, firm to hard, blocky to subfissile, moderate to very calcareous, trace carbonaceous material, occasionally pyritic patches, some slightly sandy.
	40	<u>CLAYSTONE</u> : light grey, soft, gummy, water sensitive, calcareous, trace carbonaceous material.
	20	<u>LIMESTONE</u> : light grey, firm to hard, blocky to subfissile, looks slightly recrystallised, micritic, trace very fine carbonaceous flecks, trace glauconite.
1675 - 1680	40	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
	20	<u>LIMESTONE</u> : as above.
1680 - 1685	40	<u>SILTSTONE</u> : as above but some with abundant glauconite.
	10	<u>CLAYSTONE</u> : as above.
	50	<u>LIMESTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1685 - 1690	40	<u>SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
	50	<u>LIMESTONE</u> : as above, gold mineral fluorescence only.
1690 - 1695	50	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	30	<u>LIMESTONE</u> : as above.
1695 - 1700	60	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	20	<u>LIMESTONE</u> : as above.
1700 - 1705	70	<u>SILTSTONE</u> : medium grey to medium dark grey to brownish grey, firm to hard, subfissile to blocky, argillaceous matrix, calcareous, carbonaceous flecks, some slightly sandy.
	30	<u>CLAYSTONE</u> : medium light grey, soft, gummy, water sensitive clays, calcareous, trace carbonaceous flecks.
	trace	<u>LIMESTONE</u> : light grey, subfissile, hard, fairly clear, micritic, trace carbonaceous flecks.
1705 - 1710	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above, with trace forams.
	trace	<u>LIMESTONE</u> : as above.
1710 - 1715	60	<u>SILTSTONE</u> : as above, trace glauconite.
	40	<u>CLAYSTONE</u> : as above.
1715 - 1720	80	<u>SANDSTONE</u> : clear, occasionally milky, subangular to rounded, very fine to very coarse, mainly medium to coarse, very poorly sorted quartz grains, rare aggregate of very fine quartz grains with calcareous cement, fairly clear (very little interstitial clay) but abundant glauconite pellets in quartz aggregates and on grains. Occasionally welded quartz grains (welded before deposition - possibly from quartzite). No shows.
	10	<u>SILTSTONE</u> : as above, but some cuttings have abundant glauconite.
	10	<u>CLAYSTONE</u> : as above.
1720 - 1725	100	<u>CLAYSTONE</u> : brownish grey, very soft, gummy, water sensitive clays, slightly calcareous, slightly milky in part, trace very fine carbonaceous flecks, trace pyritic clusters.
	trace	<u>SILTSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1720 - 1725 (contd)		<u>Note:</u> no sand through desilters.
1725 - 1730	100	<u>CLAYSTONE:</u> as above, some firm.
	trace	<u>SILTSTONE:</u> as above.
	trace	<u>SANDSTONE:</u> as above.
1730 - 1735	90	<u>CLAYSTONE:</u> as above.
	10	<u>SILTSTONE:</u> as above, trace pyrite, aggregates and occasional pyrite cyclinders (infilled burrows?).
1735 - 1740	90	<u>CLAYSTONE:</u> as above, some slightly silty, trace fine crystalline pyrite aggregates becoming more common.
	10	<u>LIMESTONE:</u> white, hard, micritic, clean, occasionally tan, subfissile.
1740 - 1745	90	<u>CLAYSTONE:</u> as above, with trace pyrite.
	10	<u>LIMESTONE:</u> as above.
1745 - 1750	100	<u>CLAYSTONE:</u> as above, occasionally hard, calcareous cemented cuttings, trace pyrite.
	trace	<u>LIMESTONE:</u> as above.
1750 - 1755	50	<u>CLAYSTONE:</u> as above.
	40	<u>SILTSTONE:</u> dark grey to brownish grey, firm to hard, very argillaceous, subfissile, slightly to moderately calcareous, grades from claystone, trace carbonaceous flecks, trace pyrite.
	10	<u>LIMESTONE:</u> as above.
1755 - 1760	50	<u>CLAYSTONE:</u> as above, trace pyrite.
	50	<u>SILTSTONE:</u> as above.
	trace	<u>LIMESTONE:</u> as above.
1760 - 1765	40	<u>CLAYSTONE:</u> as above.
	40	<u>SILTSTONE:</u> as above, trace pyrite.
	20	<u>LIMESTONE:</u> white, tan, hard, micritic, some looks recrystallised (very fine microcrystalline) subfissile to blocky, clean.
1765 - 1770	40	<u>CLAYSTONE:</u> as above.
	50	<u>SILTSTONE:</u> as above, trace pyrite.
	10	<u>LIMESTONE:</u> as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1770 - 1775	50	<u>CLAYSTONE</u> : as above.
	50	<u>SILTSTONE</u> : as above, trace pyrite aggregates.
	trace	<u>LIMESTONE</u> : as above.
1775 - 1780	50	<u>CLAYSTONE</u> : as above.
	50	<u>SILTSTONE</u> : as above, grades to shale, trace pyrite.
1780 - 1785	50	<u>CLAYSTONE</u> : as above.
	50	<u>SILTSTONE</u> : as above, grades to shale, trace pyrite.
1785 - 1790	60	<u>CLAYSTONE</u> : as above.
	40	<u>SILTSTONE</u> : as above, trace pyrite aggregates.
1790 - 1795	60	<u>CLAYSTONE</u> : as above.
	40	<u>SILTSTONE</u> : as above, trace pyrite aggregates.
1795 - 1800	50	<u>CLAYSTONE</u> : brownish grey, very soft, gummy, water sensitive, slightly calcareous, trace carbonaceous flecks.
	50	<u>SILTSTONE</u> : brownish grey to medium grey, fissile to subfissile, non calcareous to slightly calcareous, very argillaceous, grades to shale, trace carbonaceous flecks, trace micromica, pyritic patches, trace pyrite crystalline aggregates.
1800 - 1805	50	<u>SILTSTONE</u> : as above, grading to shale, trace pyrite.
	50	<u>CLAYSTONE</u> : as above, trace pyrite.
1805 - 1810	50	<u>SILTSTONE</u> : as above, grading to shale.
	50	<u>CLAYSTONE</u> : as above.
1810 - 1815	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1815 - 1820	60	<u>SILTSTONE</u> : grading to shale, light grey to dark grey, hard to soft, argillaceous, carbonaceous in part, slightly calcareous.
	40	<u>CLAYSTONE</u> : light to medium grey, soft.
1820 - 1825	75	<u>SILTSTONE</u> : grading to shale, light to dark grey, hard to soft, some carbonaceous inclusions.
	25	<u>CLAYSTONE</u> : light grey, soft.
1825 - 1830	95	<u>SILTSTONE</u> : as above, more dark material, cuttings are now more angular.
	5	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : white, hard, fine quartz sand. grading to siltstone.

LITHOLOGICAL DESCRIPTIONS

TRITON- 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1830 - 1835	95	<u>SILTSTONE</u> : as above.
	5	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
1835 - 1840	98	<u>SILTSTONE</u> : light grey to dark grey, dark grey is more predominant, hard to soft, contains inclusions of carbonaceous material, blocky to subfissile, darker cuttings are harder, dark siltstone is non calcareous, light coloured siltstone is very calcareous.
	2	<u>CLAYSTONE</u> : light grey, very soft, non calcareous.
	trace	<u>SANDSTONE</u> : white, very hard, very fine, quartzose, calcareous.
1840 - 1845	100	<u>SILTSTONE</u> : as above, slight reduction in calcareous material.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
1845 - 1850	100	<u>SILTSTONE</u> : as above, associated pyrite.
	trace	<u>CLAYSTONE</u> : as above.
1850 - 1855	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
1855 - 1860	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
1860 - 1865	100	<u>SILTSTONE</u> : medium grey to medium dark grey, soft to moderately firm, occasionally hard, blocky, some fine carbonaceous flecking, trace glauconite, fine disseminated pyrite, trace calcareous cement.
	trace	<u>CLAYSTONE</u> : as above.
1865 - 1870	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1870 - 1875	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1875 - 1880	100	<u>SILTSTONE</u> : as above, becoming subfissile.
	trace	<u>CLAYSTONE</u> : as above.
1880 - 1885	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1885 - 1890	90	<u>SILTSTONE</u> : as above, micaceous, becoming blocky.
	10	<u>DOLOMITE?</u> olive green to tan, blocky, angular.
	trace	<u>CLAYSTONE</u> : as above.
1890 - 1895	100	<u>SILTSTONE</u> : as above, becoming subfissile.
	trace	<u>DOLOMITE?</u> as above.
	trace	<u>CLAYSTONE</u> : as above.
1895 - 1900	100	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1900 - 1905	85	<u>SILTSTONE</u> : medium grey to medium dark grey, soft to moderately firm, micromica, argillaceous.
	15	<u>CLAYSTONE</u> : soft, light grey to pale brown, gummy.
	trace	<u>SANDSTONE</u> : white, fine grained, poorly sorted, quartzose.
1905 - 1910	75	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : medium grey to medium dark grey, firm, fissile, gradational to siltstone above.
	trace	<u>SANDSTONE</u> : as above, calcareous cement.
	15	<u>CLAYSTONE</u> : as above.
1910 - 1915	75	<u>SILTSTONE</u> : as above.
	15	<u>SHALE</u> : as above, less fissile.
	trace	<u>SANDSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
1915 - 1920	60	<u>SILTSTONE</u> : medium grey to medium dark grey, soft to moderately firm, some fine carbonaceous material, argillaceous, micaceous.
	10	<u>SANDSTONE</u> : white to very light grey, moderately hard, fine quartz grains, poorly sorted, calcareous cement.
	15	<u>CLAYSTONE</u> : as above.
	15	<u>SHALE</u> : as above.
1920 - 1925	85	<u>SILTSTONE</u> : as above.
	15	<u>SHALE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1925 - 1930	90	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : as above.
1930 - 1935	80	<u>SILTSTONE</u> : medium grey to medium light grey, firm, blocky to subfissile, argillaceous, very fine carbonaceous flecks.
	20	<u>CLAYSTONE</u> : medium light grey to pale brown, soft, gummy.
1935 - 1940	80	<u>SILTSTONE</u> : as above, subfissile, tending to shale.
	20	<u>CLAYSTONE</u> : as above.
1940 - 1945	75	<u>SILTSTONE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
1945 - 1950	65	<u>SILTSTONE</u> : as above, grading to claystone, becoming softer.
	35	<u>CLAYSTONE</u> : as above.
1950 - 1955	65	<u>SILTSTONE/SHALE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
1955 - 1960	60	<u>SILTSTONE/SHALE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
	5	<u>DOLOMITE</u> : tan, hard, blocky and angular.
	trace	<u>SANDSTONE</u> : as above.
1960 - 1965	65	<u>SILTSTONE/SHALE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1965 - 1970	60	<u>SILTSTONE</u> : medium to dark grey, firm to soft, blocky, subfissile, micromicaceous, trace pyrite, carbonaceous inclusions, non calcareous.
	40	<u>CLAYSTONE</u> : light grey, soft, gummy, trace pyrite, carbonaceous inclusions, non calcareous.
1970 - 1975	60	<u>SILTSTONE</u> : as above, grades to shale.
	40	<u>CLAYSTONE</u> : as above.
1975 - 1980	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1980 - 1985	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1985 - 1990	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1990 - 1995	60	<u>SILTSTONE</u> : medium to dark grey, hard to soft, blocky to subfissile, argillaceous, very fine carbonaceous flecks, non calcareous, grading to shale.
	40	<u>CLAYSTONE</u> : medium to light grey, soft, gummy, non calcareous.
	trace	<u>DOLOMITE</u> : white, hard.
1995 - 2000	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
2000 - 2005	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
2005 - 2010	60	<u>SILTSTONE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
	5	<u>SANDSTONE</u> : white, very fine grained quartz grains, poorly sorted, calcareous cement, contains carbonaceous fragments.
2010 - 2015	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
2015 - 2020	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
2020 - 2025	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
2025 - 2030	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
2030 - 2035	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
2035 - 2040	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>8</u>	<u>DESCRIPTION</u>
2040 - 2045	70	<u>SILTSTONE/SHALE</u> : medium dark grey, moderately firm to firm, blocky to subfissile, slightly calcareous to non calcareous, occasionally fine pyrite on partings.
	30	<u>CLAYSTONE</u> : as above.
2045 - 2050	70	<u>SILTSTONE/SHALE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
2050 - 2055	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
2055 - 2060	60	<u>SILTSTONE/SHALE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
	5	<u>SANDSTONE</u> : very fine grained, quartzose, hard, calcareous, contains carbonaceous flecks, no fluorescence, no shows.
2060 - 2065	60	<u>SILTSTONE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
	5	<u>SANDSTONE</u> : as above.
2065 - 2070	60	<u>SILTSTONE/SHALE</u> : medium to dark grey, firm, non calcareous, subfissile to blocky, some pyrite inclusions and carbonaceous inclusions.
	40	<u>CLAYSTONE</u> : light grey, soft, gummy, sticky, non calcareous.
	trace	<u>SANDSTONE</u> : white, firm to hard, quartzose, carbonaceous inclusions, calcareous cement.
2070 - 2075	65	<u>SILTSTONE/SHALE</u> : as above, becoming subfissile to fissile.
	35	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : white to very light grey as above.
2075 - 2080	60	<u>SILTSTONE/SHALE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
2080 - 2085	65	<u>SILTSTONE/SHALE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above, slightly calcareous.
2085 - 2090	75	<u>SILTSTONE/SHALE</u> : as above, becoming fissile.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2085 - 2090 (contd)	25	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above, calcareous, with trace crystalline calcite.
2090 - 2095	70	<u>SHALE/SILTSTONE</u> : medium to dark grey, firm, calcareous, fissile, some pyrite and carbonaceous flecking.
	30	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
2095 - 2100	70	<u>SHALE/SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
2100 - 2105	70	<u>SHALE</u> : medium dark grey, soft to firm, non calcareous, fissile, carbonaceous and pyrite flecks.
	30	<u>CLAYSTONE</u> : medium grey, soft, slightly calcareous, gummy.
	trace	<u>DOLOMITE</u> : olive grey, firm, calcareous.
	trace	<u>SANDSTONE</u> : white to medium light grey, very friable, fine grained, poorly sorted, carbonaceous flecks, slightly calcareous.
2105 - 2110	70	<u>SHALE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2110 - 2115	65	<u>SHALE</u> : as above, less fissile, trace glauconite, mica.
	35	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SANDSTONE</u> : coarse, loose to unconsolidated, angular to subrounded quartz grains.
2115 - 2120	70	<u>SHALE</u> : as above, fissile.
	30	<u>CLAYSTONE</u> : as above, carbonaceous fragments.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2120 - 2125	75	<u>SHALE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SANDSTONE</u> : unconsolidated, as above, trace crystalline calcite.
2125 - 2130	75	<u>SHALE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SANDSTONE</u> : as above, with trace crystalline calcite.
2130 - 2135	75	<u>SHALE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SANDSTONE</u> : white to very light grey, soft to firm, fine grained, carbonaceous, calcareous.
2135 - 2140	80	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SANDSTONE</u> : quartzose, unconsolidated, as above.
2140 - 2145	80	<u>SHALE</u> : medium grey, moderately firm, subfissile to fissile, non calcareous, fine carbonaceous flecks, argillaceous, minor fine crystalline pyrite.
	20	<u>CLAYSTONE</u> : medium light grey to pale brown, soft/gummy, water sensitive.
	trace	<u>DOLOMITE</u> : greyish red to tan, hard, blocky and angular.
	trace	<u>LIMESTONE</u> : greyish red to tan, hard, blocky and angular.
2145 - 2150	70	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
	10	<u>SILTSTONE</u> : light grey to medium light grey, moderately firm to soft, argillaceous, blocky.
2150 - 2155	85	<u>SHALE</u> : as above.
	15	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2155 - 2160	75	<u>SHALE</u> : as above.
	15	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	10	<u>SILTSTONE</u> : as above.
2160 - 2165	80	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above, trace calcite.
	trace	<u>SANDSTONE</u> : unconsolidated, quartzose.
2165 - 2170	75	<u>SHALE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : calcite crystals.
2170 - 2175	75	<u>SHALE</u> : medium to dark grey, predominantly dark grey, fissile to firm, some blocky fragments, slightly calcareous in part.
	25	<u>CLAYSTONE</u> : light grey, sticky, as above.
2175 - 2180	75	<u>SHALE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
2180 - 2185	75	<u>SHALE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
2185 - 2190	80	<u>SHALE</u> : as above, becoming more uniform.
	20	<u>CLAYSTONE</u> : as above.
2190 - 2195	80	<u>SHALE</u> : as above, carbonaceous partings.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2195 - 2200	80	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
2200 - 2205	80	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2205 - 2210	80	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2210 - 2215	80	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2215 - 2220	80	<u>SHALE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
2220 - 2225	85	<u>SHALE</u> : as above.
	15	<u>CLAYSTONE</u> : as above.
2225 - 2230	90	<u>SHALE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : crystalline calcite.
2230 - 2235	100	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : white to very light grey, loose quartz grains.
2235 - 2240	100	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
2240 - 2245	100	<u>SHALE</u> : medium dark grey, firm, non calcareous, subfissile to fissile.
	trace	<u>CLAYSTONE</u> : medium grey, soft, gummy, non calcareous.
	trace	<u>DOLOMITE</u> : tan, olive grey, hard.
2245 - 2250	100	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2250 - 2255	100	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2255 - 2260	100	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2260 - 2265	100	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2265 - 2270	100	<u>SHALE</u> : medium to dark grey, subfissile to fissile, firm, non calcareous, contains small carbonaceous inclusions.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2270 - 2275	100	<u>SHALE/SILTSTONE</u> : as above, blocky to subfissile, trace pyrite.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2275 - 2280	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2280 - 2285	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2285 - 2290	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2290 - 2300	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2300 - 2305	100	<u>SHALE/SILTSTONE</u> : medium to dark grey, firm to soft, contains carbonaceous inclusions, fissile to blocky, non calcareous.
	trace	<u>CLAYSTONE</u> : light grey, gummy, soft, non calcareous.
	trace	<u>DOLOMITE</u> : buff, blocky, medium grey in part.
2305 - 2310	100	<u>SHALE/SILTSTONE</u> : as above, siltstone argillaceous.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2310 - 2315	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2315 - 2320	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2320 - 2325	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2325 - 2330	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2330 - 2335	100	<u>SHALE/SILTSTONE</u> : medium grey to medium dark grey, soft to moderately firm, subfissile to occasionally fissile, occasionally blocky, argillaceous, fine carbonaceous flecking.
	trace	<u>CLAYSTONE</u> : as above.
	2335 - 2340	100
trace		<u>CLAYSTONE</u> : light grey, gummy, soft, non calcareous.
trace		<u>DOLOMITE</u> : as above.
2340 - 2345	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2345 - 2350	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2350 - 2355	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2355 - 2360	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2360 - 2365	100	<u>SHALE/SILTSTONE</u> : medium to dark grey, soft to firm blocky to fissile, non calcareous, carbonaceous flecking.
	trace	<u>CLAYSTONE</u> : light grey, soft, gummy, non calcareous.
	trace	<u>DOLOMITE</u> : buff, blocky, hard.
2365 - 2370	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SILTY SANDSTONE</u> : loose quartzose grains, very fine grained to silt in desilter.
2370 - 2375	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SILTY SANDSTONE</u> : as above.
2375 - 2380	100	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SILTY SANDSTONE</u> : as above.
2380 - 2385	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2385 - 2390	90	<u>SHALE/SILTSTONE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2390 - 2395	90	<u>SHALE/SILTSTONE</u> : medium dark grey, soft to firm, blocky to subfissile, non calcareous, carbonaceous flecks.
	10	<u>CLAYSTONE</u> : medium light grey to medium grey, soft, gummy, calcareous.
	trace	<u>DOLOMITE</u> : medium light grey to tan, hard, angular.
	trace	<u>SANDSTONE</u> : white, hard, coarse quartz grains.
2395 - 2400	90	<u>SHALE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above, with calcite crystals.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2400 - 2405	90	<u>SHALE</u> : as above, fissile to subfissile.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2405 - 2410	90	<u>SHALE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2410 - 2415	90	<u>SHALE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2415 - 2420	90	<u>SHALE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SANDSTONE</u> : quartzose, as above.
2420 - 2425	90	<u>SHALE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
2425 - 2430	90	<u>SHALE</u> : as above.
	10	<u>CLAYSTONE</u> : as above.
2430 - 2435	85	<u>SHALE</u> : medium dark grey, firm, non calcareous, subfissile.
	15	<u>CLAYSTONE</u> : medium light grey, soft, gummy, slightly calcareous.
	trace	<u>DOLOMITE</u> : medium light grey to tan, hard.
2435 - 2440	80	<u>SHALE</u> : as above, moderately firm to soft.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2440 - 2445	100	<u>SHALE/SILTSTONE</u> : medium dark grey, firm, subfissile to blocky, fine carbonaceous flecking, non calcareous matrix, but occasional calcite veining.
	trace	<u>DOLOMITE</u> : tan, hard, angular.
2445 - 2450	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2450 - 2455	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1775 - 1780 (contd)	5	<u>CLAYSTONE</u> : as above.
	15	<u>LIMESTONE</u> : as above.
1780 - 1785	90	<u>SILTSTONE</u> : as above.
	5	<u>CLAYSTONE</u> : as above.
	5	<u>LIMESTONE</u> : as above.
1785 - 1790	95	<u>SILTSTONE</u> : brown, medium light grey, soft to hard, predominantly soft, carbonaceous matter common, the water sensitive fragments are slightly calcareous, the hard cuttings are non-calcareous, associated pyrite, blocky to subfissile.
	trace	<u>CLAYSTONE</u> : light grey, soft, gummy.
	5	<u>LIMESTONE</u> : buff, hard, some inclusions of carbonaceous matter, blocky, minor white blocky calcite fragments.
1790 - 1795	95	<u>SILTSTONE</u> : as above.
	5	<u>LIMESTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1795 - 1800	95	<u>SILTSTONE</u> : as above.
	5	<u>LIMESTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1800 - 1805	95	<u>SILTSTONE</u> : as above.
	5	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1805 - 1810	95	<u>SILTSTONE</u> : medium grey, soft, dominantly water sensitive cuttings, the rest consist of hard siltstone, non-calcareous, carbonaceous flecking, trace glauconite, associated pyrite, blocky to subfissile.
	5	<u>CLAYSTONE</u> : light grey, gummy, soft, slightly calcareous.
	trace	<u>LIMESTONE</u> : white, firm, calcareous, blocky.
1810 - 1815	95	<u>SILTSTONE</u> : as above.
	5	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1815 - 1820		NO SAMPLE
1820 - 1825		NO SAMPLE

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1825 - 1830	95	<u>SILTSTONE</u> : as above.
	5	<u>CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
1830 - 1835	100	<u>SILTSTONE</u> : dark grey to medium grey cuttings are hard, blocky to subfissile, are non-calcareous and have carbonaceous flecking. The medium light grey cuttings are soft, water sensitive, blocky and carbonaceous flecking is common. The hard blocky siltstone makes up about 80% of the sample.
	trace	<u>DOLOMITE</u> : buff, hard, carbonaceous inclusions, blocky.
	trace	<u>SANDSTONE</u> : white, light grey, fine to medium grained quartz aggregates, subrounded, moderately sorted, calcareous cement.
	trace	<u>LIMESTONE</u> : containing white, hard, blocky calcite fragments.
1835 - 1840	100	<u>SILTSTONE</u> : as above, some of the hard cuttings grading to shale.
	trace	<u>DOLOMITE</u> : as above.
1840 - 1845	100	<u>SILTSTONE</u> : as above, the water sensitive cuttings make up about 70% of the total, grading to shale on rare occasions.
	trace	<u>DOLOMITE</u> : as above.
1845 - 1850	100	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1850 - 1855	100	<u>SILTSTONE</u> : dark grey to medium grey, hard to soft, predominantly soft water sensitive cuttings, blocky to subfissile, some carbonaceous parting, carbonaceous flecks and inclusions common, some fragments of shale present.
	trace	<u>DOLOMITE</u> : as above.
1855 - 1860	100	<u>SILTSTONE</u> : as above, pyrite common.
	trace	<u>SHALE</u> : dark grey, hard, non-calcareous, fissile, carbonaceous.
	trace	<u>DOLOMITE</u> : as above.
1860 - 1865	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2455 - 2460	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2460 - 2465	100	<u>SHALE/SILTSTONE</u> : as above.
2465 - 2470	100	<u>SHALE</u> : as above.
2470 - 2475	100	<u>SHALE</u> : light to medium grey, blocky to subfissile, argillaceous in part, occasionally black with carbonaceous flecks, firm, non calcareous.
2475 - 2480	100	<u>SHALE</u> : as above.
2480-- 2485	100	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : tan, crystalline, blocky, most probably calcite, hard.
2485 - 2490	100	<u>SHALE</u> : as above.
2490 - 2495	100	<u>SHALE</u> : medium light grey, blocky to subfissile, sandy in part, minor carbonaceous flecks, firm to hard, non calcareous.
	trace	<u>COAL</u> : black, blocky, vitreous, coarse grains of coal.
	trace	<u>DOLOMITE</u> : buff, tan, blocky, cryptocrystalline, hard, translucent, angular, calcite crystals.
	trace	<u>LIMESTONE</u>
2495 - 2500	100	<u>SHALE</u> : as above.
2500 - 2505	100	<u>SHALE</u> : as above.
2505 - 2510	100	<u>SHALE</u> : as above, with trace coal and pyrite.
	trace	<u>DOLOMITE</u> : as above, with minor aragonite, calcite.
2510 - 2515	100	<u>SHALE</u> : as above, with trace coal and pyrite.
	trace	<u>DOLOMITE</u> : as above, with minor calcite.
2515 - 2520	100	<u>SHALE</u> : as above, with very fine sand in part, less coal and pyrite.
	trace	<u>DOLOMITE</u> : with minor calcite.
2520 - 2525	100	<u>SHALE</u> : medium to dark grey, blocky to subfissile, small amount very fine sand, firm to hard.
	trace	<u>COAL</u> : black, medium to coarse grains, possibly mud additives.
	trace	<u>DOLOMITE</u> : pale brown, cryptocrystalline, containing translucent cryptocrystalline calcite and white aragonite.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2525 - 2530	100	<u>SHALE</u> : as above.
	trace	<u>COAL</u> : as above.
	trace	<u>DOLOMITE</u> : as above, containing traces of aragonite and calcite.
2530 - 2535	100	<u>SHALE</u> : as above.
	trace	<u>COAL</u> : as above.
	trace	<u>DOLOMITE</u> : as above, with trace calcite and aragonite.
2535 - 2540	90	<u>SHALE</u> : as above, occasionally coarse glauconite grains, grading in part to siltstone.
	10	<u>COAL</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2540 - 2545	90	<u>SHALE</u> : as above, grading in part to siltstone, occasionally glauconite, trace pyrite.
	10	<u>COAL</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2545 - 2550	100	<u>SHALE</u> : medium to dark grey, blocky to very occasionally subfissile, friable to firm, minor coarse carbonaceous flecks, occasional medium to coarse pyrite grains, occasional pyrite veining, grading in part to siltstone, occasional fine to medium glauconite, dark green to black grains, possible very fine angular calcite fragments, possible crinoid replacement by pyrite.
	trace	<u>COAL</u>
	trace	<u>CALCITE/DOLOMITE</u> : as above.
2550 - 2555	100	<u>SHALE</u> : grading in part to siltstone with increasing depth, trace light green glauconitic medium grained sandstone, trace pyrite.
	trace	<u>COAL</u> : as above.
2555 - 2560	70	<u>SHALE</u> : as above.
	30	<u>SILTSTONE</u> : medium to dark grey, blocky, friable to soft, carbonaceous black flecks, common fine grained glauconite, trace coarse glauconite pellets, calcareous matrix, argillaceous, common silt sized quartz tending to claystone in part, rare coal.
2560 - 2565	70	<u>SHALE</u> : as above.
	30	<u>SILTSTONE</u> : as above.
2565 - 2570	30	<u>SILTSTONE</u> : as above, rare coarse smokey quartz.
	70	<u>SHALE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2570 - 2575	30	<u>SILTSTONE</u> : light to medium grey, blocky, friable to soft, common carbonaceous black flecks, occasional medium grained glauconite, predominantly argillaceous, slightly calcareous matrix, trace pyrite.
	70	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : aragonite, buff, crystalline, hard.
2575 - 2580	100	<u>SILTSTONE/SHALE</u> : becoming increasingly glauconitic, otherwise as above.
2580 - 2585	100	<u>SILTSTONE/SHALE</u> : as above.
2585 - 2590	100	<u>SILTSTONE/SHALE</u> : as above.
2590 - 2595	100	<u>SILTSTONE/SHALE</u> : as above.
2595 - 2600	100	<u>SILTSTONE/SHALE</u> : as above.
2600 - 2605	100	<u>SHALE/SILTSTONE</u> : as above, becoming increasingly silty with depth.
	trace	<u>LIMESTONE</u> : as above, mainly aragonite.
	trace	<u>COAL</u>
2605 - 2610	100	<u>SHALE/SILTSTONE</u> : light to medium grey, firm to occasionally friable, blocky to subfissile, parting along laminations, fine to medium grained, dark carbonaceous flecks, predominantly argillaceous, slight calcareous matrix, trace pyrite, overall shale grading to an argillaceous siltstone.
	trace	<u>SANDSTONE</u> : white, cream, very fine argillaceous quartzose sandstone.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>COAL</u> : as above.
2610 - 2615	100	<u>SHALE/SILTSTONE</u> : trace gastropod with four valves, otherwise as above.
2615 - 2620	100	<u>SHALE/SILTSTONE</u> : as above.
2620 - 2625	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above, with aragonite and calcite.
	trace	<u>COAL</u> : as above.
2625 - 2630	100	<u>SHALE/SILTSTONE</u> : as above, with trace pyrite.
	trace	<u>DOLOMITE</u> : as above, with calcite.
	trace	<u>COAL</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON -- 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2630 - 2635	100	<u>SHALE/SILTSTONE</u> : light to medium dark grey, friable to firm, dark grey carbonaceous flecks, argillaceous, calcareous matrix, blocky to fissile.
	trace	<u>COAL</u> : black, vitreous, blocky.
	trace	<u>LIMESTONE</u> : clear to white, crystalline.
	trace	<u>SANDSTONE</u> : white to light grey, very fine quartz grains, argillaceous, carbonaceous flecks.
2635 - 2640	90	<u>SHALE/SILTSTONE</u> : as above.
	10	<u>COAL</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
2640 - 2645	100	<u>SHALE/SILTSTONE</u> : as above, with trace pyrite.
	trace	<u>COAL</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2645 - 2650	100	<u>SHALE/SILTSTONE</u> : as above.
	trace	<u>COAL</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2650 - 2655	100	<u>SHALE/SILTSTONE</u> : as above, grading to shale, medium light grey to medium grey, blocky to subfissile, friable to firm, occasionally with carbonaceous flecks, argillaceous, slight calcareous matrix.
	trace	<u>COAL</u> : black, vitreous, blocky.
2655 - 2660	100	<u>SHALE</u> : as above, with trace pyrite.
	trace	<u>LIMESTONE</u> : mainly calcite as above.
2660 - 2665	100	<u>SHALE/SILTSTONE</u> : shale, as above, siltstone, medium light grey, blocky to subfissile, friable, fine carbonaceous flecks, argillaceous calcareous matrix.
	trace	<u>COAL</u> : black, vitreous, blocky.
2665 - 2670	90	<u>SHALE/SILTSTONE</u> : as above with siltstone, cream to light grey in part, trace pyrite.
	10	<u>COAL</u> : as above.
2670 - 2673 (Circulated bottoms up)	90	<u>SHALE/SILTSTONE</u> : as above, trace pyrite.
	10	<u>COAL</u> : as above.
2673 - 2675	100	<u>SHALE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2675 - 2680	100	<u>SHALE</u> : as above.
2680 - 2685	100	<u>SHALE</u> : as above.
2685 - 2690	100	<u>SHALE</u> : light to medium grey to brown, firm to hard, predominantly argillaceous, slightly calcareous matrix, abundant very fine to fine black carbonaceous flecks, rare glauconite grains, silty in part, trace pyrite, trace coal.
2690 - 2695	100	<u>SHALE</u> : as above.
2695 - 2700	100	<u>SHALE</u> : as above.
2700 - 2705	100	<u>SHALE</u> : trace pyrite, blocky, trace siderite/anckerite, rare gastropods, otherwise as above.
2705 - 2710	100	<u>SHALE</u> : as above.
2710 - 2715	100	<u>SHALE</u> : light to medium grey, firm to hard, blocky to subfissile, with occasional fine carbonaceous flecks, argillaceous, slightly calcareous matrix, trace pyrite.
	trace	<u>COAL</u> : as above.
2715 - 2720	100	<u>SHALE</u> : with carbonaceous flecks becoming more abundant, otherwise as above.
	trace	<u>COAL</u> : as above.
2720 - 2722	100	<u>SHALE</u> : as above.
	trace	<u>SANDSTONE</u> : white, fine to very fine, quartzose.
2722 - 2725	90	<u>SHALE</u> : light to medium grey, occasionally buff to pale brown, firm to hard, with abundant fine carbonaceous flecks, blocky to subfissile.
	10	<u>COAL</u> : black, blocky, vitreous.
2725 - 2730	100	<u>SHALE</u> : with rare glauconite grains and rare gastropods, otherwise as above.
	trace	<u>COAL</u> : as above.
2730 - 2735	100	<u>SHALE</u> : as above.
	trace	<u>COAL</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2735 - 2740	100	<u>SHALE</u> : light to medium grey, occasionally buff to pale brown, firm to hard, blocky to subfissile, common carbonaceous flecks, becoming increasingly siliceous, trace pyrite.
	trace	<u>COAL</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2740 - 2745	100	<u>SHALE</u> : as above, with trace pyrite.
	trace	<u>DOLOMITE</u> : as above.
2745 - 2750	100	<u>SHALE</u> : as above.
2750 - 2755	100	<u>SHALE</u> : light to medium grey, firm to hard, occasionally friable, blocky to very occasionally subfissile, siliceous to argillaceous matrix, black fine carbonaceous flecks becoming rare, trace pyrite, rare coarse quartz, grading in part to siltstone, occasionally light brown becoming increasingly calcareous, becoming increasingly quartzose.
2755 - 2760	100	<u>SHALE</u> : as above.
2760 - 2765	100	<u>SHALE</u> : as above.
2765 - 2770	100	<u>SHALE</u> : medium to dark grey, firm to hard, blocky, mainly siliceous to very argillaceous, fine sand in part, becoming carbonaceous, grading in part to siltstone, trace pyrite.
	trace	<u>DOLOMITE/ARAGONITE</u> : as above.
	trace	<u>SANDSTONE</u> : clear, coarse, angular quartz grains.
2770 - 2775	100	<u>SHALE/SILTSTONE</u> : light to medium grey, firm to friable, occasionally hard, mainly blocky to very occasionally subfissile, otherwise as above.
2775 - 2780	100	<u>SHALE</u> : as above.
2780 - 2785	100	<u>SHALE</u> : as above.
2785 - 2790	100	<u>SHALE</u> : as above.
2790 - 2795	100	<u>SHALE</u> : as above.
2795 - 2800	100	<u>SHALE</u> : light to medium grey, mostly firm, occasionally friable, dominantly siliceous/argillaceous matrix, slightly calcareous, blocky, very occasionally subfissile, grading in part to siltstone, rare pyrite, trace dolomite/aragonite.
	trace	<u>COAL</u> : as above.
2800 - 2803	100	<u>SHALE</u> : as above.
<u>TRITON - 1 SIDETRACK</u>		
As a result of hole instability problems, Triton - 1 was plugged back to a depth of 1467 m. Triton - 1 Sidetrack was then kicked off from a depth of 1467 m.		

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1467 - 1470	100	<u>CEMENT</u>
1470 - 1475	100	<u>CEMENT</u>
1475 - 1480	100	<u>CEMENT</u>
1480 - 1484	100	<u>CEMENT</u>
	trace	<u>SILTSTONE</u>
1484 - 1485	70	<u>CEMENT</u>
	30	<u>CLAYSTONE</u> : medium light grey, very soft, gummy, forms gumbo, calcareous, trace very fine carbonaceous flecks.
1485 - 1487	60	<u>CEMENT</u>
	30	<u>CLAYSTONE</u> : light grey to medium light grey, as above.
	10	<u>SILTSTONE</u> : medium grey to medium dark grey, firm, very argillaceous, moderately calcareous, trace fine carbonaceous flecks, trace micromica, trace pyrite streaks, subfissile.
1487 - 1489	50	<u>CEMENT</u>
	40	<u>CLAYSTONE</u> : light grey to medium light grey, very soft, gummy, otherwise as above.
	10	<u>SILTSTONE</u> : as above.
1489 - 1490	50	<u>CEMENT</u>
	40	<u>CLAYSTONE</u> : light grey to medium light grey, otherwise as above.
	10	<u>SILTSTONE</u> : as above.
1490 - 1492	30	<u>CEMENT</u>
	40	<u>CLAYSTONE</u> : light grey to medium light grey, soft, gummy.
	30	<u>SILTSTONE</u> : medium grey to medium dark grey, otherwise as above.
1492 - 1494	20	<u>CEMENT</u>
	60	<u>CLAYSTONE</u> : medium light grey, very soft, gummy, very fine carbonaceous flecks.
	20	<u>SILTSTONE</u> : medium light grey to medium grey, firm to moderately hard, pyrite streaks, trace fine carbonaceous flecks, subfissile.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1494 - 1495	20	<u>CEMENT</u>
	50	<u>CLAYSTONE</u> : medium light grey, very soft, gummy, very fine carbonaceous flecks.
	30	<u>SILTSTONE</u> : medium grey to medium light grey, firm to moderately hard, subfissile, pyrite streaks, trace carbonaceous flecks.
1495 - 1500	10	<u>CEMENT</u>
	50	<u>CLAYSTONE</u> : medium light grey, very soft, gummy, very fine carbonaceous flecks.
	40	<u>SILTSTONE</u> : medium light grey to medium dark grey, moderately hard, moderately calcareous, trace fine carbonaceous flecks, trace micromica, trace glauconite, trace pyrite streaks, subfissile.
1500 - 1505	30	<u>SILTSTONE</u> : medium dark grey to brownish grey, firm to moderately hard, argillaceous matrix, slightly to moderately calcareous, trace carbonaceous flecks, trace very finely disseminated pyrite and pyrite clusters, some cuttings are very fine quartz grains.
	50	<u>CLAYSTONE</u> : light grey, very soft, swelling clays, forms gumbo, moderately calcareous, trace of carbonaceous flecks.
	20	<u>CEMENT</u>
1505 - 1510	30	<u>SILTSTONE</u> : as above.
	60	<u>CLAYSTONE</u> : as above.
	10	<u>CEMENT</u>
1510 - 1515	35	<u>SILTSTONE</u> : as above.
	55	<u>CLAYSTONE</u> : as above.
	10	<u>CEMENT</u>
1515 - 1520	40	<u>SILTSTONE</u> : sa above.
	55	<u>CLAYSTONE</u> : as above.
	5	<u>CEMENT</u>
1520 - 1525	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
	trace	<u>CEMENT</u>
1525 - 1530	50	<u>SILTSTONE</u> : as above, becoming blocky to subfissile.
	50	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>ft</u>	<u>DESCRIPTION</u>
1530 - 1535	40	<u>SILTSTONE</u> : light grey to medium light grey, occasional subfissile grains are red, firm to moderately hard, moderately calcareous, trace pyrite streaks, trace glauconite, trace carbonaceous flakes, blocky to subfissile.
	60	<u>CLAYSTONE</u> : very light grey to medium light grey, very soft, gummy, trace very fine carbonaceous flecks, trace very fine pyrite clusters.
1535 - 1540	20	<u>SILTSTONE</u> : as above.
	80	<u>CLAYSTONE</u> : as above.
1540 - 1545	50	<u>SILTSTONE</u> : as above.
	50	<u>CLAYSTONE</u> : as above.
1545 - 1550	60	<u>SILTSTONE</u> : medium to light grey, soft to firm, calcareous, very argillaceous, blocky to subfissile.
	40	<u>CLAYSTONE</u> : light grey, very soft, gummy, calcareous.
1550 - 1555	65	<u>SILTSTONE</u> : light to medium grey, soft to firm, calcareous, very argillaceous, blocky.
	35	<u>CLAYSTONE</u> : light grey, soft, gummy, calcareous.
1555 - 1560	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1560 - 1565	70	<u>SILTSTONE</u> : as above, blocky to subfissile.
	30	<u>CLAYSTONE</u> : as above.
1565 - 1570	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1570 - 1575	70	<u>SILTSTONE</u> : medium light grey to medium grey, soft to firm, very calcareous, argillaceous, minor pyrite, trace glauconite, minor carbonaceous flecks, blocky to subfissile.
	30	<u>CLAYSTONE</u> : light grey, soft, gummy, calcareous.
1575 - 1580	65	<u>SILTSTONE</u> : medium light grey to medium grey, soft to firm, very calcareous, argillaceous, minor carbonaceous flecks, blocky to subfissile.
	35	<u>CLAYSTONE</u> : light grey, soft, gummy, trace glauconite.
1580 - 1585	65	<u>SILTSTONE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
1585 - 1590	70	<u>SILTSTONE</u> : becoming firmer, trace glauconite.
	30	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1590 - 1595	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1595 - 1600	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1600 - 1605	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1605 - 1610	65	<u>SILTSTONE</u> : medium light grey to medium grey, soft to firm, very calcareous, argillaceous, minor carbonaceous flecks, blocky to subfissile.
	35	<u>CLAYSTONE</u> : medium light grey to light grey, soft, gummy, calcareous.
1610 - 1615	65	<u>SILTSTONE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
1615 - 1620	65	<u>SILTSTONE</u> : as above, trace pyrite.
	35	<u>CLAYSTONE</u> : as above.
1620 - 1625	50	<u>SILTSTONE</u> : medium light grey to medium grey, soft to firm, very calcareous, argillaceous, blocky to subfissile.
	40	<u>CLAYSTONE</u> : light grey, soft, calcareous, gummy.
1625 - 1630	60	<u>SILTSTONE</u> : as above.
	40	<u>CLAYSTONE</u> : as above.
1630 - 1635	65	<u>SILTSTONE</u> : as above.
	35	<u>CLAYSTONE</u> : as above.
1635 - 1640	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1640 - 1645	80	<u>SILTSTONE</u> : light grey to medium light grey, moderately hard to soft, very calcareous, blocky to subfissile, carbonaceous flecking, very argillaceous.
	20	<u>CLAYSTONE</u> : light grey, soft, gummy, very calcareous.
1645 - 1650	75	<u>SILTSTONE</u> : as above.
	25	<u>CLAYSTONE</u> : as above.
1650 - 1655	85	<u>SILTSTONE</u> : as above.
	15	<u>CLAYSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>ft</u>	<u>DESCRIPTION</u>
1655 - 1660	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1660 - 1665	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1665 - 1670	80	<u>SILTSTONE</u> : medium grey to medium light grey, firm to moderately hard, very calcareous, very argillaceous, blocky to subfissile.
	20	<u>CLAYSTONE</u> : as above.
1670 - 1675	70	<u>SILTSTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1675 - 1680	60	<u>SILTSTONE</u> : as above.
	10	<u>LIMESTONE</u> : white, blocky, contains carbonaceous flecks.
	30	<u>CLAYSTONE</u> : as above.
1680 - 1685	70	<u>SILTSTONE</u> : as above.
	10	<u>LIMESTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1685 - 1690	55	<u>SILTSTONE</u> : as above.
	15	<u>LIMESTONE</u> : as above.
	30	<u>CLAYSTONE</u> : as above.
1690 - 1695	20	<u>SILTSTONE</u> : light grey to medium grey, hard to firm, very carbonaceous, very argillaceous, blocky to subfissile.
	40	<u>LIMESTONE</u> : white to light grey, hard, carbonaceous flecks, blocky to subfissile.
	25	<u>CLAYSTONE</u> : light grey, soft, gummy, calcareous.
	15	<u>SANDSTONE</u> : milky white to clear, medium to coarse, single quartz grains and aggregates of fine grained, moderately sorted, subangular to subrounded quartz grains, calcareous cement, no shows, reasonable visual porosity.
1695 - 1700	60	<u>SILTSTONE</u> : as above.
	10	<u>LIMESTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	10	<u>SANDSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>§</u>	<u>DESCRIPTION</u>
1700 - 1705	80	<u>SILTSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
1705 - 1710	20	<u>SILTSTONE</u> : as above.
	20	<u>LIMESTONE</u> : as above.
	45	<u>CLAYSTONE</u> : light tan to mid grey, calcareous, specks of muscovite, carbonaceous matter, minor pyrite, several well rounded, fine grains of glauconite.
1710 - 1715	15	<u>SANDSTONE</u> : as above.
	60	<u>SILTSTONE</u> : as above.
	10	<u>LIMESTONE</u> : as above.
1715 - 1720	30	<u>CLAYSTONE</u> : as above.
	60	<u>SILTSTONE</u> : as above.
	10	<u>LIMESTONE</u> : as above.
1720 - 1725	20	<u>CLAYSTONE</u> : as above.
	10	<u>SANDSTONE</u> : fine to coarse, poorly sorted, very well rounded, calcareous cement, minor intergranular porosity, minor pyrite, no show.
	50	<u>SILTSTONE</u> : off white to dark brown grey, calcareous matrix, pyrite common.
	10	<u>LIMESTONE</u> : light grey, brittle, hard, oolitic glauconite inclusions.
1725 - 1730	10	<u>CLAYSTONE</u> : as above.
	30	<u>SANDSTONE</u> : white to light brown, medium to coarse, well rounded, well sorted quartz grains, minor pyrite, no show.
	25	<u>SILTSTONE</u> : as above.
	5	<u>LIMESTONE</u> : as above
1730 - 1735	35	<u>CARBONACEOUS CLAYSTONE</u> : dark grey brown, firm, non-calcareous, rich in carbonaceous matter, fine mica specks, subfissile.
	35	<u>SANDSTONE</u> : as above, no show.
	25	<u>SILTSTONE</u> : as above.
	40	<u>CARBONACEOUS CLAYSTONE</u> : as above.
	35	<u>SANDSTONE</u> : becoming finer, poorly sorted, otherwise as above, no show.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1735 - 1740	80	<u>CARBONACEOUS CLAYSTONE</u> : as above.
	20	<u>SANDSTONE</u> : very well rounded quartz grains, as above.
1740 - 1745	100	<u>CARBONACEOUS CLAYSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
1745 - 1750	100	<u>CARBONACEOUS CLAYSTONE</u> : as above, becoming siltier.
1750 - 1755	70	<u>CARBONACEOUS CLAYSTONE</u> : as above.
	30	<u>CARBONACEOUS SILTSTONE</u> : dark brown grey, very fine quartz silt, large pyrite clusters, much organic matter, non-calcareous, subfissile.
	trace	<u>LIMESTONE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
1755 - 1760	40	<u>CLAYSTONE</u> : brown grey to light grey, soft, gummy, water sensitive clays, also brown grey non-calcareous and light grey very calcareous cuttings, contains fine carbonaceous material.
	60	<u>SILTSTONE</u> : brown to dark grey, very argillaceous, contains carbonaceous flecks, non-calcareous, blocky to subfissile.
	trace	<u>SANDSTONE</u> : as above.
	1760 - 1765	20
1760 - 1765	80	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
	1765 - 1770	20
1765 - 1770	80	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : calcite veins, otherwise as above.
	1770 - 1775	25
1770 - 1775	60	<u>SILTSTONE</u> : brown to dark grey, hard to soft, the harder cuttings are very argillaceous, non-calcareous, carbonaceous, blocky to subfissile.
	15	<u>LIMESTONE</u> : light grey, hard, carbonaceous, blocky, trace white blocky calcite fragments.
	1775 - 1780	80

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1865 - 1870	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1870 - 1875	100	<u>SILTSTONE</u> : as above, predominantly water sensitive cuttings.
	trace	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1875 - 1880	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1880 - 1885	100	<u>SILTSTONE</u> : dark grey to medium light grey, soft to hard, blocky to subfissile, non-calcareous, the cuttings are predominantly soft and water sensitive, there is an abundance of carbonaceous flecking and parting.
	trace	<u>SHALE</u> : dark grey, hard, subfissile, carbonaceous matter common, non-calcareous.
	trace	<u>DOLOMITE</u> : buff, hard, blocky, rich in carbonaceous matter.
1885 - 1890	100	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1890 - 1895	100	<u>SILTSTONE</u> : as above.
1895 - 1900	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : light grey, soft, gummy, non-calcareous, carbonaceous flecks.
	trace	<u>DOLOMITE</u> : as above.
1900 - 1905	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1905 - 1910	100	<u>SILTSTONE</u> : as above, with a trace of pyrite.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON -- 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1910 - 1915	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1915 - 1920	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>LIMESTONE</u> : white, firm, blocky.
1920 - 1925	100	<u>SILTSTONE</u> : medium grey to medium dark grey, soft to firm, non-calcareous, carbonaceous flecking common, blocky to subfissile, predominantly soft water sensitive.
	trace	<u>SHALE</u> : medium grey to dark grey, firm, non-calcareous, subfissile.
	trace	<u>CLAYSTONE</u> : light grey to medium light grey, soft, gummy, non-calcareous.
1925 - 1930	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1930 - 1935	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
1935 - 1940	95	<u>SILTSTONE</u> : as above.
	5	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SANDSTONE</u> : white, subrounded quartz grains.
	trace	<u>LIMESTONE</u> : white, blocky calcite fragments.
1940 - 1945	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1945 - 1950	90	<u>SILTSTONE</u> : medium grey to medium dark grey, soft to firm, non-calcareous, minor carbonaceous flecking, some associated pyrite, blocky to subfissile.
	10	<u>SHALE</u> : medium dark grey, firm, non-calcareous, subfissile.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1945 - 1950 (contd)	trace	<u>CLAYSTONE</u> : medium light grey, soft, gummy, slightly calcareous.
	trace	<u>DOLOMITE</u> : buff to very light grey, hard, calcareous, minor carbonaceous flecking.
1950 - 1955	95	<u>SILTSTONE</u> : as above, predominantly soft, water sensitive.
	trace	<u>CLAYSTONE</u> : as above.
	5	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1955 - 1960	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1960 - 1965	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1965 - 1970	100	<u>SILTSTONE</u> : predominantly medium grey to dark grey, occasionally light grey, soft, water sensitive, very fine silt sized quartz grains, slightly carbonaceous, subfissile, minor clusters of pyrite, minor carbonaceous matter, trace white feldspar (plagioclase?).
	trace	<u>CLAYSTONE</u> : as above.
1970 - 1975	100	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1975 - 1980	100	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : tan to light brown, slightly argillaceous.
1980 - 1985	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
1985 - 1990	100	<u>SILTSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
1990 - 1995	100	<u>SILTSTONE</u> : medium dark grey, soft to firm, minor carbonaceous flecks, non-calcareous, blocky to sub-fissile, the ratio of firm siltstone cuttings is increasing with respect to the soft water sensitive cuttings.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
1990 - 1995 (contd)	trace	<u>CLAYSTONE</u> : medium grey, gummy, slightly calcareous.
	trace	<u>DOLOMITE</u> : buff, firm.
1995 - 2000	100	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>LIMESTONE</u> : white, blocky calcite fragments.
2000 - 2005	100	<u>SILTSTONE</u> : medium to dark grey, soft to firm, minor carbonaceous matter, trace of calcareous cement, water sensitive.
	trace	<u>CALCAREOUS CLAYSTONE</u> : light brown, soft to firm, blocky.
2005 - 2010	100	<u>SILTSTONE</u> : as above, with the occasional medium sized quartz grain, very well rounded.
	trace	<u>CALCAREOUS CLAYSTONE</u> : as above.
2010 - 2015	100	<u>SILTSTONE</u> : as above, with common pyrite clusters.
	trace	<u>CALCAREOUS CLAYSTONE</u> : as above.
2015 - 2020	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCAREOUS CLAYSTONE</u> : as above.
2020 - 2025	100	<u>SILTSTONE</u> : as above.
	trace	<u>CALCAREOUS CLAYSTONE</u> : as above.
2025 - 2030	100	<u>SILTSTONE</u> : as above, but no pyrite.
2030 - 2035	100	<u>SILTSTONE</u> : medium grey to dark grey brown, firm to soft, very fine grained silt, clay matrix, minor calcareous cement, blocky to subfissile, no visible pyrite, minor carbonaceous matter, trace mica flakes.
2035 - 2040	100	<u>SILTSTONE</u> : as above.
2040 - 2045	100	<u>SILTSTONE</u> : as above.
2045 - 2050	100	<u>SILTSTONE</u> : as above.
2050 - 2055	100	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : white to buff, blocky.
2055 - 2060	100	<u>SILTSTONE</u> : dark grey, hard to soft, calcareous flecking, micromicaceous in part, non-calcareous, some cuttings grading to shale, displaying carbonaceous partings, has a visual resemblance to the siltstone cuttings.

LITHOLOGICAL DESCRIPTIONS

TRITON- 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2055 - 2060 contd)	trace	<u>CLAYSTONE</u> : buff to yellow grey, soft, water sensitive, blocky, carbonaceous inclusions.
	trace	<u>LIMESTONE</u> : crystalline calcite fragments.
2060 - 2065	40	<u>SHALE</u> : dark grey, hard to firm, non-calcareous, fissile to subfissile, carbonaceous partings common, micromicaceous, non-calcareous, carbonaceous flecks common.
	60	<u>SILTSTONE</u> : dark grey, hard to soft, non-calcareous, blocky, carbonaceous flecks, micromicaceous.
	trace	<u>LIMESTONE</u> : consists of crystalline calcite.
2065 - 2070	20	<u>SHALE</u> : as above.
	80	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2070 - 2075	20	<u>SHALE</u> : as above.
	80	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2075 - 2080	5	<u>SHALE</u> : as above.
	95	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2080 - 2085	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2085 - 2090	95	<u>SILTSTONE</u> : dark grey, hard to soft, blocky to subfissile, non-calcareous, carbonaceous flecking.
	5	<u>SHALE</u> : dark grey, hard to firm, fissile to subfissile, carbonaceous partings common, non-calcareous, micromicaceous, carbonaceous flecks common.
	trace	<u>DOLOMITE</u> : buff, hard, blocky.
	trace	<u>LIMESTONE</u> : white, crystalline calcite.
2090 - 2095	95	<u>SILTSTONE</u> : as above.
	5	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2095 - 2100	90	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2100 - 2105	90	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : dark grey, hard to soft, subfissile, carbonaceous partings common, micromicaceous in part.
2105 - 2110	90	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : dark grey, hard to soft, subfissile, carbonaceous partings common, micromicaceous in part.
2110 - 2115	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
2115 - 2120	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
2120 - 2125	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
2125 - 2130	85	<u>SILTSTONE</u> : as above.
	15	<u>SHALE</u> : as above.
2130 - 2135	60	<u>SILTSTONE</u> : dark grey, soft to firm, non-calcareous, carbonaceous flecking common, blocky to subfissile.
	40	<u>SHALE</u> : dark grey, soft to firm, non-calcareous, carbonaceous partings, subfissile.
2135 - 2140	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
2140 - 2145	70	<u>SILTSTONE</u> : medium dark grey to dark grey, soft to firm, carbonaceous flecking, blocky to subfissile.
	30	<u>SHALE</u> : dark grey, soft to firm, non-calcareous, subfissile.
	trace	<u>DOLOMITE</u> : buff, hard.
2145 - 2150	70	<u>SILTSTONE</u> : as above.
	30	<u>SHALE</u> : as above.
	trace	<u>SANDSTONE</u> : grey, firm, fine grained, quartzose, non-calcareous, trace glauconite.
2150 - 2155	60	<u>SILTSTONE</u> : as above.
	40	<u>SHALE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2155 - 2160	60	<u>SILTSTONE</u> : as above.
	40	<u>SHALE</u> : as above.
2160 - 2165	70	<u>SILTSTONE</u> : as above.
	30	<u>SHALE</u> : as above.
2165 - 2170	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : white, firm, blocky calcite fragments.
2170 - 2175	70	<u>SILTSTONE</u> : dark grey, soft to firm, non-calcareous, carbonaceous flecking.
	30	<u>SHALE</u> : dark grey, firm, non-calcareous, blocky to subfissile, carbonaceous flecking.
	trace	<u>LIMESTONE</u> : white, blocky calcite fragments.
	trace	<u>SANDSTONE</u> : light grey to medium light grey, soft to firm, fine grained, poorly sorted quartz grains, slightly calcareous, carbonaceous flecking.
2175 - 2180	70	<u>SILTSTONE</u> : as above.
	30	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : calcite grains.
2180 - 2185	60	<u>SILTSTONE</u> : as above.
	40	<u>SHALE</u> : as above, with partings of carbonaceous matter, trace pyrite.
	trace	<u>CLAYSTONE</u> : light to medium grey, soft, gummy, slightly calcareous, carbonaceous.
	trace	<u>SANDSTONE</u> : as above.
2185 - 2190	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above, trace pyrite.
	trace	<u>CLAYSTONE</u> : as above.
2190 - 2195	75	<u>SILTSTONE</u> : as above.
	25	<u>SHALE</u> : as above.
	trace	<u>SANDSTONE</u> : as above.
2195 - 2200	70	<u>SILTSTONE</u> : dark grey, soft to firm, carbonaceous flecking and some carbonaceous layering in more fissile fragments, non-calcareous, blocky to fissile, associated pyrite.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2195 - 2200	30	<u>SHALE</u> : dark grey, firm to hard, non-calcareous, carbonaceous flecking, blocky to subfissile.
	trace	<u>SANDSTONE</u> : light grey, soft to firm, fine grained, quartzose, argillaceous, slightly calcareous, glauconitic.
	trace	<u>LIMESTONE</u> : white, blocky, calcite fragments.
2200 - 2205	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2205 - 2210	80	<u>SILTSTONE</u> : as above, with trace glauconite and associated pyrite.
	20	<u>SHALE</u> : as above.
	trace	<u>CLAYSTONE</u> : light grey, gummy, soft, slightly calcareous, carbonaceous flecks, trace glauconite.
2210 - 2215	90	<u>SILTSTONE</u> : as above with trace forams.
	10	<u>SHALE</u> : as above.
2215 - 2220	90	<u>SILTSTONE</u> : medium grey to dark grey brown, firm to hard, occasionally soft, mainly silt sized quartz grains, non-calcareous clay matrix.
	10	<u>SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : buff to brown, very hard.
	trace	<u>LIMESTONE</u> : dark grey, very hard, conchoidal fracture.
2220 - 2225	100	<u>SILTSTONE</u> : as above, with minor pyrite clusters.
	trace	<u>LIMESTONE</u> : as above.
2225 - 2230	80	<u>SILTSTONE</u> : medium grey to light grey, soft to firm, predominantly soft, very argillaceous, non-calcareous, blocky to subfissile, carbonaceous flecking.
	20	<u>SHALE</u> : dark grey to medium dark grey, firm to hard, non-calcareous, blocky to sub-fissile, carbonaceous flecking and parting common.
	trace	<u>LIMESTONE</u> : light grey, soft, high clay content, blocky, carbonaceous flecking.
2230 - 2235	60	<u>SILTSTONE</u> : as above.
	30	<u>SHALE</u> : as above.
	10	<u>LIMESTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2235 - 2240	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2240 - 2245	90	<u>SILTSTONE</u> : as above, together with some fragments of siltstone that are medium grey, very hard, very argillaceous, non-calcareous, blocky.
	10	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
	trace	<u>CHERT</u> : rust brown, very hard, blocky, conchoidal fracture.
2245 - 2250	60	<u>SILTSTONE</u> : as above.
	40	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2250 - 2255	85	<u>SILTSTONE</u> : as above.
	15	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2255 - 2260	trace	<u>CHERT</u> : as above.
	70	<u>SILTSTONE</u> : medium grey, firm to soft, non-calcareous, blocky to subfissile, carbonaceous parting common.
	30	<u>SHALE</u> : dark grey, firm to soft, non-calcareous, fissile to subfissile, carbonaceous flecking and carbonaceous partings common.
2260 - 2265	trace	<u>LIMESTONE</u> : yellow grey, soft, blocky, organic inclusions.
	60	<u>SILTSTONE</u> : as above.
	40	<u>SHALE</u> : as above.
	trace	<u>CHERT</u> : rust brown, very hard, blocky with conchoidal fracture.
2265 - 2270	trace	<u>LIMESTONE</u> : as above.
	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
2270 - 2275	trace	<u>LIMESTONE</u> : as above.
	60	<u>SHALE</u> : as above.
	40	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2275 - 2280	80	<u>SHALE</u> : as above.
	20	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2280 - 2285	80	<u>SHALE</u> : as above.
	20	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2285 - 2290	50	<u>SHALE</u> : dark grey, firm to soft, non-calcareous, blocky to subfissile, carbonaceous partings very common, carbonaceous flecking also present.
	50	<u>SILTSTONE</u> : dark grey to medium grey, soft to firm, more calcareous, blocky to subfissile, carbonaceous flecking.
	trace	<u>LIMESTONE</u> : yellow grey, soft, organic inclusions.
2290 - 2295	40	<u>SHALE</u> : as above.
	60	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
	trace	<u>DOLOMITE</u> : reddish brown, very hard, blocky.
2295 - 2300	60	<u>SHALE</u> : as above.
	40	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2300 - 2305	80	<u>SHALE</u> : as above.
	20	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2305 - 2310	80	<u>SHALE</u> : as above.
	20	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
2310 - 2315	60	<u>SHALE</u> : medium grey to dark grey, firm to soft, non-calcareous, blocky to fissile, very carbonaceous, partings along carbonaceous material common.
	40	<u>SILTSTONE</u> : medium grey to medium dark grey, soft, non-calcareous, blocky to subfissile, carbonaceous flecking.
2315 - 2320	80	<u>SHALE</u> : as above.
	20	<u>SILTSTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2320 - 2325	70	<u>SHALE</u> : as above.
	30	<u>SILTSTONE</u> : as above.
	trace	<u>LIMESTONE/DOLOMITE</u> : buff, yellow grey, very hard, blocky.
2325 - 2330	70	<u>SHALE</u> : as above.
	30	<u>SILTSTONE</u> : as above with some calcite veining.
2330 - 2335	80	<u>SHALE</u> : as above.
	20	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : yellow grey, firm, blocky.
	trace	<u>LIMESTONE</u> : tan, calcite crystals.
2335 - 2340	80	<u>SHALE</u> : dark grey to medium dark grey, firm to soft, non-calcareous, fissile to subfissile, carbonaceous partings.
	20	<u>SILTSTONE</u> : medium grey to medium dark grey, firm to soft, non-calcareous, blocky to subfissile, carbonaceous flecking.
	trace	<u>DOLOMITE</u> : buff, very hard, blocky, organic inclusions.
	trace	<u>SANDSTONE</u> : fine grained, angular quartz grains, calcareous, pyrite rich, glauconite inclusions, poor visual porosity.
2340 - 2345	60	<u>SHALE</u> : dark grey to medium dark grey, firm to soft, non-calcareous, subfissile, abundant fine carbonaceous flecking.
	40	<u>SILTSTONE</u> : medium grey to medium dark grey, non-calcareous, blocky to rounded cuttings, abundant very fine grained carbonaceous material, trace pyrite.
	trace	<u>DOLOMITE</u> : as above.
2345 - 2350	60	<u>SHALE</u> : as above.
	40	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2350 - 2355	60	<u>SHALE</u> : as above.
	40	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2355 - 2360	100	<u>SILTSTONE/SHALE</u> : dark grey to medium dark grey, firm to soft, slightly calcareous, blocky to rounded cuttings, very fine grained carbonaceous flecking, slight trace forams (benthonic), red brown, translucent, recrystallized (?).
	trace	<u>DOLOMITE/LIMESTONE</u> : dark grey to medium dark grey, hard, angular to subangular cuttings, subfissile.
2360 - 2365	100	<u>SILTSTONE/SHALE</u> : as above, with trace crystalline pyrite.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>LIMESTONE</u> : white to light grey, hard, subangular, calcareous, blocky.
2365 - 2370	100	<u>SILTSTONE/SHALE</u> : as above, with trace crystalline pyrite and trace very fine grained glauconite.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2370 - 2375	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>LIMESTONE/DOLOMITE</u> : as above.
2375 - 2380	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite.
	trace	<u>LIMESTONE/DOLOMITE</u> : as above.
2380 - 2385	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite.
	trace	<u>LIMESTONE/DOLOMITE</u> : as above.
2385 - 2390	60	<u>SILTSTONE</u> : medium grey to medium dark grey, firm, subangular to subrounded, slightly calcareous, blocky to subfissile.
	40	<u>SHALE</u> : medium light grey to medium grey, soft, very fine grained, rounded to subrounded, slightly calcareous, blocky, carbonaceous speckling, trace crystalline pyrite.
	trace	<u>LIMESTONE/DOLOMITE</u> : brown grey to medium grey, hard to very hard, blocky angular fragments.
2390 - 2395	70	<u>SILTSTONE</u> : as above.
	30	<u>SHALE</u> : as above, with trace pyrite.
	trace	<u>LIMESTONE</u> : as above, hard.
2395 - 2400	100	<u>SILTSTONE/SHALE</u> : medium grey to medium dark grey, soft, calcareous, blocky to subfissile, carbonaceous flecks, trace quartz, pyrite and glauconite.
	trace	<u>LIMESTONE/DOLOMITE</u> : buff to light grey, hard, white calcareous flecks, trace shell fragments.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2400 - 2405	95	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite and glauconite.
	5	<u>LIMESTONE/DOLOMITE</u> : as above.
2405 - 2410	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite, quartz and glauconite.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above with trace crystalline calcite.
2410 - 2415	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2415 - 2420	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2420 - 2425	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above with trace calcite crystals.
2425 - 2430	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2430 - 2435	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2435 - 2440	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2440 - 2445	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2445 - 2450	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2450 - 2455	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2455 - 2460	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2460 - 2465	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2465 - 2470	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2470 - 2475	100	<u>SILTSTONE/SHALE</u> : medium grey to medium dark grey, soft to firm, subangular to subrounded, very slightly calcareous, blocky to subfissile, <u>trace carbonaceous</u> flecks, and <u>trace micaceous</u> flecks, trace crystalline pyrite.
	trace	<u>DOLOMITE/LIMESTONE</u> : buff to brown grey, hard, angular to subangular fragments, blocky, calcite veins, calcareous in part.
2475 - 2480	100	<u>SILTSTONE/SHALE</u> : as above, with <u>trace glauconite</u> .
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2480 - 2485	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2485 - 2490	100	<u>SILTSTONE/SHALE</u> : as above, with very <u>rare benthonic forams</u> .
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2490 - 2495	100	<u>SILTSTONE/SHALE</u> : as above, <u>rare benthonic foram.</u>
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2495 - 2500	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2500 - 2505	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : with calcite veins.
2505 - 2510	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above, with trace calcite crystals.
2510 - 2515	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2515 - 2520	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2520 - 2525	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.
2525 - 2530	100	<u>SILTSTONE/SHALE</u> : as above, but becoming softer and stickier, minor pyrite.
	trace	<u>DOLOMITE/LIMESTONE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2530 - 2535	100	<u>SILTSTONE/SHALE</u> : as above, trace pyrite, trace glauconite.
	trace	<u>DOLOMITE</u> : trace calcite crystals.
2535 - 2540	100	<u>SILTSTONE/SHALE</u> : becoming siltier, rarely fissile, trace pyrite.
	trace	<u>DOLOMITE</u> : as above with trace calcite crystals.
2540 - 2545	100	<u>SILTSTONE/SHALE</u> : as above, trace pyrite and trace glauconite.
	trace	<u>DOLOMITE</u> : as above, with trace calcite crystals.
2545 - 2550	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2550 - 2555	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2555 - 2560	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2560 - 2565	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2565 - 2570	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite and glauconite.
	trace	<u>DOLOMITE</u> : with trace calcite crystals.
2570 - 2575	100	<u>SILTSTONE/SHALE</u> : as above, slightly harder.
	trace	<u>DOLOMITE</u> : as above.
2575 - 2580	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2580 - 2585	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2585 - 2590	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2590 - 2595	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2595 - 2600	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2600 - 2605	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2605 - 2610	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2610 - 2615	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2615 - 2620	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
	trace	<u>SILTSTONE</u> : light grey to medium light grey, firm, dominantly composed of subrounded silt sized quartz grains, some silt sized carbonaceous grains, blocky, minor clay matrix.
2620 - 2625	70	<u>SHALY SILTSTONE</u> : medium dark grey, firm, visible silt sized quartz and carbonaceous grains, subangular to subrounded, some clay matrix, very slightly calcareous, blocky to subfissile, trace crystalline pyrite.
	30	<u>SILTY SHALE</u> : medium light grey, soft, sticky, rounded fragments, some silt sized quartz and carbonaceous grains, very slightly calcareous, cuttings disintegrate when rewetted after drying.
	trace	<u>DOLOMITE</u> : buff to brown grey, hard, angular to subangular, blocky, non-calcareous.
2625 - 2630	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite, calcite, glauconite and aggregates of quartz grains.
	trace	<u>DOLOMITE</u> : as above with trace polyzoans.
2630 - 2635	95	<u>SILTSTONE/SHALE</u> : as above, trace pyrite, trace calcite crystals.
	5	<u>DOLOMITE</u> : as above, calcareous.
2635 - 2640	95	<u>SILTSTONE/SHALE</u> : as above.
	5	<u>DOLOMITE</u> : as above.
2640 - 2645	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2645 - 2650	100	<u>SILTSTONE</u> : slightly shaly, medium light grey to medium dark grey, moderately hard, silt sized quartz grains, blocky, micaceous, carbonaceous flecks, slightly calcareous, trace pyrite.
	trace	<u>DOLOMITE</u> : as above, with trace calcite crystals.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2650 - 2655	100.	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2655 - 2660	100	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2660 - 2665	100	<u>SILTSTONE</u> : as above.
	trace	<u>DOLOMITE</u> : as above.
2665 - 2670	100	<u>SILTSTONE</u> : as above, with minor amounts of blue-green silt sized grains of chlorite or glauconite (?) trace pyrite.
	trace	<u>DOLOMITE</u> : as above, calcareous.
2670 - 2675	95	<u>SILTSTONE</u> : as above, trace pyrite.
	5	<u>DOLOMITE</u> : as above, calcareous.
2675 - 2680	100	<u>SILTSTONE</u> : as above, becoming shalier, trace pyrite.
	trace	<u>DOLOMITE</u> : as above.
2680 - 2685	100	<u>SILTSTONE</u> : as above, also contains minor amounts of very fine grained, subrounded quartz grains, trace pyrite.
	trace	<u>DOLOMITE</u> : as above.
2685 - 2690	100	<u>SILTSTONE</u> : as above, trace pyrite.
	trace	<u>DOLOMITE</u> : as above, slightly calcareous.
2690 - 2695	100	<u>SILTSTONE/SHALE</u> : medium light grey to medium dark grey, soft to firm, subfissile to blocky. The siltstone grades to subfissile shale cuttings, generally quartzose, very fine grained carbonaceous flecking. The shaly cuttings are generally very carbonaceous and have no recognisable quartz granular appearance. It has occasional mineral fluorescence, micromicaceous, especially in shaly cuttings. Some silty and shaly cuttings contain abundant swelling clays, trace calcite, slightly calcareous, trace pyrite, no hydrocarbon fluorescence.
2695 - 2700	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite and trace calcite.
2700 - 2705	100	<u>SILTSTONE/SHALE</u> : as above, predominantly siltstone, occasionally some siltstone cuttings are very light grey to light grey, quartzose, soft, blocky, argillaceous, very fine carbonaceous flecking, very calcareous matrix, fine flocculating clays make up part of the matrix, trace pyrite, trace calcite, trace siderite(?).

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2705 - 2710	100	<u>SILTSTONE/SHALE</u> : as above, there are two distinct types of cuttings, hard shale/siltstone and soft clayey siltstone. Most siltstone cuttings are very argillaceous, the matrix consists of fine flocculating clays. The hard shale/siltstone is slightly calcareous while the argillaceous siltstone is very calcareous.
2710 - 2715	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite, trace quartz fragments, trace calcite and trace dolomite.
2715 - 2720	100	<u>SILTSTONE/SHALE</u> : as above, also trace glauconite.
2720 - 2725	100	<u>SILTSTONE/SHALE</u> : as above.
2725 - 2730	100	<u>SILTSTONE/SHALE</u> : as above.
2730 - 2735	100	<u>SILTSTONE/SHALE</u> : as above.
2735 - 2740	100	<u>SILTSTONE/SHALE</u> : as above.
2740 - 2745	100	<u>SILTSTONE/SHALE</u> : as above.
2745 - 2750	100	<u>SILTSTONE/SHALE</u> : predominantly siltstone, light grey to medium grey, moderately hard to very hard, quartzose, blocky, rarely subfissile, calcareous, slightly micaceous, slightly carbonaceous, with small traces of calcite, dolomite, pyrite and glauconite.
2750 - 2755	100	<u>SILTSTONE/SHALE</u> : as above, with only traces of pyrite and calcite accessories.
2755 - 2760	100	<u>SILTSTONE/SHALE</u> : as above, containing traces of pyrite, dolomite and calcite.
2760 - 2765	100	<u>SILTSTONE/SHALE</u> : lithology varies between shaly siltstone and silty shale, medium grey to medium dark grey, firm to hard, quartzose, angular to subangular, blocky, carbonaceous, micromicaceous in part, slightly calcareous, pyritic, trace mineral fluorescence.
	trace	<u>DOLOMITE</u> : brown grey. very hard, angular, argillaceous matrix with minor silt sized grains, blocky, crystalline cemented texture.
2765 - 2770	100	<u>SILTSTONE/SHALE</u> : as above, but with an increase in siltstone content, trace pyrite.
	trace	<u>DOLOMITE</u> : as above.
2770 - 2775	100	<u>SILTSTONE/SHALE</u> : consists of two lithological varieties: 1) <u>SHALY SILTSTONE</u> : medium grey to medium light grey, soft, quartzose, argillaceous, only slightly calcareous, blocky, abundant carbonaceous flecking, occasional carbonaceous partings, occasionally micaceous, occasionally appears as light grey, soft, quartzose, very calcareous, blocky, trace clear

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2770 - 2775 (contd)		white crystals and yellow brown to tan coloured blocky cuttings, trace dolomite and siderite(?). 2) <u>SILTY SHALE</u> : medium grey to medium light grey, silt sized quartz grains, angular shale cuttings, blocky to subfissile, slightly calcareous, trace fine grained pyrite aggregates.
2775 - 2780	100	<u>SILTSTONE/SHALE</u> : as above.
2780 - 2785	100	<u>SILTSTONE/SHALE</u> : as above.
2785 - 2790	100	<u>SILTSTONE/SHALE</u> : as above.
2790 - 2795	100	<u>SILTSTONE/SHALE</u> : as above, also trace glauconite.
2795 - 2800	100	<u>SILTSTONE/SHALE</u> : as above, also trace fossils.
2800 - 2805	100	<u>SILTSTONE/SHALE</u> : as above, trace pyrite, trace calcite.
2805 - 2810	100	<u>SILTSTONE/SHALE</u> : as above.
2810 - 2815	100	<u>SILTSTONE/SHALE</u> : as above.
2815 - 2820	100	<u>SILTSTONE/SHALE</u> : consists of two lithological varieties: 1) <u>SHALY SILTSTONE</u> : medium grey to medium light grey, soft, blocky, quartzose, slightly micaceous, with carbonaceous flecks, slightly calcareous, trace pyrite. 2) <u>SILTY SHALE</u> : medium grey to medium dark grey, moderately hard, blocky to subfissile, angular fragments, slightly carbonaceous and micaceous, slightly calcareous, trace pyrite, trace clear to brownish crystalline calcite.
2820 - 2825	100	<u>SILTSTONE/SHALE</u> : as above, with trace pyrite and calcite.
2825 - 2830	100	<u>SILTSTONE/SHALE</u> : light medium grey, moderately firm, fragments are predominantly blocky, and occasionally they are rounded, slightly micaceous, contains small amounts of rounded grains of glauconite, minor amounts of dark grey to black carbonaceous flecks.
2830 - 2835	100	<u>SILTSTONE/SHALE</u> : as above, also contains large percentage of metal cuttings.
2835 - 2840	100	<u>SILTSTONE/SHALE</u> : light to medium grey, firm, occasionally soft, friable and gummy, claystone showing swelling qualities, blocky, slightly micaceous, fine carbonaceous flecks, very slightly calcareous.
2840 - 2845	100	<u>SILTSTONE/SHALE</u> : as above.
	trace	<u>DOLOMITE</u> : buff, light pale green, blocky, cryptocrystalline.
2845 - 2850	100	<u>SILTSTONE/SHALE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2850 - 2855	100	<u>SILTSTONE/SHALE</u> : as above.
2855 - 2860	100	<u>SILTSTONE/SHALE</u> : occasionally dark grey, relatively hard, angular to subfissile, but generally light to medium grey, (with a trace to yellow grey), swelling clays, forming gumbo, trace orange to red dolomite, blocky, microcrystalline, trace carbonaceous flecks.
2860 - 2865	100	<u>SILTSTONE/SHALE</u> : light grey to medium dark grey, blocky, rarely subfissile, darker fragments relatively hard, lighter fragments firm to very soft gumbo, fine carbonaceous flecks, trace micromica.
2865 - 2870	100	<u>SILTSTONE/SHALE</u> : medium light grey to medium dark grey, blocky to subfissile, fine carbonaceous flecks, trace micromica, trace orange microcrystalline dolomite, trace yellow, hard, microcrystalline accessory mineral.
2870 - 2875	100	<u>SILTSTONE/SHALE</u> : predominantly medium light to medium dark grey, blocky to very occasionally subfissile, abundant dark black carbonaceous flecks, becoming argillaceous, relatively firm to very common soft gumbo (water sensitive).
	trace	<u>DOLOMITE</u> : orange to pale brown, blocky, microcrystalline to cryptocrystalline, relatively hard.
2875 - 2880	100	<u>SILTSTONE/SHALE</u> : as above.
2880 - 2885	100	<u>SILTSTONE/SHALE</u> : as above.
2885 - 2890	100	<u>SILTSTONE/SHALE</u> : light medium grey to dark medium grey, occasionally dark grey to black, blocky to subfissile, black blocky fragments relatively hard, otherwise soft becoming increasingly argillaceous as above, trace pyrite, trace pale green, very hard cryptocrystalline accessory mineral.
2890 - 2895	100	<u>SILTSTONE/SHALE</u> : as above.
2895 - 2900	100	<u>SILTSTONE/SHALE</u> : as above but no trace pale green accessory, trace orange microcrystalline dolomite.
2900 - 2905	100	<u>SILTSTONE/SHALE</u> : medium grey to medium dark grey to occasionally dark grey, mainly blocky to very occasionally subfissile, slightly calcareous, argillaceous, common dark to black, fine carbonaceous flecks, occasionally sparse loose medium grained quartz, micromicaceous (occasionally thin laminated sample) firm to soft (water sensitive), trace orange blocky microcrystalline dolomite, trace pale green to yellow very hard amorphous and well rounded accessory, trace pyrite.
2905 - 2910	100	<u>SILTSTONE/SHALE</u> : increased percentage of swelling clays forming gumbo, minor trace accessories, otherwise as above, minor cement contamination.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2910 - 2915	100	<u>SILTSTONE/SHALE</u> : as above.
2915 - 2920	100	<u>SILTSTONE/SHALE</u> : as above.
2920 - 2925	100	<u>SILTSTONE/SHALE</u> : as above.
2925 - 2930	100	<u>SILTSTONE/SHALE</u> : medium dark grey, blocky to very occasionally subfissile, darker fragments are relatively hard, lighter fragments tend to be soft with large percentage of swelling clays forming gumbo, minor micromica, common carbonaceous flecks, trace pyrite.
2930 - 2935	100	<u>SILTSTONE/SHALE</u> : as above.
2935 - 2940	100	<u>SILTSTONE/SHALE</u> : three types: 1) medium dark grey to dark grey, hard and brittle, blocky to subfissile, common fine carbonaceous flecks, trace pyrite. 2) buff to light grey, blocky, soft sticky gumbo, carbonaceous flecks. 3) pale red brown, blocky, angular, fine carbonaceous flecks, hard and brittle fragments are present in small traces.
2940 - 2945	100	<u>SILTSTONE/SHALE</u> : as above.
2945 - 2950	100	<u>SILTSTONE/SHALE</u> : as above.
2950 - 2955	100	<u>SILTSTONE/SHALE</u> : as above.
2955 - 2960	100	<u>SILTSTONE/SHALE</u> : as above, trace micromica, trace hard yellow accessory.
2960 - 2965	100	<u>SILTSTONE/SHALE</u> : as above.
2965 - 2970	100	<u>SILTSTONE/SHALE</u> : dark grey, firm, blocky to rarely subfissile, very slightly calcareous, argillaceous, fine dark carbonaceous flecks, rare micromicaceous, medium grey fragments are blocky, soft, water sensitive, forming gumbo, otherwise as for dark grey siltstone, trace white-orange microcrystalline dolomite.
2970 - 2975	100	<u>SILTSTONE/SHALE</u> : as above, occasionally dark green glauconite.
2975 - 2980	100	<u>SILTSTONE/SHALE</u> : as above.
2980 - 2985	100	<u>SILTSTONE/SHALE</u> : as above.
2985 - 2990	100	<u>SILTSTONE/SHALE</u> : predominantly medium to dark grey, blocky, slightly fissile, with laminar partings, occasionally dark green coarse glauconite clasts, fine dark to black carbonaceous flecks, rare micromicaceous, argillaceous, relatively firm, buff to light grey water sensitive gumbo, occasionally some fragments are dark grey to black, angular, blocky, hard, becoming slightly quartzose with possible black, rounded, feldspar, trace dark white to brown microcrystalline to angular megacrystalline dolomite.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
2990 - 2995	100	<u>SILTSTONE/SHALE</u> : as above.
2995 - 3000	100	<u>SILTSTONE/SHALE</u> : medium dark grey to dark grey, firm, occasionally fissile, with laminated partings, coarse dark green glauconite clasts becoming more common, occasionally pyritic clusters, fine dark carbonaceous flecks, argillaceous, also present is buff to light grey water sensitive gumbo, trace microcrystalline orange red dolomite, slightly calcareous.
3000 - 3005	100	<u>SILTSTONE/SHALE</u> : predominantly light to medium grey, very soft, blocky, rarely fissile, mainly hydrated, very water sensitive, tending to gumbo throughout, possible bit balling, otherwise as above.
3005 - 3010	100	<u>SILTSTONE/SHALE</u> : 30% cement contamination, otherwise as above.
3010 - 3015	100	<u>SILTSTONE/SHALE</u> : as above, trace micromica, occasional coarse microcrystalline pyrite aggregates.
3015 - 3020	100	<u>SILTSTONE/SHALE</u> : predominantly medium light grey to medium grey, occasionally medium dark grey, blocky, rarely fissile, less hydrated (about 50% soft gumbo) darker grains firm to hard, trace cement contamination, trace coarse glauconite, trace pyrite, fine carbonaceous flecks.
3020 - 3025	100	<u>SILTSTONE/SHALE</u> : as above.
3025 - 3030	100	<u>SILTSTONE/SHALE</u> : as above.
3030 - 3035	100	<u>SILTSTONE/SHALE</u> : as above.
3035 - 3040	100	<u>SILTSTONE/SHALE</u> : as above.
3040 - 3045	100	<u>SILTSTONE/SHALE</u> : predominantly medium to dark grey, blocky, becoming very slightly firmer, but hydrated in the main, trace glauconite, rare micromica, trace pyrite.
3045 - 3050	100	<u>SILTSTONE/SHALE</u> : light to medium grey, firm, blocky, rarely subfissile, dark carbonaceous flecks, becoming increasingly micromicaceous, common coarse green angular glauconitic clasts, with proportions of hydrated water sensitive clay becoming very soft and friable, trace pyrite, minor cement contamination.
3050 - 3055	100	<u>SILTSTONE/SHALE</u> : as above, scattered white fluorescence.
3055 - 3060	100	<u>SILTSTONE/SHALE</u> : predominantly dark grey, firm to hard, blocky, rarely subfissile, dark carbonaceous flecks, lower proportion of soft water sensitive gumbo, trace micromica, trace orange microcrystalline dolomite, fluorescence increasing, no cut.
3060 - 3065	100	<u>SILTSTONE/SHALE</u> : as above.
3065 - 3070	100	<u>SILTSTONE/SHALE</u> : more light grey water sensitive gumbo, very soft, trace glauconite, otherwise as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>ft</u>	<u>DESCRIPTION</u>
3070 - 3075	100	<u>SILTSTONE/SHALE</u> : predominantly medium grey, blocky, high proportion of light grey, soft, water sensitive gumbo, otherwise as above.
3075 - 3080	100	<u>SILTSTONE/SHALE</u> : as above.
3080 - 3085	100	<u>SILTSTONE/SHALE</u> : as above.
3085 - 3090	100	<u>SILTSTONE/SHALE</u> : predominantly light to medium grey, blocky, common dark to black carbonaceous flecks, greater proportion of soft water sensitive hydrated gumbo, some fragments are dark grey, blocky, relatively hard to firm, becoming slightly quartzose, trace pyrite, minor mineral fluorescence, no cut.
3090 - 3095	100	<u>SILTSTONE/SHALE</u> : as above.
3095 - 3100	100	<u>SILTSTONE/SHALE</u> : as above, the dark grey, very hard, blocky, siltstone cuttings becoming more frequent, otherwise as above.
3100 - 3105	100	<u>SILTSTONE/SHALE</u> : as above.
3105 - 3110	100	<u>SILTSTONE/SHALE</u> : medium to dark grey, blocky, slightly fissile, greater proportion of relatively hard and firm siltstone than above, becoming occasionally quartzose, common dark to black carbonaceous flecks, trace micromica, trace glauconite, trace pyrite.
3110 - 3115	100	<u>SILTSTONE/SHALE</u> : increasingly fissile with minor laminar partings, otherwise as above.
3115 - 3120	100	<u>SILTSTONE/SHALE</u> : as above.
3120 - 3125	100	<u>SILTSTONE/SHALE</u> : as above.
3125 - 3130	100	<u>SILTSTONE/SHALE</u> : as above.
3130 - 3135	100	<u>SILTSTONE/SHALE</u> : medium to dark grey, hard to firm, blocky, trace subfissile, dark carbonaceous flecks, lower proportion of soft water sensitive hydrated gumbo, rare micromica.
3135 - 3140	100	<u>SILTSTONE/SHALE</u> : as above.
3140 - 3145	100	<u>SILTSTONE/SHALE</u> : as above, with an increase in proportion of medium light grey, soft, water sensitive gumbo.
3145 - 3150	100	<u>SILTSTONE/SHALE</u> : as above.
3150 - 3155	100	<u>SILTSTONE/SHALE</u> : as above and trace glauconite.
3155 - 3160	100	<u>SILTSTONE/SHALE</u> : medium light grey, soft gumbo. Also present is dark grey to medium dark grey, hard, otherwise as above.
3160 - 3165	100	<u>SILTSTONE/SHALE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3165 - 3170	100	<u>SILTSTONE/SHALE</u> : as above, with a trace of grey, moderately hard argillaceous shale, and a trace of clear, medium grained quartz sand.
3170 - 3175	100	<u>SILTSTONE/SHALE</u> : as above with occasional quartz grains.
3175 - 3180	100	<u>SILTSTONE/SHALE</u> : as above.
3180 - 3185	100	<u>SILTSTONE/SHALE</u> : medium to dark grey, blocky to subfissile, mainly firm, occasionally hard, common dark to black carbonaceous flecks, rare micromica, becoming slightly quartzose in part, somewhat argillaceous, trace fine to medium grained, soft, subrounded quartz sand in a kaolinitic white clay matrix, no show.
3185 - 3190	100	<u>SILTSTONE/SHALE</u> : as above, becoming less hydrated.
3190 - 3195	100	<u>SILTSTONE/SHALE</u> : as above.
3195 - 3200	100	<u>SILTSTONE/SHALE</u> : as above, trace glauconite, trace pyritic agglomerates.
3200 - 3205	100	<u>SILTSTONE/SHALE</u> : as above.
3205 - 3210	100	<u>SILTSTONE/SHALE</u> : medium to dark grey, firm, occasionally hard, blocky to subfissile, common dark to black carbonaceous flecks, rare micromica, becoming slightly quartzose in part, somewhat argillaceous, trace siderite.
3210 - 3215	100	<u>SILTSTONE/SHALE</u> : as above.
3215 - 3220	100	<u>SILTSTONE/SHALE</u> : as above.
3220 - 3225	100	<u>SILTSTONE/SHALE</u> : as above.
3225 - 3230	100	<u>SILTSTONE/SHALE</u> : as above.
3230 - 3235	100	<u>SILTSTONE/SHALE</u> : as above, with trace micromica.
3235 - 3240	100	<u>SILTSTONE/SHALE</u> : as above, with trace glauconite.
3240 - 3245	100	<u>SILTSTONE/SHALE</u> : as above, plus occasional dark grey to black, firm to hard, moderately calcareous shale, with occasional agglomerates of coarse microcrystalline pyrite.
3245 - 3250	100	<u>SILTSTONE/SHALE</u> : as above.
3250 - 3255	100	<u>SILTSTONE/SHALE</u> : as above.
3255 - 3260	100	<u>SILTSTONE/SHALE</u> : about 50% of the cuttings are medium to dark grey, blocky to subfissile, firm to occasionally hard, common black, very fine carbonaceous flecks, some slightly quartzose, slightly calcareous. The other 50% consists of buff to light grey, water sensitive, soft, gumbo, contains occasional very fine, dark carbonaceous flecks, trace microcrystalline pyritic agglomerates.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3260 - 3265	100	<u>SILTSTONE/SHALE</u> : predominantly very light to light grey, tending mainly towards siltstone, although water sensitive as previously, otherwise as above.
3265 - 3270	100	<u>SILTSTONE</u> : very light to light grey, blocky, quartzose, common fine carbonaceous flecks, argillaceous, predominantly buff to light grey clay matrix, trace mica, sandy in part.
3270 - 3275	100	<u>SILTSTONE</u> : as above.
3275 - 3280	100	<u>SILTSTONE</u> : very light to light grey, blocky, quartzose, fine, dark to black carbonaceous flecks, argillaceous, common mica, occasionally buff to light grey clay matrix, otherwise a partly silicic matrix, trace pyrite agglomerates, trace shale partings as above.
3280 - 3285	90	<u>SILTSTONE</u> : very light to light grey, soft to firm, blocky, quartzose, fine dark grey to black carbonaceous flecks.
	10	<u>SHALE</u> : medium dark to dark grey, blocky to subfissile, firm to very hard, trace pyrite.
3285 - 3290	90	<u>SILTSTONE</u> : as above.
	5	<u>SHALE</u> : as above.
	5	<u>LIMESTONE</u> : white, buff, yellow to grey, soft to firm, calcite grains.
3290 - 3295	90	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : as above.
	trace	<u>LIMESTONE</u> : as above.
3295 - 3300	90	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : as above.
3300 - 3305	90	<u>SILTSTONE</u> : very light grey to light grey, soft to firm, blocky, quartzose, fine carbonaceous flecking.
	10	<u>SHALE</u> : medium dark to dark grey, blocky to subfissile, firm to very hard, non calcareous.
	trace	<u>LIMESTONE</u> : white to buff, soft, blocky.
3305 - 3310	90	<u>SILTSTONE</u> : very light grey to dark grey, soft to firm, blocky, quartzose, fine carbonaceous flecks to very carbonaceous, non calcareous.
	10	<u>SHALE</u> : as above.
3310 - 3315	95	<u>SILTSTONE</u> : as above.
	5	<u>SHALE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3315 - 3320	95	<u>SILTSTONE</u> : very light grey to light grey, firm to soft, blocky, quartzose, carbonaceous flecks common, non calcareous, micaceous in part.
	5	<u>SHALE</u> : dark grey, firm to very hard, blocky to subfissile, non calcareous, trace pyrite.
3320 - 3325	100	<u>SILTSTONE</u> : very light grey, otherwise light grey, soft to firm, blocky, quartzose, slightly calcareous, carbonaceous flecks, mica common.
	trace	<u>SHALE</u> : dark grey, blocky, sub conchoidal fracture, very hard, brittle.
3325 - 3330	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3334	100	SPOT SAMPLE: <u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3330 - 3335	100	<u>SILTSTONE</u> : light grey to medium light grey, soft to firm, blocky, carbonaceous flecking, some carbonaceous fragments, quartzose.
	trace	<u>SHALE</u> : dark grey, blocky, very hard, non calcareous, the dark colour suggests the presence of abundant carbonaceous matter.
3335 - 3340	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3340 - 3345	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3345 - 3350	100	<u>SILTSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3350 - 3355	100	<u>SILTSTONE</u> : very light grey to light grey, soft to firm, blocky to subfissile, quartzose, carbonaceous flecking common.
	trace	<u>SHALE</u> : dark grey, firm to very hard, blocky to subfissile.
3355 - 3360	90	<u>SILTSTONE</u> : as above.
	10	<u>SHALE</u> : as above.
3360 - 3365	85	<u>SILTSTONE</u> : as above.
	15	<u>SHALE</u> : as above.
3365 - 3370	100	<u>SILTSTONE</u> : light grey to dark grey, soft to very hard, blocky, angular, quartzose, carbonaceous flecking common, abundant clay matrix.
	trace	<u>SHALE</u> : as above.

LITHOLOGICAL DESCRIPTIONS

TRITON - 1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3370 - 3375	85	<u>SILTSTONE</u> : medium grey to dark grey, soft to firm, quartzose, very carbonaceous, abundant clay matrix.
	15	<u>SHALE</u> : very dark grey brown, rich in carbonaceous matter, blocky.
3375 - 3380	85	<u>SILTSTONE</u> : as above.
	15	<u>SHALE</u> : as above.
	trace	<u>METAL CUTTINGS</u>
3380 - 3385	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
	trace	<u>SILCRETE</u> : white, light brown banded, flat upper and lower surfaces, otherwise irregular fracture, mainly silica content.
3385 - 3390	70	<u>SILTSTONE</u> : light grey to dark grey, soft to firm, mainly clay cement, subfissile, carbonaceous plant remains, minor calcareous fossil(?) fragments.
	30	<u>SHALE</u> : dark grey, very hard, flakey to blocky.
3390 - 3395	70	<u>SILTSTONE</u> : light grey to medium grey, soft to firm, blocky, carbonaceous flecking, non-calcareous.
	25	<u>SHALE</u> : medium grey to medium dark grey, firm to hard, subfissile, non-calcareous.
	5	<u>LIMESTONE</u> : white to buff, blocky.
	trace	<u>WEATHERED FRAGMENTS</u> : rust brown iron oxide coated grains, some grain surfaces completely covered by oxides, others have a laminar weathered surface, the unweathered surface appearing to be a chloritic? siltstone or mud additive?
3395 - 3400	80	<u>SILTSTONE</u> : as above.
	20	<u>SHALE</u> : as above.
	trace	<u>SANDSTONE</u> : very light grey to light grey, soft, subangular to subrounded, poorly sorted, quartz grains, slightly calcareous cement.
	trace	<u>LIMESTONE</u> : as above.
3400 - 3404	80	<u>SILTSTONE</u> : as above.
	15	<u>SHALE</u> : as above.
	5	<u>LIMESTONE</u> : as above.
	trace	<u>SANDSTONE</u> : white to very light grey, firm, subangular to subrounded, poorly sorted, quartz grains, slightly calcareous cement.

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3404 - 3405	60	<u>SILTSTONE</u> : medium light grey to medium grey, moderately soft to firm, subrounded, blocky, argillaceous matrix, silt sized quartz grains, carbonaceous flecks, slightly calcareous.
	20	<u>SHALE</u> : medium grey to medium dark grey, firm to moderately hard, subangular, blocky to subfissile, some silt sized quartz grains, very slightly calcareous.
	20	<u>CEMENT</u> : buff to light brown, moderately hard, subangular, blocky, calcareous.
	very rare	<u>SANDSTONE</u> : consists of loose quartz grains.
3405 - 3409	common	<u>METAL FILINGS</u>
	70	<u>SANDSTONE</u> : consists of quartz grain aggregates, plus loose quartz, fine grained to very fine grained, well sorted, subangular to subrounded, occasional medium grained quartz grains, no visible porosity, quartz grain aggregates appear almost welded together in places, possible secondary quartz overgrowth, some mineral fluorescence from calcareous matrix, occasional very fine grained pyrite aggregates with quartz aggregates, possible glauconite, very fine grained, occasionally fine grained to very fine grained carbonaceous flecks included with quartz aggregates. <u>NOTE</u> : occasional fine grained to medium grained, rounded to subrounded, loose quartz grains.
3409 - 3410	30	<u>SHALE AND SILTSTONE</u> : as above.
	95	<u>SANDSTONE</u> : as above, with no hydrocarbon fluorescence and no cut. <u>NOTE</u> : occasional medium grained to coarse grained, angular to subangular, quartz grains and occasional very calcareous matrix in fine grained to very fine grained quartz aggregates.
	5	<u>CLAYSTONE</u> : white, gummy, soft, carbonaceous streaks in places.
3410 - 3412	trace	<u>SILTSTONE & SHALE</u> : as above.
	95	<u>SANDSTONE</u> : fine to medium grained loose quartz dominant in the sample, subangular to subrounded, mainly subangular, generally well sorted, occasional coarse, subrounded quartz grains, common fine grained quartz aggregates, some quartz grains are encrusted with very fine grained pyrite, no hydrocarbon fluorescence or cut.
	5	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : dark grey to medium dark grey, carbonaceous flecking.

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3412 - 3413	90	<u>SANDSTONE</u> : clear to translucent, firm to hard, fine to medium grained, predominantly fine grained with common coarse subangular to subrounded quartz grains, dominantly subangular, poorly sorted, evidence of quartz overgrowths, very poor visible porosity, no hydrocarbon fluorescence and no cut.
	5	<u>SHALE</u> : very dark grey, firm to hard, subangular cuttings, carbonaceous flecks.
	5	<u>SILTSTONE</u> : light grey, light brown, soft to firm, contains quartz grains and small shell fragments.
	trace	<u>CARBONATE</u> : mineral fluorescence.
3413 - 3415	100	<u>SANDSTONE</u> : as above, with trace pyrite.
	trace	<u>SHALE</u> : as above.
	trace	<u>SILTSTONE</u> : as above.
3415 - 3420	100	<u>SANDSTONE</u> : as above, with aggregates becoming less common.
	trace	<u>SHALE</u> : as above.
	trace	<u>SILTSTONE</u> : as above.
3420 - 3424.8	80	<u>SANDSTONE</u> : medium grey to medium dark grey, soft to hard, predominantly soft, blocky, non-calcareous matrix, common carbonaceous flecking.
	20	<u>SANDSTONE</u> : as above.
3424.8 - 3429	100	<u>SANDSTONE</u> : fine grained to very fine grained quartz, little loose quartz, mainly aggregates, aggregates show very little to no porosity, possible secondary silica cementation, moderately calcareous cement, quartz grains are angular to subangular and are poorly sorted, common carbonaceous fine grained flecking, occasional glauconite, aggregates are hard and well cemented, grades to dirty, silty, coaly (ie. high carbonaceous quartzose fragments in places), abundant mineral fluorescence.
	trace	<u>SHALE</u> : medium grey to medium dark grey, firm to hard, blocky cuttings, slightly calcareous, carbonaceous flecking.
	trace	<u>SILTSTONE</u> : buff, soft, blocky, calcareous matrix, common carbonaceous flecks, and silt sized quartz grains.

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>	
3429 - 3430	80	<u>SANDSTONE</u> : mostly aggregates of quartz, fine to medium grained (mostly medium), subangular to subrounded, moderately sorted, common carbonaceous grains, some pyrite grains, firmly cemented, calcareous, some loose quartz grains, (mainly coarse grained, subangular) no fluorescence, little porosity, mostly siliceous cement, some evidence of quartz overgrowths.	
	20	<u>SHALE</u> : medium grey to medium dark grey, firm to hard, subangular, blocky, carbonaceous, silty in part, slightly calcareous in part.	
3430 - 3433	60	<u>CLAYSTONE</u> : whitish, soft, gummy, contains medium to fine quartz grains, carbonaceous with some laminae present, calcareous, appears to be interbedded with hard, well cemented sandstone.	
	40	<u>SANDSTONE</u> : as above, contains some carbonaceous grains.	
3433 - 3435	90	<u>SANDSTONE</u> : predominantly quartz aggregates - clear to translucent, firm to hard, fine grained, subangular, moderately well sorted, no visual porosity, common carbonaceous flecks, some calcareous cement, with common loose quartz grains, clear to translucent, hard, fine to medium grained with occasional coarse quartz grains, subangular to subrounded, dominantly subangular.	
	5	<u>CLAYSTONE</u> : white to very light grey, very soft, calcareous matrix, common carbonaceous flecks and very fine quartz grains, trace muscovite.	
	5	<u>SHALE</u> : dark grey, firm, non-calcareous matrix, common carbonaceous flecks, with common carbonaceous cuttings, trace glauconite and muscovite.	
	3435 - 3438	100	<u>SANDSTONE</u> : as above.
		trace	<u>CLAYSTONE</u> : as above.
3438 - 3440	trace	<u>SHALE</u> : as above, trace pyrite.	
	95	<u>SANDSTONE</u> : as above.	
	5	<u>CLAYSTONE</u> : as above.	
3440 - 3445	trace	<u>SHALE</u> : as above, trace pyrite.	
	80	<u>SANDSTONE</u> : as above.	
	20	<u>CLAYSTONE</u> : as above.	
	trace	<u>SHALE</u> : as above.	
	trace	Green calcareous material, it could be smithsonite or strontianite but more likely to be a green tinted variety of calcite.	

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3445 - 3450	95	<u>SANDSTONE</u> : as above, with abundant calcite cement.
	trace	<u>LIMESTONE</u> : consists of milky white to tan calcite fragments.
	trace	<u>SHALE</u> : as above.
	5	<u>CLAYSTONE</u> : as above.
3450 - 3455	100	<u>SANDSTONE</u> : quartz aggregates, with calcareous cement and carbonaceous flecks, and with loose quartz fragments that have possibly been fractured from a highly silicified sandstone, translucent, very hard, fine to granule sized grains, angular to subangular, predominantly angular, evidence of fracturing within the grains, probably secondary silica cement, no porosity, abundant mineral fluorescence; evidence of sandstone interbedded with shale, trace pyrite.
	trace	<u>SHALE</u> : dark grey, carbonaceous, blocky to subfissile, at times shows interbedding with angular quartz grains.
	trace	<u>CLAYSTONE</u> : as above.
3455 - 3460	100	<u>SANDSTONE</u> : as above, with pyrite veins between silicified grains.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3460 - 3465	90	<u>SANDSTONE</u> : as above, but with a greater percentage of quartz aggregates, fine grained, with carbonaceous flecks.
	5	<u>SHALE</u> : as above.
	5	<u>CLAYSTONE</u> : as above, interbedded with sandstone.
3465 - 3470	100	<u>SANDSTONE</u> : some of the sample consists of fine grained quartz aggregates with carbonaceous flecking and possible quartz overgrowths, otherwise the sample contains mostly loose, angular, fractured quartz fragments, with trace pyrite occurring as veins in loose fractured quartz grains, trace feldspar (?), milky white, non calcareous, subangular to subrounded, medium to coarse grained, moderately hard.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3470 - 3475	85	<u>SANDSTONE</u> : occasional fine grained quartz aggregates, with carbonaceous flecks as above, but sample consists mostly of loose quartz grains, fractured, angular fragments, these are generally fine grained, with some small fragments becoming transparent, otherwise as above, trace pyrite, occurring as loose cuttings as well as in veins within the silicified quartz grains.

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3470 - 3475 (contd)	15	<u>SHALE</u> : as above, however, with only occasional carbonaceous flecks.
	trace	<u>CLAYSTONE</u> : white, very soft, with layers of black carbonaceous material.
3475 - 3477	95	<u>SANDSTONE</u> : as above, except the quartz fragments are predominantly coarse grained with only occasional granule sized fragments (ie. the fragments are becoming finer with depth). The quartz aggregates as above are more common, also pyrite and feldspar cuttings as above.
	trace	<u>SHALE</u> : as above.
	5	<u>CLAYSTONE</u> : as above.
3477 - 3478.5	90	<u>SANDSTONE</u> : now with common granule sized quartz fragments and a greater percentage of quartz aggregates, with pyrite and feldspar as above.
	5	<u>CLAYSTONE</u> : as above.
	5	<u>SHALE</u> : as above.
3478.5 - 3480	90	<u>SANDSTONE</u> : as above, with trace pyrite and glauconite (?).
	5	<u>CLAYSTONE</u> : as above.
	5	<u>SHALE</u> : as above.
3480 - 3485	95	<u>SANDSTONE</u> : common fine grained quartz aggregates, calcareous cement and possible quartz overgrowths, with carbonaceous flecks (ie. as above), with abundant loose, angular, fractured, medium to very coarse sand sized, quartz grains, trace pyrite.
	5	<u>CLAYSTONE</u> : white, very soft, calcareous matrix, with layers of black carbonaceous material.
	trace	<u>SHALE</u> : medium dark to dark grey, firm to hard, non calcareous matrix, occasional fine carbonaceous flecks.
3485 - 3490	100	<u>SANDSTONE</u> : mostly loose quartz grains, fine to medium, subangular to angular, translucent; some aggregates also present, usually calcite cemented, fine to medium grained quartz, angular crystalline pyrite, some carbonaceous grains, also common coarse to granule sized quartz grains, angular, cloudy, fractured appearance, no fluorescence, little visible porosity in aggregates.
	trace	<u>SHALE</u> : medium grey to dark grey, firm to hard, angular to subangular, blocky, some carbonaceous flecks, pyritic in part, silty in part.
	trace	<u>CLAYSTONE</u> : whitish, soft, gummy, rounded grains, silty, carbonaceous and shaly laminae, calcareous.

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3490 - 3495	100	<u>SANDSTONE</u> : as above.
	trace	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3495 - 3500	80	<u>SANDSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3500 - 3505	90	<u>SANDSTONE</u> : as above, but finer grained, made up mainly of fine to medium grain sized quartz, some coarse to granule size, common calcite cemented aggregates of fine to medium grain sized quartz.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above.
3505 - 3510	70	<u>SANDSTONE</u> : common aggregates of fine to medium quartz grains, carbonaceous shale grains, carbonaceous grains, calcareous cement, some clay matrix, moderately firm, well sorted. Also common loose grains of quartz, fine to medium grained (some coarse and angular grains), subangular to subrounded, translucent, no visible porosity in aggregates, little evidence of quartz overgrowths. The sandstone has much more clay matrix than before, not as strongly cemented, trace pyrite.
	30	<u>CLAYSTONE</u> : whitish, soft, gummy, contains fine to medium quartz grains, carbonaceous and shaly laminae.
	trace	<u>SHALE</u> : medium grey to dark grey, firm to hard, angular to subangular chips, blocky, some carbonaceous flecks, pyritic, partly silty.
3510 - 3515	80	<u>SANDSTONE</u> : as above.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above, containing some black, fine grained carbonaceous material.
3515 - 3520	80	<u>SANDSTONE</u> : as above, but finer grained, only a few coarse loose grains, mostly fine grained, trace pyrite.
	20	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above, one cutting contains fine grained blue-green chlorite, also, trace carbonaceous material.
3520 - 3525	70	<u>SANDSTONE</u> : quartz aggregates consisting of clear to very light grey, friable to hard, fine to medium sized grains, predominantly medium, subangular, moderately well sorted, has argillaceous and slightly

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3520 - 3525 (contd)		calcareous matrix, possible quartz overgrowths also occur. No visual porosity. Within the aggregates fine to medium sized fragments of black carbonaceous material are common. Also common are loose quartz fragments; clear to translucent, very hard to hard, medium to occasionally granule sized, predominantly coarse, angular to sub-angular, dominantly sub-angular. The fragments are fractured; sample has abundant mineral fluorescence.
	10	<u>SHALE</u> : medium grey to dark grey, friable to occasionally moderately hard, non calcareous matrix, carbonaceous flecks, with trace chlorite (?).
	20	<u>CLAYSTONE</u> : whitish, very soft, calcareous matrix, with layers of black carbonaceous material, and occasionally very fine quartz grains.
3525 - 3530	60	<u>SANDSTONE</u> : with the loose quartz fragments becoming less common, otherwise as above, trace pyrite.
	25	<u>CLAYSTONE</u> : as above.
	15	<u>SHALE</u> : as above, occasionally becoming very carbonaceous. The shale, claystone and sandstone appear to be interbedded.
3530 - 3535	80	<u>SANDSTONE</u> : quartz aggregates are generally smaller, and have in parts a calcareous and argillaceous matrix, poor visual porosity, otherwise as above.
	15	<u>CLAYSTONE</u> : at times grey with carbonaceous material, otherwise as above.
	5	<u>SHALE</u> : as above.
3535 - 3540	100	<u>SANDSTONE</u> : loose fractured quartz chards, angular to subangular, show much silica cementation of grains, occasionally calcareous cement present, fragments are medium to coarse grained, some fragments show relict subangular to subrounded quartz grains, surrounded by quartz and silica cement, grades to medium to fine grained quartz aggregates containing fine to very fine grained carbonaceous particles, common subrounded shaly fragments (perhaps sourced from reworked Otway sandstone rocks), most aggregates contain white calcareous cement, grades to an argillaceous, very carbonaceous siltstone in places, argillaceous siltstone appears interbedded with cleaner quartz grains in places, probably beds are graded, abundant mineral fluorescence, slight cut from argillaceous and carbonaceous cuttings.
	trace	<u>SHALE</u> : medium light grey, dark grey carbonaceous streaking, quartzose, closely interbedded with sub-angular to angular quartz grains in places.
	trace	<u>CLAYSTONE</u> : very light grey to buff, contains common carbonaceous particles, soft, contains very fine grained quartz, very calcareous.

LITHOLOGICAL DESCRIPTIONS

TRITON-1 SIDETRACK

<u>DEPTH</u>	<u>%</u>	<u>DESCRIPTION</u>
3540 - 3545	90	<u>SANDSTONE</u> : quartz aggregates, sometimes with fine to very fine quartz grains and carbonaceous grains in a calcareous and/or argillaceous matrix, or in some instances possibly a silica cement. Also present are aggregates of medium to coarse quartz grains, generally square or rectangular in shape in a possible silica cement. Loose angular to sub-angular quartz fragments occur as above. Abundant mineral fluorescence.
	10	<u>CLAYSTONE</u> : as above.
	trace	<u>SHALE</u> : as above, the shale and quartz aggregates show evidence of fine interbedding.
3545 T.D.		

OIL and GAS DIVISION

2 8 OCT 1982

APPENDIX 1

LITHOLOGICAL DESCRIPTIONS

TRITON # 1 AND TRITON # 1 SIDETRACK

OTWAY BASIN

APPENDIX 2