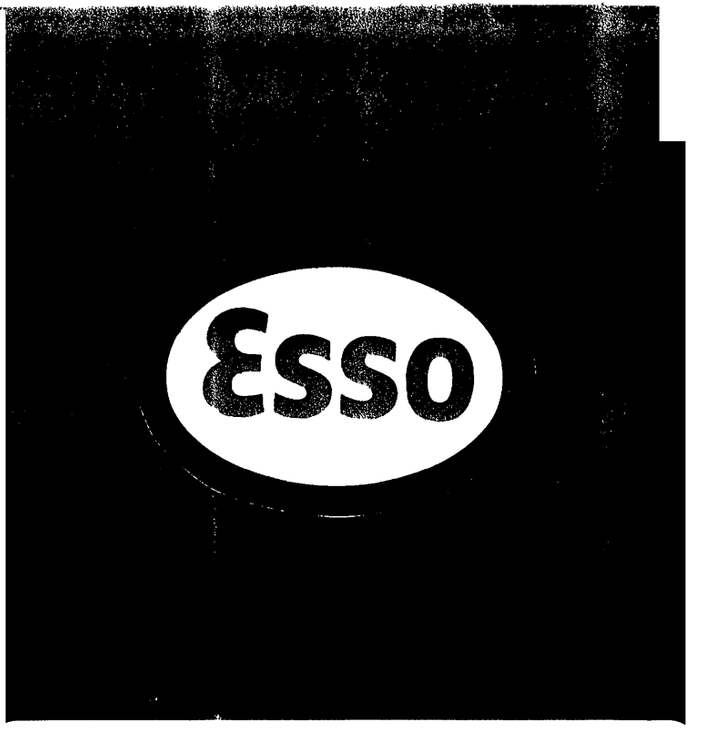


WELL COMPLETION REPORT

FLOUNDER-6

GIPPSLAND BASIN, VICTORIA

WELL COMPLETION REPORT

FLOUNDER-6

GIPPSLAND BASIN, VICTORIA.

R. DO ROZARIO

L. G. ELLIOTT

MARCH 1978

RR.

CONTENTS

ESSO STANDARD OIL (AUSTRALIA) LTD.

COMPLETION REPORT

I WELL DATA RECORD

Date January, 1978

LOCATION

WELL NAME	STATE	PERMIT or LICENCE	GEOLOGICAL BASIN	FIELD
FLOUNDER-6	VICTORIA OFFSHORE	VIC/L11	GIPPSLAND	FLOUNDER

CO-ORDINATES	MAP PROJECTION	GEOGRAPHICAL DESCRIPTION:
Lat. 38° 19'07.11"S Long. 148° 26'09.227"E Surface X = 625,524mE Y = 5757,843mN	AMG ZONE 55	74 miles SE SALE, VICTORIA 0.79 miles S.E. Flounder#1 0.57 miles N.W. Flounder#2

ELEVATIONS & DEPTHS

ELEVATIONS	WATER DEPTH	TOTAL DEPTH	Avg.Angle
Ground MSL KB 83' RT Braden Head Top Deck Platform	306'	M.D. 8601'	straight hole to 8214', then sidetracked 3000' to 8601' Average angle 1°.
	PLUG BACK DEPTH	REASONS FOR P.B.	
	450'	Abandoned.	

DATES

MOVE IN	RIG UP	SPUDDED 0000 hours
July 10th, 1977	July 11th, 1977	July 12th, 1977
RIG DOWN COMPLETE	RIG RELEASED	PROD.UNIT - Start Rigging Up
December 22nd, 1977	January 2nd, 1978	
PROD.UNIT - Rig Down Complete	RIG STRIKE BOUND	
	2200 hours, 4-8-77 to 22-11-77 and 1200 hours, 21-12-77 to 31-12-77	

MISCELLANEOUS

OPERATOR	PERMITTEE or LICENCEE	ESSO INTEREST	OTHER INTEREST
ESSO AUSTRALIA LTD	HEMATITE PETROLEUM P/L	50%	50%

CONTRACTOR	RIG NAME	EQUIPMENT TYPE
AUSTRALIAN ODECO PTY. LTD	OCEAN ENDEAVOUR	SEMI-SUBMERSIBLE ROTARY DRILLING VESSEL

TOTAL RIG DAYS	DRILLING AFE NO.	COMPLETION NO.	TYPE COMPLETION
175.7	237-005		

LAHEE WELL CLASSIFICATION	Before Drilling	Step out
	After Drilling	Plugged and abandoned. Successful oil and gas confirmation well.

L.G.ELLIOTT/R. DO ROZARIO

Geologist

WELL COMPLETION REPORT

II(a) - Initial Production Test - Not applicable

II(b) - Summary of Flounder-6 FIT & RFT DATA - for more information see Appendix 8

FIT NO.	DEPTH (FT) KB	DEPTH (FT) S.S	RECOVERY GAS (cf)	RECOVERY OIL (c.c)	RECOVERY FILTRATE (c.c)	Po (PSIG)	P	k (md)
1	8215	8132	151.3	2,450	800	3616		15
2	8273	8190	65.8	6,400	7,750	3632		34
3	8301	8218	-	-	-	Tool failure		
4	8301	8218	-	-	100	Dry run		
5	8312.5	8229.5	-	-	3,500	Dry run		
6	8334	8251	-	-	1,500	3646		65
7	8249	8166	38.4	2,870	14,500	3623		170
8	8231	8148	130.5	2,300	2,200	3622		7
9	8243	8160	-	-	-	Lost seal		
10	8531	8448	-	-	-	Lost seal		
11	8334	8251	-	-	-	Lost seal after shot fired		
12	8522	8439	-	-	21,000	3735		108

RFT NO. (Pre-test chambers)			FORMATION PRESSURE (PSIG)
1	8531	8448	H.P. pressure data unavailable
2	8479	8396	H.P. pressure data unavailable
3	8479.5	8396.5	3732
4	8301	8218	Run aborted - very tight zone
5	8300	8217	Run aborted - very tight zone
6	8312.5	8229.5	Run aborted - very tight zone
7	8283	8200	Run aborted - very tight zone
8	8273	8190	3643
9	8215	8132	3628
10	8531	8448	3738
11	8479	8396	3712
12	8334	8251	3648
13	8148	8065	No seal
14	8148.5	8065.5	Run aborted - very tight zone
15	8195.5	8112.5	3623
16	8243	8160	3630

STK
January 4, 1978

WELL FLOUNDER-6 GIPPSLAND BASIN

IV	CASING - LINER - TUBING RECORD						
Type	Size	Weight	Grade	Thread	No. Joints	Amount	Depth
Pile Joint	24"	670#		CC.	1	32.23	413.23
Cross Over	20"	129#	X-52	JV x CC	1	42.30	455.53
Conductor Casing	20"	91#	X-52	JV	7	312.29	767.82
Float Shoe Jt.	20"	91#	X-52	JV	1	43.92	811.74
Casing Hanger	13-3/8"	-	-	-	1	2.30	387.79
Cross Over	13-3/8"-10-3/4"	-	-	-	1	0.80	388.59
Pup Joint	10-3/4"	45.5#	K-55	BUTT	1	4.35	392.94
Surface Casing	10-3/4"	45.5#	K-55	BUTT	63	2480.36	2873.30
Float Collar	10-3/4"	-	-	BUTT	1	1.70	2875.00
Float Joint	10-3/4"	45.5#	K-55	BUTT	1	39.00	2914.00
Float Shoe	10-3/4"	-	-	BUTT	1	2.00	2916.00

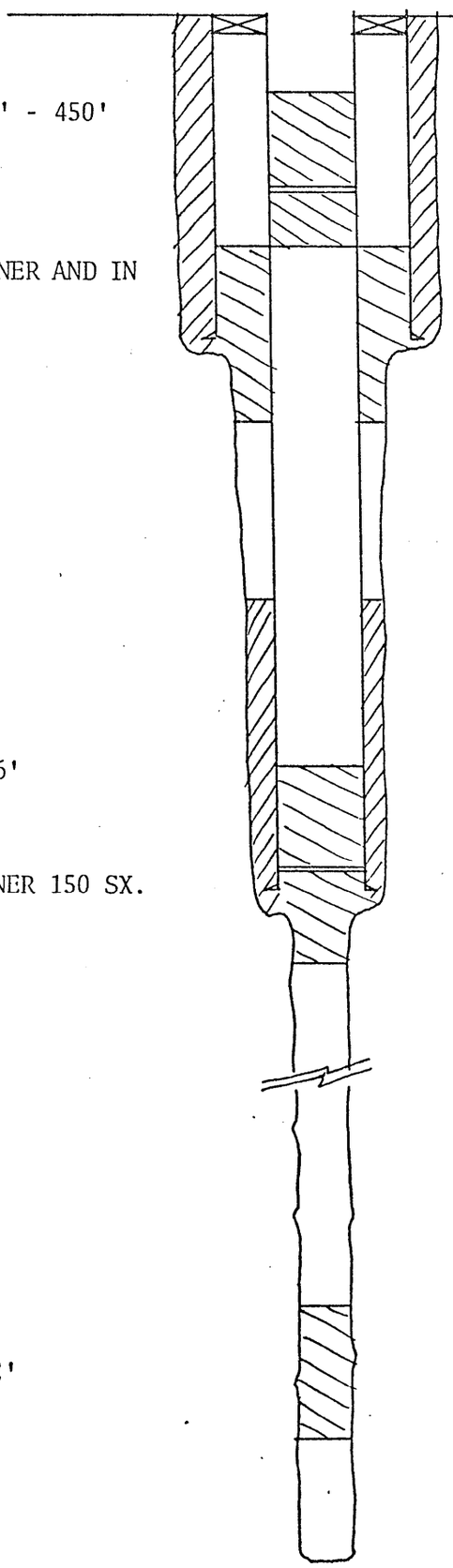
V	CEMENT RECORD				
String	20" Conductor Csg.		10-3/4" Surface Csg.		
Type of Cement	Aust. N Neat		Aust. N Neat		
	12% Gel	2% $CaCl_2$	Neat	1% $CaCl_2$	
Number of FT^3	1709	472	767	378	
Average weight of slurry	12.1	15.6	15.6		
Cement Top	Seafloor		1232'		
Casing Tested with	500 psi		1500 psi		
Number of Centralizers	7		10		
Number of Scratchers	-		-		
Stage Collar etc.	-		-		
Remarks	-		-		

G.W. WEYBURY

FLOUNDER-6 ABANDONMENT PLUGS

(ALL DEPTHS ARE FROM THE OCEAN ENDEAVOUR KB)

KB - SEA LEVEL	83'
WATER DEPTH	306'
KB - SEA FLOOR	389'



SURFACE CEMENT PLUG 650' - 450'

CEMENT RETAINER AT 650'

CEMENT PLUG BELOW RETAINER AND IN 10-3/4" x 20" ANNULUS 250 SX. CEMENT)

PERFORATIONS 710' - 712'

20" CASING SHOE AT 812'

CEMENT PLUG 2866' - 2666'

CEMENT RETAINER AT 2866'

CEMENT PLUG BELOW RETAINER 150 SX.

10-3/4" CASING SHOE AT 2916'

CEMENT PLUG 8500' - 7842'

TOTAL DEPTH 8601'

WELL FLOUNDER-6 (SIDETRACK)

VII SAMPLES, CONVENTIONAL CORES, SW CORES

INTERVAL	TYPE	RECOVERED	INTERVAL	TYPE	RECOVERED
	5 sets of washed and dried cuttings, one unwashed sack of cuttings, one composite cuttings canned, sample taken every 100'.		8128'6"-8160'	Core #1	31' 6"
			8160' -8171'6"	Core #2	10' 6"
			8171'6"-8214'6"	Core #3	32'
			900' -2925'	S.W.C.'s	29 out of 30
			5690' -6356'	S.W.C.'s	9 out of 13
			6406' -7970'	S.W.C.'s	25 out of 30
Every 30'	881'-3000'		SIDETRACK HOLE		
Every 20'	3000'-6100'		8130'-8160'	Core #4	28' 3"
Every 10'	6100'-8128'		8160'-8177'	Core #5	11'10½"
SIDETRACKED HOLE			8177'-8225'	Core #6	25' 8"
			8225'-8270'	Core #7	45'
Every 20'	5330'-6900'		8270'-8313'	Core #8	40' 3"
Every 10'	6900'-8130'		8313'-8343'	Core #9	29'
Every 10'	8420'-8601'		8343'-8390'	Core #10	43' 4"
			8390'-8420'	Core #11	30'
			6410'-8148'	S.W.C.'s	29 out of 30

VIII WIRELINE LOGS AND SURVEYS Incl. FIT)

Type & Scale	From To	Type & Scale	From To
ISF-Sonic Run 1 2" & 5" = 100'	818'-2949'		
FDC-GR Run 1 GR 2" & 5" = 100'	818'-2940' to 389'		
ISF-Sonic Run 2 2" & 5" = 100'	2918'-8122'		
FDC-CNL Run 1 2" & 5" = 100'	2918'-8126'		
CST 1	900-2925	Ran 12 FIT's and 16 RFT's;for results, see PART II.	
CST 2	5690-6356		
CST 3	6406-7970		
SIDETRACK HOLE			
ISF-Sonic Run 3 2" & 5" = 100'	2917'-8590'		
FDC-CNL Run 2 2" & 5" = 100'	2915'-8594'		
HDT Run 1	2915'-8594'		
Velocity Survey	14 levels, 33 shots 3212-8550		
CST 4	6410-8143		

L.G. ELLIOTT
R. DO ROZARIO
Geologist

IX (a)

FLOUNDER-6

STRATIGRAPHIC TABLE

MM YEARS	EPOCH	SERIES	FORMATION HORIZON	PALYNOLOGICAL ZONATION SPORE - POLLEN ASSEMBLAGE ZONES A.D. PARTRIDGE	PLANKTONIC FORAMINIFERAL ZONATIONS D. TAYLOR	DRILL DEPTH	SUBSEA DEPTH	THICKNESS
						389'	306'	
0			*SEAFLOOR*					
	PLEIST.	E M L	GIPPSLAND LIMESTONE		A1 – A2	1450'	1367'	
	PLIO.	E M L			A3	1843'	1760'	
5		E			A4	2180'	2097'	
	MIOCENE	LATE			B–D Not Possible to Zone in Detail			5919'
10		MIDDLE						
15		EARLY			E1	6230'	6147'	
					E2	6275'	6192'	
					F	6300'	6217'	
					G	6325'	6242'	33'
20					H1	6341'	6258'	
	OLIGOCENE	LATE	LAKES ENTRANCE FORMATION		H2			
25					I1			
					I2			
30		EARLY			J1		MISSING	
35				*PROTEACIDITIES TUBERCULATUS*	J2			
				UPPER *N. ASPERUS*	K			
40	EOCENE	LATE	LATROBE GROUP	MIDDLE *N. ASPERUS*				
45		MIDDLE		LOWER *N. ASPERUS*		6341'	6258'	
		EARLY	FLOUNDER FORMATION	*P. ASPEROPOLUS.*		7185'	7102'	924'
50				UPPER *M. DIVERSUS*		7424'	7341'	159'
				LOWER *M DIVERSUS*		MISSING 7424'	7341'	
55	PALEOCENE	LATE	COARSE CLASTICS	UPPER *L. BALMEI*		7457'	7374'	280'
		MIDDLE		LOWER *L BALMEI*				
60		EARLY	FLOUNDER FIELD SEAL A					378'
			B			8082'	7999'	
65	UPPER CRETACEOUS	LATE	COARSE CLASTICS T.D	*T LONGUS*		8601'	8517'	518'

L. ELLIOTT
MARCH, 1978

Dwg. 1875/OP/4

FLOUNDER-6 WELL COMPLETION REPORT

DESCRIPTION OF LITHOLOGICAL UNITS:

GIPPSLAND LIMESTONE (389'-6300')

389- 800	No samples were collected, gamma ray log indicates limestones.
800-1600	CALCARENITE- buff to very light grey, also cream, granular, very fine to fine, angular equant grains, friable to firm, silty at times. Skeletal material common at times, consisting of bryzoa, forams and bivalves.
1600-2800	CALCISILTITE - light grey, subrounded to rounded grains, suspended in soft calcareous matrix, grades to fine calcarenite. Rare micritic limestone, buff to brown, microcrystalline, very hard, dense and brittle. Some forams and bivalves.
2800-3170	CALCARENITE - buff to light grey, silty to fine, subangular to subrounded equant grains, grades in part to calcisiltite, firm to friable, some hard and brittle, rare glauconite and pyrite.
3170-4730	CALCAREOUS SILTSTONE - light grey, silty to fine, subangular to subrounded grains in a clay to silty matrix, firm to friable. Larger fragments are generally fossils in calcareous ooze, grades to calcarenite. Zones of larger grained coarse fraction.
4730-6300	INTERBEDDED SILTSTONE-MARL - Siltstone - medium to dark grey, silt to very fine, subangular to subrounded equant grains, firm to friable, some pyrite and glauconite. Marl - light grey, soft, silty, forams abundant in places.

LAKES ENTRANCE FORMATION: (6300'-6341')

6300-6341	INTERBEDDED SILTSTONE-MARL - Siltstone - medium to dark grey, silt to very fine, subangular to subrounded equant grains, firm to friable, some pyrite and glauconite. Marl - light grey, soft, silty, forams abundant in places.

LATROBE GROUP FLOUNDER FORMATION: (6341'-7424')

6341-6800	SILTSTONE, MUDSTONE, SHALE - medium to dark grey, micaceous, carbonaceous, pyritic, some glauconitic, slight to very calcareous.
6800-7424	INTERBEDDED SANDSTONES, SILTSTONE AND SHALE- Sandstone - cream to light grey, fine to very coarse, friable to firm, some carbonate cement, subangular to rounded, some pyritic and glauconitic, generally micaceous. Siltstone - dark brown, firm to soft, carbonaceous, slightly calcareous. Shale - dark brown to light grey, very calcareous, pyritic, carbonaceous, silty.

.../2

LATROBE COARSE CLASTICS & COALS: (7424' to 7878')

7424-7878 INTERBEDDED SANDSTONES, SILTSTONES AND COAL - Sandstone - light brown to light grey, very fine to granule, poor to moderate sorting, firm, some friable, slightly to moderately calcareous, some dolomitic stringers, subangular to subrounded, micaceous, at times pyritic. Siltstone - medium to dark grey, non to slightly calcareous, carbonaceous, micaceous, pyritic, often finely laminated with fine sandstones. Coal - black, vitreous, hard, slightly pyritic.

FLOUNDER SEAL: (7878'-8145')

7878-8145 SILTSTONE - medium to dark grey, very sandy, poor sorting, micaceous, argillaceous, slightly carbonaceous, dolomitic, glaucontic, pyritic,
AND -
MINOR SANDSTONE - light to medium grey, silty, very fine to coarse grained, poorly sorted, glaucontic, pyritic, micaceous white dolomitic cement, friable to moderately consolidated.

LATROBE COARSE CLASTICS: (8145'-8601')

8145-8601 INTERBEDDED SANDSTONES AND SILTSTONES: Sandstones - light to medium grey, very fine to coarse grained, poorly sorted, micaceous, dolomitic, some glauconitic and pyritic. Siltstone - dark grey, non calcareous, sandy, carbonaceous, micaceous. From 8500-8601 some thin coals.

GEOLOGICAL AND GEOPHYSICAL ANALYSIS

OBJECTIVES:

Flounder-6 was designed to establish the development potential of the Flounder field by:-

1. Testing for the presence of a gas cap in the Flounder-1 Block in a structurally higher position than the Flounder-1 well which intersected the top of the T.longus reservoir at -8199' and tested oil only.

2. Providing information on the presently mapped structural configuration of the Flounder-1 Block.

3. Confirming the stratigraphic interpretation and reservoir parameters of the T-1 reservoir in this part of the field.

SUMMARY:

FORMATION	TOPS PREDICTED (Subsea)	TOPS ACTUAL DRILLED (KB83')	TOPS ACTUAL (Subsea)	THICKNESS
Latrobe Group (Flounder Formation)	-6300	6341	-6258	1083'
Base of Flounder Channel	-7240	7424	-7341	-
Seismic "Base of Coals"	-7630	7665	-7582	-
T-1 Reservoir				
T-1.1 Unit	-8090	8145	-8062	143' Gross; 75' Net
Gas-Oil Contact		8238	-8155	93' Gross; 47' Net Gas
T-1.2 Unit		8288	-8285	to T.D. (312')
Oil/Water Contact		8397	-8314	28' Net Oil

GEOPHYSICS:

The tops of the Flounder T-1 reservoir cannot be adequately traced by a single continuous seismic reflection. Consequently isopaching down from a seismically mappable event at or near the "Base of Coals" about 500 feet higher in the section was used to derive a structure map for the top of the T-1 reservoir.

.../2

Well control shows the interval between the base of the coals and the top of the pay thickens towards the east. An isochron map between the base of the coals and a discontinuous reflection very near the pay was used to show the trend of thickening away from well control. Using this 'trend' map and the well values, an isopach map between the base of coals and the top of the pay was then drawn.

This isopach map was used with the structure map on the base of coals horizon to construct a structure map on top of the pay sand.

Flounder-6 came in essentially as predicted (see Summary above). Except for the Base of Channel, the other horizons differed from prediction because of minor variations in time and velocity. The Base of Channel was in error because it was picked one cycle too high and the interval velocity between the top of Latrobe Group and the base of channel was too low. This error was not surprising because of the difficulty of mapping the base of channel and the varying nature of the channel sediments.

GEOLOGY:

Flounder-6 was expected to intersect about 224 feet of gross hydrocarbon section in the T-1 reservoir. This reservoir consists of a predominantly massive sand unit of nearshore origin with some dolomitization (T-1.1), conformably overlying a series of thin sands, shales and minor coals (T-1.2 unit). The main T-1.1 unit was expected to be 133 feet thick.

The well intersected a 93 feet gross column of gas with a gas-oil contact at 8155 feet subsea and 159 feet gross oil column with the field oil-water contact at 8314 feet subsea.

The T-1.1 unit was 143 feet thick, 10 feet thicker than expected. However, dolomite zones were common and reduced the thickness of the net effective reservoir to 75 feet. This was made up of 47 feet net gas-sand and 28 feet net oil-sand.

The T-1.2 unit contains only poor quality non-effective reservoir sands. Above the field oil-water contact these silty sands contain shows but apparently occur within an oil transition zone with interpreted very high water saturations. The position of the oil-water contact in the T-1.2 unit was calculated from FIT pressure data. It appears that the T-1.2 unit is not in hydraulic communication with the T-1.1 sand unit and hence no recovery is predicted from the T-1.2.

.../3

The reservoir pressure measured is about 18 psi below that measured in the Flounder-1 well. This drawdown can probably be attributed to hydraulic communication between Flounder and the producing fields in the more central area of the basin.

STRUCTURE:

The Flounder Field is an Intra-Latrobe reservoir in a northeast-southwest trending anticline. This anticline is cut by three significant north westerly trending normal faults which divide the field into four blocks. The top of the structure was eroded in the Late Paleocene-Early Eocene by the Tuna-Flounder Channel. The normal faults are interpreted to be late Paleocene prior to the filling of the channel. The folding probably took place in the Late Paleocene as the Tuna-Flounder Channel sediments have suffered little deformation, there being no top of Latrobe structure.

APPENDIX 1

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 1

SAMPLE DESCRIPTIONS

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS/HUGHES
14/7/77

DEPTH	%	DESCRIPTION
881-900	100%	Cement plus shoe fragments. Trace Skeletal fragments - forams, shells.
900- 30		as above.
930- 60	30% 70%	Cement plus shoe fragments. Skeletal fragments/calcarenite very light grey, generally fractured coral and bryozoa, some benthonic forams, echinoid spines,shells.
960-990	20% 50% 30%	Cement plus shoe fragments. Calcarenite - light grey to cream, fine to very fine angular grains, fairly equant grains, friable grains. Skeletal fragments - as above.
990-1020	10% 30% 60%	Cement/shoe cavings. Skeletal fragments - coral, bryozoa, forams, echinoid spines. Calcarenite - as above.
1020-50	80% 10% 10%	Calcarenite - cream to light grey, spotty, granular, very fine to fine, angular equant grains, friable. Skeletal fragments - coral, bryozoa. Cement shoe.
1050-80	70% 20% 10%	Calcarenite - as above. Skeletal fragments - as above. Cement plus shoe cavings.
1080-1110	85% 15%	Calcarenite - as above Cement plus shoe Trace skeletal fragments.
1110-40	80% 20%	Calcarenite - cream to light grey, granular, very fine to fine, subangular to angular equant grains, firm to friable. Cement cavings. Trace skeletal fragments - coral, bryozoas.
1140-70	100%	Calcarenite - as above. Trace skeletal fragments. Trace cement.
1170-1200	100%	Calcarenite - as above Trace skeletal fragments Trace cement
1200-30		as above
1230-60	100%	Calcarenite - cream to light grey, very fine to fine, subangular to subrounded equant grains, firm to friable, very calcareous. Trace skeletal fragments to shell, coral, bryozoa, forams. Trace cement
1260-90	100%	Calcarenite - as above, comprised generally of fossil debris. Trace skeletal fragments - as above. Trace cement
1290-1320	100%	Calcarenite - light olive grey to light grey - as above. Trace skeletal fragements - as above Trace cement.
1320-50	50% 50%	Calcarenite - as above. Cement cavings Trace skeletal fragments - as above.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS/HUGHES
14/7/77

DEPTH	%	DESCRIPTION
0-80	100%	Calcarenite - buff to light grey, very fine to fine, subangular to subrounded equant grains, firm to friable. Trace skeletal fragments - forams.
80-1410	100%	Calcarenite - as above, becoming siltier Trace skeletal fragments.
10-40	100%	Calcarenite - buff to very light grey, silty to very fine, subangular to subrounded, grades to calcareous siltstone, firm to friable. Trace skeletal fragments.
40-70	100%	Calcarenite - as above. Trace skeletal fragments - as above
70-1500	100%	Calcarenite - as above. Trace skeletal fragments - as above.
00-30		As above.
0-60	100%	Calcarenite - light grey, silty to fine, generally very fine, subangular to subrounded equant grains, firm to friable, some glauconite inclusion. Trace skeletal fragments - shell
60-90	85% 15%	Calcarenite - as above Micritic Limestone - buff to brown, hard, brittle, microcrystalline, effervesces slightly in cold HCl - probably dolomitic. Trace skeletal fragments.
90-1620	60% 40%	Calcareous Siltstone - light grey, grades from calcarenite above, silty to very fine some fine, soft to firm. Micritic Limestone - buff, hard, brittle, dense microcrystalline. Trace skeletal fragments - forams.
20-50	50% 50%	Calcareous Siltstone - as above. Micritic Limestone - as above. Trace skeletal fragments.
50-80	70% 30%	Calcareous Siltstone - as above. Micritic Limestone - as above, buff to medium grey.
80-1710	75% 25%	Calcareous Siltstone- as above grades in part to very fine calcarenite. Micritic Limestone - as above.
0-40	90% 10%	Calcarenite - light grey, silty to fine, subrounded to rounded grains in a clay to silt calcareous matrix, soft to firm. Micritic Limestone - buff to medium grey, hard, dense, brittle, microcrystalline.
40-70		As above Trace skeletal fragments, mainly benthonic forams.
70-1800	80% 20%	Calcarenite/Calcareous siltstone - as above. Micritic Limestone - as above. Trace forams.
00-30	85% 15%	Calcarenite - as above. Micritic Limestone - as above. Trace forams, echinoid spines.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS/HUGHES
14/7/77

DEPTH	%	DESCRIPTION
1830-60	100%	Calcareous Siltstone - light grey, silty to very fine, subangular to subrounded grains, grains suspended in firm to soft calcareous clay matrix. Trace Micritic Limestone - buff to brown, microcrystalline, very hard, dense, brittle. Trace fossiliferous fragments - forams, shells.
1860-90	100%	Calcareous Siltstone - as above Trace Micritic Limestone - as above Trace fossiliferous Fragments - forams, shells.
1890-1920	100%	Calcareous Siltstone - as above Trace Micritic Limestone - as above Trace fossiliferous fragments - forams,.
1920-1950	100%	Calcareous Siltstone, light grey, silty to very fine, subrounded to rounded, grains suspended in soft calcareous clay matrix. Trace Micritic Limestone, medium to grey, microcrystalline, very hard, brittle. Trace fossiliferous fragments - forams.
1950-1980	90% 10%	Calcareous Siltstone - as above. Micritic Limestone - as above. Trace fossiliferous fragments - forams - some benthonic.
1980-2010	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace fossiliferous fragments - shells, forams.
2010-2040	100%	Calcareous Siltstone - light grey, silty to very fine, subrounded to rounded, grains suspended in very soft calcareous clay matrix. Trace fossiliferous fragments - forams.
2040-2070	100%	Calcareous Siltstone - as above. Trace fossiliferous fragments - forams.
2070-2100	100%	Calcareous Siltstone - light to medium grey, subrounded to rounded, grains suspended in very soft calcareous clay matrix. Trace fossiliferous fragments - shells, forams - some benthonic.
2100-2130	100%	Calcareous Siltstone - light to medium grey.
2130-2160	100%	Calcareous Siltstone - light to medium grey, subangular to subrounded, grains suspended in very soft calcareous clay matrix. Trace fossiliferous fragments - forams.
2160-2190	100%	Calcareous Siltstone - light grey, subrounded to rounded, grains suspended in soft calcareous clay matrix. Trace fossiliferous fragments - forams some benthonic, shells.
2190-2220	100%	Calcareous Siltstone - light grey, silty to very fine, subrounded to rounded fossiliferous (mainly forams) grains in soft to very soft calcareous ooze.
2220-50		As above - grades to calcareous claystone - volume of clay in sample dependent on amount of sample washing.
2250-80	90% 10%	Calcareous Siltstone - as above. Forams - mainly benthonic, up to 1.5mm diameter - mainly "gastropodic" forams.

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DEPTH	%	DESCRIPTION
2280-2310	90% 10%	Calcareous Siltstone - as above. Forams - up to 2mm diameter.
2310-2340	90% 10%	Calcareous Siltstone - as above Forams - as above.
2340-2370	90% 10%	Calcareous Siltstone - light grey, silty to very fine, subrounded to rounded. Forams
2370-2400	100%	Calcareous Siltstone Trace Forams
2400-2430		As above - grades to calcareous-claystone-volume of clay in sample dependent on the amount of sample washing.
2430-2460	100%	Calcareous Siltstone-grading to calcareous claystone
2460-2490	100%	Calcareous Siltstone - light grey, silty to very fine, subrounded to rounded. Trace forams.
2490-2520	95% 5%	Calcareous Siltstone - as above Forams.
2520-50	100%	Calcareous Siltstone - light grey, silty to very fine, subrounded to rounded fossiliferous grains, firm to very soft calcareous clayey matrix. Trace abundant benthonic and planktonic forams.
2550-80	100%	Calcareous Siltstone - as above to very soft. Trace abundant forams - as above.
2580-2610	100%	Calcareous Siltstone - light grey, clay to very fine, subrounded to rounded grains, fossiliferous grains in calcareous clay ooze. Trace Forams - benthonic and planktonic.
2610-40	100%	Calcareous Siltstone - as above. Trace forams - as above.
2640-70	100%	Calcareous Siltstone - as above - grades in part to calcareous claystone - volume of clay dependent on sample washing.
2670-2700	100%	Calcareous Siltstone - light grey, clay to very fine, subrounded to rounded grains, firm to very soft, hard fossiliferous fragments in calcareous clay/silty matrix. Trace Forams.
2700-30		As above.
2730-60	100%	Calcareous Siltstone - as above. Trace forams - planktonic and benthonic.
2760-90		As above
2790-2820	100%	Calcareous Siltstone - light grey, silty to very fine, subrounded to rounded equant grains, firm to soft, generally fossiliferous fragments in calcareous clay cement. Trace forams.
2820-50	100%	Calcarenite - grades from calcareous siltstone above, buff to light grey, silty to fine, subangular to subrounded equant grains,

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DEPTH	%	DESCRIPTION
2820-50	100%	Continued.
		firm to friable. Trace forams.
2850-80	100%	Calcarenite - as above trace glauconite and rare finely disseminated pyrite. Trace forams.
2880-2910	100%	Calcarenite - buff to light grey, silty to fine, subangular to subrounded equant grains, firm to friable some hard and brittle (more homogenous and less granular), glauconite and fossiliferous inclusions. Trace forams.
2910-40	100%	Calcarenite - as above. Trace forams.
2940-70	100%	Calcarenite - buff to light grey, silty to fine, subangular to subrounded equant grains, grades in part to calcareous siltstone, firm to slightly soft. Trace forams.
		Drilled to 2964' at 2235 hours 15/7/77 - Circulated Bottoms Up. Short trip to 20" shoe condition mud prior to POH to log. Discovered pins on 20 singles of pipe included in pipe tally, also a single was missed. Depth Corr.-41' TD 2923. RIH drilled one single to 2955. Sample 2955 100% Calcarenite - as above.
		Trace forams.
2970		1 unit HW 520 ppm C_1
2970-3000	100%	Cement, float collar and shoe cavings trace Calcarenite - buff light grey, silty to fine,subangular to subrounded equant grains, silty; firm to hard, very calcareous.
		Leak off test 2975' - closed hydril surge - 650psi only $\simeq$ 12.6ppg equivalent.
3020		Perform another leak off - shut rams this time - pressure up with Halliburton unit. $\simeq$ 12.8ppg equivalent no leak off.
3000-20	40% 60%	Calcarenite - as above. Cement and shoe cavings.
3020-40	80% 20%	Cement Calcarenite - as above Trace forams.
3040-60	60% 40%	Cement Calcarenite - as above
3060-80	60% 40%	Cement, shoe, metal filings Calcarenite - cream to light grey, silty to fine, subangular to subrounded equant grains, minor glauconite inclusions, firm to hard very calcareous.
		Trace forams - mainly benthonic some planktonic.
3080-3100	40%	Cement cavings, iron filings.

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DEPTH	%	DESCRIPTION
	60%	Calcarenite - cream to light grey, silty to very fine, subangular to subrounded grains, firm to friable, minor glauconite, very calcareous.
		Trace forams.
3100-20	70%	Calcarenite - as above.
	30%	Cement cavings.
3120-40	80%	Calcarenite - as above.
	20%	Cement cavings.
3140-60	100%	Calcarenite - light grey, silty to very fine, subangular to subrounded equant grains, minor glauconite, grains in calcareous clayey matrix, some grades to calcareous siltstone.
		Trace cement.
3160-80	100%	Calcarenite - as above.
		Trace cement.
3180-3200	100%	Calcareous Siltstone - grades from calcarenite above, light grey, silty to very fine, firm, slightly granular, clayey to silty matrix, moderately calcareous.
		Trace forams.
3200-20	100%	Calcareous Siltstone - as above.
		Trace forams, cement.
3220-40	100%	Calcareous Siltstone - as above.
		Trace forams, fossiliferous debris.
3240-60	100%	Calcareous Siltstone - light grey, clay to very fine, subangular to subrounded grains - generally fossiliferous in a clayey to silty matrix, firm to slightly soft.
		Trace forams.
3260-80	100%	Calcareous Siltstone - as above.
		Trace forams.
3280-3300	100%	Calcareous Siltstone - as above.
		Trace forams.
3300-20	100%	Calcareous Siltstone - as above.
		Trace forams.
3320-40	100%	Calcareous Siltstone - light grey, silty to fine, subangular to subrounded grains in clay to silty matrix, firm to friable, generally fossiliferous fragments in calcareous ooze.
		Trace forams.

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DEPTH	%	DESCRIPTION
3340-60	100%	Calcareous Siltstone - light grey, silty to fine, subangular to subrounded grains in clay calcareous matrix, firm, generally fossiliferous inclusions. Trace forams.
3360-80	100%	Calcareous Siltstone - as above, occasionally firm to medium grain. Trace forams, fossiliferous fragments.
3380-3400	100%	Calcareous Siltstone - as above. Trace forams - some benthonic gastropodic forms up to 2.5mm - broken out of calcareous siltstone.
3400-3420	100%	Calcareous Siltstone - as above Trace forams.
3420-40	100%	Calcareous Siltstone - as above, abundant "ball bearing" form planktonic forams inclusions. Trace forams.
3440-60	100%	Calcareous Siltstone - light grey, silty to very fine, subangular to subrounded fossiliferous grains in calcareous clay matrix, firm to friable some slightly soft. Trace forams, fossiliferous fragments.
3460-80	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - buff, hard, dense, brittle, microcrystalline.
3480-3500	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams.
3500-20	100%	Calcareous Siltstone - light grey, silty to fine, subangular to subrounded fossiliferous (generally forams) grains in a clayey/silty matrix, firm to friable, very calcareous. Trace Micritic Limestone - buff, hard, dense, microcrystalline, moderately calcareous - probably slightly dolomitic. Trace forams, fossiliferous debris.
3520-40	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams - as above.
3540-60	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams.

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DEPTH	%	DESCRIPTION
3560-80	100%	Calcareous Siltstone - light grey, silty to very fine, subangular to subrounded fossiliferous (generally forams) grains in clayey/ silty matrix, firm. Trace Micritic Limestone - buff, dense, hard, microcrystalline moderately calcareous. Trace forams.
3580-3600	100%	Calcareous Siltstone - as above, foram inclusions up to 2.5mm Trace Micritic Limestone - as above. Trace forams.
3600-20	100%	Calcareous Siltstone - as above, some grades up to calcarenite. Trace Micritic Limestone - as above. Trace forams, fossiliferous fragments.
3620-40	100%	Calcareous Siltstone - light grey, silty to very fine, subangular to subrounded fossiliferous (generally forams) grains in clayey/ silty matrix, firm to friable. Trace Micritic Limestone - buff, hard, dense, microcrystalline Trace forams.
3640-60	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams.
3660-80	100%	Calcareous Siltstone - as above. Trace forams - benthonic forams up to 2mm some partially replaced by pyrite.
3680-3700	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams, fossiliferous fragments.
3700-20	100%	Calcareous Siltstone - light grey, silty to very fine, subangular to subrounded fossiliferous grains, clayey/silty matrix, firm to friable, some grades to granular, very fine to fine calcarenite. Trace Micritic Limestone - buff, dense, hard, brittle, microcrystalline. Trace forams.
3720-40	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams.

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DEPTH	%	DESCRIPTION
3740-60	100%	Calcareous Siltstone - light grey, silty to fine, subangular to subrounded fossiliferous grains, clayey/silty matrix, firm to friable. Trace Micritic Limestone - buff, hard, dense, brittle, microcrystalline. Trace forams.
3760-3800		No samples - changed over from seawater gel mud to fresh water gel mud.
3800-3820	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams.
3820-40	100%	Calcareous Siltstone - as above. Trace Micritic Limestone - as above. Trace forams, fossiliferous fragments.
3840-60	100%	Calcarenite - light grey to buff, silty to fine, subangular to subrounded fossiliferous grains, clayey/silty matrix, firm to friable, very calcareous. Trace Micritic Limestone - buff, hard, dense, brittle, microcrystalline, moderately calcareous. Trace forams, rare bryozoa.
3860-80	100%	Calcarenite - as above. Trace Micritic Limestone Trace forams.
3880-3900	100%	Calcarenite - as above. Trace Micritic Limestone Trace forams.
3900-20	100%	Calcarenite - grades in part to calcareous siltstone, light grey, silty to fine, subangular to subrounded fossiliferous grains in clayey/silty matrix, firm to friable, Trace Micritic Limestone - buff, very hard, dense, brittle microcrystalline. Trace forams, fossiliferous fragments.
3920-40	100%	Calcarenite - as above. Trace Micritic Limestone - as above. Trace forams.

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DEPTH	%	DESCRIPTION
3940-60	100%	Calcarenite - as above. Trace Micritic Limestone Trace forams, fossiliferous fragments.
3960-80	100%	Calcarenite - as above. Trace forams.
3980-4000	100%	Calcarenite grades in part to calcareous siltstone, light grey, silty to fine, subangular to subrounded, minor traces of glauconite inclusions. Trace forams - mainly benthonic.
4000-4020	100%	Calcarenite - as above. Trace forams.
4020-4040	100%	Calcarenite - as above. Trace forams.
4040-4060	100%	Calcarenite grades in part to calcareous siltstone, light grey, silty to fine, subangular to subrounded, Trace forams.
4060-4080	100%	Calcarenite - as above. Trace forams - mainly benthonic, some planktonic.
4080-4100	100%	Calcarenite - light grey, silty to fine, subangular to subrounded, fossiliferous grains in silty/clayey matrix, firm to friable, glauconite and pyrite inclusions. Trace forams.
4100-4120	100%	Calcarenite - as above. Trace Micritic Limestone - buff, very hard, dense, brittle, microcrystalline. Trace forams, fossiliferous fragments.
4120-40	100%	Calcarenite - as above. Trace Micritic Limestone - as above. Trace forams etc - as above.
4140-60	100%	Calcarenite, light grey, silty to fine, subangular to subrounded, fossiliferous grains in silty/clayey matrix. Trace forams.
4160-4180	100%	Calcareous Siltstone, light grey, silty to fine, subangular to subrounded, grains in a clay calcareous matrix, friable, Trace forams.

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DEPTH	%	DESCRIPTION
4180-4200	100%	Calcarenite grades in part to calcareous siltstone, light grey, silty to fine, subangular to subrounded.
		Trace forams.
4200-4220	100%	Calcarenite - as above.
		Trace Micritic Limestone - buff, very hard, dense, brittle, microcrystalline.
		Trace forams.
4220-4240	95%	Calcarenite - grades in part to calcareous siltstone, light grey, silty to fine, subangular to rounded.
	5%	Micritic Limestone - as above.
		Trace forams.
4240-60	100%	Calcareous Siltstone - light grey, silty to very fine grains (generally fossiliferous) clayey matrix, firm to friable, grades from calcarenite above.
		Trace Micritic Limestone - as above.
		Trace forams, fossiliferous fragments.
4260-80	100%	Calcareous Siltstone - as above.
		Trace Micritic Limestone - as above.
		Trace forams - abundant planktonics with a few benthonics.
4280-4300	100%	Calcareous Siltstone - as above.
		Trace Micritic Limestone - as above.
		Trace forams - as above.
4300-20	100%	Calcareous Siltstone - light grey, clay to very fine, subangular to subrounded fossiliferous grains (mainly planktonic forams) in clayey/silty matrix, firm, grades to calcarenite.
		Trace forams - benthonic and planktonic.
4320-40	40%	Calcareous Siltstone - as above light to medium grey.
	60%	Calcarenite - buff to light grey, saccharoidal text, firm to friable, subangular to subrounded, silty to fine grains.
		Trace forams.
4340-60	50%	Calcareous Siltstone - light to medium grey, silty to very fine, subangular to subrounded grains in clay matrix, firm.
	50%	Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains, firm to friable.
		Trace forams.
		Drill to 4401 pump slug, drop TOTCO pull out of hole for new bit.

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DEPTH	%	DESCRIPTION
		0300 19/7/77. BOB 0820 19/7/77.
1360-80	60%	Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains (generally forams) in clayey/ silty matrix, firm to friable, granular.
	40%	Calcareous Siltstone - light to medium grey, silty to very fine, subangular to subrounded grains in clay matrix, firm.
		Trace Micritic Limestone - buff, hard, dense, brittle, microcrystalline.
		Trace forams - benthonic and planktonic forams.
4380-4400	50%	Calcarenite - as above.
	50%	Calcareous Siltstone - as above.
		Trace forams.
4400-20	70%	Calcarenite - as above.
	30%	Calcareous Siltstone - as above
		Trace forams.
4420-40	75%	Calcarenite - as above.
	25%	Calcareous Siltstone - as above.
		Trace forams.
4440-60	100%	Calcarenite - buff to light grey, silty to very fine, subangular to subrounded fossiliferous grains, firm to friable, very calcareous. Trace Calcareous Siltstone light to medium grey, firm,
		Trace forams - planktonic, and benthonic
4460-80	100%	Calcarenite - as above.
		Trace Calcareous Siltstone - as above
		Trace forams.
4480-4500	100%	Calcarenite - as above grades in part to calcareous siltstone.
		Trace forams.
4500-20	100%	Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains, clay matrix, firm to friable
		Trace forams - benthonic and planktonic.
4520-40	100%	Calcarenite - as above.
		Trace Marl - very light grey, soft, very calcareous.
		Trace forams.
4540-60	90%	Calcarenite - as above
	10%	Marl - as above Trace forams

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DEPTH	%	DESCRIPTION
4560-80	90%	Calcarenite - buff to light grey, silty to very fine, subangular to subrounded fossiliferous grains in clayey/silty matrix, firm to friable, granular
	10%	Marl - very light grey, very soft, very calcareous.
		Trace forams - benthonic, planktonic.
4580-4600	70%	Calcarenite - as above.
	20%	Calcareous LSiltstone - light to medium grey, silty to very fine, firm to hard
	10%	Marl - as above.
		Trace Forams - as above.
4600-20	80%	Calcareous Siltstone - as above.
	20%	Calcarenite - as above.
		Trace Marl - as above.
		Trace forams.
4620-40	100%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, silty matrix, firm.
		Trace Calcarenite - buff to light grey; silty to fine, subangular to subrounded fossiliferous grains in clay matrix, firm to friable.
		Trace Marl - very light grey, sticky, very soft.
		Trace forams - benthonic and planktonic, fossiliferous fragments.
4640-60	80%	Calcarenite - as above.
	20%	Calcareous Siltstone - as above.
		Trace forams.
4660-80	75%	Calcarenite - as above.
	25%	Calcareous Siltstone - as above.
		Trace forams.
4680-4700	70%	Calcarenite - as above.
	30%	Calcareous Siltstone - as above.
		Trace forams, fossiliferous fragments.
4700-20	70%	Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains, firm to friable (generally foram inclusions), rarely glauconitic.
	30%	Calcareous Siltstone - light to medium grey, subangular to subrounded grains, silty matrix, firm.
		Trace forams, fossiliferous fragments.

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DEPTH	%	DESCRIPTION
4720-40	60%	Calcarenite - as above.
	40%	Calcareous Siltstone - as above.
		Trace forams - as above.
4740-60	40%	Calcarenite - as above.
	60%	Calcareous Siltstone - as above.
		Trace Marl - light grey, very soft, sticky.
		Trace forams.
4760-80	75%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, silty matrix firm, pyrite inclusions.
	25%	Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains, clayey/silty matrix, firm to friable.
		Trace forams.
4780-4800	60%	Calcareous Siltstone - as above.
	40%	Calcarenite - as above.
		Trace forams.
4800-4820	70%	Calcareous Siltstone - as above.
	30%	Calcareous - as above.
		Trace Marl - as above.
		Trace forams
4820-40	60%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm.
	30%	Calcarenite - light grey, silty to fine, subangular to subrounded fossiliferous grains, silty matrix, firm to friable.
	10%	Marl - very light grey, soft, sticky.
		Trace forams granular pyrite aggregates.
4840-60	50%	Calcarenite - as above.
	50%	Calcareous Siltstone - as above.
		Trace forams, marl as above, pyrite
4860-80	50%	Marl - as above.
	35%	Calcareous Siltstone - as above.
	35%	Calcarenite - as above.
4880-4900	30%	Marl - light grey, very soft, sticky, percentage totally dependent on sample washing.
	40%	Calcarenite - light grey, silty to fine, subangular to subrounded fossiliferous grains, clay matrix, firm to friable.
	30%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm to slightly soft.
		Trace forams - benthonic and planktonic.

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DEPTH	%	DESCRIPTION
4900-20	20%	Marl - as above.
	40%	Calcarenite - as above.
	40%	Calcareous Siltstone - as above.
		Trace forams, pyrite.
4920-40	40%	Marl - as above.
	30%	Calcarenite - as above.
	30%	Calcareous Siltstone - as above.
		Trace forams.
4940-60	50%	Marl - light grey, very soft, sticky to calcareous ooze
	50%	Calcarenite and Calcareous Siltstone grains as above suspended in ooze.
		Trace forams.
4960-80	50%	Marl - as above.
	35%	Calcarenite - as above.
	15%	Calcareous Siltstone - as above.
		Trace pyrite, forams.
4980-5000	60%	Marl - light grey, soft, sticky
	30%	Calcareous Siltstone - light to medium grey, clay to very fine grained, subangular to subrounded grains, silty matrix, firm.
	10%	Calcarenite - light grey, silty to fine, subangular to subrounded fossiliferous grains, firm to friable.
		Trace forams.
5000-20	60%	Marl - as above.
	40%	Calcareous Siltstone - as above
		Trace Calcarenite - as above.
		Trace forams, pyrite.
5020-40	50%	Marl - as above
	50%	Calcareous Siltstone - as above.
		Trace Calcarenite - as above.
		Trace forams.
5040-5060	50%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm to slightly soft.
	50%	Marl - very light grey, very soft, sticky, very calcareous
		Trace forams.
5060-80	70%	Marl - as above
	30%	Calcareous Siltstone - as above.
		Trace forams.
5080-5100	75%	Marl - as above.
	25%	Calcareous Siltstone - as above.
		Trace forams.
5100-20		As above.

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DEPTH	%	DESCRIPTION
5120-40	25%	Marl - as above.
	45%	Calcareous Siltstone - as above.
	30%	Calcarenite - light grey, silty/fine, subangular to subrounded grains firm to friable.
		Trace forams.
		NOTE: Probably not a representative sample as riser being flushed.
5151		C.O. 1 pump on hole, 1 pump on riser short trip to 2916'.
5140-60	90%	Calcareous Siltstone - light to medium grey, clayey to very fine, subangular to subrounded grains, firm to hard.
	10%	Marl - very light grey, soft, sticky, percentage dependent in sample washing.
		Trace forams, pyrite.
		Trace Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains in silty matrix, granular, firm to friable.
5160-80	80%	Calcareous Siltstone - as above.
	20%	Marl - as above.
		Trace pyrite, forams.
5180-5200	70%	Calcareous Siltstone - as above.
	30%	Marl - as above.
		Trace pyrite, forams.
5200-20	80%	Calcareous Siltstone - as above.
	20%	Marl - as above.
		Trace Calcarenite - as above.
5220-40	90%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm.
	10%	Marl - light grey, soft, sticky
		Trace forams, pyrite.
5240-60	80%	Calcareous Siltstone - as above, slightly pyritic
	20%	Marl - as above.
		Trace forams, pyrite.
5260-80	90%	Calcareous Siltstone - as above
	10%	Marl - as above.
		Trace forams, pyrite.
5280-5300	80%	Calcareous Siltstone - as above, slightly glauconitic.
	20%	Marl - as above.
		Trace forams, pyrite.
5300-20	90%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm, slightly pyritic, rare glauconite.

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DEPTH	%	DESCRIPTION
5300-20		Continued....
	10%	Marl - light grey, soft, sticky.
		Trace forams, pyrite.
5320-40	100%	Calcareous Siltstone - as above.
		Trace Marl - as above Trace forams, pyrite
5340-60	100%	Calcareous Siltstone - as above.
		Trace Marl - as above Trace forams
5360-80	100%	Calcareous Siltstone - as above, some grades to calcarenite.
		Trace Marl - as above. Trace forams, pyrite.
5380-5400	100%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm, some grade to very fine calcarenite.
		Trace Marl - light grey, soft, sticky. Trace forams, pyrite.
5400-20	100%	Calcareous Siltstone - as above.
		Trace Marl - as above. Trace forams.
5420-40	80%	Calcareous Siltstone - as above.
	20%	Marl - as above, volume totally dependent on sample washing.
		Trace forams.
5440-60	70%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm to slightly friable, some grades to calcarenite.
	30%	Marl - very light grey, very soft, sticky.
		Trace forams, pyrite.
5460-80	50%	Calcareous Siltstone - as above.
	50%	Marl - as above
		Trace forams.
5480-5500	60%	Calcareous Siltstone - as above.
	40%	Marl - as above
		Trace forams.
5500-20	80%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, firm to friable, grades to calcarenite.
	20%	Marl - light grey, soft, sticky.
		Trace forams.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
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DEPTH	%	DESCRIPTION
5520-40	70%	Calcareous Siltstone - as above.
	30%	Marl - as above.
		Trace forams.
5540-60		As above.
5560-80	60%	Calcareous Siltstone - as above.
	40%	Marl - as above.
		Trace forams.
5580-5600	80%	Calcareous Siltstone - light to medium grey, silty to very fine, subangular to subrounded grains, firm
	20%	Marl - light grey, soft, sticky.
		Trace forams.
5600-20	75%	Calcareous Siltstone - as above.
	25%	Marl - as above.
		Trace forams - as above.
5620-40		As above.
5640-60	80%	Calcareous Siltstone - as above, minor glauconite, pyrite
	20%	Marl - as above.
		Trace forams.
5660-80		As above
5680-5700	10%	Calcareous Siltstone - as above.
	30%	Marl - as above.
		Trace forams.
5700-20	100%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, moderate sorting, firm to slightly friable
		Trace Marl - very light grey, soft, sticky.
		Trace forams, pyrite.
5720-40	90%	Calcareous Siltstone - as above.
	10%	Marl - as above.
		Trace forams, pyrite.
5740-60	90%	Calcareous Siltstone - as above, firm to hard.
	10%	Marl - as above.
		Trace forams - benthonic and planktonic.
5760-80		As above.
5780-5800	100%	Calcareous Siltstone - light to medium grey, clay to very fine, subangular to subrounded grains, moderate to well sorting, firm to hard, occasionally planktonic, foram inclusions.

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BELLIS
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DEPTH	%	DESCRIPTION
5780-5800		Continued....
		Trace Marl - light grey, soft, sticky.
		Trace forams.
5800-20	100%	Calcareous Siltstone - as above.
		Trace forams, pyrite.
		Trace Marl - as above.
5820-40	100%	Calcareous Siltstone - as above.
		Trace Marl - as above.
		Trace Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains, firm to friable, poor sorting
		Trace forams.
5840-60		As above - Trace pyrite.
5860-80	100%	Calcareous Siltstone - medium grey, clay to very fine, subangular to subrounded grains, firm, moderate sorting.
		Trace Calcarenite - buff to light grey, silty to fine, subangular to subrounded fossiliferous grains, firm to friable, poorly sorted
		Trace Marl - very light grey, soft, sticky
		Trace forams and pyrite.
5880-5900	75%	Calcareous Siltstone - as above.
	25%	Marl - as above
		Trace Calcarenite - as above.
		Trace forams, pyrite.
5900-20	80%	Calcareous Siltstone - medium grey, clay to very fine, subangular to subrounded grains, moderate sorting, some pyritic
	20%	Marl - very light grey, soft, sticky.
		Trace forams, pyrite.
5920-40	70%	Calcareous Siltstone - as above.
	30%	Marl - as above.
		Trace forams, pyrite.
5940-60	60%	Calcareous Siltstone - as above.
	40%	Marl - as above.
		Trace forams - some replaced by pyrite.
5960-80	90%	Calcareous Siltstone - as above
	10%	Marl - as above
		Trace forams.
(0850 20/7/77) 5997		Circulated out pump slug, clean hole and riser pulled out of hole to change bit. Cut and slip draw-works line. Change over mud system RIH NB#4 $9\frac{5}{8}$" HTC X 1G Back on Bottom 0115 hours, 21/7/77 TG 1.5 Hot Wire 721C_1. Conditioned Mud.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
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DEPTH	%	DESCRIPTION
5980-6000	100%	Calcareous Siltstone - medium to dark grey, clay to very fine, subangular to subrounded grains, moderate sorting, firm, some pyrite.
		Trace forams - mainly planktonic - often replaced by pyrite.
6000-6020	90%	Calcareous Siltstone - as above.
	10%	Marl - very light grey, soft, sticky
		Trace forams, pyrite.
6020-40	70%	Calcareous Siltstone - as above.
	30%	Marl - as above.
		Trace forams, pyrite.
6040-60	80%	Calcareous Siltstone - as above
	20%	Marl - as above
		Trace forams, pyrite.
6060-80	60%	Calcareous Siltstone - as above.
	40%	Marl - as above.
		Trace forams, pyrite.
6080-6100	50%	Calcareous Siltstone - medium to dark grey, clay to silty, subangular to subrounded grains, moderate sorting, firm to hard
	50%	Marl - very light grey, soft, sticky
		Trace forams, pyrite
6100-10	60%	Calcareous Siltstone - as above
	40%	Marl - as above
		Trace forams, pyrite.
6110-20	60%	Calcareous Siltstone - as above
	50%	Marl - as above.
		Trace forams - mainly planktonic; pyrite
6120-30		As above
6130-40	70%	Calcareous Siltstone - medium to dark grey, clay to silty, sub-angular to subrounded, moderate sorting, firm to hard.
	30%	Marl - very light grey, soft to very soft, sticky
		Trace forams pyrite.
6140-50	40%	Calcareous Siltstone - as above
	60%	Marl - as above
		Trace forams - as above, pyrite.
6150-60	60%	Calcareous Siltstone - as above
	40%	Marl - as above
		Trace forams, pyrite

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BELLIS
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DEPTH	%	DESCRIPTION
6160-70	50%	Calcareous Siltstone - as above
	50%	Marl - as above
		Trace forams, pyrite.
6170-80	50%	Calcareous Siltstone - medium to dark grey, clay to silt, firm to hard, slightly pyritic, hint of fissility, tends toward calcareous shale.
	50%	Marl - very light grey, sticky, soft to very soft
		Trace forams, pyrite.
6180-90	90%	Calcareous Siltstone - as above.
	10%	Marl - as above Percentage is wash dependent
		Trace forams, pyrite.
6190-6200		As above
6200-10	80%	Calcareous Siltstone - as above.
	20%	Marl - as above.
		Trace forams, pyrite.
6210-20	90%	Calcareous Siltstone - medium to dark grey, clay to silt, firm to hard, grades to calcareous shale, slightly pyritic.
	10%	Marl - light grey, soft to very soft, sticky
		Trace forams, pyrite
6220-30	80%	Calcareous Siltstone/Calcareous Shale - as above
	20%	Marl - as above
		Trace forams, pyrite.
6230-40	90%	Calcareous Siltstone - as above
	10%	Marl - as above
		Trace forams, pyrite
6240-50	80%	Calcareous Siltstone - medium to dark grey, clay to silt, firm to hard, slightly pyritic, grades to calcareous shale
	20%	Marl - light grey, very soft, sticky
		Trace forams, pyrite.
6250-60	90%	Calcareous Shale - as above
	10%	Marl - as above
		Trace forams, fossiliferous fragments, pyrite.
6260-70	100%	Calcareous Siltstone - as above, shows some fissility, tends to calcareous shale.
		Trace Marl - as above; forams, pyrite.
6270-80		As above.
6280-90	100%	Calcareous Siltstone/Calcareous Shale - as above.

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DEPTH	%	DESCRIPTION
6280-90		Continued....
		Trace Marl - as above, forams, fossiliferous fragments, pyrite.
6290-6300	70%	Calcareous Siltstone/Calcareous Shale - as above
	30%	Marl - as above
		Trace forams, pyrite.
6300-10	60%	Calcareous Siltstone - as above
	40%	Marl - as above
		Trace forams, fossiliferous fragments, pyrite, glauconite
6310-20	50%	Calcareous Siltstone - medium to dark grey, clay to silt, firm to hard, grades in part to calcareous shale, slightly pyritic
	50%	Marl - very light grey, soft, sticky
		Trace forams, pyrite.
6320-30	60%	Calcareous Siltstone - as above, some buff, rare glauconite inclusions
	40%	Marl - as above
		Trace forams, pyrite, glauconite.
6330-40	70%	Calcareous Siltstone - buff - medium to dark grey, clay to silt, subangular to subrounded grains, firm to hard some friable, pyrite and glauconite inclusions.
	30%	Marl - light grey, soft, sticky.
		Trace forams, pyrite, glauconite.
6341		Small change in rate of penetration and in torque noticed. Also noticed slight change in hot wire - chromotograph Trace → 0.5, 91 → 212C_1.
6340-50	60%	Calcareous Siltstone - as above buff, medium to dark grey
	40%	Marl - as above.
		Trace forams, pyrite, glauconite
		Trace Loose quartz grains - clear, angular, up to 0.6mm, no show.
6350-60	70%	Calcareous Siltstone - buff and medium to dark grey, clay to very fine, moderate to poor sorting, firm to friable.
	30%	Marl - light grey, soft, sticky.
		Trace Siltstone - dark brown, speckled, black inclusions, non calcareous, firm to soft, clay to organic matter.
		Trace Calcarenite - cream, silty to medium, subangular to subrounded glauconite, grains, firm to friable to hard, very poorly sorted, silty, no show.
		Trace pyrite, glauconite, loose quartz grains.
6360-70	80%	Calcareous Siltstone/Calcareous Shale - as above, slight glauconite and pyrite.
	20%	Marl - as above.
		Trace Siltstone - dark brown - as above.
		Trace Calcarenite - as above

LITHOLOGICAL DESCRIPTIONS

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BELLIS
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DEPTH	%	DESCRIPTION
6360-70		Continued....
		Trace forams, glauconite, pyrite, rare quartz grains.
6370-80	60%	Calcareous Siltstone/Calcareous Shale - as above
	30%	Marl - as above
	10%	Siltstone - dark brown - as above
		Trace Calcarenite - as above, silty
		Trace forams, pyrite, galuconite
6380-90	80%	Calcareous Siltstone - medium to dark grey, clay to very fine, firm to hard, slightly pyrite and glauconite, moderate sorting
	20%	Marl - light grey, soft, sticky
		Trace Siltstone - dark brown, clay to silt, firm to soft non calcareous, partly organic
		Trace Calcarenite - cream to light grey, silt to medium, firm to friable non calcareous.
		Trace forams, loose quartz grains, pyrite, glauconite
6390-6400	60%	Calcareous Siltstone - as above
	20%	Marl - as above
	20%	Siltstone - as above
		Trace Calcarenite - as above
		Trace forams, pyrite, glauconite
6400-10	70%	Calcareous Siltstone - as above
	20%	Marl - as above
	10%	Siltstone - as above
		Trace Micritic Limestone - tan/brown, very hard, very dense, brittle, microcrystalline, some mica
		Trace forams, pyrite, glauconite
6410-20		As above
6420-30	60%	Calcareous Siltstone - medium to dark grey, clay to silt, firm to hard, tends to calcareous shale in part
	20%	Micritic Limestone - as above
	10%	Siltstone - dark brown, firm to soft, non calcareous, partly organic.
	10%	Marl - light grey, very soft, sticky.
		Trace forams, abundant pyrite
6430-40	60%	Calcareous Siltstone - as above
	30%	Siltstone - as above
	10%	Marl - as above
		Trace Micritic Limestone - as above, including glauconite
		Trace forams, glauconite, pyrite.
6440-50	40%	Calcareous Siltstone - as above
	10%	Siltstone - as above
	50%	Limestone - buff to brown, very hard, dense, - coarser form of micritic limestone above, 0 porosity and permeability.
		Trace forams, fossiliferous fragments, pyrite, and glauconite
6450-60	30%	Calcareous Siltstone - as above.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
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DEPTH	%	DESCRIPTION
6450-60		Continued....
	70%	Limestone - buff to brown, hard, dense limestone as above
		Trace Siltstone - as above, forams, pyrite, glauconite
6460-70	60%	Limestone - buff to brown, microcrystalline, very hard, dense, brittle, very calcareous, some glauconite
	40%	Calcareous Siltstone/lutite - light to medium grey, firm, clay to silt
		Trace Siltstone - dark brown, soft to firm, silt to very fine, weakly calcareous
6470-80	25%	Calcareous Siltstone - light to medium grey, clay to silt, subangular to subrounded grains, firm to hard.
	15%	Micritic Limestone - cream to buff, firm to hard, dense
	20%	Siltstone - dark brown, soft, speckled, slightly calcareous.
	40%	Limestone - brown, very hard, dense, brittle, microcrystalline
		Trace forams, pyrite, glauconite.
6480-90	40%	Calcareous Siltstone - as above
	40%	Limestone - brown - as above
	20%	Micritic Limestone - buff - as above.
		Trace forams, pyrite, glauconite, loose quartz grains
6490-6500	70%	Calcareous Siltstone/Mudstone - as above
	20%	Limestone - brown to dark brown - as above
	10%	Micritic Limestone - as above
		Trace forams, pyrite, glauconite
6500-10	60%	Calcareous Siltstone - as above
	30%	Limestone - as above
	10%	Siltstone - dark brown - as above
		Trace forams, pyrite, glauconite, rare loose quartz grains
6510-20	30%	Calcareous Siltstone - as above
	50%	Limestone - as above
	20%	Siltstone - dark brown - as above
		Trace pyrite, forams, glauconite.
6520-30	60%	Siltstone - buff to brown, clay to very fine, firm to soft, poorly sorted, slightly calcareous, speckled appearance
	40%	Calcareous Mudstone - light grey, clay grain size, very calcareous, firm to soft, grades from calcareous siltstone above.
		Trace Limestone - brown, hard, dense, brittle
		Trace forams, glauconite, pyrite.
6530-40	50%	Siltstone - as above
	40%	Calcareous Mudstone - as above
	10%	Limestone - buff to brown, as above
		Trace forams, glauconite, pyrite.
6540-50	60%	Limestone - buff to brown, very hard, dense, microcrystalline.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
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DEPTH	%	DESCRIPTION
6540-50		Continued....
	20%	Siltstone - brown, clay to silt, speckled appearance, firm, slightly calcareous
	20%	Calcareous Mudstone - light grey, clay grain size, firm to soft, very calcareous.
		Trace pyritic, glauconitic, forams.
6550-60	20%	Limestone - hard, dense, as above.
	40%	Siltstone - as above.
	40%	Calcareous Mudstone - as above
		Trace pyrite, glauconite, forams, fossiliferous fragments
6560-70	50%	Calcareous Mudstone - as above
	25%	Limestone - as above
	25%	Limestone - as above
		Trace pyrite, glauconite, forams
6570-80	80%	Calcareous Mudstone - as above
	10%	Siltstone - as above
	10%	Limestone - as above
		Trace pyrite, glauconite, forams.
6580-90	70%	Calcareous Mudstone - as above
	20%	Limestone - buff to brown.
	10%	Siltstone - as above
		Trace forams, pyrite, glauconite
6590-6600	80%	Calcareous Mudstone - light grey, clay grain size, firm to soft, shows very weak fissility, very calcareous.
	10%	Limestone - buff to brown, very hard, dense, micritic
	10%	Siltstone - brown, speckled appearance, firm to soft, clay to silt grain size, slightly calcareous.
		Trace forams, glauconite, pyrite.
6600-10	50%	Calcareous Mudstone - as above
	30%	Limestone - as above
	20%	Siltstone - as above
		Trace pyrite, glauconite, forams, fossiliferous fragments
6610-20	40%	Calcareous Mudstone -as above.
	40%	Limestone - as above
	20%	Siltstone - as above
		Trace pyrite, glauconite, forams.
6620-30	40%	Calcareous Mudstone - light grey, clay grain size, slightly silty, firm to soft, shows some fissility
	40%	Limestone - buff to brown, very hard, dense, brittle, micritic.
	20%	Siltstone - brown to dark brown, clay to silt grain size, firm to soft, slightly calcareous, speckled appearance.
		Trace forams, fossiliferous fragments, pyrite, glauconite.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
21-22/7/77

DEPTH	%	DESCRIPTION
1800 hours 21-7-77		
6630		Circulated out pump slug. Drop survey. Pulled out of hole TG=5 Hot Wire 4640C$_1$ 148C$_2$ 36C$_3$. RIH New Bit #5 Bit 6 Security 9^5/8" S68 Back on bottom 0235 22-7-77.
6630-40	100%	Calcareous Mudstone - light to medium grey, clay grain size, firm, slightly silty Trace Siltstone - dark brown, clay to silt, speckled appearance, slightly organic, firm to soft, slightly calcareous Trace Limestone - buff to brown, very hard, dense, brittle micritic Trace pyrite, glauconite, forams.
6640-50	90% 10%	Calcareous Mudstone - as above Siltstone - as above Trace Limestone - as above Trace pyrite, glauconite, forams.
6650-60	80% 20%	Calcareous Mudstone - as above Siltstone - as above Trace Limestone - as above Trace forams, pyrite, glauconite, fossiliferous fragments
6660-70	70% 30%	Calcareous Mudstone - light to medium grey, clay to silt grain size, firm, silty, moderately calcareous Siltstone - dark brown, clay to silt, firm to soft, partly organic, speckled appearance, slightly calcareous Trace Limestone - buff to brown, hard, dense, brittle, microcrystalline Trace forams, pyrite, glauconite, rare quartz grains
6670-80	70% 15% 15%	Calcareous Mudstone - as above Siltstone - as above Limestone - as above
6680-90	60% 25% 15%	Calcareous Mudstone - light to medium grey, clay to silt, firm to soft, moderately calcareous, silty in parts, slightly pyritic and glauconitic Siltstone - dark brown, clay to silt, firm to soft, partly organic, slightly calcareous. Limestone - buff to brown, very hard, dense, brittle, microcrystalline. Trace forams, pyrite, glauconite.
6690-6700	50% 40% 10%	Calcareous Mudstone - as above Siltstone - as above Limestone - as above Trace pyrite, forams, glauconite
6700-10	10% 50% 40%	Calcareous Mudstone - as above Siltstone - as above Limestone - as above Trace forams, fossiliferous fragments, pyrite

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
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DEPTH	%	DESCRIPTION
6710-20	20%	Calcareous Mudstone - as above
	30%	Siltstone - as above
	50%	Limestone - as above, slightly pyritic
		Trace forams, fossiliferous fragments, pyrite, glauconite
6720-30	10%	Calcareous Mudstone - light to medium grey, clay to silt, firm to soft, silty, moderately calcareous, slightly pyritic, glauconitic
	70%	Siltstone - dark brown, clay to silt, speckled appearance, partly organic, slightly calcareous.
	20%	Limestone - buff to brown, hard to very hard, dense, microcrystalline
		Trace forams, pyrite, glauconite.
6730-40	90%	Siltstone - as above
	10%	Calcareous Mudstone - as above
		Trace Limestone - as above
		Trace forams, pyrite, glauconite
6740-50	100%	Siltstone - as above
		Trace Calcareous Mudstone - as above
		Trace Limestone - as above
		Trace forams, pyrite, glauconite
6750-60	90%	Siltstone - as above
	10%	Calcareous Mudstone - as above
		Trace Limestone - as above
6760-70	75%	Siltstone - dark brown, clay to silt, firm to soft, speckled appearance, partly organic, slightly calcareous
	25%	Limestone - buff to brown, hard, dense, micritic
		Trace Calcareous Mudstone - light grey, clay to silt, firm to soft, moderately calcareous, slightly silty.
		Trace glauconite, pyrite, quartz.
		Drilling Break
		6785 - 90 25-35 ft/hr
		6790 - 95 47.9 ft/hr
		6795 - 6800 83' ft/hr
		6800 - 6805 148 ft/hr
		Fast break
		6798 - 6808 maximum 178 ft/hr at 6808
		Picked up off bottom flow check - no flow
		Circulated Out Bottoms Up 10.42 22/7/77
6770-80	90%	Limestone - buff to brown, very hard, dense, micritic, slightly pyritic.
	10%	Calcareous Mudstone - as above
		Trace Siltstone - as above
		Trace pyrite, glauconite, forams, fossiliferous fragments - mineral fluorescence
		Trace loose quartz grains, angular, cloudy, no show

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
22/7/77

DEPTH	%	DESCRIPTION
6780-90	50%	Sandstone - Cream to milky, fine to very coarse, well calcareous cemented, dirty, very tight, subangular to subrounded grains, pale yellow fluorescence, no significant.
	40%	Limestone - as above
	10%	Siltstone - dark brown, speckled appearance, clay to silt, slightly calcareous, partly organic.
		Trace Coal - black, virtreous, firm to hard Trace pyrite, glauconite, forams, fossiliferous fragments
6790-6800	40%	Sandstone - as above
	60%	Limestone - as above
		Trace Coal - as above Trace Siltstone - as above Trace pyrite, glauconite, forams, fossiliferous fragments.
6800-6008	60%	Limestone - buff to brown, very hard, dense, microcrystalline.
	40%	Sandstone - generally loose quartz grains, clear to cloudy, aggregates well cemented, calcareous cement, dirty, tight, subangular to subrounded equant grains, pale yellow fluorescence, no cut
		Trace Coal - black, vitreous, hard to firm. Trace pyrite, glauconite, forams, fossiliferous fragments.
5780		0.5 Hot Wire 201 C_1 26C_2 18C_3 Trace C_4
		0.5 Hot Wire 311 C_1 67C_2 49C_3 15C_4
6790		1 Hot Wire 486 C_1 89C_2 63C_3 30C_4 Trace C_5
6800		1 Hot Wire 410C_1 63C_2 45C_3 15C_4
6808		Bottoms Up Cuttings Gas 31 units (shows its tight) Steam still C_1 72 C_2 8 C_3 9 C_4 Trace C_5 Trace
6800-10	70%	Sandstone - generally loose quartz grains, fine to very coarse, some granule, clear to milky, subangular to subrounded, aggregates very calcareous cement, well cemented, dirty, tight pale yellow fluorescence in all of quartz aggregates no cut.
	30%	Limestone - buff to brown, very hard, dense, brittle, microcrystalline.
		Trace Coal - black, virtreous, firm to hard. Trace pyrite
6810-20	90%	Sandstone - as above
	10%	Limestone - as above
		Trace pyrite, coal
6820-30	80%	Sandstone - as above
	20%	Limestone - as above
		Trace pyrite, glauconite, fossiliferous fragments Trace Siltstone - dark brown, silt to clay, firm to soft, partly organic, slightly calcareous.
6830-40	80%	Sandstone - cream, fine to very coarse, granule, poorly sorted, clear to milky, subangular to wellrounded, generally loose quartz grains, aggregates well cemented with calcareous cement, often

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FLOUNDER-6 BELLIS
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DEPTH	%	DESCRIPTION
6830-40		Continued....
		silty, aggregates have pale yellow fluorescence, no cut - may be carbonate mineral fluorescence to some extent
	20%	Limestone - buff to brown, very hard, dense, brittle , microcrystalline.
		Trace Siltstone - dark brown, clay to silt, firm to soft, slightly calcareous.
		Trace pyrite , glauconite.
6840-50	80%	Sandstone - as above
	10%	Limestone - as above
	10%	Siltstone - as above
		Trace pyrite, fossiliferous fragments, coal
		Trace Calcareous Mudstone - light grey, clay to silt, firm to soft, silty
6850-60	80%	Sandstone - as above
	10%	Limestone - as above - some almost orange colour
	10%	Siltstone - as above
		Trace pyrite, fossiliferous fragments, rare coal
6860-70	80%	Sandstone - cream to light grey, fine to very coarse and granule as loose grains, generally very fine to medium aggregates well cemented with calcareous cement, subangular to rounded, aggregates show pale yellow fluorescence with no cut.
	10%	Limestone - buff to brown, very hard, dense, brittle, microcrystalline
	10%	Siltstone - dark brown, silt to clay, firm to soft, partly organic, slightly calcareous.
		Trace pyrite, fossiliferous fragments, calcareous.
6870-80	10%	Sandstone - as above
	20%	Calcareous Mudstone - light grey, clay to silt, firm to soft, silty
	10%	Limestone - as above
		Trace Siltstone - as above
		Trace pyrite, fossiliferous fragments
6880-90	75%	Sandstone - cream to light grey, loose grains quartz fine to very coarse to granule, aggregates - ver fine to medium well cemented, calcareous cement, all show pale yellow fluorescence, no cut, subangular to rounded, hard to rarely friable.
	15%	Siltstone - dark brown, clay to silt, firm to soft, partly organic, slightly calcareous.
	10%	Limestone - buff to brown, very hard, dense, brittle, microcrystalline.
		Trace Calcareous Mudstone - light grey, clay to silt, firm to soft, moderately calcareous.
		Trace pyrite, fossiliferous fragments, glauconite
6890-6900	70%	Limestone - as above, aggregates often have black coaly inclusions occasionally pyritic.
	10%	Calcareous Mudstone - as above
	15%	Siltstone - as above

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DEPTH	%	DESCRIPTION
6890-6900		Continued....
	5%	Limestone - as above
		Trace abundant pyrite, fossiliferous fragments.
6900-10	80%	Limestone - as above.
	10%	Siltstone - as above
	10%	Limestone - as above
		Trace pyrite, glauconite, fossiliferous fragments
		Trace Calcareous Mudstone - as above
6910-20	100%	Sandstone - cream to light grey, medium to granule, generally loose quartz grains, subangular to rounded, poorly sorted, clear to milky, aggregates fine to medium, well cemented - calcareous often silty - show weak yellow fluorescence, no cut - hard, rarely friable.
		Trace Calcareous Mudstone - light grey, clay to silt, firm to soft, moderately calcareous
		Trace Siltstone - dark brown, partly organic, firm to soft
		Trace Limestone - buff to brown, very hard, dense, micritic
		Trace pyrite, fossiliferous fragments, glauconite
6920-30	60%	Sandstone - as above
	30%	Calcareous Mudstone - as above
	10%	Siltstone - as above
		Trace Limestone - as above
6936		Flush Riser. Pumps slug. Drop survey pulled out of hole. Ran in hole New bit #6 (Bit #7) 8½" HTC XDV Back on Bottom 0440 hours 23/7/77 0700hrs-6991' TG =5 units 2341C_1 207C_2 180C_3 61C_4 Tr C_5
6930-40	60%	Calcareous Mudstone - light to medium grey, clay to silt, firm, moderately calcareous.
	30%	Sandstone - cream to light grey, fine to very coarse, very poorly sorted, aggregates well cemented with calcareous cement, show pale yellow fluorescence, subangular to rounded clear to cloudy grains, no cut fluorescence.
	10%	Siltstone - dark brown, clay to silt, firm to soft, slightly calcareous
		Trace limestone - buff to brown, very hard, dense, brittle, microcrystalline
		Trace coal - pyrite, fossiliferous fragments.
6940-50	80%	Sandstone - as above - most aggregates broken up so very little fluorescence
	10%	Calcareous Mudstone - as above
	10%	Siltstone - as above
		Trace Limestone - as above, coal, pyrite, glauconite, fossiliferous
6950-60	90%	Sandstone - as above
	10%	Siltstone - dark brown to black tar like - as above
		Trace limestone - as above - trace coal, pyrite, glauconite, fossiliferous

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DEPTH	%	DESCRIPTION
6960-70	90%	Sandstone - as above shows only a trace of pale yellow fluorescence Black tar cement on some grains
	10%	Siltstone - as above
		Trace limestone - as above, coal, pyrite, glauconite, fossiliferous
6970-80	80%	Sandstone - cream to light grey, generally loose quartz grains medium to very coarse, aggregates strongly cemented with calcareous cement - show pale yellow fluorescence, no cut · partly HC and partly mineral fluorescence. Some sand cemented with black tarry substance- no fluorescence but slow yellow/white cut fluorescence.
	10%	Calcareous Sandstone - light to medium grey, firm to soft.
	10%	Siltstone - dark brown, firm to soft, clay to silt, slightly calcareous.
		Trace pyrite, fossiliferous fragments, glauconite.
6980-90	100%	Sandstone - cream to light grey, very fine to very coarse, very poorly sorted, subangular to rounded grains, mainly loose quartz grains, some very fine to medium aggregates strongly cemented with calcareous cement, show rare pale yellow fluorescence, partly mineral and partly HC fluorescence (~5%) some very fine to fine quartz cemented with black tar - no fluorescence but shows white cut fluorescence.
		Trace Calcareous Mudstone - light to medium grey, clay to silt, firm, moderately calcareous Trace Limestone - buff to brown, very hard, dense, brittle, microcrystalline. Trace Siltstone - dark brown to black, firm to soft, slightly calcareous partly organic and tarry. Trace pyrite, glauconite, fossiliferous fragments.
6990-7000	90%	Sandstone - as above 10% is very fine quartz cemented with tar
	10%	Calcareous Mudstone/Siltstone - as above
		Trace abundant pyrite, glauconite, fossiliferous fragments.
7000-10	90%	Sandstone - as above
	10%	Calcareous Mudstone - as above
		Trace Limestone - as above Trace pyrite, Siltstone - as above; coal
7010-20	75%	Sandstone - as above
	15%	Calcareous Mudstone - as above
	10%	Siltstone - as above
		Trace Limestone - as above Trace pyrite, coal.
7020-30	70%	Sandstone - cream to light grey, very fine to very coarse, generally aggregates - well cemented with calcareous cement- no fluorescence, no cut, subangular to rounded grains, very dirty rare tar cemented grains, no fluorescence, no cut
	20%	Siltstone - dark brown to black, clay to silt, firm to soft, slightly calcareous.
	10%	Calcareous Mudstone - light to medium grey, silty, firm trace pyrite, coal, limestone - as above, glauconite.

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DEPTH	%	DESCRIPTION
7020-30 Continued...	10%	Note: Chromatograph readings have decreased.
7030-40	80%	Sandstone - cream to light grey, very fine to very coarse, sub-angular to rounded, generally aggregates - well cemented (calcareou no fluorescence, no cut, firm to hard rare tar cemented quartz grai - no cut, no fluorescence
	10%	Siltstone - dark brown to black, speckled appearance, clay to silt, firm to soft, slightly calcareous.
	10%	Calcareous Mudstone - light grey, firm, silty.
		Trace Limestone - buff to brown, very hard, dense, brittle Trace pyrite, glauconite, rare coal.
7040-50	70%	Sandstone - as above (~ 5%) tar cemented sand rare has slow cut fluorescence.
	20%	Siltstone - as above
	10%	Calcareous Mudstone - as above, buff to light grey
		Trace pyrite, coal/tar, rare foram
7050-60	80%	Sandstone - as above
	10%	Calcareous Mudstone - as above
	10%	Siltstone - as above
		Trace pyrite, coal
7060-70	90%	Sandstone - cream to light grey, fine to very coarse, generally loose grains, subangular to rounded, very poorly sorted, no show aggregates strongly cemented (calcareous) - no show
	10%	Siltstone - dark brown, firm to soft, clay to silt, slightly calcareous
		Trace pyrite, coal/tar Trace Calcareous Mudstone - light to medium grey buff - clay, silty, firm
7070-80	90%	Sandstone - as above aggregates show weak pale yellow fluorescence, no cut. Only rare tar cemented sands, no fluorescence, weak white cut.
	10%	Calcareous Mudstone - as above.
		Trace Limestone - buff to brown, very hard, dense Trace pyrite, siltstone - dark brown - as above.
7080-90	100%	Sandstone - fine to granule, all loose grains, no show, as above great looking sand.
		Trace Siltstone - as above Trace Calcareous Mudstone - as above Trace pyrite
7090-7100		As above
		Trace pyrite, glauconite
7100-10	100%	Sandstone - cream, fine to granule, subangular to wellrounded, very poorly sorted, generally loose grains, rare firm to medium aggregates - strongly cemented - calcareous cement, - some show pale yellow fluorescence

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DEPTH	%	DESCRIPTION
7100-10 Continued...		Trace Siltstone - dark brown, clay to silt, firm to soft, slightly calcareous Trace Calcareous Mudstone - light grey, silty, firm, moderately calcareous. Trace pyrite.
7110-20	100%	Sandstone - as above Trace Siltstone - as above Trace Calcareous Mudstone - as above Trace Limestone - as above, pyrite.
7125		15.00 hours 23/7/77 Pump slug Pulled Out of Hole Ran in Hole New Bit #7 (Bit #8) 8½" HTC J44 Back on Bottom 2200 hours 23/7/77 TG 1.5 Hot Wire $623C_1$ $30C_2$ $18C_3$ $15C_4$ TrC_5
7120-30	90%	Sandstone - cream to light grey, fine to granule, subangular to wellrounded, poorly sorted, mainly loose grains, aggregates of very fine to medium grains strongly cemented - calcareous cement - show pale yellow fluorescence no cut.
	10%	Siltstone - dark brown, clay to silt, hard to soft, pyritic, slightly calcareous Trace pyrite, Limestone - buff to brown, hard, dense
7130-40	70%	Sandstone - as above
	20%	Siltstone - as above
	10%	Calcareous Mudstone - light grey, silty, firm to soft, moderately calcareous Trace pyrite, Limestone - as above
7140-50	50%	Sandstone - as above
	25%	Calcareous Mudstone - as above
	15%	Siltstone - as above
	10%	Limestone - as above Trace pyrite Fast interval 7158-7218 ROP increase from 10-16 ft/hr to 65-117 ft/hr avg. 60ft/hr Flow check 7160 - no flow Flow check 7171 - no flow
7150-60	60%	Sandstone - cream to light grey, very fine to coarse, subangular to rounded, poorly sorted, generally loose quartz grains, aggregates strongly cemented - 0 porosity and permeability - rarely show pale yellow fluorescence - no cut, cuts white after HCl
	25%	Siltstone - dark brown to black, clay to silt, partly organic, firm to soft, slightly calcareous.
	10%	Limestone - buff to brown, very hard, dense, microcrystalline
	5%	Calcareous Mudstone - light to medium grey, silty, firm Trace pyrite, fossiliferous fragments
7160-70	50%	Sandstone - as above
	20%	Siltstone - as above
	20%	Calcareous Mudstone - as above

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DEPTH	%	DESCRIPTION
7160-70 Continued...	10%	Limestone - as above
		Trace Coal/Tar - black, silty, a few fine quartz grains, no fluorescence, weak white cut fluorescence
		Trace pyrite.
7170-80	80%	Sandstone - cream to light grey, very fine to granule, generally medium to coarse, subangular to rounded, poorly sorted, mainly loose grains, aggregates strongly cemented, 0 porosity and permeability - some show pale yellow fluorescence - no cut, cuts white after dissolving in HCl
	20%	Siltstone - buff to dark brown - black, clay to silt, firm to soft, slightly calcareous
		Trace Limestone - buff to brown, hard, dense, microcrystalline Trace Calcareous Mudstone - as above Trace pyrite, tar/coal - as above
7180-90		As above
7190-7200	90%	Sandstone - as above
	10%	Siltstone - as above
		Trace Limestone - as above, Calcareous Mudstone - as above Trace coal, pyrite, glauconite
7200-10		As above
7210-20	100%	Sandstone - as above
		Trace Siltstone - as above Trace Limestone - as above Trace Calcareous Mudstone - as above Trace pyrite, coal
7720-30	90%	Sandstone - cream, fine to granule generally medium to coarse, subangular to rounded, poorly sorted, gnerally loose grains, aggregates strongly cemented - calcareous cement, rarely firm, show pale yellow fluorescence, weak white cut when dissolved in HCl.
	10%	Siltstone - buff to brown, firm to soft, clay to silt, partly organic, slightly calcareous
		Trace Limestone - buff to brown, very hard, dense, microcrystalline Trace pyrite, coal/rare tar
7230-40	100%	Sandstone - as above
		Trace Siltstone - as above Trace Calcareous Mudstone - as above Trace pyrite, coal
7240-50	100%	Sandstone - as above
		Trace Limestone - as above Trace Siltstone - as above; Calcareous Mudstone - as above Trace pyrite, glauconite, coal

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DEPTH	%	DESCRIPTION
7250-60		As above
7260-70	90%	Sandstone - cream to light grey, fine to granule, generally medium to coarse grains, subangular to wellrounded, poorly sorted, mainly loose grains, clear, white aggregates strongly cemented with calcareous cement, commonly frosted show pale yellow fluorescence, weak white cut in HCl.
	10%	Limestone - buff to brown, very hard, dense, micritic
		Trace Calcareous Mudstone - light to medium grey, firm to soft, clay to silt Trace pyrite, coal
7270-80		As above
7280-90		As above
7290-7300	100%	Sandstone - as above
		Trace Limestone - as above Trace Coal, pyrite.
7300-10	90%	Sandstone - as above
	10%	Limestone - as above
		Trace pyrite, coal
7310-20	80%	Sandstone - as above grades to pebbly sandstone
	20%	Limestone - as above
		Trace coal, pyrite, glauconite
7320-30	100%	Sandstone - mainly loose quartz grains, firm to granule, generally medium to very coarse, subangular to wellrounded, grains clear to milky often frosted, no show.
		Trace Limestone - buff to brown, very hard, dense, micritic Trace pyrite, coal, glauconite.
7330-40		As above - No shows.
7340-50	100%	Sandstone - as above, often quartz grains cemented by pyrite.
		Trace Limestone - as above Trace pyrite, glauconite
7350-60	90%	Sandstone - as above
	10%	Limestone - as above
		Trace pyrite, glauconite
7360-70	90%	Sandstone - cream to light grey, fine to granule, generally medium to coarse, subangular to wellrounded, very poorly sorted, all loose grains, no show
	10%	Limestone - buff to brown, very hard, dense, micritic
		Trace pyrite, glauconite
7370-80	90%	Sandstone - as above, ~5% aggregates - show pale yellow fluorescence, no cut when dissolved in acid.

DEPTH	%	DESCRIPTION
7370-80 Continued	....10%	Limestone - as above
		Trace pyrite, glauconite
7380-90	80%	Sandstone - as above, some very silty aggregates
	20%	Limestone - as above
		Trace Siltstone - dark brown, clay to silt, firm to soft, pyritic
		Trace pyrite, glauconite
7390-7400	90%	Sandstone - cream to light grey, fine to granule, generally medium to coarse, subangular to wellrounded, very poorly sorted, loose quartz grains, aggregates calcareous cement show pale yellow fluorescence, no cut
	10%	Limestone - buff to brown, very hard, dense, brittle, micritic, slightly pyritic.
		Trace pyrite, glauconite
7400-10		As above
7410-20	100%	Sandstone - as above - no show
		Trace Limestone - as above, silty
		Trace pyrite.
7420-30	100%	Sandstone - cream to light grey, fine to granule, generally medium to coarse, subangular to wellrounded, clear to milky, commonly frosted, very poorly sorted, mainly loose grains, aggregates are strongly cemented - with calcareous cement - show pale medium yellow mineral fluorescence, no cut even when dissolved in HCl
		Trace Limestone - buff to brown, very hard, silty, dense
		Trace pyrite
		Trace Siltstone - buff to dark brown, firm to soft, slightly calcareous
7430-40	100%	Sandstone - as above
		Trace Limestone - as above, Siltstone - as above, pyrite
7440-50		As above
7450-60	65%	Sandstone - as above
	25%	Coal - black, vitreous, hard
	10%	Limestone - as above
		Trace pyrite.
		Tentative top of coal sequence, base of Flounder Channel 7407' - Drilling break first coal in 7450-60' sample - corresponding increase in gas on chromotograph C_1, C_2, C_3.
7460-70	50%	Sandstone - cream to light grey, very fine to granule, generally medium to coarse, subangular to wellrounded, very poorly sorted, generally loose grains, aggregates well cemented, no show
	40%	Coal - black, vitreous, hard

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DEPTH	%	DESCRIPTION
7460-70 Continued...	10%	Siltstone - buff to dark brown, firm to soft, slightly calcareous.
		Trace Limestone - buff to brown, very hard, dense
		Trace pyrite.
7470-80	50%	Sandstone - as above
	40%	Coal - as above
	10%	Siltstone - as above
		Trace pyrite
7480-90	100%	Coal - black, vitreous, hard, slightly pyritic.
		Trace Sandstone - white, medium to coarse, loose quartz grains, angular to rounded, poorly sorted, no show
7490-7500		As above
		Trace Siltstone - brown, clay to silt, firm
7500-10	90%	Coal - as above, coal seen degassing
	10%	Sandstone - as above
		Trace Siltstone - as above
		Trace pyrite
7510-20	90%	Sandstone - as above
	10%	Coal - as above
		Trace Siltstone - as above
		Trace pyrite
7520-30	100%	Sandstone - cream, fine to granule, mainly medium to coarse, subangular to wellrounded equant grains, poorly sorted, generally loose quartz grains, aggregates cemented by calcareous cement - pale yellow fluorescence, no cut.
		Trace Coal - black, vitreous, hard,
		Trace Siltstone - brown, clay to silt, firm.
		Trace Limestone - buff to brown, very hard, dense, micritic
		Trace pyrite.
7530-40	90%	Sandstone - as above
	10%	Coal - as above
		Trace Siltstone - as above
		Trace pyrite
7540-50	100%	Sandstone - as above
		Trace Coal - as above
		Trace Siltstone - as above
7550-60		As above
		Trace pyrite.
7560-70	100%	Sandstone - white, fine to very coarse, occasionally granular, subangular to rounded, poorly sorted, generally loose grains.

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DEPTH	%	DESCRIPTION
7560-70		Continued....
		Trace Siltstone - brown, clay to silt, firm.
		Trace coal - black, vitreous, hard.
		Trace pyrite.
7570-80	90%	Sandstone - white, fine to very coarse, some granular, subangular to equant grains, generally loose grains no show, good porosity and permeability.
	10%	Coal - black, vitreous, hard.
		Trace Siltstone - brown, firm to soft, clay to silt
		Trace pyrite.
7580-90	50%	Sandstone - as above.
	50%	Coal - as above.
		Trace Siltstone - as above; pyrite.
7590-7600	90%	Sandstone - as above
	10%	Siltstone - as above
		Trace Coal - as above
		Trace pyrite.
7600-10	80%	Sandstone - white, fine to very coarse, subangular to rounded equant grains, poorly sorted, unconsolidated,no show
	10%	Siltstone - buff to brown, clay to silt, firm to soft.
	10%	Coal - black, vitreous, hard.
		Trace pyrite.
7610-20	70%	Sandstone - as above
	15%	Coal - as above
	15%	Siltstone - as above, pyritic, carbonaceous - seat earth
		Trace pyrite.
7620-30	80%	Sandstone - as above
	10%	Coal - as above
	10%	Siltstone - as above
		Trace pyrite
7630-40	60%	Sandstone - white, fine to very coarse, subangular to rounded equant grains, very poorly sorted, unconsolidated, no show
	30%	Siltstone - buff to brown, clay to silt, firm to soft
	10%	Coal - black, vitreous, hard.
		Trace pyrite
7640-50	80%	Sandstone - as above
	20%	Siltstone - as above
		Trace Coal - as above
		Trace pyrite.
7650-60	75%	Sandstone - white to light grey, very fine to very coarse, subangula to rounded equant grains, very poorly sorted, unconsolidated, no show, occasionally aggregate to friable.

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DEPTH	%	DESCRIPTION
7650-60		Continued....
	15%	Coal - black, vitreous, hard
	10%	Siltstone - buff to brown, clay to silt, firm to soft, pyritic, carbonaceous
		Trace pyrite.
7660-70	100%	Coal - black, vitreous, hard, pyritic
		Trace Sandstone - as above
		Trace pyrite.
7670-80	100%	Coal - as above
		Trace Siltstone - buff to brown, soft, pyritic, carbonaceous
		Trace Sandstone - as above unconsolidated.
		Trace pyrite.
7680-90		As above
7690-7700	80%	Coal - black, vitreous, hard, pyritic
	20%	Sandstone - white, very fine to very coarse, subangular to rounded equant grains, unconsolidated, friable.
		Trace Siltstone - buff to brown, clay to silt, firm to soft, pyritic, carbonaceous
7700-10	70%	Coal - as above
	30%	Sandstone - as above
		Trace Siltstone - as above
		Trace pyrite
7710-20	60%	Coal - as above
	40%	Sandstone - as above
		Trace Siltstone - as above
		Trace pyrite
7720-30	100%	Sandstone - white, fine to very coarse, subangular to rounded equant grains, completely friable, no show
		Trace Coal - black, vitreous, hard - as above
		Trace Siltstone - buff to brown, firm to soft, clay to silt, pyritic, carbonaceous.
		Trace pyrite.
7730-40	90%	Sandstone - white, fine to very coarse, very poorly sorted, subangular to rounded equant grains, friable, no show.
	10%	Coal - black, vitreous, hard, pyritic.
		Trace Siltstone - buff to brown, clay to silt, firm to soft, pyritic, carbonaceous
		Trace pyritic.
7740-50	100%	Sandstone - as above
		Trace Coal - as above
		Trace Siltstone - as above; pyrite.

DEPTH	%	DESCRIPTION
7750-60	100%	Sandstone - as above
		Trace Coal - as above; Siltstone - as above; pyrite
7760-70		As above
7770-80		As above
7780-90	100%	Sandstone - white, fine to granular, generally medium to very coarse, subangular to rounded equant grains, very poorly sorted, clear to milky often frosted grains, completely unconsolidated, no show.
		Trace Coal - black, vitreous, hard, slightly pyritic. Trace Siltstone - buff to brown, clay to silt, firm to soft, slightly pyritic and carbonaceous. Trace pyrite.
7790-7800	100%	Sandstone - as above
		Trace Coal - as above Trace Siltstone - as above; pyrite
7800-10	90% 10%	Sandstone - as above Coal - as above
		Trace Siltstone - as above Trace pyrite.
7810-20	100%	Sandstone - white, fine to very coarse, generally medium to coarse, subangular to rounded equant grains, very poorly sorted, clear to milky often frosted grains, friable, no show
		Trace coal, pyrite, siltstone - as above
7820-30	90% 10%	Sandstone - as above Coal - as above
		Trace Siltstone - as above Trace pyrite.
7830-40	90%	Sandstone - white, fine to granular, generally medium to very coarse, subangular to rounded equant grains, very poorly sorted, clear to white often frosted grains, very friable, no show
	10%	Coal - black, vitreous, hard, slightly pyritic
		Trace Siltstone - buff to brown, clay to silt, firm to soft, slightly pyritic, carbonaceous. Trace pyrite.
7840-50	100%	Sandstone - as above
		Trace Coal - as above Trace Siltstone - as above Trace pyrite.
7850-60		As above
7860-70	100%	Sandstone - white, fine to granular, mainly medium to coarse,

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DEPTH	%	DESCRIPTION
7860-70	100%	Continued....
		subangular to wellrounded equant grains, very poorly sorted, clear to white often frosted grains, very friable, no shows
		Trace Coal - black, vitreous, hard, slightly pyritic.
		Trace pyrite
		Trace Siltstone - buff to brown, clay to silt, firm to soft, slightly pyritic, carbonaceous.
7870-80	100%	Sandstone - as above, increases in aggregates of firm to medium quartz grains - firm to friable.
		Trace Coal - as above - cavings
		Trace Siltstone - light to medium grey, calcareous cavings.
7880-90	100%	Sandstone - as above ~ 10% is composed of silty very fine to fine aggregates - frequently pyritic
		Trace Coal - as above
		Trace Siltstone - as above
7890-7900	70%	Sandstone - white, fine to granular, mainly medium to coarse, subangular to rounded equant grains, very poorly sorted, clear to white often frosted grains, all loose quartz, no shows.
	20%	Silty Sandstone - light grey, silty to fine, subangular to sub-rounded grains, very poorly sorted, moderately cemented in aggregates, dirty sandstone - firm to slightly friable, no shows
	10%	Siltstone - buff to brown, clay to silt, firm to soft
		Trace pyrite, coal - cavings.
7900-10	70%	Sandstone - white, fine to very coarse, very poorly sorted, subangular to rounded equant grains, very friable, no show
	30%	Silty Sandstone - light to medium grey, silt to fine, very poorly sorted, strongly cemented with partly dolomitic, carbonate cement, subangular to subrounded grains, hard to firm, no shows.
		Trace Siltstone - buff to brown, firm to soft, clay to silt
		Trace Coal cavings, pyrite.
7910-20	60%	Sandstone - as above
	40%	Silty Sandstone - as above, slightly pyritic.
		Trace Siltstone - as above
		Trace pyrite.
7920-30	50%	Sandstone - as above
	50%	Silty Sandstone - as above strongly cemented quartz grains-calcareous cement.
		Trace pyrite.
7930-40	30%	Sandstone - white, fine to very coarse, loose quartz grains, subangular to wellrounded equant grains, very poorly sorted, very friable, no show.
	70%	Silty Sandstone - light to medium grey, silt to medium grains strongly cemented - aggregates - dolomitic cement, very poorly sorted. 0 porosity and permeability, no show, some pyritic, silty, mineral fluorescence, no cut

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DEPTH	%	DESCRIPTION
930-40		Continued....
		Trace pyrite, coal cavings?
940-50	50%	Sandstone - as above, unconsolidated.
	50%	Silty Sandstone - as above, hard dolomitic sand grains.
		Trace pyrite.
		Trace Siltstone - buff to brown, firm to soft, clay to silt.
950-60	50%	Sandstone - as above, unconsolidated.
	50%	Silty Sandstone - as above
		Trace pyrite
7960-70	50%	Sandstone - white, fine to very coarse, poorly sorted unconsolidated quartz grains, subangular to subrounded equant grains, no show
	50%	Silty Dolomitic Sandstone - light to medium grey, silty to medium, very poorly sorted, grains strongly cemented by dolomitic/ carbonate cement - very hard, some show pale yellow fluorescence, no cut.
		Trace Siltstone - dark brown, firm to soft, clay to silt
		Trace pyrite.
7970-80	50%	Sandstone - white, fine to very coarse, subangular to rounded equant grains, very friable, no show.
	40%	Silty Dolomitic Sandstone - light to medium grey, silt to medium grains, subangular to subrounded grains, generally grains cemented by dolomite, very hard.
	10%	Siltstone - buff to brown, clay to silt, firm to soft
		Trace pyrite.
7987		Increase in gas on FID C.G. = 14 units.
		Tr -- 1 unit Hot Wire $516C_1$ $81C_2$ $54C_3$ $23C_4$ TrC_5
	100%	Sandstone - as above friable, no fluorescence, no cut even from unwashed sample.
980-90	40%	Sandstone - as above
	50%	Silty Dolomitic Sandstone - as above
	10%	Siltstone - as above
		Trace pyrite; coal cavings?
990-8000	50%	Sandstone - white, fine to very coarse, subangular to rounded equant grains, very friable, no shows, unconsolidated
	40%	Silty Sandstone - light to medium grey, silt to medium grains often show pale yellow fluorescence, no cut in dissolving HCl - cemented by dolomite, very hard. Often aggregates also friable, slightly pyritic.
	10%	Siltstone - buff to brown, clay to silt, firm to soft, carbonaceous, slightly pyritic.
		Trace pyrite, coal cavings
8000-10	70%	Sandstone - as above
	20%	Silty Sandstone - as above
	10%	Siltstone - as above

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
24/7/77

DEPTH	%	DESCRIPTION
8000-10		Continued....
		Trace pyrite, coal cavings
8010-20	80%	Sandstone - as above
	20%	Silty Sandstone - as above
		Trace pyrite, coal.
		Trace Siltstone
8020-30	60%	Silty Sandstone - light to medium grey, very fine to medium, subangular to subrounded equant grains, very poorly sorted, well cemented with dolomite/carbonate cement, occasionally glauconitic, no show, slightly pyritic
	40%	Sandstone - white, fine to very coarse, subangular to rounded equant grains, very friable, unconsolidated, no show
		Trace Siltstone - dark brown, clay to silt, firm to soft, slightly pyritic, carbonaceous
		Trace pyrite, glauconite.
8030-40	50%	Silty Sandstone - as above, some friable
	50%	Sandstone - as above
		Trace pyrite, siltstone - as above
8040-50	40%	Sandstone - as above
	40%	Silty Sandstone - as above
	20%	Siltstone/Mudstone - buff to light grey, clay to silt, firm to soft.
		Trace pyrite, coal
8050-60	30%	Sandstone - white, fine to very coarse, poorly sorted, subangular to subrounded equant grains, unconsolidated
	60%	Silty Sandstone - buff to light grey, silt to very fine, very poorly sorted, (abundant) glauconitic, pyritic, firm to friable to soft, dolomitic carbonate cement.
	10%	Siltstone - buff to brown, clay to silt, firm to soft, partly organic, carbonaceous
		Trace pyrite, coal.
8060-70	20%	Sandstone - as above
	60%	Silty Sandstone - as above
	20%	Siltstone - as above
		Trace pyrite, glauconite, coal cavings?
8070-80	25%	Sandstone - as above
	60%	Silty Sandstone - as above
	15%	Siltstone/Mudstone - as above
		Trace pyrite, glauconite, coal
8090		Large increase in gas.
		Hot Wire 6 CG 24 $2554C_1$ $355C_2$ $162C_3$ $61C_4$ TrC_5
		Pull off bottom check samples both washed and unwashed - no fluorescence and no cut.
		Gas rapidly steadied.

LITHOLOGICAL DESCRIPTIONS

FLOUNDER-6

BELLIS
25/7/77

EPTH	%	DESCRIPTION
080-8090	20%	Sandstone - white, fine to very coarse, poorly sorted, subangular to rounded equant grains, very friable, no show.
	30%	Silty Sandstone - light to medium grey, silt to medium, very poorly sorted, abundant glauconite and pyrite, well cemented - dolomite - no show
	50%	Siltstone - light grey to buff, firm to soft, clay to silt, carbonaceous - poor white cut - gas seen bleeding out.
		Trace pyrite, glauconite.
090-8100	40%	Silty Sandstone - as above
	20%	Sandstone - as above
	40%	Siltstone - as above
		Trace pyrite, glauconite
100-10	20%	Sandstone - as above, no show
	60%	Silty Sandstone - as above, no show
	20%	Siltstone - as above
		Trace pyrite, glauconite.
8110-20	30%	Sandstone - white, fine to granular, very poorly sorted, clear to white frosted grains, very friable, no show.
	50%	Silty Sandstone - light to medium grey, silt to medium, very poorly sorted, abundant glauconite and pyrite cemented with quartz grains by dolomite, very hard, no show.
	20%	Siltstone - buff to brown, firm to soft, clay to silt, carbonaceous
		Trace pyrite Trace glauconite.
8120-8128	40%	Sandstone - white, fine to granular, very poorly sorted, clear to white frosted grains, very friable, no show.
	30%	Silty Sandstone - light to medium grey, silt to medium, very poorly sorted, abundant glauconite and pyrite cemented with quartz by dolomitic cement, very hard, no show.
	30%	Siltstone - buff to dark brown, clay to silt, fine to soft, carbonaceous, bearly degrassing, trace pyrite, glauconite.
		Drilled to 8128' C.O. Pump slug. Drop survey. Pulled out of hole 1746 hours 25/7/77 to core thru OWC @ 8397 KB. Hit bridge at 7094'. Started to ream. Pulled out of hole. RIH with bit to ream.

SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

ELLIOTT,
KJELLGREN/DO ROZARIO

30/11/77

DEPTH	%	DESCRIPTION
5330'-5350'	90%	MARL - light to medium grey, very soft, gluey,forams.
	10%	SILTSTONE - calcareous, medium grey, moderately firm, sandy sorting.
5350'-5370'	90%	MARL - As above - light to medium grey, very soft, gummy, with some forams.
	10%	SILTSTONE - medium grey, firm, moderate to hard in parts, grading to very fine sandstone in part, calcareous.
5370'-5390'		As above.
5390'-5410'	90%	SILTSTONE - medium grey, firm, slightly sandy in part, grading to claystone with some forams.
	10%	MARL - light to medium grey, very soft, slightly gummy.
5410'-5430'	50%	SILTSTONE - As above.
	50%	MARL - As above.
5430'-5450'	90%	SILTSTONE - moderately grey, firm, subfissile, calcareous, slightly sandy in part with some forams.
	10%	MARL - light grey, very soft, gummy.
5450'-5480'	90%	SILTSTONE, 10% MARL, however sample probably not representative of quantities, mostly marl suspected. Otherwise as above.
5480'-5500'	90%	SILTSTONE - medium grey, calcareous, slightly sandy in part, subfissile tending to platy shapes, firm.
	10%	MARL - medium grey, calcareous, soft.
		Sphyerical, elliptical forams common to both lithologies, trace echinoid spines.
5500'-5520'	90%	SILTSTONE, 10% MARL - Otherwise as above.
5520'-5540'	80%	SILTSTONE, 10% MARL - Otherwise as above.
5540'-5560'	80%	MARL, 20% SILTSTONE - Otherwise as above.
5560'-5580'	90%	SILTSTONE - medium grey, firm to moderately indurated, calcareous, sandy in part, only slightly platy in part, with some forams.
	10%	MARL - light to medium grey, very soft, gummy.
5580'-5600'	90%	SILTSTONE - As above.
	10%	MARL - As above.
5600'-5620'	100%	SILTSTONE - medium grey, moderately indurated, very calcareous, sandy in part, slightly platy with some forams and fossiliferous fragments, some globules of white clay, possibly gel, trace pyrite, massive, crinoid stems?
5620'-5640'	100%	SANDSTONE - As above with some trace Marl. Trace coal, black, hard, blocky, possibly lignite from mud.
5640'-5660'	80%	SILTSTONE - As above.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

R. DO ROZARIO
G. KJELLGREN

DEPTH	%	DESCRIPTION
5640'-5660'	20%	MARL - light to medium grey, gummy, trace coal, from mud, checked with mud man.
5660'-5680'	80%	MARL - light to medium grey, very soft, gummy.
	20%	SILSTONE - medium grey, firm to moderately hard, as above.
5680'-5700'	90%	SILTSTONE - As above, trace pyrite, fossiliferous.
	10%	MARL - As above.
5700'-5760'		No sample due to depth correction and trip at 5779'. RIH with NB 14
5760'-5780'	50%	MARL - light grey, very soft, gummy, with some forams.
	50%	SILTSTONE - medium grey, firm to moderately indurated, sandy in part, pyrite, trace speresene and pipe dope.
5780'-5800'	80%	MARL - As above.
	20%	SILTSTONE - As above.
5800'-5820'	60%	CALCARENITE - medium grey, grey to brown, moderately indurated, poorly indurated in part, argillaceous, trace glauconite, abundan forams, poor porosity.
	30%	SILTSTONE - medium grey, firm, as above, trace pyrite.
	10%	MARL - light grey, very soft, as above.
5820'-5840'	90%	SILTSTONE - medium grey, subfissile, trace glauconite, pyrite.
	10%	CALCARENITE - light grey to white, moderately indurated, trace glauconite, poor porosity. Forams abundant in both lithologies, echinoid spines.
5840'-5860'	90%	SILTSTONE, 5% CALCARENITE, 5% MARL - As above.
5860'-5880'	85%	SILTSTONE, 10% CALCARENITE, 5% MARL - As above.
5880'-5900'	90%	SILTSTONE - medium grey, moderately indurated, calcarenite (les with some forams, slightly platy in part, argillaceous.
	10%	CALCARENITE - moderately indurated, medium grey, and grey to brown, fossiliferous, forams, poor visual porosity, trace marl.
5900'-5920'	90%	SILTSTONE
	10%	CALCARENITE
5920'-5960'	90%	SILTSTONE - As above.
	5%	CALCARENITE - As above.
	5%	MARL - As above.
5960'-5980'	75%	SILTSTONE - As above.
	10%	CALCARENITE - As above.
	15%	MARL - As above.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

R. DO ROZARIO
G. KJELLGREN

DEPTH	%	DESCRIPTION
5980'-6000'	50%	SILTSTONE - medium grey, moderately indurated, subfissile, calcareous, argillaceous, trace glauconite and pyrite, forams, echinoid spines.
	50%	MARL - light grey, soft, forams.
6000'-6020'	50%	SILTSTONE - As above.
	50%	MARL - As above.
		Trace Calcarenite.
6020'-6040'	70%	SILTSTONE - As above.
	30%	MARL - As above.
6040'-6060'	80%	SILTSTONE - medium grey, moderate to well indurated, calcareous and argillaceous, trace pyrite and glauconite, forams and echinoid spines.
	20%	MARL - light grey, soft, silty, forams.
		Trace Calcarenite.
6060'-6080'	70%	SILTSTONE - As above.
	30%	MARL - As above.
		Trace Calcarenite.
6080'-6100'	70%	SILTSTONE - As above.
	30%	MARL - As above.
6100'-6120'	70%	SILTSTONE - As above.
	30%	MARL - As above.
6120'-6140'	70%	SILTSTONE - medium grey, moderate to well indurated, subfissile in part, slightly moderately calcareous and argillaceous, trace glauconite and pyrite, forams.
	30%	MARL - light grey, soft, slightly silty, forams, some echinoid spines.
6140'-6160'	70%	SILTSTONE - As above.
	30%	MARL - As above.
6160'-6180'	70%	SILTSTONE - As above.
	30%	MARL - As above.
6180'-6200'	70%	SILTSTONE - As above.
	30%	MARL - As above.
6200'-6220'	70%	SILTSTONE - light to medium grey, moderate to well indurated, subfissile, slight to moderately calcareous, slightly argillaceous trace pyrite, forams.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

R. DO ROZARIO
G. KJELLGREN

DEPTH	%	DESCRIPTION
	30%	MARL - light grey, soft, slightly silty, forams, echinoid debris in cuttings.
6220'-6240'	70%	SILTSTONE - As above.
	30%	MARL - As above.
6240'-6260'	100%	SILTSTONE - medium to dark grey, very calcareous, moderate to well indurated, platy in part, trace pyrite and mica, with some forams, occasional crystalline,clear, fibrous, brittle, non calcareous, probably gypsum.
6260'-6280'	100%	SILTSTONE - As above.
		NOTE: MARL BEING WASHED AWAY, PROBABLY 20-30%.
6280'-6300'	80%	SILTSTONE - As above,trace green Siltstone, trace clear crystalline pyrite.
	20%	MARL - light grey, very soft, gummy.
6300'-6320'	90%	SILTSTONE - As above.
	10%	MARL - As above.
6320'-6340'	90%	SILTSTONE - medium to dark grey, moderate to well indurated, platy in part, trace pyrite and mica, trace gypsum with some fossiliferous forams, also occasional trace green siltstone, argillaceous, non calcareous.
	10%	MARL - light grey, as above - STILL CARRYING TRACE LIGNITE.
6340'-6360'	70%	SILTSTONE - medium to dark grey, as above, with some forams.
	20%	SILTSTONE - dark brown, firm to moderately indurated, slightly calcareous to non calcareous, trace glauconite, mica, sandy in part, trace gypsum.
	10%	MARL - As above.
		NOTE: About 5% Lignite from mud.
6360'-6380'	80%	SILTSTONE - medium to dark grey, as above.
	20%	SILTSTONE - dark brown, as above.
6380'-6400'	90%	SILTSTONE - medium to dark grey, as above.
	10%	SILTSTONE - dark brown, as above.
6400'-6420'	80%	SILTSTONE - medium to dark grey, moderately indurated, calcareous, platy in part, with some mica, trace pyrite, some fossiliferous forams.
	10%	SILTSTONE - dark brown, slightly calcareous to non calcareous, firm to moderately indurated, trace glauconite, sandy.
	10%	LIMESTONE - calcilutite, brown to buff, well indurated, brittle forams, trace glauconite, trace gypsum.

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SAMPLE DESCRIPTIONS

R. DO ROZARIO
C. KJELLGREN

FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
6420'-6440'	70%	SILTSTONE - medium grey, micaceous, sandy, slightly pyritic, slightly glauconitic, firm, very calcareous.
	30%	CALCARENITE - mainly skeletal, granular, light grey up to .1mm. Trace Marl - light grey, gooey. Trace lignite, skeletal fragments.
6440'-6460'	60%	SILTSTONE - medium grey, as above.
	30%	SILTSTONE - brown, very sandy, grading to fine Sandstone, glauconitic, carbonaceous, weakly calcareous, soft micaceous.
	10%	SANDSTONE - light grey to white to .1mm sorting fair, subangular very fine, trace Marl, Lignite skeletal fragments.
6460'-6480'	50%	SILTSTONE - Brown, as above.
	50%	SILTSTONE - medium grey, as above. Trace Sandstone - as above. Trace Marl, Lignite, skeletal fragments. Trace Pyrite, - cement between grains.
6480'-6500'	40%	SILTSTONE - brown, as above.
	50%	SILTSTONE - medium grey, as above.
	10%	SANDSTONE - As above. Trace Marl, Lignite, skeletal fragments, pyrite.
6500'-6520'	30%	SILTSTONE - brown, as above.
	60%	SILTSTONE - medium grey, as above.
	10%	SANDSTONE - as above. Trace Marl, Lignite, skeletal fragments.
6520'-6540'	10%	SILTSTONE - dark brown, soft to firm, mica, carbonaceous, slightly glauconitic, slight to non calcareous, argillaceous.
	70%	- medium grey, moderate to well indurated, subfissile, mica, calcareous, trace pyrite, forams, becoming very argillaceous, grading to mudstone.
	20%	CALCILUTITE - buff, well indurated, dense, forams, no porosity.
6540'-6560'	60%	SILTSTONE - dark brown, medium grey, as above.
	20%	CALCILUTITE - buff, as above.
	20%	MARL - light grey to brown, very soft, gummy.
6560'-5680'	80%	SILTSTONE - medium to grey, well indurated, subfissile, calcareous, mica, forams.
	10%	- dark brown, soft to firm, slightly-non calcareous, carbonaceous, mica, argillaceous, trace gypsum crystalline, clear, fibrous, brittle, non calcareous, trace pyrite.
	10%	CALCILUTITE - buff, dense, well indurated, trace Marl.
6580'-6600'	80%	SILTSTONE - medium to grey.

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SAMPLE DESCRIPTIONS

R. DO ROZARIO
G. KJELLGREN

FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
6580'-6600'	20%	SILTSTONE - dark brown, sandy, trace calcilutite.
6600'-6620'	60%	SILTSTONE - medium grey, trace pyrite, forams, gypsum, mica, very argillaceous.
	20%	- dark brown, trace calcilutite.
	20%	MUDSTONE - medium grey, firm, calcareous, silty in part, slightly fossiliferous.
6620'-6640'	30%	SILTSTONE - dark brown, soft to firm, carbonaceous, mica, slightly calcareous.
	70%	MUDSTONE - medium grey, firm to moderately indurated, calcareous, silty in part, with some pyrite, few forams, possible cavings.
6640'-6660'	30%	SILTSTONE - as above.
	70%	MUDSTONE - As above, trace calcilutite.
6660'-6680'	30%	SILTSTONE - dark brown, soft to firm, carbonaceous, slightly calcareous, mica, slightly sandy in part.
	70%	MUDSTONE - medium grey, firm, moderately indurated, calcareous, pyrite.
	60%	MUDSTONE - medium grey, firm to moderately indurated, calcareous pyrite, silty in part, trace foram.
6680'-6700'	20%	SILTSTONE - dark brown, soft to firm, carbonaceous, slightly calcareous, sandy in part, mica.
	20%	CALCILUTITE - brown, well indurated, dense.
6700'-6720'	80%	SILTSTONE - as above, mainly firm.
	20%	MUDSTONE - as above, medium grey, trace Limestone.
6720'-6740'	70%	SILTSTONE - As above.
	30%	MUDSTONE - As above, trace green.
6740'-6760'	50%	SILTSTONE - dark brown, soft to firm, carbonaceous, mica, sandy in part.
	30%	MUDSTONE - medium grey, firm, calcareous, micaceous.
	20%	CALCILUTITE - brown, well indurated, silty in part, brittle.
6760'-6780'	10%	SANDSTONE - white, very fine to fine, subangular, friable to moderately cemented, slightly calcareous cement, no fluorescence or cut, fair sorting.
	30%	MUDSTONE - grey, as above.
	60%	SILTSTONE - dark brown, as above - more pyrite.
6780'-6800'	10%	SANDSTONE - As above.
	40%	MUDSTONE - grey, firm, calcareous, mica, trace pyrite, trace forams.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

R. DO ROZARIO
G. KJELLGREN

DEPTH	%	DESCRIPTION
6780'-6800'	20%	SILTSTONE - dark brown, as above.
	30%	CALCILUTITE - dolomitic, dark brown, very well indurated, dense, slightly carbonaceous.
6800'-6820'	80%	SANDSTONE - loose grains, medium to very coarse, angular to subangular, clear and milky, fair sorting, few granules, no fluorescence or cut.
	10%	MUDSTONE - As above.
	10%	SILTSTONE - As above.
6820'-6840'	70%	SANDSTONE - loose grains, clear to milky, as above.
	20%	MUDSTONE - grey, firm to moderately indurated, calcareous, pyrite.
	10%	SILTSTONE - dark brown, firm to soft, slightly calcareous, mica.
		Trace CALCILUTITE - dark brown, dolomitic, very well indurated.
6840'-6860'	50%	SANDSTONE - loose grains, clear to milky, coarse to very coars few granules, angular to subangular, also aggregate, fine to medium grains, well cemented, white calcareous cement, tight, poor porosity, subangular to rounded quartz grains, dirty, occasional carbonaceous stain.
	20%	SILTSTONE - dark brown, brown to black, non calcareous, soft to firm, very carbonaceous in part.
	30%	MUDSTONE - medium grey, firm to moderately indurated, calcareou trace pyrite, forams, subfissile.
6860'-6880'	20%	SANDSTONE - white to light brown, very fine grained, well indurated, subrounded, calcareous, well sorted, poor porosity, pyrite, trace glauconite.
	40%	SILTSTONE - MUDSTONE - light grey, subfissile, pyrite, moderate ly calcareous, forams.
	40%	SILTSTONE - dark to medium brown, subfissile, slightly calcareou argillaceous, slightly carbonaceous, forams.
		Trace MARL - white, soft, slightly silty.
6880'-6900'	40%	SANDSTONE - As above.
	30%	SILTSTONE - MUDSTONE - light grey, as above.
	30%	SILTSTONE - dark to medium brown, as above.
		Trace LIMESTONE - very fine grained, light brown, well indurate trace pyrite and glauconite.
		Trace coal, echinoid debris.
6900'-6910'	30%	SANDSTONE
	30%	SILTSTONE
	40%	MUDSTONE - As above.

SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

R. DO ROZARIO
G. KJELLGREN

DEPTH	%	DESCRIPTION
6910'-6920'	20%	SANDSTONE - light grey, brown, aggregate and loose, coarse to very coarse quartz grains, mica.
	30%	SILTSTONE - abundant pyrite, carbonaceous matter.
	50%	MUDSTONE
6920'-6930'	80%	COAL - black, hard, brittle, blocky , conchoidal to uneven fracture, pyrite, silty and sandy laminae.
	20%	SANDSTONE - coarse to very coarse loose grains, clear to milky, angular to subangular predominant, minor subrounded, also fine to medium grained aggregates, subangular, light grey to brown, well cemented, carbonaceous, silty, mica, pyrite.
6930'-6940'	95%	SANDSTONE - white to clear, loose, coarse to very coarse, sub-angular to subrounded, pyrite. Aggregates, fine grained, slightly carbonaceous, pyrite, well indurated and cemented, poor porosity, Remainder: Coal, mudstone and Siltstone, as above.
6940'-6950'	95%	SANDSTONE - As above.
	5%	SILTSTONE/MUDSTONE
6950'-6960'	80%	SANDSTONE - As above.
	10%	SILTSTONE - As above.
	10%	MUDSTONE - As above.
6960'-6970'	80%	SANDSTONE - coarse to very coarse, white to clear loose, angular to subrounded predominant, minor aggregates: fine to medium grained, light grey to white, well cemented, dirty and carbonaceous in part, poor sorting, no fluorescence, but weak white to yellow cut.
	10%	SILTSTONE - brown to dark brown, black to brown in part where very carbonaceous, firm to moderately indurated, subfissile, mica carbonaceous siltstone has no fluorescence, good white to yellow cut (grading to very fine Sandstone).
	10%	MUDSTONE - light grey, buff, calcareous to non calcareous, firm to moderately indurated, subfissile, silty in part.
6970'-6980'	80%	SANDSTONE - As above.
	10%	SILTSTONE - As above.
	10%	MUDSTONE - As above.
6980'-6990'	80%	SANDSTONE - coarse to very coarse, loose quartz grains and aggregate - (about 50%), firm to medium grained predominant, white dolomite cement, no to very weak , white to yellow cut.
	10%	SILTSTONE - As above.
	10%	MUDSTONE
6990'-7000'	80%	SANDSTONE - predominant, fine to medium grained aggregates, minor, coarse to very coarse loose quartz grains, no fluorescence, no cut, very well cemented.
	10%	SILTSTONE - brown, carbonaceous, grading to very fine Sandstone.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

R. DO ROZARIO
G. KJELLGREN

DEPTH	%	DESCRIPTION
6990'-7000'	10%	MUDSTONE - buff, light grey, firm to moderately indurated.
7000'-7010'	80%	SANDSTONE - As above.
	10%	SILTSTONE - As above.
	10%	MUDSTONE - As above.
7010'-7020'	70%	SANDSTONE - As above.
	20%	SILTSTONE - As above.
	10%	MUDSTONE - As above.
7020'-7030'	90%	SANDSTONE - coarse to very coarse, subangular to subrounded, loose quartz grains, clear to milky, and aggregates (30%): fine to medium predominant, well cemented, light grey to white, white dolomite cement, no fluorescence, no cut.
	5%	SILTSTONE - As above.
	5%	MUDSTONE - As above.
7030'-7040'	100%	SANDSTONE - predominant, loose, coarse to very coarse quartz grains, subangular to subrounded, minor aggregates as above. Trace pyrite.
		Trace SILTSTONE and MUDSTONE as above.
7040'-7050'	100%	SANDSTONE - predominant, loose, coarse to very coarse quartz grains, clear, minor milky, subangular to subrounded.
7050'-7060'	100%	SANDSTONE - almost all loose, coarse to very coarse quartz grains clear, minor milky, subangular to rounded, predominant subangular.
		Trace aggregates as above.
		Trace SILTSTONE and MUDSTONE.
7060'-7070'	100%	SANDSTONE - almost all coarse to very coarse, loose quartz grains, clear to slightly frosted, minor firm to medium grained aggregates; well cemented, little dolomite matrix, poor porosity, no fluorescence, weak, white to yellow slow cut, trace Siltstone.
7070'-7080'	100%	SANDSTONE - predominant very coarse loose quartz grains, clear to slightly milky, subrounded to rounded, trace aggregate as above.
7080'-7090'	100%	SANDSTONE - 70% coarse to very coarse loose quartz grains, clear to slightly milky, subrounded to rounded.
	30%	Aggregates, fine to coarse, white to light grey, well cemented, white to cream, dolomite matrix, poor porosity, no fluorescence or cut. Trace pyrite.
7090'-7100'	100%	SANDSTONE - predominant very coarse loose quartz grains, clear to slightly milky, subrounded to rounded, trace aggregates as above, with some dolomite cement.
7100'-7110'	100%	SANDSTONE - predominant very coarse loose quartz grains, with some trace aggregates, as above, trace pyrite.
7110'-7120'	90%	SANDSTONE - coarse to very coarse, loose quartz grains, angular to subrounded, with some aggregates: light cream, fine to very coars

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SAMPLE DESCRIPTIONS

R. DO ROZARIO
G. KJELLGREN

FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
7110'-7120'	100%	Continued/....
		abundant yellow dolomitic matrix, very poor sorting.
	10%	SILTSTONE and MUDSTONE - As above - cavings?
7120'-7130'	70%	SANDSTONE - predominantly, coarse to very coarse angular to rounded, clear milky, loose quartz grains and aggregates, light cream, light grey, fine to very coarse, with some yellow dolomitic matrix, very poorly sorted, trace pyrite and glauconite, very weak white to yellow crush cut in Sandstone, no fluorescence.
	20%	SILTSTONE - brown to dark brown, mdoerately indurated, mica, non calcareous, carbonaceous in part, grading very fine Sandstone trace glauconite.
	10%	MUDSTONE - light grey, fawn, firm, non to moderately calcareous silty in part.
7130'-7140'	70%	SANDSTONE - As above with some pyrite.
	20%	SILTSTONE - As above.
	10%	MUDSTONE - As above.
7140'-715-'	100%	SANDSTONE - predominant coarse, loose quartz grains, subangular to subrounded, clear to milky, trace light grey, rose, trace aggregates, firm to medium grained.
		Trace SILTSTONE and MUDSTONE - As above.
7150'-7160'	90%	SANDSTONE - coarse to very coarse, loose quartz grains, sub-angular to rounded, clear to milky, trace light grey, trace aggregates, firm to medium grained.
	5%	SILTSTONE - brown to dark brown, firm to moderately indurated, subfissile, carbonaceous in part, non calcareous.
	5%	MUDSTONE - light grey, fawn, non calcareous, firm, rare echinoic spines.
7160'-7170'	100%	SANDSTONE - As above, with some trace Sandstone and Mudstone.
7170'-7180'	100%	SANDSTONE - coarse to very coarse, loose quartz grains, as above with trace SILTSTONE, brown to dark brown, as above. Trace MUDSTONE, light grey, fawn, as above.
7180'-7190'	95%	SANDSTONE - clear to milky, loose, coarse to very coarse, sub-angular to subrounded, moderate to well sorted, pyrite. Trace aggregates.
	5%	MUDSTONE, SILTSTONE - As above.
7190'-7200'	95%	SANDSTONE - As above.
	5%	MUDSTONE and SILTSTONE - As above, Limestone, very fine grained light brown, argillaceous.
7200'-7210'	90%	SANDSTONE - loose, coarse to very coarse grained, trace aggre-gates, trace glauconite.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

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DEPTH	%	DESCRIPTION
7200'-7210'	5%	SILTSTONE - As above.
	5%	MUDSTONE - As above.
		Trace coal, pyrite.
7210'-7220'	90%	SANDSTONE - As above, minor aggregates, fine grained, trace glauconite.
	5%	SILTSTONE - As above.
	5%	MUDSTONE - As above.
		Trace coal, pyrite, ever present echinoid debris.
7220'-7230'	40%	SANDSTONE - As above.
	25%	SANDSTONE - aggregates - As above.
	20%	MUDSTONE - light grey, as above.
	15%	SILTSTONE - medium brown, as above.
		Trace coal, limestone, buff to light brown, pyrite.
7230'-7240'	35%	SANDSTONE - As above.
	35%	SANDSTONE - fine grained aggregates, as above, glauconite, well indurated.
	15%	MUDSTONE - As above.
	15%	SILTSTONE - As above, minor carbonaceous.
		Trace pyrite.
7240'-7250'	85%	SANDSTONE - loose, coarse to very coarse grained, as above.
	5%	SANDSTONE - aggregates, very fine grained, as above.
	5%	MUDSTONE - buff to light grey, as above.
	5%	SILTSTONE - As above.
		Trace coal, Limestone.
7250'-7260'		
7260'-7270'	50%	SANDSTONE - loose coarse to very coarse grained, as above. moderately glauconitic, pyrite
	30%	SANDSTONE - aggregates very fine grained, as above.
	10%	MUDSTONE - As above.
	10%	SILTSTONE - As above.
		Trace pyrite, limestone.
7270'-7280'	50%	QUARTZ - clear to milky, .5-2 mm, subrounded.
	20%	SANDSTONE - .1-.4 mm, light grey, to brownish grey, subangular to subrounded, fair to poor sorting, some glauconite, slightly

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

R. DO ROZARIO
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DEPTH	%	DESCRIPTION
7270'-7280'	20%	Sandstone Continued/....
		micaceous, some calcite cement, firm.
	10%	SILTSTONE - brown, sandy, micaceous, carbonaceous, slightly pyritic, firm.
	20%	SILTSTONE - medium grey, very calcareous, firm.
		Trace pyrite - infills of voids from Sandstone, fine crystalline masses up to 1.5 mm.
7280'-7290'	40%	QUARTZ - as above up to 4.mm.
	30%	LIMESTONE - micritic brown to buff, carbonaceous, silty, micaceous, slightly glauconitic.
	10%	SANDSTONE - As above.
	10%	SILTSTONE - medium grey, as above.
	10%	SILTSTONE - brown, as above.
		Trace Pyrite, fossiliferous fragments.
7290'-7300'	90%	QUARTZ - As above.
	5%	SILTSTONE - medium grey - as above.
	5%	SILTSTONE - brown, as above.
		Trace Pyrite, Limestone, as above, fossiliferous fragments.
7300'-7310'	75%	QUARTZ - As above.
	15%	SILTSTONE - brown, as above.
	10%	LIMESTONE - As above.
		Trace Pyrite, Siltstone - medium grey, as above.
7310'-7320'	50%	SANDSTONE - light grey to buff, multicoloured .05-.15 mm poorly sorted, silty carbonaceous,micaceous, pyritic, dolomitic cement finely bedded,minor glauconite, very hard, well cemented.
	50%	QUARTZ - As above.
		Trace Pyrite, Siltstone - medium grey, siltstone brown.
		Trace Limestone - as above, fossiliferous fragments.
7320'-7330'	80%	SANDSTONE - light grey carbonaceous, white quartz, some smokey dolomitic cement, hard, rare glauconite and pyrite, poor sorting, subangular.
	20%	QUARTZ - light grey to mainly clear, rounded,to 3mm.
		Trace Siltstone -brown carbonaceous, micaceous,slightly calcareous.
		Trace Pyrite - micro-crystalline aggregates to 2mm.
		Trace Limestone - buff micritic.

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SAMPLE DESCRIPTIONS

R. DO ROZARIO
G. KJELLGREN

FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
7320'-7330'		Continued/....
		Trace Siltstone - light grey, calcareous.
7330'-7340'	80%	SANDSTONE - As above.
	20%	QUARTZ - As above.
		Trace Siltstone, pyrite, Limestone.
7340'-7350'	90%	SANDSTONE - fine grained aggregates, light grey to white, dolomitic cement, moderately sorted, subrounded, slightly carbonaceous, well indurated, minor glauconite, pyrite, poor porosity no fluorescence, no cut.
	5%	SANDSTONE - clear to milky, coarse to very coarse, loose grains, subangular to subrounded, pyritic.
	5%	MUDSTONE - light grey, subfissile, moderately indurated.
		SILTSTONE - medium to dark brown, slightly carbonaceous, subfissile, moderate to well indurated.
7350'-7360'	60%	SANDSTONE - fine grained aggregates, as above.
	10%	SANDSTONE - coarse to very coarse grains, loose, as above.
	20%	SANDY SILTSTONE - buff to light brown, very fine grained, well indurated, dolomitic cement, slightly carbonaceous, slightly glauconite, trace pyrite.
	10%	MUDSTONE - light grey as above, SILTSTONE - dark to medium brown, as above, trace Marl, light grey to white, soft, silty.
7360'-7370'	10%	SANDSTONE - clear to milky, coarse to very coarse grained, as above.
	10%	SANDSTONE - fine grained aggregates, buff to light brown, as above.
	70%	SANDSTONE - fine grained aggregates, light grey to white, as above.
	10%	MUDSTONE - light grey, as above, SILTSTONE - dark brown, as above.
7370'-7380'	20%	SANDSTONE - fine to coarse grained, moderate to well indurated, buff to light grey, 70% coarse to very coarse loose quartz, subangular to subrounded, clear to milky, white to buff, dolomitic cement, subangular quartz grains, no fluorescence or cut, pyrite, trace glauconite, silty in parts.
	10%	MUDSTONE - light grey, firm to moderately indurated, slightly calcareous, silty in part, and SILTSTONE - brown, slightly carbonaceous, subfissile, soft to firm, sandy, non calcareous.
7380'-7390'	90%	SANDSTONE - predominant loose, minor aggregates, as above.
	10%	SILTSTONE and MUDSTONE - As above.
7390'-7400'	90%	SANDSTONE - coarse to very coarse, loose quartz grains, predominant subrounded, (minor subangular to rounded), clear to milky.
	10%	MUDSTONE and SILTSTONE - As above.

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SAMPLE DESCRIPTIONS

R. DO ROZARIO
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FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
7400'-7410'	60%	SANDSTONE - loose, very coarse to coarse quartz grains, as above, trace glauconite.
	30%	SILTSTONE - brown to buff, non calcareous, slightly carbonaceou pyrite, subfissile, sandy in part.
	10%	MUDSTONE - buff, light grey, soft to firm, non calcareous subfissile, rare glauconite grains.
7410'-7420'	20%	SANDSTONE - loose very coarse to coarse quartz grains, as above minor fine to medium grains.
	60%	SILTSTONE - As above.
	20%	MUDSTONE - As above.
7420'-7430'	40%	SANDSTONE - loose very coarse to coarse quartz grains, subrounde to rounded, clear to milky, minor aggregates, fine to medium grai moderate to well cemented, white to light grey, buff, dolomitic matrix, no fluorescence, no cut.
	40%	SILTSTONE - dark brown, buff, firm to moderately indurated, As above.
	20%	MUDSTONE - buff, light grey, soft to firm, non calcareous to calcareous, trace white clay.
7430'-7440'	80%	SANDSTONE - predominant loose very coarse to coarse grains, as above, minor aggregates very fine to fine grained, friable, white to light grey, white non calcareous matrix, with some carbonaceous laminae, pyrite, no fluorescence or cut, minor aggregates fine to medium grained, buff, well indurated, buff dolomitic matrix, poor porosity, subangular grains, no fluorescen or cut.
	10%	SILTSTONE - brown to dark brown, as above, carbonaceous, sandy, non calcareous.
	10%	MUDSTONE - light grey, buff, (the buff is non calcareous, the grey calcareous), soft to firm.
7440'-7450'	70%	SANDSTONE - coarse to very coarse loose grains, as above and approximately 30% Sandstone, very fine to fine aggregates, friabl to moderately indurated, white non calcareous matrix, very carbon aceous, pyrite, subangular grains, no fluorescence or cut.
	30%	SILTSTONE - dark brown, grey to brown, soft to firm, very sandy carbonaceous, pyrite, non calcareous, abundant pyrite.
7450'-7460'	80%	COAL - black, brittle, waxy to vitreous, blocky to subfissile, with some silty laminae, uneven - subconchoidal fracture.
	10%	SILTSTONE - brown, grey to brown, soft to firm, argillaceous, carbonaceous, non calcareous, no fluorescence, very weak to no white to yellow cut.
	10%	SANDSTONE - very fine to fine, white, light buff, friable to moderately indurated, carbonaceous, white clayey matrix, no fluorescence. (Very weak to no yellow cut). Trace loose coarse to very coarse quartz grains.
7460'-7470'	100%	COAL - black, brittle, waxy to vitreous, blocky to subfissile,

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

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DEPTH	%	DESCRIPTION
7460'-7470'		Continued/...
		uneven to subconchoidal fractures, argillaceous.
7470'-7480'	80%	SANDSTONE - coarse to very coarse, lcose quartz grains, clear to milky, predominant subrounded, pyrite, trace fine to medium grains aggregates, carbonaceous, pyrite, white, non calcareous, clayey matrix, no fluorescence, no cut.
	10%	COAL - black, brittle, as above.
	10%	SILTSTONE - brown to dark brown, buff, carbonaceous, pyritic soft to firm, non calcareous, very weak white to yellow cut, no fluorescence.
7480'-7490'	100%	SANDSTONE - coarse to very coarse, subangular to rounded with some trace Siltstone and Coal, as above.
7490'-7500'	100%	SANDSTONE - coarse to very coarse, subangular to rounded, with some trace Siltstone, coal as above.
7500'-7510'	90%	SANDSTONE - coarse to very coarse, subangular to rounded, clear to milky, slightly pyritic.
	5%	COAL - black, brittle, hard, subconchoidal fracture.
	5%	SILTSTONE - brown, dark brown, soft to firm, non calcareous.
7510'-7520'	100%	SANDSTONE - loose very coarse to coarse quartz grains, clear to milky, subrounded predominant, minor subangular, rounded, trace pyrite.
		Trace coal and Siltstone, as above.
7520'-7530'	100%	SANDSTONE - loose very coarse to coarse grains, as above.
7530'-7540'	100%	SANDSTONE - very coarse to coarse, loose quartz grains, clear to milky, finely disseminated pyrite within grains, trace Siltstone.
7540'-7550'	100%	SANDSTONE - very coarse to coarse, loose quartz grains, predominant subrounded to rounded, with some fine disseminated pyrite in grains.
7550'-7560'	80%	COAL - black, brittle, subfissile to blocky, silty, subconchoidal to uneven fracture, trace pyrite.
	20%	SILTSTONE - buff, brown, soft to firm, non calcareous, carbonaceo interbedded with some coal, subfissile.
7560'-7570'	90%	COAL - black, brittle, as above.
	10%	SILTSTONE - buff, brown, as above.
7570'-7580'	60%	SANDSTONE - coarse to very coarse, loose quartz grains, subangula to subrounded, clear to milky, and very fine to fine aggregates, buff to light grey, subangular quartz grains, white to cream, (slightly dolomitic in part), non calcareous, clay matrix, carbonaceous, silty in part, the fine sandstone interlaminated with some coal, and forming matrix of coarse quartz aggregates.
	30%	SILTSTONE - brown, brown to grey, soft to firm, carbonaceous, very argillaceous in part, grading fine sandstone in part.
	10%	COAL - black, brittle, subfissile and silty in part, pyrite,

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DEPTH	%	DESCRIPTION
7570'-7580'		Continued/....
		subconchoidal to uneven fracture.
7580'-7590'	90%	COAL - black, hard, brittle, subconchoidal fracture, some subfissile with earthy texture.
	10%	SILTSTONE - brown, brown grey, very argillaceous in part, soft to firm, carbonaceous, trace pyrite.
7590'-7600'	50%	COAL - As above.
	40%	SILTSTONE - As above.
	10%	SANDSTONE - loose coarse quartz grains and very fine to fine aggregates, friable to moderately indurated.
7600'-7610'	70%	SILTSTONE - medium brown, buff, soft to firm, subfissile, carbonaceous, argillaceous, sandy in part, pyrite, mica.
	20%	COAL - black, brittle, subfissile in part.
	10%	SANDSTONE - very fine to fine, aggregates, friable to moderately cemented, white clay matrix, carbonaceous, silty in part, no to very weak slow crush cut, no fluorescence.
7610'-7620'	40%	SANDSTONE - coarse loose quartz grains and very fine to fine aggregates, as above.
	50%	SILTSTONE - brown, soft to firm, as above.
	10%	COAL - black, as above, abundant pyrite.
7620'-7630'	60%	SANDSTONE - coarse loose quartz grains and very fine to fine aggregates.
	40%	SILTSTONE - brown, as above.
		Trace Coal, trace pyrite.
7630'-7640'	60%	SANDSTONE - As above.
	40%	SILTSTONE - As above.
		Trace coal.
7640'-7650'	100%	COAL - black, brittle, conchoidal fracture, subfissile in part, Trace Siltstone and Trace Limestone quartz grains.
7650'-7660'	100%	SANDSTONE - coarse to very coarse, loose quartz grains, clear to milky, angular to subrounded, trace coal. Trace Siltstone.
7660'-7670'	90%	QUARTZ - clear to milky, .5-2mm.
	10%	COAL - black subvitreous.
7670'-7680'	50%	QUARTZ - As above.
	50%	COAL - As above.
7680'-7690'	60%	COAL - As above.
	40%	QUARTZ - As above.

SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

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DEPTH	%	DESCRIPTION
7690'-7700'	90%	QUARTZ - milky to clear, some brown subrounded to subangular .4-1.5 mm.
	10%	COAL - black subvitreous.
7700'-7710'	100%	QUARTZ - As above, some grains with coaly matrix attached. Trace Coal - As above.
7710'-7720'	100%	QUARTZ - As above, trace pyrite on grain.
		Trace Coal - As above.
7720'-7730'	100%	QUARTZ - As above.
		Trace Coal - As above.
7730'-7740'	100%	QUARTZ - As above.
		Trace Coal - As above.
		Trace Pyrite - micro-crystalline aggregates.
7740'-7750'	100%	QUARTZ - As above.
		Trace Coal - As above.
		Trace Pyrite - As above.
7750'-7760'	100%	QUARTZ - As above.
		Trace Coal - As above.
		Trace Pyrite - As above.
7760'-7770'	100%	QUARTZ - As above, pyrite on grains increasing.
		Trace Coal - As above.
		Trace Pyrite - As above.
7770'-7780'	100%	QUARTZ - As above.
		Trace Coal, Trace Pyrite.
7780'-7790'	95%	SANDSTONE (QUARTZ) - clear, coarse grains, loose, subrounded to rounded, well sorted, trace pyrite.
	5%	COAL - black, conchoidal fracture, slightly pyrite, sub-vitreous.
		Trace Siltstone, dark brown and Mudstone, light to medium grey.
7790'-7800'	95%	SANDSTONE - clear to milky, as above.
	5%	COAL - slightly pyrite, as above.
		Trace Siltstone, dark brown, as above, Mudstone, medium grey, as above.
7800'-7810'	95%	SANDSTONE - As above.
	5%	COAL - As above.
		Trace Siltstone, Mudstone, as above.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

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DEPTH	%	DESCRIPTION
7810'-7820'	45%	SANDSTONE - clear to milky,medium to coarse grains, loose, as above.
	45%	SANDSTONE - clear to milky, very fine to fine grained aggregates moderate to well sorted, well indurated, subangular to subrounded slightly pyritic, slightly carbonaceous, dolomitic cement, no fluorescence, no cut.
	10%	COAL - As above. Trace Siltstone, dark brown, as above, Mudstone medium to light grey as above.
7820'-7830'	45%	SANDSTONE - loose, as above.
	45%	SANDSTONE - very fine to fine quartz aggregates, as above.
	5%	COAL - As above.
	5%	SILTSTONE - dark brown, as above, and Mudstone, light brown, white to light grey, as above. Minor pyrite grains.
7830'-7840'	50%	SANDSTONE - loose, as above.
	40%	SANDSTONE - very fine to fine grained aggregates, weak to well indurated, weak indurated Sandstone is white, argillaceous, carbonaceous, pyrite.
	5%	COAL - As above.
	5%	SILTSTONE - As above, Mudstone, as above, minor pyrite grains.
7840'-7850'	45%	SANDSTONE - Loose, as above.
	45%	SANDSTONE - aggregates, as above.
	5%	COAL - As above.
	5%	SILTSTONE/MUDSTONE - pyrite grains, as above.
7850'-7860'	45%	SANDSTONE - loose as above.
	45%	SANDSTONE - aggregates, as above, no fluorescence, or cut.
	5%	COAL - As above.
	5%	SILTSTONE, MUDSTONE and Pyrite grains, as above.
7860'-7870'	20%	SANDSTONE - Loose, as above.
	75%	SANDSTONE - aggregates, very fine to fine grained, clear to milky, dolomitic cement, well indurated, very fine grained, with clay matrix, friable, slightly pyrite and carbonaceous.
	5%	COAL/SILTSTONE/MUDSTONE - pyrite, as above.
7870'-7880'	20%	SANDSTONE - loose, as above.
	80%	SANDSTONE - aggregates, as above, moderately pyrite, slightly micaceous.
		Trace 2% Coal, as above, Siltstone, Mudstone, pyrite, as above, rare glauconite aggregates.

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SAMPLE DESCRIPTIONS

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FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
7880'-7890'	40%	SANDSTONE - loose, as above.
	45%	SANDSTONE - aggregates as above, moderate to very pyritic, slightly micaceous.
	5%	COAL - As above.
	5%	SILTSTONE/MUDSTONE - slightly calcareous, and pyrite as above.
	5%	CLAYSTONE - cream, silty, non calcareous, soft.
7890'-7900'	30%	SANDSTONE - loose, as above.
	50%	SANDSTONE - fine grained aggregates, as above.
	15%	SILTSTONE/MUDSTONE - As above.
	5%	Pyrite grains, trace -2% Coal, trace Claystone white to cream.
7900'-7910'	25%	SANDSTONE - loose, as above.
	45%	SANDSTONE - fine grained aggregates.
	30%	SILTSTONE - dark brown subfissile, trace glauconite, mudstone, light grey, subfissile, trace 2% coal, minor pyrite grains, minor trace Claystone cream to light grey.
7910'-7920'	10%	SANDSTONE - loose, as above.
	80%	SANDSTONE - very fine to fine grained aggregates, as above. slightly pyritic, micaceous, carbonaceous.
	10%	SILTSTONE and MUDSTONE
		Trace Coal and pyrite and Claystone
7920'-7930'	30%	SANDSTONE - loose, as above.
	50%	SANDSTONE - very fine grained aggregates, as above, moderately micaceous.
	20%	SILTSTONE - dark brown, subfissile, trace glauconite, mudstone, silty, medium grey to light grains.
		Trace Coal, pyrite grains, Claystone.
7930'-7940'	40%	SANDSTONE - loose, coarse grains, as above.
	40%	SANDSTONE - white to light grey to light brown, trace glauconite slightly carbonaceous, pyrite, micaceous.
	20%	SILTSTONE - dark brown, trace glauconite, MUDSTONE, light grey, silty, trace glauconite, trace coal, Claystone, pyrite.
7940'-7950'	30%	SANDSTONE - loose, as above.
	40%	SANDSTONE - clear to white to light grey to light green to ligh brown, aggregates, as above.
	30%	SILTSTONE - dark brown, micaceous, subfissile and Mudstone light grey to light green, glauconite, trace-2% Coal, pyrite, Claystone to cream, silty, soft.

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SAMPLE DESCRIPTIONS

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FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
7950'-7960'	30%	SANDSTONE - loose, as above.
	40%	SANDSTONE - aggregates, as above, trace glauconite.
	30%	SILTSTONE/MUDSTONE
		Trace Coal, pyrite, Claystone, cream, silty.
7960'-7970'	30%	SANDSTONE - loose, as above.
	40%	SANDSTONE - very fine grained aggregates, multicolours, trace glauconite, no fluorescence or cut.
	30%	SILTSTONE/MUDSTONE
		Trace Coal, pyrite.
7970'-7980'	30%	SANDSTONE - loose, as above.
	40%	SANDSTONE - very fine grained aggregates, very friable to moderately indurated, argillaceous in part, multicolours, trace glauconite, otherwise dolomitic cemented.
	30%	SILTSTONE/MUDSTONE - As above.
		Trace pyrite, glauconite aggregates, coal.
7980'-7990'		As above, SANDSTONE aggregates notably contains more glauconite, slightly carbonaceous and very argillaceous; cream Sandstone aggregates, trace coal, pyritiferous.
7990'-8000'		As above with 80% total SANDSTONE - glauconite common 20% MUDSTONE/SILTSTONE/MUDSTONE, light grey to pink
8000'-8010'	90%	SANDSTONE - light medium grey, glauconitic, pyritic, micaceous, poor to moderate sorting, .05.15mm some carbonaceous flecks, silty calcareous.
	10%	QUARTZ - loose subrounded grains, white milky.
		Trace coal, pyrite.
8010'-8020'	60%	SANDSTONE - light to medium grey, glauconite, pyrite, slightly carbonaceous, calcareous, mainly dolomitic, poor to moderate sorting, .05-15mm, silty subangular to subrounded.
	20%	QUARTZ - loose subrounded grains .5-2mm rounded.
	20%	SILTSTONE - brown, sandy, carbonaceous, calcareous, micaceous pyritic.
		Trace Coal, pyrite.
8020'-8030'	40%	SANDSTONE - As above.
	30%	QUARTZ - As above.
	20%	SILTSTONE - As above.
	10%	MUDSTONE - brown, soft to firm, calcareous, platey chips, some carbonaceous.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 DEVIATED HOLE

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DEPTH	%	DESCRIPTION
		Trace Coal, Pyrite, Siltstone - grey calcarenite.
8030'-8040'	30%	SANDSTONE - As above.
	30%	QUARTZ - As above.
	30%	SILTSTONE - As above.
		Trace Coal, Pyrite, Siltstone- grey calcarenite.
8040'-8050'	505	SANDSTONE - As above.
	30%	QUARTZ - As above.
	10%	SILTSTONE - As above.
	10%	MUDSTONE - As above.
		Trace Coal, Pyrite.
8050'-8060'	40%	SANDSTONE - As above.
	30%	QUARTZ - As above.
	20%	SILTSTONE - As above.
	10%	MUDSTONE - As above.
		Trace Coal, Pyrite, Siltstone - grey calcarenite.
8060'-8070'	70%	SANDSTONE - fine to medium grained, light grey to brown, well indurated, with some brown to yellow dolomitic cement, very glauconitic, very pyritic, micaceous, very poor porosity, no fluorescence or cut.
	20%	QUARTZ - coarse to very coarse, clear to milky, subangular to rounded.
	10%	SILTSTONE - brown, light grey, firm, non calcareous, sandy, pyrite, Trace Mudstone.
8070'-8080'	50%	SANDSTONE - light grey to light brown, micaceous, friable, some firm, carbonaceous, poor sorting, .1mm average, subangular to subrounded, some dolomitic cement.
	30%	QUARTZ - loose grains, .5-2mm, subrounded.
	20%	GLAUCONITE & PYRITE - glauconite about .1mm cemented by pyrite, pyrite replaced quartz chips the same size as the Sandstone ?? T. longus Gurnard. Contains some Quartz - looks like Gurnard. Glauconitic bright green pellets.
		Trace Siltstone, brown and grey, Trace Coal.
8080'-8090'	90%	SANDSTONE - As above, some very high in glauconite and pyrite, calcareous, carbonaceous.
	10%	SILTSTONE - brown micaceous, firm to non calcareous.
		Trace Coal, Siltstone - grey.
		Lost most of the aggregate glauconite and pyrite ?? through an unconformity.

22/....

SAMPLE DESCRIPTIONS

R. DO ROZARIO
G. KJELLGREN

FLOUNDER 6 DEVIATED HOLE

DEPTH	%	DESCRIPTION
8090'-8100'	40%	SANDSTONE - firm to medium grey, light brown, grey to brown, friable to moderately indurated, subangular quartz grains, trace pyrite and glauconite, mica.
	20%	QUARTZ - loose grains, predominantly coarse, clear to milky, subangular to subrounded.
	30%	SILTSTONE - dark brown, buff, soft to firm, carbonaceous, grading to very fine Sandstone in part, subfissile.
	10%	DOLOMITE - dark brown, well indurated, silty micro-crystalline Trace Coal and Mudstone.
8100'-8110'	80%	SANDSTONE - As above, some chips very glauconitic and pyritic, carbonaceous, calcareous.
	20%	QUARTZ - As above.
		Trace Siltstone, brown, Coal, Mudstone, Pyrite.
8110'-8120'	80%	SANDSTONE - grey to brown, buff, very fine to fine grains, friable to moderately indurated, very silty, slightly glauconitic and pyritic, dolomitic cement, no fluorescence, no cut.
	10%	QUARTZ - As above.
	10%	SILTSTONE - brown, brown to grey, soft to firm, carbonaceous, micaceous, grading very fine Sandstone in part, non calcareous.
8120'-8130'	70%	SANDSTONE - very fine to fine, grey to brown, as above, carbonaceous, glauconite, pyrite, (trace).
	10%	QUARTZ - coarse, subangular to subrounded.
	20%	SILTSTONE - brown, soft to firm, carbonaceous, as above.
		STOP CIRCULATING AT 0030 HOURS.

23/....

SAMPLE DESCRIPTIONS

FLOUNDER 6 SIDETRACK

R. DO ROZARIO
C. KJELLGREN

R. DO ROZARIO
13.12.77

DEPTH	%	DESCRIPTION
		CORED FROM 8130'-8420' FT - for lithology see Core Description Sheets. Core #4 to Core #11.
8420'-8430'	20%	SANDSTONE - very fine to fine aggregates, light grey, subangular to angular, clear to milky quartz grains, moderate to weakly cemented with some dolomite in part, carbonaceous, silty in part, trace glauconite. No fluorescence, very weak slow white to yellow crush cut. cavings? from reaming.
	10%	QUARTZ - clear to milky, medium to coarse grains, subangular to subrounded, loose, few aggregates. SILTSTONE - medium grey, dark brown to grey, firm to well indurated, carbonaceous, micaceous, subfissile. Trace Coal, Trace Pyrite.
8430'-8440'	40%	SANDSTONE - light grey, very fine to fine grains, grading to Siltstone in part, subangular to angular, clear to milky quartz grains, moderate to weakly cemented with some dolomite in part, very carbonaceous, poor porosity, even dull orange mineral fluorescence, no cut. Trace Pyrite.
	60%	SILTSTONE - medium grey, firm to moderately indurated, very carbonaceous, micaceous, subfissile.
8440'-8450'	30%	SANDSTONE - light grey, very fine to medium grains, silty in part, angular to subangular, clear to milky quartz grains, moderate to well cemented, with some dolomite in part, very carbonaceous, poor porosity, even dull orange mineral fluorescence, no cut, trace pyrite.
	70%	SILTSTONE - medium grey, carbonaceous, micaceous, firm to moderately indurated, micaceous.
8450'-8460'	30%	SANDSTONE - white to light grey, very fine to medium grains, angular to subangular quartz grains, weakly to well cemented with some white clay, carbonaceous, pyritic, poor porosity, trace dull gold mineral fluorescence, no cut.
	70%	SILTSTONE - medium grey, dark grey, dark grey to brown, firm to well indurated, very carbonaceous, micaceous, pyritic in part, subfissile to fissile and pyritic in part.
8460'-8470'	50%	SANDSTONE - white to light grey, very fine to fine grains, as above.
	50%	SILTSTONE - medium to dark grey, grey to brown, as above, Trace pyrite.
8470'-8480'	80%	QUARTZ - loose, clear to milky, angular to subangular, medium to coarse. Trace very fine to fine Sandstone aggregates, as above, and medium to coarse quartz aggregates, weakly cemented with some clay, friable, fair to good porosity, no fluorescence or cut.
	20%	SILTSTONE - medium grey, dark brown to grey, firm to well indurated, very carbonaceous, micaceous. Trace Pyrite, shaly in part, interlaminated with some coal - black, fissile, sub-vitreous to dull, conchoidal fracture.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 SIDETRACK

R. DO ROZARIO
G. KJELLGREN

R. DO ROZARIO
13.12.77

DEPTH	%	DESCRIPTION
8480'-8490'	80%	SILTSTONE - medium grey, dark brown to grey, as above.
	20%	SANDSTONE - very fine to medium grains, friable to moderately cemented with some white clay. Trace coarse to loose quartz grains, as above.
8490'-8500'	10%	SANDSTONE - very fine to fine grains, light grey, very carbonaceous. Trace Pyrite.
	80%	SILTSTONE - light to dark grey, grey to brown, very carbonaceous subfissile, shaly in part, interlaminated in part with some coal.
	10%	COAL - black, fissile, dull to vitreous, conchoidal fracture, interlaminated with some Siltstone.
8500'-8510'	10%	SANDSTONE - very fine to medium grained aggregates, as above, no fluorescence, or cut.
	10%	COAL - black, dull to vitreous, interlaminated with some Siltstone.
	80%	SILTSTONE - light to dark grey, brown to grey, very carbonaceous as above. Trace Pyrite.
8510'-8520'	10%	QUARTZ - coarse to very coarse grains, clear to milky, subangular.
	10%	SANDSTONE - very fine to fine offwhite to light grey, as above, weakly cemented with some clay (white), no fluorescence, or cut.
	80%	SILTSTONE - offwhite, light grey to medium grey, very argillaceous, carbonaceous, soft to firm, pyritic in part, micaceous.
8520'-8530'	60%	QUARTZ - medium to very coarse grains, loose, clear to milky, subangular to subrounded. Trace Coal: black, fissile, dull to subvitreous, very pyritic.
	10%	SANDSTONE - cream to white, very fine to fine grains, aggregate. weakly to moderately indurated with some clay, very carbonaceous, non calcareous, trace pyrite.
	10%	SILTSTONE - light to dark brown, subfissile, slightly carbonaceous, very weakly indurated.
	20%	DOLOMITE - light brown to buff, very well indurated, subfissile non calcareous, trace micaceous and carbonaceous.
		Trace Pyrite, no fluorescence or cut.
8530'-8540'	10%	QUARTZ - clear to milky, medium to very coarse grains, loose, subangular to subrounded, trace Pyrite.
	10%	SANDSTONE - white to cream, very fine to fine quartz aggregate moderately sorted, moderately indurated, slightly carbonaceous and pyritic, non calcareous, slightly dolomitic with some dolomitic cement, trace micaceous.
	25%	DOLOMITE - As above, trace Pyrite.
	50%	SILTSTONE - As above.
	5%	COAL - As above, conchoidal to subconchoidal fractures.

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SAMPLE DESCRIPTIONS

FLOUNDER 6 SIDETRACK

R. DO ROZARIO
G. KJELLGREN

13.12.77

DEPTH	%	DESCRIPTION
8530'-8540'		Trace Pyrite, no fluorescence or cut.
8540'-8550'	5%	QUARTZ - As above.
	5%	COAL - As above.
	10%	SANDSTONE - As above, with some white clay matrix.
	10%	DOLOMITE - As above, light buff to grey, light brown.
	70%	SILTSTONE - light grey to dark brown, soft to weakly indurated, subfissile, very micaceous and carbonaceous.
		Trace clay, white, silty, slightly micaceous.
		Trace Pyrite, no fluorescence or cut.
8550'-8560'	5%	QUARTZ - As above.
	10%	COAL - As above, pyritic.
	30%	SANDSTONE - cream to white, very fine to fine grains, with some white clay matrix, soft, slightly carbonaceous and dolomitic
	5%	DOLOMITE - non calcareous, trace Pyrite.
	50%	SILTSTONE - As above, very micaceous and carbonaceous.
		Trace Pyrite.
8560'-8570'	5%	QUARTZ - clear to milky, medium to coarse grains, angular to subangular, loose.
		Trace Dolomite - light orange to brown, well indurated, hard, slightly pyritic.
	10%	COAL - black, subvitreous, fissile to blocky, pyritic.
		Trace Clay, buff, very soft, silty.
	25%	SANDSTONE - cream to white, very fine to fine grained aggregate clear to milky quartz grains, weakly to moderately indurated, trace dolomitic cement, with some white clay matrix, slightly carbonaceous and micaceous.
	60%	SILTSTONE - light grey, light grey to brown to dark brown, weakly to moderately cemented, subfissile in part, very micaceou and carbonaceous.
		Trace Pyrite aggregates.
8570'-8580'	13%	COAL - As above.
	20%	SANDSTONE - As above.
	50%	SILTSTONE - As above.
		Trace Quartz, loose, as above.
		Trace Pyritic aggregates, no fluorescence or cut.
8580'-8590'	90%	COAL - black, conchoidal fractures, blocky, slightly pyritic,

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SAMPLE DESCRIPTIONS

FLOUNDER 6 SIDETRACK

R. DO ROZARIO
G. KJELLGREN

13.12.77

DEPTH	%	DESCRIPTION
8580'-8590'		Continued/....
		subvitreous to vitreous, finely laminated.
	10%	SILTSTONE - very carbonaceous and micaceous, weakly indurated, subfissile.
		Trace Sandstone - As above, weakly to moderately indurated.
		Trace pyritic aggregates.
8590'-8601'	5%	SANDSTONE - white to cream, very fine to medium grains, trace micaceous and carbonaceous, weakly indurated, and cemented.
	30%	SILTSTONE - As above.
	65%	COAL - As above.
		Trace pyritic aggregates, loose quartz, clear to milky, medium to coarse grains.

APPENDIX 2

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 2

CORE DESCRIPTIONS

ESSO AUSTRALIA LTD.

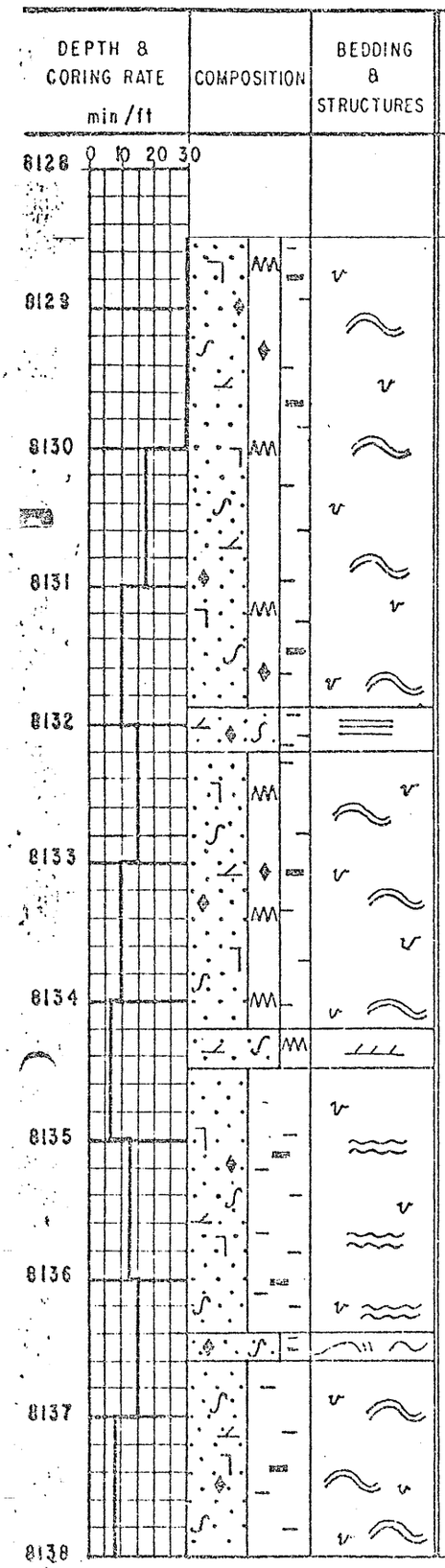
CORE DESCRIPTION

WELL FLOUNDER-6 SCALE 2cm = 1ft

CORE No. 1

Interval Cored 8128'6"-8160' Cut 31'6" Recovered 31'6" (100.%) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32 in., Desc by ELLIOTT/MORTON Date 30/7/77



REMARKS

8128'6"-8131'11" Interbedded and intensely burrowed SST, SLST and Shale.
SST: M-dk gy, hard, vf-silty, mod-poorly sorted, sa-sr, quartz, mica, pyrite, v glauconitic, carb, dolomite cement, pyrite cement, very tight
Shale: dk gy-bl, hard, mod sorted burrowed, carb clay, silty and sandy in burrows, mica, pyrite dolomite cement.

8131'11"-8132'3" SST: as above, mod sorted, vf-silty.

8132'3"-8134'3" Interbedded and burrowed SST, Shale and SLST as above.

8134'3"-8134'6" SST: as above.

8134'6"-8136'5" Interbedded SST and Shale: as above highly burrowed.

8136'5"-8136'8" SST: mod sorted, rippled, wavy laminae, as above.

8136'8"-8139'5" Interbedded Shale and Sandstone.

ESSO AUSTRALIA LTD.

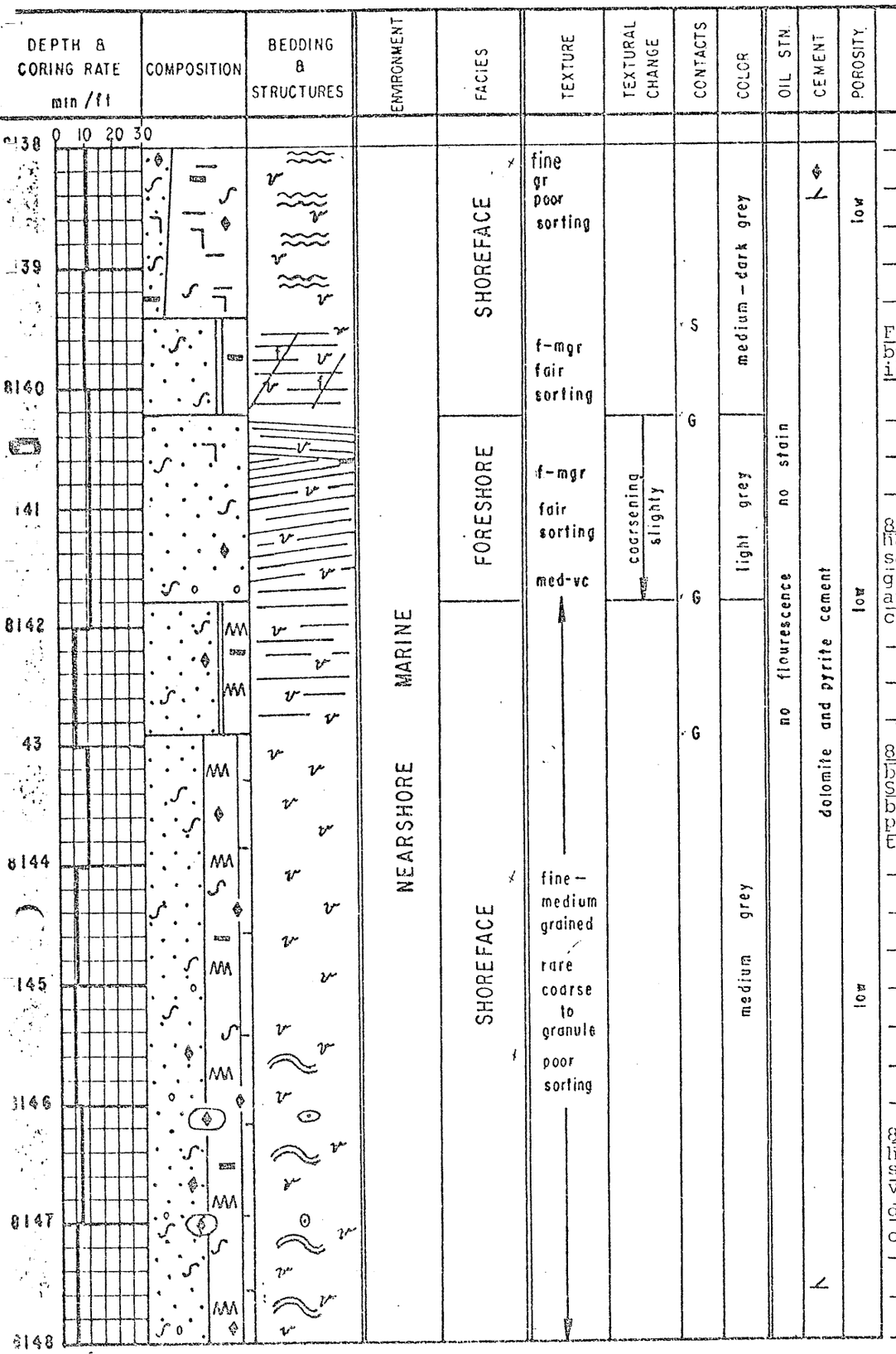
CORE DESCRIPTION

WELL FLOUNDER-6 SCALE 2cm = 1ft

CORE No. 1

Interval Cored 8128'6"-8160' Cut 31'6" Recovered 31'6" (100 %) Fm. LATROBE

Bit Type C-20 Bit Size $8\frac{15}{32}$" in., Desc by ELLIOTT/MORTON Date 30/7/77



REMARKS

Faults probably caused by slumping and burrowing.

8141'- Sandstone lt gy, hard, vf-f, mod sorting, sa-sr, quartz, mica, glauc, pyrite, pyrite and dolomitic cement, carbonaceous, very tight.

8142'11"-8151'10" Interbedded SST, SLST and Shale, v glauc, highly burrowed, dolomitic and pyritic cement, very tight.

8148' Sandstone M-lt gy, hard, vf-med, mod sorted, sa-sr, quartz, mica, v glauc, pyritic and dolomitic cement, carbonaceous.

ESSO AUSTRALIA LTD.

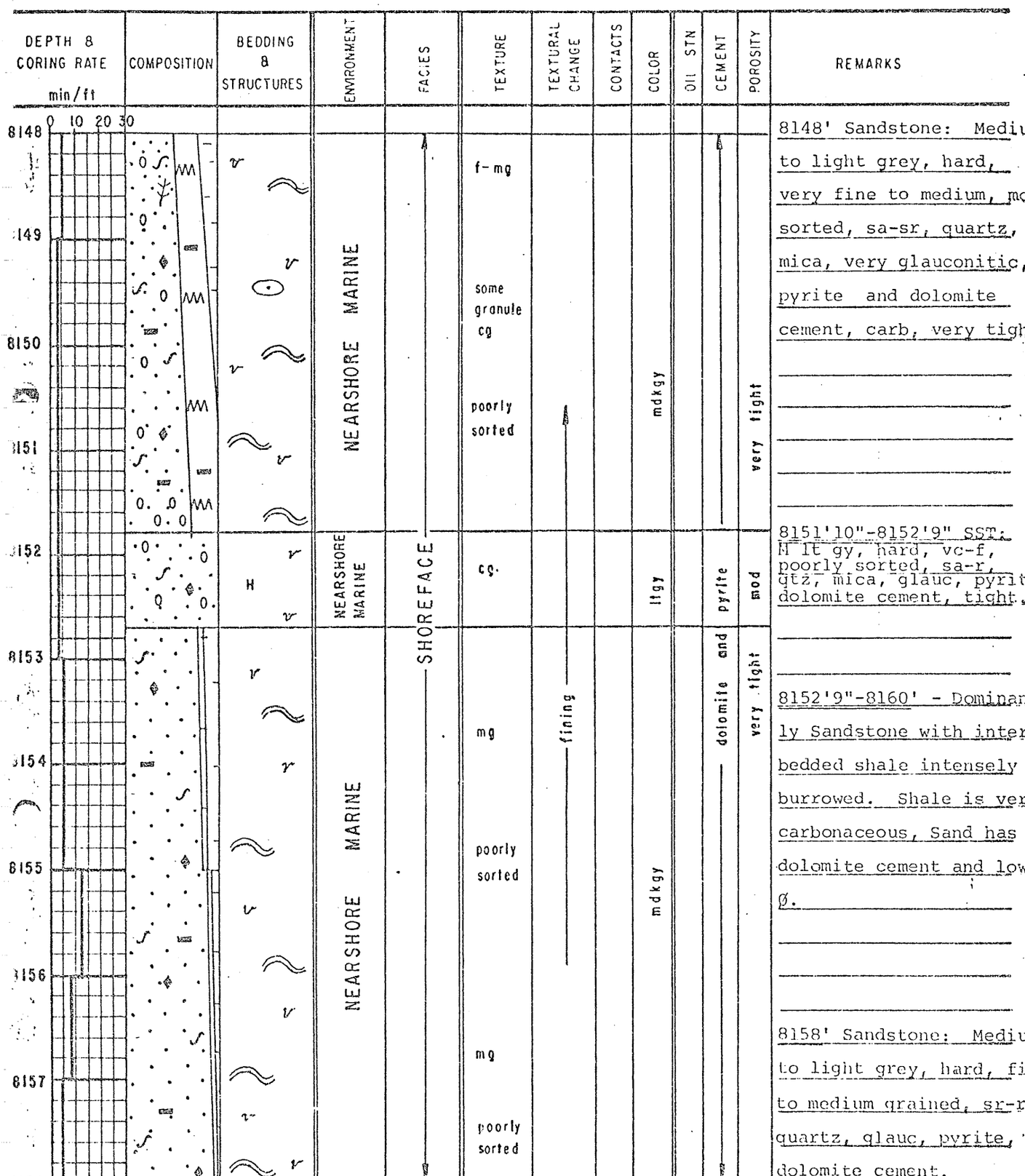
CORE DESCRIPTION

WELL FLOUNDER-6 SCALE 2cm = 1ft

CORE No. 1

terval Cored 8128'6"-8160' Cut 31'6" Recovered 31'6" (100%) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32 in., Desc by ELLIOTT/MORTON Date 30/7/77



8148' Sandstone: Medium to light grey, hard, very fine to medium, mod sorted, sa-sr, quartz, mica, very glauconitic, pyrite and dolomite cement, carb, very tight.

8151'10"-8152'9" SSTM. M lt gy, hard, vc-f, poorly sorted, sa-r, qtz, mica, glauc, pyrite, dolomite cement, tight.

8152'9"-8160' - Dominantly Sandstone with interbedded shale intensely burrowed. Shale is very carbonaceous, Sand has dolomite cement and low ø.

8158' Sandstone: Medium to light grey, hard, fine to medium grained, sr-r, quartz, glauc, pyrite, dolomite cement.

Core is intensely burrowed throughout.

No fluorescence or cut. Sands are tight and contain either dolomitic or pyritic cement.

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6 SCALE 2cm = 1ft

CORE No. 1

terval Cored 8128'6"-8160' Cut 31'6" Recovered 31'6" (100%) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32" in. Desc by ELLIOTT/MORTON Date 30/7/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8158 0 10 20 30												8158' Sandstone Med-lt gy, hard, f-m, mod sorting, sr-r, quartz, glauc, pyrite, pyrite and dolomite cement, very tight.
8159			NEARSHORE MARINE	SHOREFACE	medium grained; poor sorting			medium grey	no flour, no stain	dolimitic and pyritic	low	
8160												8160' Sandstone Med-lt gy, f-m, mod sorted, sr-r, quartz, glauc, pyrite, pyrite and dolomite cement, very tight.

Gas Chromatograph readings from steam-still sample from 8152'.

C_1	C_2	C_3	C_4	C_5	C_6
182ppm	74	324	729	1026	756

Dwg. 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

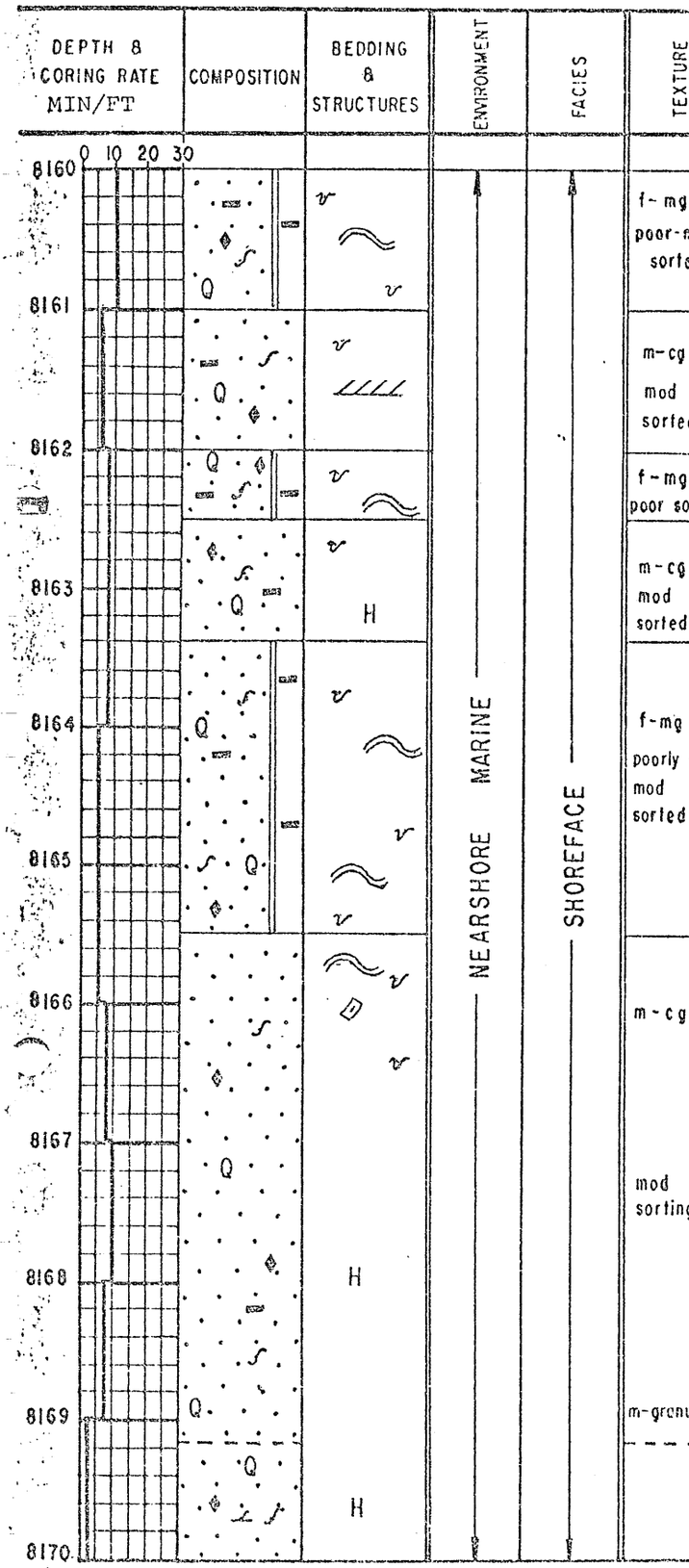
WELL. FLOUNDER-6

SCALE 2cm = 1ft

CORE No. 2

Interval Cored 8160'-8171'6" Cut 11½" Recovered 10'6" (96.4%) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32 in., Desc by MORTON/ELLIOTT Date 31/7/77



8160'-8161' Sandstone with thin interbeds of shale. Highly burrowed. Sandstone: M-lt gy, hd, f-mg, mod sorted, mod ø, glauc. Shale: Dk gy-bl, hd, sharp bedding contacts between sand and shale where they haven't been affected by burrowing.

8161'-8162' SST: M gy, sa-r, glauc, mica, pyr, dolomite cement, pyrite cement, little matrix, fair sorting, fair-good ø. Thin shale laminae steeply inclined.

8162'-8162'6" Interbedded SST and Shale as above

8162'6"-8163'5" SST: as above with shale laminae

8163'5"-8165'5" Interbedded SST and Shale: as above, highly burrowed.

8165'5"-8169'2" SST: M gy, firm, sr-r, mod sorted, m-cg, qtz, pyrite glauc, mica, carb, some dolomite cement, good ø.

8169'2"-8970'6" SST: Lt gy, hard, m-cg, mod sorted, sr-r, qtz, mica, pyrite, fully cemented by dolomite, no porosity, little matrix.

Gas Chromatograph Readings from blender sample taken fr 8168'.

C_1	C_2	C_3	C_4	C_5	C_6
334 ppm	133	576	1246	1846	1588

Dwg H07/09/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6

SCALE 2cm = 1ft

CORE No. 2

Interval Cored 8160'-8171'6" Cut 11 1/6". Recovered 10'6" (96%) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32 in., Desc by MORTON/ELLIOTT Date 31/7/77

DEPTH & CORING RATE MIN/FT	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN.	CEMENT	POROSITY	REMARKS
0 10 20 30												
8170	Q	H			mcg			lt gy		dolomite	low	
8171												No recovery: cut in same way as dolomitic action.

Dwg 1107/07/01

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6

SCALE 2cm = 1ft

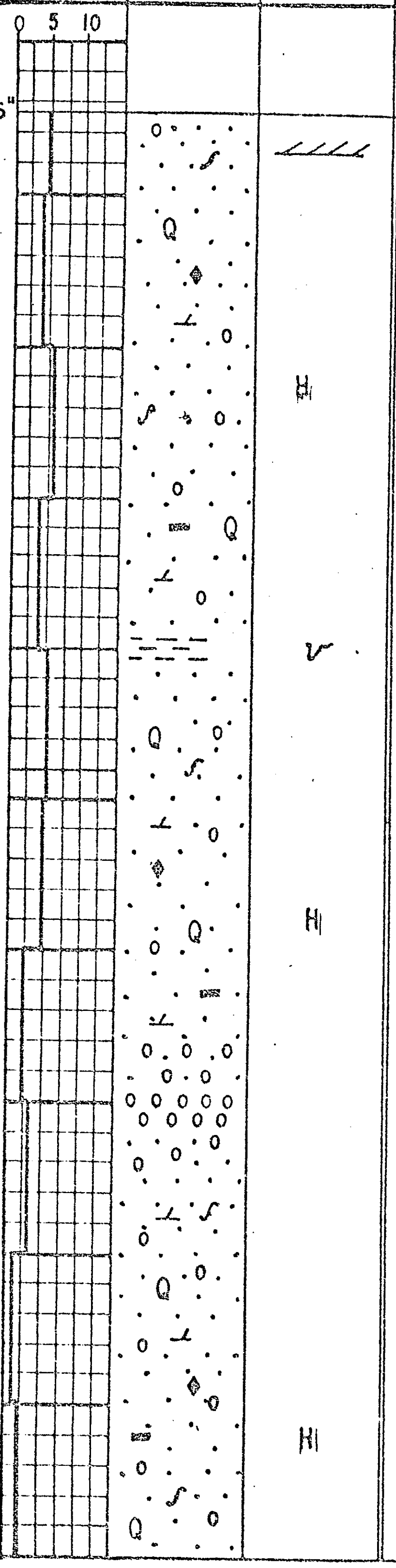
CORE No. 3

Interval Cored 8171'6"8214'6" Cut 43' Recovered 32' (74 %) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32" in., Desc by MORTON/ELLIOTT Date 1/8/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8171'6" – 8181			NEARSHORE MARINE		m-vc; mod sorted; shale; m-vc; pebbly; m-vc		sharp	lt. gy		dolomite	very low	8171'6"-8191'4" SST: lt gy, very hard, granule to mg, mod sorted, sa-r, quartz, glauc, carb, pyrite, some shale laminae, low angle x-beds at 8171'6"-8172', thin shale unit, that is burrowed at 8175'. Sharp bedding contacts. Pebbly zone 8177'-78'. Dolomite cement, porosity has been obliterated by the dolomite cement. Yellow mineral fluorescence, no cut.

Depth marks: 8171'6", 8172, 8173, 8174, 8175, 8176, 8177, 8178, 8179, 8180, 8181



Gas Chromatograph blender sample from 8174'8"

C_1	C_2	C_3	C_4	C_5	C_6	HOT WIRE
23ppm	4	63	228	445	454	80 UNITS

Wellsite Core Analysis	Ø	K	So%	Sw%
8174'6"	11%	656md	1	41
8191'8"	27%	1431	6.2	27

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6 SCALE 2cm = 1ft

CORE No. 3

Interval Cored 8171'6"-8214'6" Cut 43' Recovered 32' (74%) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32 in., Desc by MORTON/ELLIOTT Date 1/8/77

DEPTH & CORING RATE	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 5 10												
8181		H	NEARSHORE MARINE		m - vc			lt gy		dolomite	very low	
8182												8182'-8184'7"- Sandstone: as above without dolomite cement. Some thin wavy shale laminae.
8183					vc - m			lt brn			mod good	
8184												
8185		H										
8186					mod sorted							
8187								lt. gy		dolomite	very low	
8188												
8189												
8190		H			vc - m							
8191												

Dwg 1107/OP/01

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL . FLOUNDER-6 SCALE . . . 2cm = 10m . . .

CORE No. . . . . 3 . . . . . .

Interval Cored 8171'6"-8214'6" Cut . . . 43' . . . . Recovered . . . . 32' . . . . . (. . . 74.4%) Fm. . LATROBE . . . .

Bit Type . . . . C-20 . . . . . Bit Size . . . . . $8\frac{15}{32}$" . . . in., Desc by . MORTON/ELLIOTT . . . Date . . 1/8/77 . . . . . .

DEPTH & CORING RATE min/ft.	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 5 10												
8191	Q	H	MARINE		f-vc mod sorted f-vc			lt gy / lt brn		dolomite	low / mod-good	8191'4"-8192'10" SST as above without dolomite cement but with sharp bedding contacts and some silt laminae.
8192	Q											
8193	Q	v			vf-f poorly sorted			lt-mgy			low	8192'10"-8194'11" Highly burrowed interbedded SST, SLST and Shale with wavy and parallel continuous and discontinuous laminae SST lt gy, hd, f-shale, poorly sorted, sa-sr, burrowed.
8194	Q	v										
8195	Q				f-m			brn			good	8194'11"-8195'5" SST: with shale clasts (up to 4" +) Gry-brn, hard, quartz, mod sorted.
8196	Q	v	MARINE	OFFSHORE	vf-f poorly sorted		sharp	lt-mgy			low	8195'5"-8197'9" Interbedded highly burrowed SST, SLST and Shale as for 8192'10"-8194'11".
8197	Q	v										
8198		v						bl			very low	8197'9"-8201'8" Shale: with very fine grained sst and silt laminae and burrow infills, parallel continuous laminae, lenticular and silt beds, black, hard, pyrite, carbonaceous.
8199												
8200		v										
8201		v										

Dwg 102/0726

ESSO AUSTRALIA LTD.

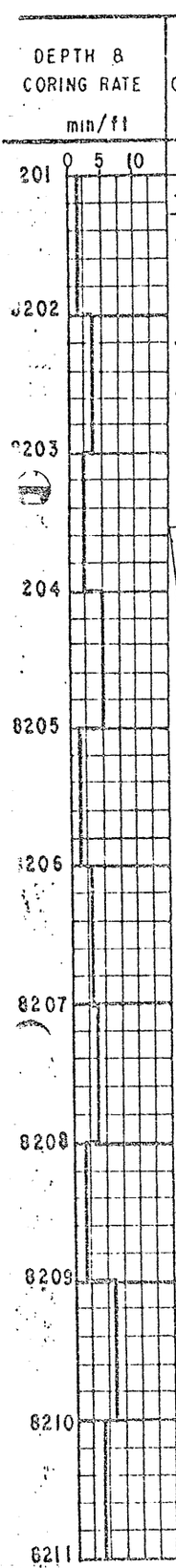
CORE DESCRIPTION

WELL FLOUNDER-6 SCALE 2cm = 1ft

CORE No. 3

Interval Cored 8171'6"-8214'6" Cut 43' Recovered 32' (74%) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32" in., Desc by MORTON/ELLIOTT Date 1/8/77



COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY
		MARINE	SHORE FACE	pebble silt poorly sorted		sharp	dk gy			low

REMARKS

8201'3"-8202'6" Silty Pebbly Sandstone: very poorly sorted sandstone with slst matrix and pebble-granule sized clasts, dk gy, hard, pebbly-silt, poorly sorted, sa-r, highly burrowed, quartz, carb, very tight.

8202'6"-8214'6"
NO RECOVERY.

Gas Chromtograph Values from blended sample from 8202'6"

C_1	C_2	C_3	C_4	C_5	C_6
106ppm	74	99	76	68	38

Dft. HOT/DP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6

SCALE 2cm = 1ft

CORE No. 3

terval Cored 8171'6"-8214'6" Cut 43' Recovered 32' (74 %) Fm. LATROBE

Bit Type C-20 Bit Size 8 15/32" in., Desc by MORTON/ELLIOTT Date 1/8/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8211 0 5 10												8203'6"-8214'6"
												NO RECOVERY.
212												
8213												
214												

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm. = 1ft

CORE No. 4

Interval Cored 8130'-8160' Cut 30' Recovered 28'3" (95 %) Fm LATROBE=T. longus

Bit Type C-20 Bit Size $8\frac{15}{32}$" in., Desc by ELLIOTT, DO ROZARIO, KJELLGREN Date 6-12-1977

DEPTH & CORING RATE	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8130												
		3°	MARINE	? FORESHORE	V. fine some silt mod sort		G-S	Lt - Med. Grey		Pyritic Cement	Poor	8131' SANDSTONE - light grey, poor sorting very fine to fine, sub-angular to subrounded, very glauconite, very micaceous, very pyritic, pyritic and dolomitic cement, firm, silty, Interbedded very fine to fine Sandstone.
8131												
8132				SHOREFACE	vf-gran V. poor sort		G	Lt - Med. Grey			Very Poor	8133' SANDSTONE - medium grey .02-2mm, very glauconite, very micaceous, silty, pyritic and dolomitic cement very poorly sorted, sub-angular to subrounded, hard tight, some fine ~~interbedds of very fine~~ to medium Sandstone, ~~mainly obliterated by~~ burrows.
8133												
8134				SHOREFACE	vf-gran V. poor sort		G	Medium Grey		Dolomitic and Pyritic Cement		8135', 8137' SANDSTONE - light to medium grey, very fine to granule, very poor sorting, sub-angular to subrounded, silty, very glauconite, ~~very micaceous, pyrite~~ and dolomitic cement ~~burrowed~~.
8135												
8136												
8137												
8138												8139.5' SANDSTONE - medium to light grey, medium to granule, glauconite, micaceous, ~~pyritic and dolomitic~~ cement, moderate sorting, ~~interbedded coarse~~ and fine Sandstone.
8139		H		Shoreface	fine mod sort						Poor	
8140		10°			med pebble mod sort							

No fluorescence no cut.

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm. = 1ft.

CORE No. 4

Interval Cored 8130'-8160' Cut 30' Recovered 28'3" (95%) Fm. LATROBE-T. longus

Bit Type C-20 Bit Size $8^{15}/32$" in., Desc by ELLIOTT, DO ROSARIO KJELLGREN Date 6-12-1977

DEPTH & CORING RATE	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8140		W/10°	NEARSHORE MARINE	SHOREFACE	med-gran fair sorting		G	Med. grey		Dolomite and Pyrite	Poor	
8141		H			m-c fair-poor sorting						Fair	
8142					vf-m poor sort		S				Poor	8143' - SANDSTONE - silty and shaley, medium to dark grey, very pyritic, subfissile, glauconite, firm, very micaceous, very poorly sorted, carbonaceous material dolomitic and pyritic cement, burrowed, firm,
8143							S					
			TRANSITION		vf-m poor sort		S				Fair - Poor	
8144							G					
8145			OFFSHORE		f-m							8145' - SANDSTONE - silty and slightly shaley, medium grey, fine to medium grains, poor to moderate sorting, glauconite, micaceous, carbonaceous, dolomitic and pyrite cement, tight, firm.
8146					poor-mod sorting	less interbedded shale		Med. grey (shale dark grey)		Dolomite and Pyrite	Fair - Poor	Interbedded shale - very silty, micaceous, pyritic.
8147			NEARSHORE		f-m							
8148												
8149			MARINE									
8150												

CHROMATOGRAPH - BLENDER SAMPLE FROM 8142'

No fluorescence, no cut.

	C_1	C_2	C_3	C_4	C_5	C_6
ppm	Tr	7	18	42	80	66

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm. = 1ft.

CORE No. 4

Interval Cored 8130'-8160' Cut 30' Recovered 28'3" (95 %) Fm LATROBE-T. longus

Bit Type C-20 Bit Size $8\frac{15}{32}$" in., Desc by ELLIOTT, DO ROSARIO, KJELLGREN Date 6-12-1977

DEPTH & CORING RATE	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8150												
8151			NEARSHORE - OFFSHORE TRANSITION		f - med poor sorting	less shale	G		Medium grey	Dolomite & Pyrite	Poor	8151' SANDSTONE - medium grey, fine to ~~coarse grained, sub-~~ angular to subrounded, poor to moderate sorting, glauconite, micaceous, ~~burrowed.~~ Interbedded Shale dolomite and pyrite cement.
8152		H										
8153		H			f - c poor sorting						Fair - Poor	8153' SANDSTONE - light grey, medium to ~~very coarse, poor to~~ moderate sorting, glauconite, micaceous, carbonaceous, tight, dolomite and pyrite cement.
8154		H					G					
8155			NEARSHORE MARINE		f - m poor sorting		G					
8156		10°			m - gran poor - fair sorting		G				Poor	
8157		10°								Dolomite & Pyrite	None	8157' SANDSTONE - light grey, medium to very coarse, glauconite, micaceous, very tight, ~~very dolomitized, dolo-~~ mite and pyrite cement, fair sorting.
8158		10°										
8159												8158'3"-8160' - NO RECOVERY
8160												8156'-8158'3" Very hard, very dolomitized.

CHROMATOGRAPH - BLENDER SAMPLE FROM 8156'

No fluorescence, no cut.

	C_1	C_2	C_3	C_4	C_5	C_6
ppm	64	37	62	71	64	66

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

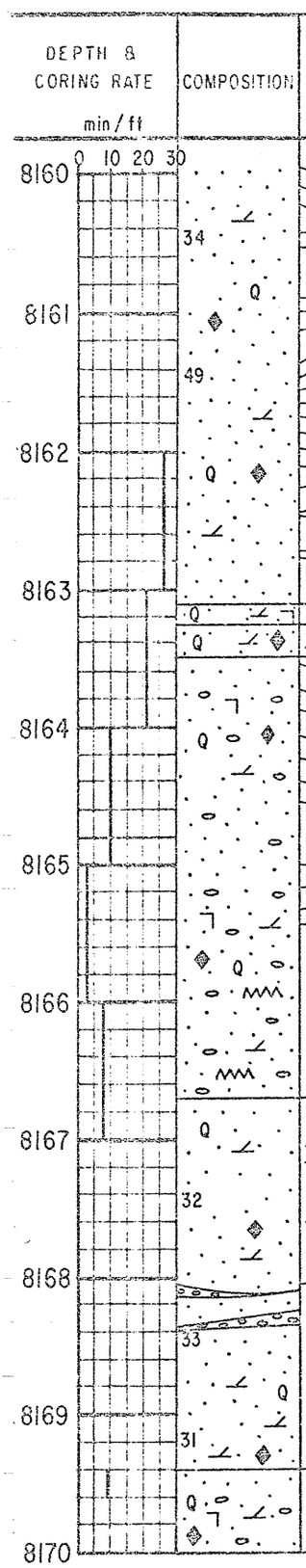
WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1ft

CORE No. 5

Interval Cored 8160'-8177' Cut 17' Recovered 11'10½" (70 %) Fm. T. longus

Bit Type C20 RR Bit Size $8^{15}/32$" in., Desc by DO ROZARIO KJELLGREN Date 7/12/77



8162' - Sandstone - light grey, medium to coarse grains, milky grains, angular to subangular, well cemented and indurated, white dolomitic cement, trace glauconite, trace pyrite, tight, no fluorescence, very weak yellow cut.

8163'2" - Sandstone - light grey to brown, clear to milky grains, fine to medium grains, angular to subangular, well cemented and indurated, white to light buff dolomitic cement, tight, trace glauconite, trace mica, no fluorescence, weak white crush cut.

8163'5" - Sandstone - medium grey, clear to milky grains, subangular well cemented and indurated, white dolomitic cement, trace glauconite and pyrite, tight, slightly patchy yellow fluorescence, no visual cut.

8163'9" - Sandstone - light grey, clear to milky, coarse to very coarse grains with abundant granules, well cemented and indurated, very fine grains dolomitic cement, tight, trace mica, and pyrite, very rare glauconite, no fluorescence or cut.

8166' - Sandstone - light grey, medium to very coarse grains, with abundant granules, clear to milky grains, well cemented and indurated, dolomitic cement, subangular to subrounded, moderate sorting, tight, slightly silty, trace pyrite and rare glauconite, no fluorescence or cut.

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1ft

CORE No. 5

Interval Cored 8160'-8177' Cut 17' Recovered 11'10½" (70 %) Fm. T. longus

Bit Type C20 RR Bit Size $8^{15}/32$" in., Desc by DO ROZARIO KJELLGREN Date 7/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8170	Q 44 Q	H	MARINE NEARSHORE	BEACH	c - vc w grnls /≤ 50% mod srtg			lt-m grey		Dolic	Poor	8171' - Sandstone - As above with friable sandy inclusions up to ½", no fluorescence or cut.
8171	Q 44 Q	H										
8172	44											
8173												
8174	31											
8175												
8176												
8177												

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 5ft

CORE No. 6

Interval Cored 8177'-8225' Cut 48' Recovered 25'8" (53.5) Fm. T. longus
DO ROZARIO

Bit Type C20 Bit Size 8 15/32" in., Desc by KJELLGREN Date 7-8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8177		H	MARINE	NEAR-SHORE	m - c few gran			brn-grey		Dolomite	fair	Slight hydrocarbon odour in core.
8178		U? H	"	"	m - c			m gy			v poor	8177'-8182'6" - Sandstone medium grey to brown, medium to coarse grains, subangular to subrounded quartz grains, little dolomitic matrix, few grains, moderately sorted fair to good porosity, no fluorescence, no to weak yellow blue crush cut. Very tight Sandstone at 8177'8"-8178'1" with abundant dolomitic cement
8179		H			m - c few grans	incr grnls		brn-grey			fair - good	
8180			"	"								
8181												
8182		H					G					
8183			"	NEARSHORE SHOREFACE	c - vc (rare gran)			m-grey			v poor	8182'6"-8189'11" Sandstone - medium grey to brown, coarse to very coarse grains, with abundant grains, rounded, up to 4 mm, moderately cemented with little dolomitic matrix, very poorly sorted, poor porosity, trace glauconite, trace pyrite, no fluorescence, very weak to weak, pale yellow blue crush cut.
8184		10°					G					
8185		10°	"	"	c - vc w/ abnt gran	incr grnls		brn grey			poor - mod	
8186		U	"	"	m - c		S-G	brn-grey			fair - poor	
8187			"	NEAR-SHORE	f - vc		S-G					

Blender Sample: 8177'6": C_1 C_2 C_3 C_4 C_5 C_6

98 29 132 298 445 529

Dwg 1107/OP/67

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1ft

CORE No. 6

Interval Cored 8177'-8225' Cut 48' Recovered 25'8" (53.5%) Fm. T. longus

Bit Type C 20 Bit Size 8 15/32" in., Desc by DO ROZARIO KJELLGREN Date 7-8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8187 (0 10 20 30)			MARINE	NEARSHORE - SHOREFACE	w/ abnt gran							
8188		15°			v. poor srtg	incr slt		brn grey			fair	Cross bedding weakly developed, few silty laminae.
8189		H										
8190			"	"	vf - m	incr ss	S	dk - m gy			poor	
8191			"	NEARSHORE OFFSHORE TRANSITION	vf - m	incr ss	S	lt grey alt dk grey		Dolomitic	v poor	Few large burrows up to 1" wide. 8189'11"-8199'8" Alternating laminations of Sandstone and Siltstone with top Sandstone laminations showing fine cross bedding. Numerous burrows and wavy laminae, decreasing with depth.
8192												
8193			"	NEAR-SHORE	m - c gr		G	brn - gy			fair	Sandstone - very fine to fine grains, medium grey, well cemented with brown to white dolomitic cement, fair sorted, poor porosity, trace glauconite, pyrite, mica, and carbonaceous matter,
8194							S					
8195			"	NEARSHORE - OFFSHORE TRANSITION	vf - f gr	incr f snd		dk gy			v poor	Siltstone - dark grey to brown, moderately indurated, carbonaceous, abundant mica, trace pyrite.
8196												
8197												

Blender Sample: 8187'4": C_1 C_2 C_3 C_4 C_5 C_6

392 89 457 909 1145 198

Dwg. 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1ft

CORE No. 6

Interval Cored 8177'-8225' Cut 48' Recovered 25'8" (53.5%) Fm. T. longus

Bit Type C20 Bit Size $8^{15}/_{32}$" in., Desc by DO ROZARIO KJELLGREN Date 7-8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8197 (0 10 20 30)			MARINE	NEARSHORE	vf - f gr			dk grey			v poor	Subfissile, no fluorescence, weak to moderate pale blue crush cut.
8198												
8199												8199'8"-8202'8" Sandstone - grey to brown firm to medium coarse grains, with some rounded grains, silty in part, moderate to weakly cemented at base, poor to fair porosity, trace trace mica and glauconite no visual florescence, weak to moderate pale yellow blue crush cut.
8200					f - m - c grs some gran	w. ind		m brn - grey		dol	poor	
8201			"			incr grnls						
8202											fair	
2' 8"						fri						
8203												No recovery to 8225'.
8204												
8205												
8026												
8207												

Blender Sample: 8201'6": C_1 C_2 C_3 C_4 C_5 C_6

19 15 44 42 63 132

Dwg 1107/CP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 10ft

CORE No. 6

Interval Cored 8177'-8225' Cut 48' Recovered 25'8" (53.5 %) Fm. T. longus

Bit Type C20 Bit Size 8 15/32" in., Desc by DO ROZARIO KJELLGREN Date 7-8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8207												
8208												
8209												
8210												NO RECOVERY
8211												
8212												
8213												
8214												
8215												
8216												
8217												

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 6

Interval Cored 8177'-8225' Cut 48' Recovered 25'8" (53.5 %) Fm. T. longus

Bit Type C20 Bit Size 8 15/32" in., Desc by DO ROZARIO KJELLGREN Date 7-8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8217												
8218												
8219												
8220												NO RECOVERY
8221												
8222												
8223												
8224												
8225												

Dwg. 1107/CP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1m

CORE No. 7

Interval Cored 8225'-8270' Cut 45' Recovered 42'9" (95 %) Fm. T. longus

Bit Type C30 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8225												Faint hydrocarbon odour in fresh break.
8226			MARINE	NEARSHORE	f - vc gr, prly srtd			lt-m grey			fair	8226'4" - Sandstone - light grey, clear to milky grains, fine to very coarse grains, poorly sorted, moderately indurated and cemented, white dolomitic cement, subangular to subrounded, fair porosity, moderately pyritic, trace glauconite, mica, trace coaly fragments (carbonaceous), nil to patchy yellow fluorescence, slow white to yellow bulk cut.
8227												
8228							g					8229'10" - Interbedded Sandstone - light grey, fine grained, clear to milky, subangular to subrounded, moderately well sorted, well indurated and cemented, dolomitic cement, tight, trace ~~glauconite, moderately~~ pyritic and mica.
8229			MARINE	NEARSHORE - OFFSHORE TRANS	vf - f gr, mod srtd	incr gr size				Dolomite	very poor	Sandy Siltstone - dark grey, moderately indurated, ~~subfissile, tight~~, very mica and pyritic, carbonaceous (?), ~~no~~ visual fluorescence, slow ~~weak blue to white crush~~ cut.
8230												
8231												
8232												
8233												
8234											poor	
8235							s					

Blender Samples: 8226'4": C1 C2 C3 C4 C5 C6

34 29 48 71 286 495

Note: 2'3" of Core #7 (8267'9"-8270') recovered in top of Core #8.

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 1cm = 12ft

CORE No. 7

Interval Cored 8225'-8270' Cut 45' Recovered 42'9" (95 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROSARIO G. KJELLGREN Date 8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8235			MARINE	NEARSHORE - SHOREFACE	m - vc gr w abnt grnls prly srtd			lt-m brn gy		Dolomite	fair - good	8238'4" - Sandstone - light grey, medium to very coarse grains, with abundant granules, some pebbles, clear to milky subangular to subrounded poorly sorted, white dolomitic cement, moderately indurated and cemented, fair porosity, trace glauconite and coaly matter (carbonaceous), slightly pyritic and mica, patchy yellow fluorescence, fast strong blue to white cut
8236												
8237												
8238												
8239												
8240												
8241												
8242												
8243												
8244												
8245												

	C_1	C_2	C_3	C_4	C_5	C_6
8243'6"	78	29	422	795	1145	1853

Dwg. 1107/09/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1ft

CORE No. 7

Interval Cored 8225'-8270' Cut 45' Recovered 42'9" (95 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 8/12/77

DEPTH & CORING RATE min/ft (0 10 20 30)	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8245		H	MARINE	NEARSHORE - SHOREFACE		decr grnls		lt-m brn gy		Dolomite	fair - good	
8246		H										
8247		H										
8248		H										
8249		H										
8250		H										
8251		H										
8252		H										
8253		H										8253'6" - Sandstone - light grey, fine to coarse grains, clear to milky, subangular to subrounded, poorly to moderately sorted, weak to moderately indurated and cemented, white dolomitic cement, fair porosity, trace glauconite, mica, slightly pyritic spotty yellow fluorescence, fast strong blue to white cut
8254	61	H			f - vc gr		s-g	ll grey			v poor	
8255												

Dwg 1107/GP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2" = 1ft

CORE No. 7

Interval Cored ... 8225'-8270' Cut ... 45' ... Recovered ... 42'9" ... (... 95) Fm. T. longus ...

Bit Type ... C20 RR ... Bit Size ... 8 15/32" ... in., Desc by R. DO ROZARIO G. KJELLGREN ... Date ... 8/12/77 ...

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8255 (0 10 20 30)	32		MARINE	NEARSHORE - SHOREFACE	f - vc w/ gran	decr gran		lt grey		Dolomite	V. Poor	8257'2" - Sandstone - light grey, fine to very coarse grains, abundant granules, clear to milky, subangular to subrounded quartz grains, very well cemented with [illegible]ite dolomitic cement, very tight porosity, trace glauconite and mica, moderate to very pyritic no fluorescence or cut.
8256		H										
	51											
8257												
	37											
8258		H										
8259												
8260		H					S					
8261			MARINE	NEARSHORE - SHOREFACE	f - vc w/ gran	incr gran		med brn-grey		Dolomite	Fair — Good	
8262		H										
8263												
8264						decr gran fining						
8265		H										

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER-6
Sidetrack

SCALE 2" = 15ft

CORE No. 7

Interval Cored 8225'-8270' Cut 45' Recovered 42'9" (95 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 8/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8265												8266'6" - Sandstone - medium brown to grey, fine to very coarse grains, becoming fine to coarse at base, clear to milky subangular to subrounded quartz grains poor to moderate sorting moderately cemented, patchy yellow fluorescence, fast strong white cut.
8266		H						med brn - gy		Dolomite	V. Good —	
8267	38											
8267'9"												NO RECOVERY
8268	46		MARINE	NEARSHORE	f - m gr v w cmtd			lt gy w/ patchy dk-gy		Dolomite	Poor	
8269												Note: (8267'9"-8270' recovered from Core #8)
8270												Revised recovery 100%.

	C_1	C_2	C_3	C_4	C_5	C_6
8267'6"	19	89	193	255	509	662

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 8

Interval Cored 8270'-8313' Cut 43' Recovered 40'3" (94 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO K. KJELLGREN Date 9/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
8270 0 10 20 30												8271'6" - Sandstone - light grey, firm to medium grains, subangular to subrounded, clear to milky quartz grains, trace glauconite and pyrite, very well cemented and indurated dolomitic cement, very tight, trace yellow patchy fluorescence, no-very weak slow white cut.
8271	54		MARINE	NEARSHORE	f - m gr			lt gy w. patchy dk grey		Dolomite	Very Poor	
8272	60											
8273												
8274												
8275												8276'11" - Sandstone - light grey to brown, fine to coarse grains, some granules, clear to milky subangular quartz grains, very poorly sorted, abundant carbonaceous fragments, woody fragments, silty clastics, trace pyrite, mica and glauconite, no to trace dull yellow patchy fluorescence, fast moderate pale blue cut.
8276	37											
8277					f - c gr v. prly srtd	incr grnls less cmtd	g	m brn-gy			Poor	
8278				NEARSHORE - OFFSHORE TRANS.	vf - f gr ss interlam slst	incr silt	g	lt-m brn-grey			V. Poor	
8279												
8280												

Blender Sample: 8276'10": C_1 C_2 C_3 C_4 C_5 C_6

38 29 72 175 154 264

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 8

Interval Cored 8270'-8313' Cut 43' Recovered 40'3" (94 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 9/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8280					slst w f gr interlam ss							
8281											V. Poor	
8282												Burrows generally pyritised.
8283							g	dk gy w patchy lt brn-grey				
8284			MARINE	NEARSHORE - OFFSHORE TRANSITION		incr sand				Dolomitic	Poor	
8285							g					
8286												
8287											V. Poor	8288'- Pyrite nodule, ellipsoidal 5 cms long.
8288												
8289				NEAR-SHORE	vf - m gr w. slst laminae w. grnls		g	lt brn-gy			Poor	
8290												

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 8

Interval Cored 8270'-8313' Cut 43' Recovered 40'3" (94 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 9/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8290			MARINE	NEARSHORE	vf-m gr w. slst lam w grnls	incr grnls	g	lt brn-gy		Dolomite	Poor	8290'9" - Sandstone - medium grey, very fine to medium grains, angular to subangular, clear to milky quartz grains, with granules, trace glauconite, pyrite and mica, very well cemented and indurated, white dolomitic cement, many Siltstone laminae, dark brown to black, pyrite, mica, well indurated, subfissile, no to dull patchy yellow fluorescence, moderate to very weak yellow to white cut.
8291							g					
8292												
8293												
8294				NEARSHORE - OFFSHORE TRANSITION	vf-m gr ss w slst		g					
8295												
8296												
8297												
8298												
8299												
8300							g				Vpr	

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

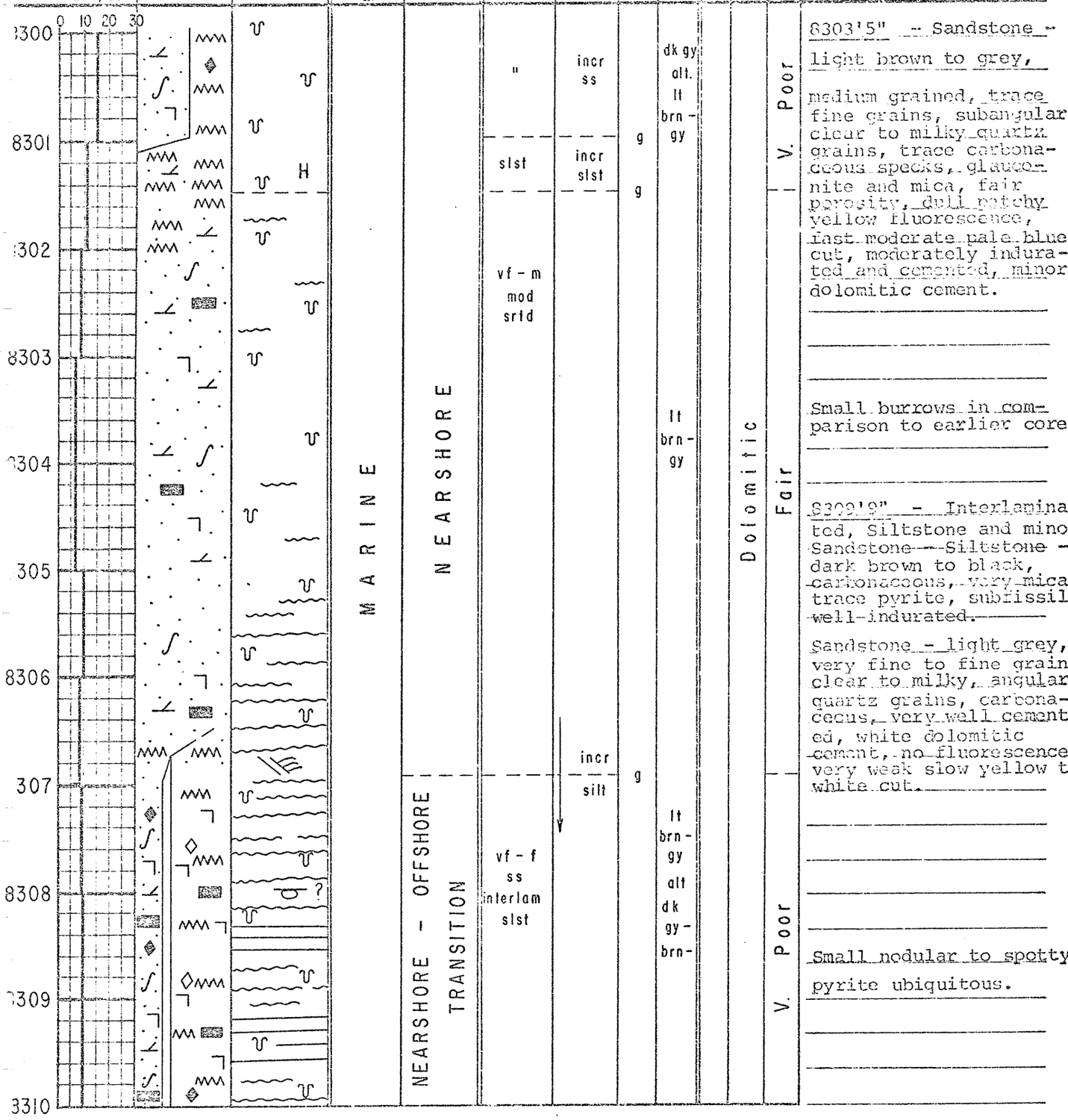
WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1ft

CORE No. 8

Interval Cored 8270'-8313' Cut 43' Recovered 40'3" (94 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in. Desc by R. DO ROZARIO G. KJELLGREN Date 9/12/77



8303'5" - Sandstone - light brown to grey, medium grained, trace fine grains, subangular, clear to milky quartz grains, trace carbonaceous specks, glauconite and mica, fair porosity, dull patchy yellow fluorescence, fast moderate pale blue cut, moderately indurated and cemented, minor dolomitic cement.

Small burrows in comparison to earlier core.

8309'9" - Interlaminated, Siltstone and minor Sandstone - Siltstone - dark brown to black, carbonaceous, very mica, trace pyrite, subfissile well-indurated.

Sandstone - light grey, very fine to fine grains clear to milky, angular quartz grains, carbonaceous, very well cemented, white dolomitic cement, no fluorescence, very weak slow yellow to white cut.

Small nodular to spotty pyrite ubiquitous.

Blender Sample: 8304'1": C_1 C_2 C_3 C_4 C_5 C_6

134 703 681 1810 2142 2515

Dwg. HO7/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL: FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 8

Interval Cored 8270'-8313' Cut 43' Recovered 40'3" (94 %) Fm. T. longus

Bit Type C20 RR Bit Size $8\frac{15}{32}$" in, Desc by R. DO ROZARIO G. KJELLGREN Date 9/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8310			n	NEAR SHORE	vf - m gr	incr ss	g	lt brn - gy		Dol.	poor	
8310'3"												NO RECOVERY.
8311												
8312												
8313												

Dwg 1107/CP/67

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1m

CORE No. 9

Interval Cored 8313'-8343' Cut 30' Recovered 29' (97 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 10/12/77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8313			MARINE	OFFSHORE - NEARSHORE TRANSITION	vf - f gr ss			lt grey ss dk gy slst		Dolomite	V. Poor	8313'-8318'10" Interlaminated Sandstone and Siltstone. Sandstone - very fine to fine grains, light grey, angular to subangular quartz grains, well cemented with white dolomite, trace pyrite, carbonaceous, mica, no fluorescence, very slow, weak yellow to white cut very small (≤ 2mm) pyrite, aggregates.
8314												
8315						decr ss						
8316												
8317		H										Siltstone: dark grey, well indurated, sub-fissile to fissile, slightly carbonaceous, mica and pyrite, shaley.
8318		H				incr ss	g					
8319				NEARSHORE	m gr (f gr)			m brn - gy		Dolomite	Fair	8318'10"-8331' Sandstone - light grey to brown, fine to medium grains, subangular to subrounded quartz grains, well cemented with dolomite, trace glauconite, pyrite, mica, carbonaceous fragments, moderately tight, silty in part, burrowed, dull patchy yellow to green fluorescence, slow to moderate pale blue cut.
8320												
8321												
8322												
8323												

Blender Sample: 8321'4": C_1 C_2 C_3 C_4 C_5 C_6

19 15 18 44 61 66

Dwg. 1107/CP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

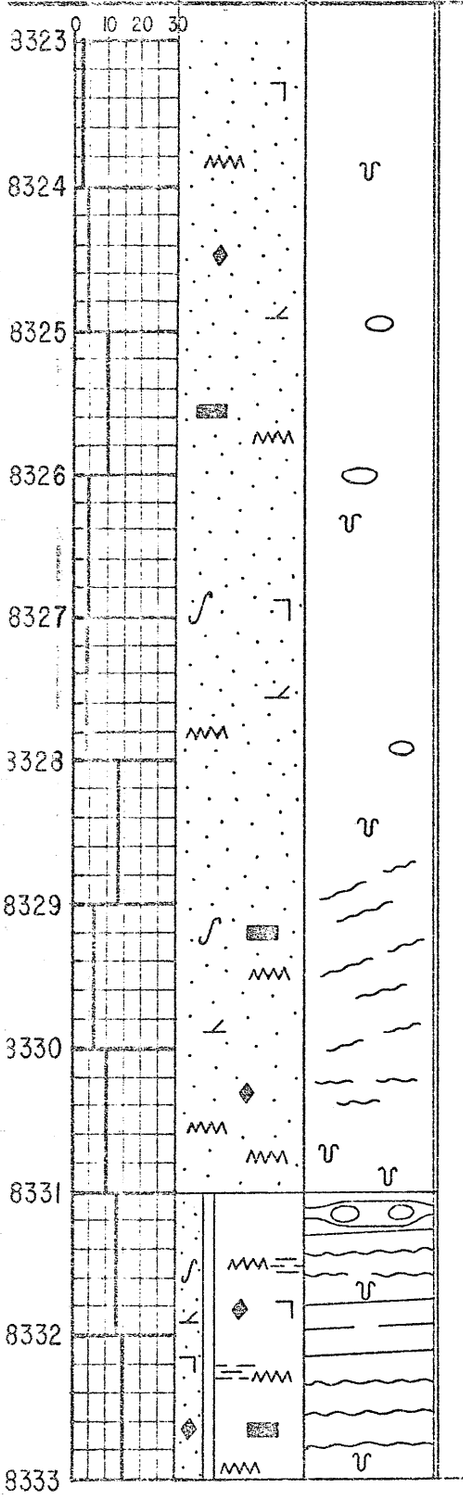
WELL FLOUNDER-6
Sidetrack

SCALE 2cm = 1ft

CORE No. 9

Interval Cored 8313'-8343' Cut 30' Recovered 29' (97 %) Fm. T. longus

Bit Type C20 RR Bit Size $8\frac{15}{32}$" in., Desc by R. DO ROZARIO G. KJELLGREN Date 10/12/77



REMARKS

Note: faint hydrocarbon odour on fresh break.

Nodules - up to 4" diameter, highly pyritic, dark grey, and silty, syneresis cracks infill with dolomite and pyrite.

Note: moderate odour of H_2S on fresh break towards base of Sandstone

8331'-8342'
Interlaminated Sandstone and Siltstone.

Siltstone - dark grey, well indurated, sub-fissile to fissile, slightly carbonaceous, mica and pyrite, shaley.

Blender Sample: 8329':

C_1	C_2	C_3	C_4	C_5	C_6
7.2	3.7	18	29.2	30.4	33.1

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

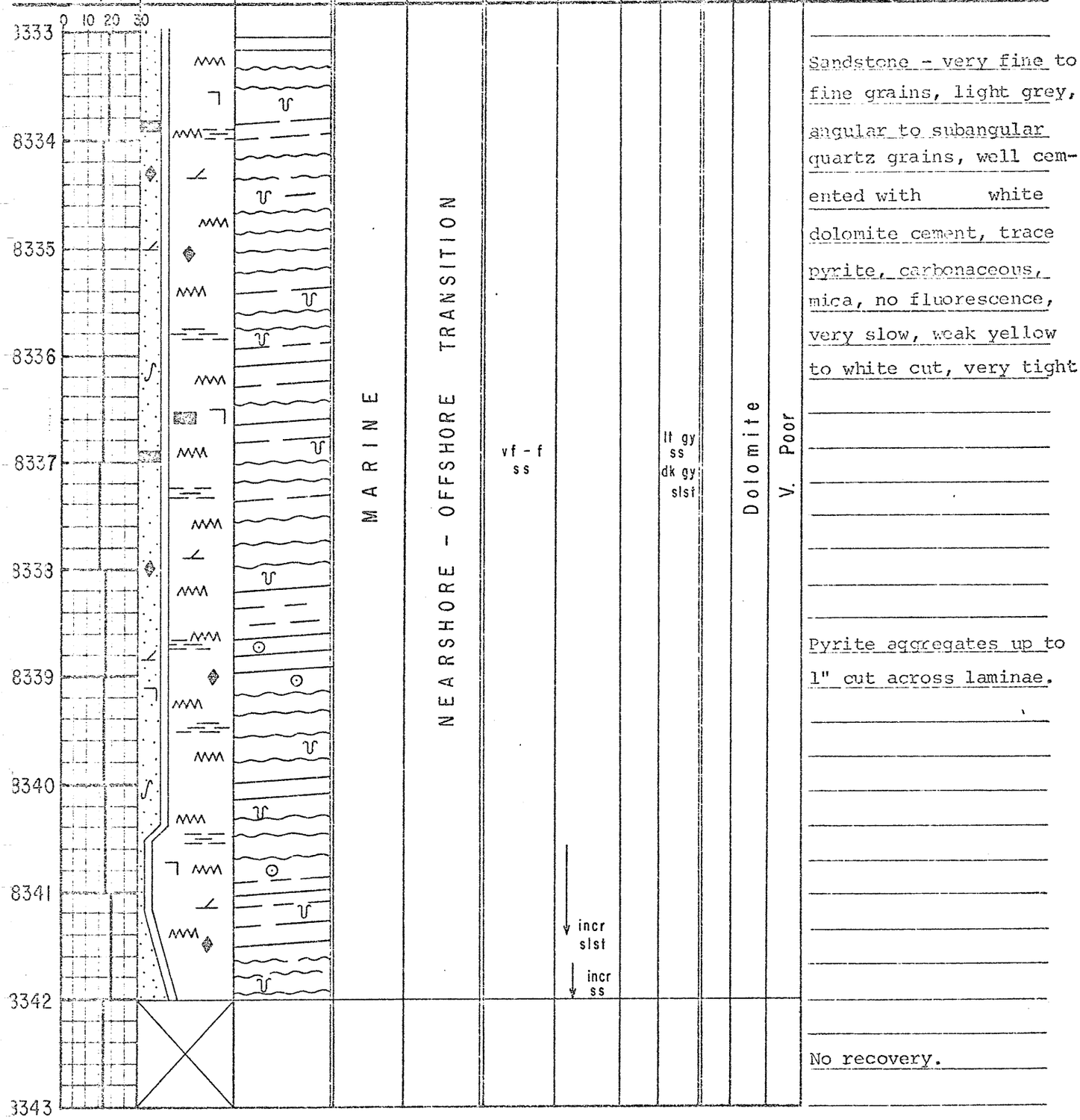
WELL FLOUNDER - 6
Sidetrack

SCALE 2" = 10'

CORE No. 9

Interval Cored 8313'-8343' Cut 30' Recovered 29' (97 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 10/12/77



Sandstone - very fine to fine grains, light grey, angular to subangular quartz grains, well cemented with white dolomite cement, trace pyrite, carbonaceous, mica, no fluorescence, very slow, weak yellow to white cut, very tight.

Pyrite aggregates up to 1" cut across laminae.

No recovery.

Dwg 1107/CP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 10m

CORE No. 10

Interval Cored 8343'-8390' Cut 47' Recovered 42'4" (90%) FmT. longus

Bit Type C20 RR Bit Size $8^{15}/_{32}$" in. Desc by R. DO ROZARIO G. KJELLGREN Date 11.12.77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8343			MARINE	NEARSHORE	vf - f gr mod w srtd	incr silt	s-g	lt brn - gy		Dolic	Poor - Fair	8344': Sandstone: light brown to grey, very fine to fine grains moderate to well sorted, angular to subangular quartz grains, well cemented with dolomitic cement, poor porosity, trace glauconite and mica, no fluorescence or cut.
8344												
8345												
8346		10°		NEARSHORE - OFFSHORE TRANSITION	slst/shale w vf - f ss							
8347												
8348						incr ss		dk gy			V. Poor	8348': Siltstone: dark grey, very shaley, very well indurated, with some carbonaceous and woody fragments, very mica, subfissile to fissile, minor interlaminated Sandstone: light grey, very fine to fine grains, moderately to well sorted, angular to subangular quartz grains, very well cemented with dolomitic cement, very poor porosity, trace mica, pyrite and carbonaceous, no fluorescence or cut.
8349												
8350												
8351		5°										
8352												
8353												

Blender Sample: 8343'6": C_1 C_2 C_3 C_4

134 29 20 7.3

Spotty pyrite aggregates throughout this zone.

Dwg 1107/GP/e7

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 10

Interval Cored 8343'-8390' Cut 47' Recovered 42'4" (90 %) Fm. T. longus
R. DO ROZARIO

Bit Type C20 RR Bit Size $8^{15}/32$" in., Desc by G. KJELLGREN Date 11.12.77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN.	CEMENT	POROSITY	REMARKS
0 10 20 30												
8353												
8354		H		"				dk gy			V. Poor	
8355							g					
8356					vf - f gr ss interlam slst							8358'6": Sandstone: light grey, very fine to fine grains, moderately sorted, angular to sub-angular quartz grains, very well cemented with dolomitic cement, trace glauconite and carbonaceous, very tight very poor porosity, no fluorescence or cut. Minor silty laminae, dark grey, carbonaceous, mica, trace pyrite.
8357			MARINE					lt gy - brn alt dk gy		Dolic		
8358				"		incr ss					V. Poor	
8359												
8360												
8361												
8362												
8363				NEAR-SHORE	vf - m w/grnls		s	m gy			V Poor	Contorted Beds, secondary dolomite → probable flow zone.

Dwg H07/CP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2" = 10'

CORE No. 10

Interval Cored 8343'-8390' Cut 47' Recovered 42'4" (90 %) Fm T. longus

Bit Type C20 RR Bit Size $8^{15}/32$" in. Desc by R. DO ROZARIO G. KJELLGREN Date 11.12.77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8363				=	=			=			=	
							g					
8364				NEAR - OFFSHORE	vf - f gr ss & slst/sh	decr ss		alt lt gy and dk gy			V. Poor	8366'6": Sandstone: light to dark grey, fine to very coarse granules, clear to milky quartz grains, subangular to subrounded, moderately indurated, well cemented with dolomitic cement, some dark grey silty matrix, very poorly sorted, very tight porosity, no fluorescence or bulk/crush cut, trace glauconite, micaceous and slightly carbonaceous.
8365												
8366												
8367			MARINE	NEARSHORE	f - vc ss w/ abnt grnls	incr grnls		lt - dk gy		Dolic	V. Poor	
8368												
8369												
8370						decr grnls						
							s					
8371				NEAR - OFFSHORE	vf - f gr ss			alt lt & dk gy			V. Poor	8372': as for 8348' i.e. Siltstone/Shale with some minor interlaminated very fine to fine grains Sandstone.
8372						incr grnls						
							s-g					
8373												

Blender Sample: 8366'7": C_1 C_2 C_3 C_4

86 74 63 14

Dwg 1107/CP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

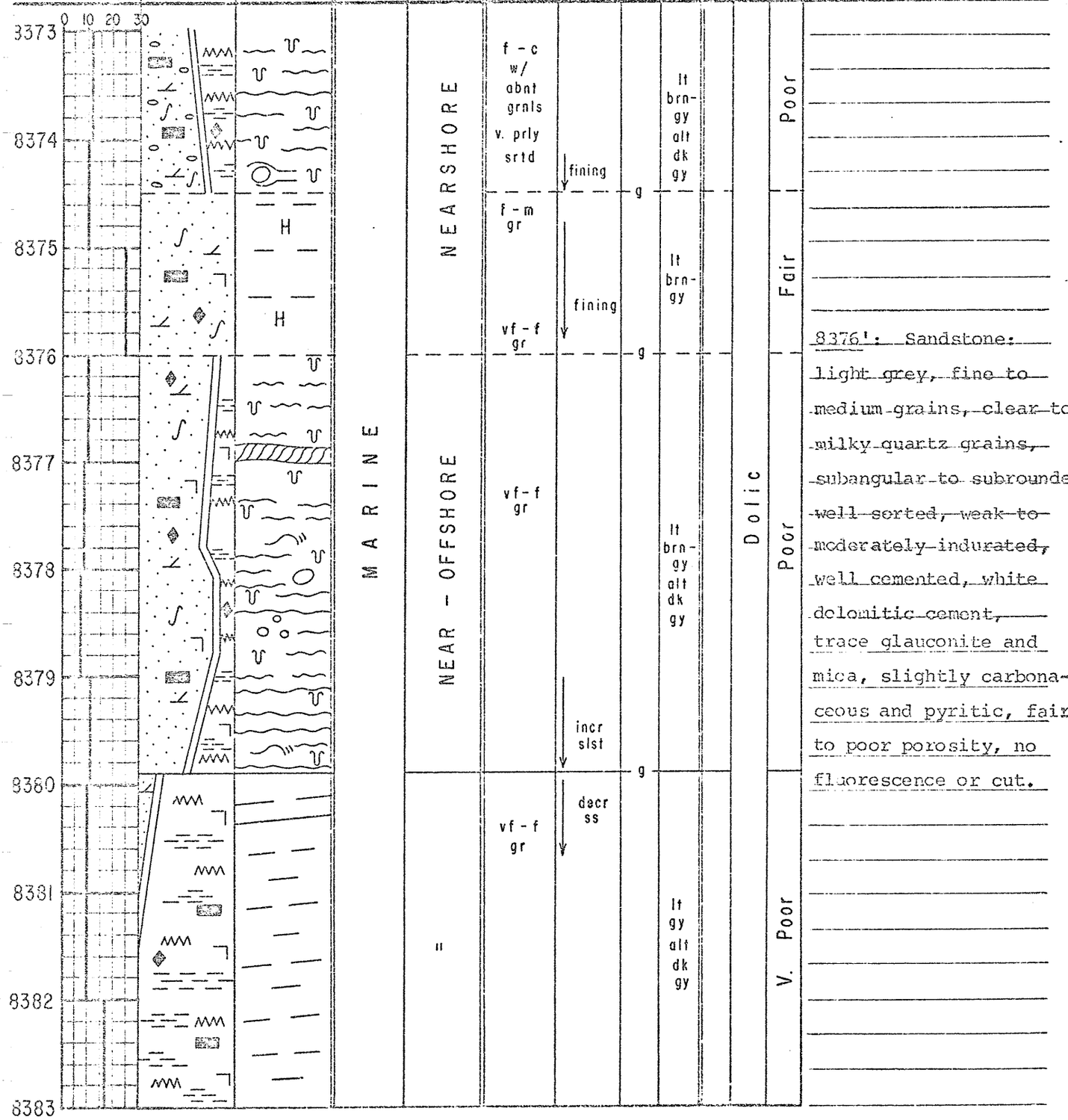
WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 10

Interval Cored 8343'-8390' Cut 47' Recovered 42'4" (90%) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in., Desc by R. DO ROZARIO G. KJELLGREN Date 11.12.77



REMARKS

8376': Sandstone: light grey, fine to medium grains, clear to milky quartz grains, subangular to subrounded, well sorted, weak to moderately indurated, well cemented, white dolomitic cement, trace glauconite and mica, slightly carbonaceous and pyritic, fair to poor porosity, no fluorescence or cut.

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft [illegible]

CORE No. 10

Interval Cored 8343'-8390' Cut 47' Recovered 42'4" (90 %) Fm. T. longus

Bit Type C20 RR Bit Size 8 15/32" in. Desc by R. DO ROZARIO G. KJELLGREN Date 11.12.77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8383			MARINE	=	=	incr ss	s	=		Dolic	=	pyrite aggregates.
8384				NEARSHORE	vf - f gr mod w srtd			lt brn - gy			Poor	8384': Siltstone/Shale interlaminated Sandstone light grey, very fine to fine grains, clear to milky quartz grains, subangular to subrounded very well indurated and cemented, with white dolomitic cement, very tight porosity, well bedded, very micaceous and carbonaceous (?), minute trace glauconite, no fluorescence or cut.
8385												
8385'4"												
8386												
8387												NOTE: 1' from 8389'-8390' of Core 10 recovered in Core 11.
8388												
8389					vf - f mod w srtd			lt gy		Dolic	Poor	Sandstone: light grey, very fine to fine grains, well cemented with dolomite, poor porosity, no fluorescence or cut.
8390												

Blender Sample: 8384': no gas

Dwg 1107/OP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 11

Interval Cored 8390'-8420' Cut 30' Recovered 30' (100 %) Fm LATROBE-T. longus

Bit Type C20 RR Bit Size $8^{15}/32$" in. Desc by R. DO ROZARIO G. KJELLGREN Date 12.12.77

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8390			MARINE	NEAR - OFFSHORE TRANS.	vf - f gr ss			dk gy alt lt gy		Dolic	V. Poor	Pyritic nodules.
8391												
8392							s					
8393				NEARSHORE	f - m gr ss w/ grnls	incr grnls		lt brn - gy			Poor	well cemented.
8394												
8395				NEAR - OFFSHORE TRANSITION	vf - f gr ss	decr ss	g	lt gy alt dk gy			V. Poor	8395'3": Interlaminated Sandstone and Siltstone: Siltstone: dark grey, well indurated, sub-fissile to fissile, shaley, very micaceous, trace pyrite and carbonaceous. Sandstone: light grey, very fine to fine grains, angular to sub-angular quartz grains, well cemented with white dolomitic cement, trace mica and carbonaceous, very poor porosity, no fluorescence or cut.
8396												
8397												
8398												
8399												
8400												Very well cemented Sandstone nodules.

Dwg 1107/CP/67

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1m

CORE No. ....11.....

Interval Cored 8390'-8420' Cut .....30'. Recovered .....30' (100 %) Fm. LATROBE-T.longus

Bit Type ...C20 RR..... Bit Size ....8 15/32"... in., Desc by R. DO ROZARIO G. KJELLGREN .... Date ....12.12.77.....

DEPTH & CORING RATE min/ft	COMPOSITION	BEDDING & STRUCTURES	ENVIRONMENT	FACIES	TEXTURE	TEXTURAL CHANGE	CONTACTS	COLOR	OIL STN	CEMENT	POROSITY	REMARKS
0 10 20 30												
8400				=	=		g	=			=	
8401				NEAR - OFFSHORE TRANSITION	vf - f gr ss interlam slst	incr ss		alt lt brn - gy & dk brn - gy			V. Poor	
8402												
8403							s					
8404			MARINE		fis	incr slst/sh	g	blk			Nil	Very well cemented Sandstone nodules with some pyrite.
8405				=	slst / sh			dk gy - blk		Dolic	V. Poor	
8406					vf - f gr ss mod w srtd	incr ss	g					
8407				=				predom lt brn - gy			Poor - Fair	8409'6": Sandstone: light brown, fine to coarse grains, clear to milky quartz grains, moderate to well sorted, moderately cemented with dolomite, fair porosity, trace mica , dark grey Siltstone; no fluorescence or cut.
8408						incr ss						
8409				NEAR - SHORE	f - m gr ss mod w srtd		g	lt gy - brn			Fair - Good	
8410		H										

Dwg. 1107/CP/87

ESSO AUSTRALIA LTD.

CORE DESCRIPTION

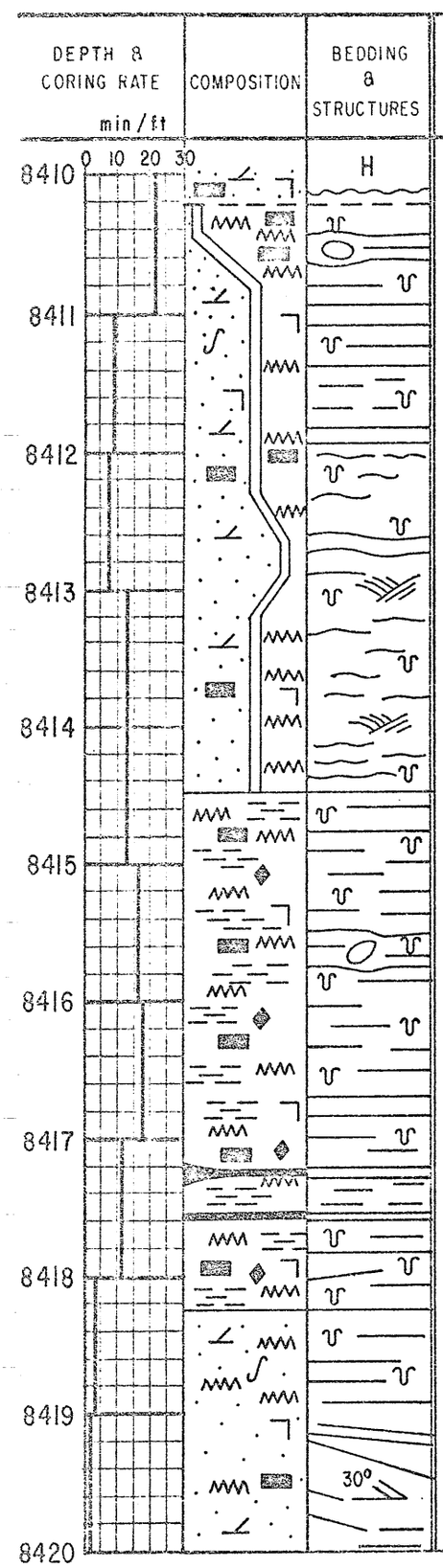
WELL FLOUNDER - 6
Sidetrack

SCALE 2cm = 1ft

CORE No. 11

Interval Cored 8390'-8420' Cut 30' Recovered 30' (100 %) Fm. LATROBE-T.longus

Bit Type C20 RR Bit Size $8^{15}/32$" in., Desc by R. DO ROZARIO G. KJELLGREN Date 12.12.77



REMARKS

8413'9": Interlaminated Sandstone and Siltstone: Sandstone: light grey, very fine to fine grains angular to subangular quartz grains, very well cemented with white dolomitic cement, trace micaceous and carbonaceous matter, very poor porosity, no fluorescence or cut. Siltstone: dark grey, well indurated, subfissile to fissile, shaley, very micaceous and carbonaceous.

8419'3": Sandstone: medium grey to brown, fine to very coarse grains, moderately sorted, weakly to moderately cemented with white dolomitic cement, angular to subangular, clear to milky quartz grains, trace carbonaceous and micaceous, slight trace glacuonite, slightly silty, fair to good porosity, no fluorescence or cut.

Blender Sample: 8419'1": C_1 C_2 C_3 C_4 C_5 C_6

9 5 7 7.3 15 19

Dwg 1107/CP/87

PE904980

This is an enclosure indicator page.
The enclosure PE904980 is enclosed within the container PE902759 at this location in this document.

The enclosure PE904980 has the following characteristics:

ITEM_BARCODE	= PE904980
CONTAINER_BARCODE	= PE902759
NAME	= Flounder 6 Core Description Chart
BASIN	= GIPPSLAND
PERMIT	= VIC/L11
TYPE	= WELL
SUBTYPE	= DIAGRAM
DESCRIPTION	= Flounder 6 plus sidetrack. Core Description Chart. From appendix 2 of WCR.
REMARKS	=
DATE_CREATED	= 31/12/77
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= Core Laboratories INC
CL[illegible]_OP_CO	= Esso Australia LTD

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 3

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 3

SIDEWALL CORE DESCRIPTIONS

PAGE 1 OF 3

ATT 30 REC 29

DATE 16/7/77

RUN NO 1 SWC RUN NO 1

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

WELL FLOUNDER-6

GEOLOGIST BELLIS

SERVICE CO SCHLUMBERGER

NO. 1a	DEPTH 1	REC 2	ROCK TYPE 3	MODIFIERS 4	CAL 5	COLOR 6	INDUR DEG 7	GRAIN SIZE 8	SRTG 9	RND 10	DISS CLAY 11	STAIN 12	FLOURESCENCE % RK	FLOURESCENCE DISTR 14	FLOURESCENCE INTEN 15	FLOURESCENCE COLOR 16	CUT FLUOR. INTEN 17	CUT FLUOR. COLOR 18	CUT RESIDUE QUAN 19	CUT RESIDUE COLOR 20	SHOW 21	PROB PROD 22	REMARKS - GAS 23
1	2925	1¼	Calc	mica,very	V	light	firm	clay	-	-	50												Gas Odour
			Clay-stone	fine pyrite.		grey																	
2	2860	1¼	Calc	Abundant	V	light	firm	clay	p	sa	30												Gas Odour
			Silt-stone	glauconite, mica				to silt															
3	2800	1	Calc	Glauconite,	V	light	firm	clay	p	sa	30												Gas Odour
			Silt stone	mica forams				silt		-sr													
4	2769	1¼	Calca-renite	Glauconite, mica forams	V	buff to light grey	firm	silty to very fine	p	sa -sr	30												Some gas Odour
5	2700	1	Calc	silty, clay	V	light	firm	clay	p	sa	30												Gas Odour
			Silt-stone	glauconite		olive grey		to silt		-sr													
6	2625	3/4	Calc	large forams	V	light	firm	clay	-	-	40												Gas Odour
			clay-stone	silt		to medium grey	to hard																
7	2550	1½	Calc	forams,	V	light	firm	clay	-	-	40												Gas Odour
			Clay-stone	silt		olive grey																	
8	2475	5/8	Calc	Silt,forams	V	light	firm	clay	-	-	40												Gas Odour
			clay-stone			olive grey																	
9	2400	3/4	Calc	Silt,forams	V	light	firm	clay	p	sa	30												Gas Odour
			Silt-stone			to medium grey		to silt		-sr													
10	2332	2	Calc	Silt,forams	V	light	firm to soft	clay	-	-	50												Gas Odour
			Clay-stone			to medium grey																	
11	2256	1¼	Calc	Silt,forams	V	light	firm	clay	p	sa	30												Gas Odour
			Silt-stone			olive grey		to silt		-sr													
12	2180	1½	Calca-renite	forams, mica	V	light olive grey	firm	silt very fine	p	sa -sr	30												Gas Odour
13	2114	N/R																					Misfire

FORM R 257 3 72

PAGE 2 OF 3

ATT 30 REC 29

DATE 16/1/77

RUN NO 1 SWC RUN NO 1

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

WELL FLOUNDER-6

GEOLOGIST BELLIS

SERVICE CO SCHLUMBERGER

NO.	DEPTH	REC	ROCK TYPE	MODIFIERS	CAL	COLOR	INDUR DEG	GRAIN SIZE	SRTG	RND	DISS CLAY	STAIN	FLOURESCENCE %	FLOURESCENCE DISTR	FLOURESCENCE INTEN	FLOURESCENCE COLOR	CUT FLUOR. INTEN	CUT FLUOR. COLOR	CUT RESIDUE QUAN	CUT RESIDUE COLOR	SHOW	PROB PROD	REMARKS - GAS
1a	1	2	3	4	5	6	7	8	9	10	11	12	RK	14	15	16	17	18	19	20	21	22	23
14	2044	2	Calc Clay-stone	mica, forams, glauconite, pyrite	V	light to olive grey	firm to slightly soft	clay	-	-	40												Gas Odour
15	1974	1 3/4	Calc Clay-stone	mica, forams pyrite, glauconite	V	light olive grey	firm to slightly soft	clay	-	-	40												Gas Odour
16	1902	1 3/4	As above	" "	"	"	"	"	"	"	"												" "
17	1832	2	Calca-renite	mica, forams glauconite	V	light olive grey	firm	silt to very fine	p	sa -sr	30												Gas Odour
18	1762	1½	Calc siltstone	mica, forams	V	light olive grey	firm	clay to silt	p	sa -sr	30												Gas Odour
19	1692	2	Calc Siltstone	" "	"	"	"	"	"	"	"												" "
20	1630	1 3/4	As Above	" "	"	"	"	"	"	"	"												" "
21	1536	1 3/4	Calca-renite	Minor, forams	V	light olive grey	firm	clay to very fine	p	sa -sr	30												Gas Odour
22	1475	2	As Above	"	"	"	"	"	"	"	"												" "
23	1400	2	Calca-renite	Mica, forams fossiliferous debris	V	light olive grey	firm to soft	clay to fine	p	sa -sr	30												Strong Gas Odou 100ppmC,
24	1342	2½	As Above	" "	"	"	"	"	"	"	"												Strong Gas Odou
25	1256	1 3/8	Calca-renite	forams in clay matrix	V	buff to light olive grey	friable to soft	clay to medium	p	sa -sr	10												Strong Gas Odou 1000ppmC,

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ATT 30 REC 29

DATE 16/7/77

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

RUN NO 1 SWC RUN NO 1

WELL FLOUNDER-6

GEOLOGIST BELLIS

SERVICE CO SCHLUMBERGER

NO. 1a	DEPTH 1	REC 2	ROCK TYPE 3	MODIFIERS 4	CAL 5	COLOR 6	INDUR DEG 7	GRAIN SIZE 8	SRTG 9	RND 10	DISS CLAY 11	STAIN 12	FLOURESCENCE % RK	FLOURESCENCE DISTR 14	FLOURESCENCE INTEN 15	FLOURESCENCE COLOR 16	CUT FLUOR. INTEN 17	CUT FLUOR. COLOR 18	CUT RESIDUE QUAN 19	CUT RESIDUE COLOR 20	SHOW 21	PROB PROD 22	REMARKS - GAS 23
26	1190	2¼	Calcarenite	forams in clay matrix	V	buff to light olive grey	friable to soft	clay to medium	p	sa-sr	10												Strong gas Odour
27	1120	2¼	As above	" "	"	"	friable to unconsolidated	"	"	"													" " "
28	1040	1½	As above	" "	"	"	"	"	"	"													" " "
29	970	1 5/8	As above	" "	"	"	"	"	"	"													" " "
30	900	1½	As above	" "	"	"	"	"	"	"													" " "

FORM R 257 3.72

ESSO AUSTRALIA LTD.
SIDEWALL CORE DESCRIPTIONS

WELL FLOUNDER-6 ... PAGE 1 OF 4
GEOLOGIST MORTON/ELLIOTT ... ATT 13 REC 9
SERVICE CO SCHLUMBERGER ... DATE 30/7/77
IES RUN NO 2 ... SWC RUN NO 2 & 3

NO.	DEPTH	REC	ROCK TYPE	MODIFIERS	CAL	COLOR	INDUR DEG	GRAIN SIZE	SRTG	RND	DISS CLAY	STAIN	FLOURESCENCE % RK	FLOURESCENCE DISTR	FLOURESCENCE INTEN	FLOURESCENCE COLOR	CUT FLUOR. INTEN	CUT FLUOR. COLOR	CUT RESIDUE QUAN	CUT RESIDUE COLOR	SHOW	PROB PROD	REMARKS - GAS
1a	1	2	3	4	5	6	7	8	9	10	11	12		14	15	16	17	18	19	20	21	22	23
31	6356	1/4	MARL	Globigerina glauconite carbonaceous fragments	V	Medium grey	Medium to firm	1mm	bimodal														May be 6340'
32	6354	1	SILTSTONE	Glauconite, pyrite, mica	V	black brown -grey	-	silt	fair	sa-sr													Oxidised
33	6348	NR																					
34	6340	1½"	MARL	Globigerina ooze, glauconite.	V	Medium grey	firm to soft	1-2mm	bimodal														
35	6335	3/4	MARL	" "	"	"	"	"	"														
36	6330	2"	MARL	" "	"	"	"	"	"														
37	6320	1/4	MARL	" "	"	"	"	"	Poor														
38	6270	1¼"	SHALE	Calcareous glauconite	"	Dark grey	Firm	to.5mm	"														Fissile
39	6200	3/4	SHALE	Calcareous	"	"	"	"	"														Fissile
40	6139	3/4	SHALE	Calcareous	"	"	"	"	"														Fissile
41	6056	MF																					MF=misfire
42	5878	MF																					
43	5690	MF																					
	GUN	3																					
44	7970	LB																					LB=Lost bullet
45	7907	1	SILTSTONE	Quartz, Calcareous, pyrite, mica carbonaceous	SL	Medium to dark grey	Firm	Silt	Mod														
46	7845	¼"	SANDSTONE	Quartz, carbonaceous pyrite, silty	-	Light grey	Firm	Very fine to medium	Poor	sa-sr	30%												
47	7800	½"	SANDSTONE	Quartz, pyrite	SL	Light grey	Firm	gran-ule to fine	Poor	sa-sr	10%												

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ATT 30 REC 25

DATE 30/7/77

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

IES RUN NO 2 SWC RUN NO 3

SERVICE CO SCHLUMBERGER

GEOLOGIST MORTON/ELLIOTT

WELL FLOUNDER-6

NO. 1a	DEPTH 1	REC 2	ROCK TYPE 3	MODIFIERS 4	CAL 5	COLOR 6	INDUR DEG 7	GRAIN SIZE 8	SRTG 9	RND 10	DISS CLAY 11	STAIN 12	FLOURESCENCE % RK	FLOURESCENCE DISTR 14	FLOURESCENCE INTEN 15	FLOURESCENCE COLOR 16	CUT FLUOR. INTEN 17	CUT FLUOR. COLOR 18	CUT RESIDUE QUAN 19	CUT RESIDUE COLOR 20	SHOW 21	PROB PROD 22	REMARKS - GAS 23
48	7750	½"	SAND-	Quartz,	M	Light	Firm	gran-	Poor	sa-	10%												
			STONE			Brown		ule to		sr													
								very fine															
49	7707	½"	SILTY SAND-	Quartz, silt	SL	Medium	Firm	gran-	Poor	sa-	30%												
			STONE			grey		ule to		sr													
								very fine															
50	7666	½"	SILT-	Silt,	SL	Medium	Firm	Silt	Good	sa-													
			STONE	quartz,		to				sr													
				carbonaceous pyrite		Dark grey																	
51	7600	½"	SILT-	Silt, quartz	SL	Dark	Firm	Silt	Good	"													Fissile, laminated
			STONE	carbonaceous		to																	with very fine to
				pyrite		light																	~~fine grained~~ sand
				~~calcareous~~		grey																	stone in parts.
52	7525	½"	SILT-	Quartz,	-	Dark	Firm	Silt	"	"													
			STONE	silt, carb-		grey																	
				onaceous, pyrite																			
53	7457	½"	SILT-	Quartz,	-	Medium	Firm	Silt	Good	sa-													
			STONE	carbonaceous pyrite		dark grey				sr													
54	7426	½"	SILT-	Quartz,	-	Medium	"	"	"	"													
			STONE	carbonaceous		grey																	
				pyrite, mica																			
55	7413	3/4	SAND-	Quartz,	-	Light	Firm	Very	Poor	sa-	30%												
			STONE	silt, carb-		grey		fine		sr													
				onaceous,				to very															
								coarse															
56	7402	1¼"	SAND-	Quartz,	SL	Light	Firm	Silt	Mod	sa-	25%												Sand and laminate
			STONE	silt, mica		grey to		to medium	to Poor	r													very fine sand ar
			with SILT-	carbonaceous,		Dark																	Siltstone
			STONE	pyrite		grey																	

FORM R 257 3 72

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ATT 30 REC 25

DATE 30/7/77

SWC RUN NO 3

IES RUN NO 2

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

WELL FLOUNDER-6

GEOLOGIST MORTON/ELLIOTT

SERVICE CO SCHLUMBERGER

NO. 1a	DEPTH 1	REC 2	ROCK TYPE 3	MODIFIERS 4	CAL 5	COLOR 6	INDUR DEG 7	GRAIN SIZE 8	SRTG 9	RND 10	DISS CLAY 11	STAIN 12	FLOURESCENCE % RK	FLOURESCENCE DISTR 14	FLOURESCENCE INTEN 15	FLOURESCENCE COLOR 16	CUT FLUOR. INTEN 17	CUT FLUOR. COLOR 18	CUT RESIDUE QUAN 19	CUT RESIDUE COLOR 20	SHOW 21	PROB PROD 22	REMARKS - GAS 23
57	7376	NR																					
58	7294	NR																					
59	7261	1"	SAND-STONE	Quartz, carbonaceous glauconite pyrite	SL	Light grey	Firm	Very fine to coarse	Poor	sa-r	20%												
60	7186	3/4	SAND-STONE	Quartz, carbonaceous, glauconite, pyrite	-	Light grey	Firm	Very fine to medium	Mod	sa-r	15%												
61	7145	NR																					
62	7091	1½	SILT-STONE with SAND-STONE	Quartz, silt, carbonaceous, mica, pyrite	-	Dark grey	Firm	Very coarse to silt	Poor	sa-r	30%												
63	7029	1¼"	SILT-STONE	Quartz, silt, mica	-	Medium to Dark grey	"	Silt	Good	sa-r													
64	6949	1"	SAND-STONE	Quartz, carbonaceous silt, pyrite	-	Light grey	"	Fine to medium grained	Mod	sa-r	10%												Thin coal lamina
65	6937	1¼	SHALE	Clay, pyrite, carbonaceous quartz, silty	V	Dark brown to light grey	Firm	Clay	Mod	-	-												
66	6876	3/4	SHALE	Clay, pyrite quartz, silty	M	"	"	"	Mod	-	-												Possibly cavings
67	6805	1"	SAND-STONE	Quartz, mica, carbonaceous	SL	Light grey	Soft	fine to coarse	Mod	sa-r													
68	6750	1 3/4	SHALE	Clay, carbonaceous, silty, stringers	V	Dark grey	Firm	Clay	Good	-	-												

FORM R 257 3.72

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ATT 30 REC 25

DATE 30/7/77

SWC RUN NO 3

IES RUN NO 2

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

GEOLOGIST MORTON/ELLIOTT

SERVICE CO. SCHLUMBERGER

WELL FLOUNDER-6

NO. 1a	DEPTH 1	REC 2	ROCK TYPE 3	MODIFIERS 4	CAL 5	COLOR 6	INDUR DEG 7	GRAIN SIZE 8	SRTG 9	RND 10	DISS CLAY 11	STAIN 12	FLOURESCENCE % RK	FLOURESCENCE DISTR 14	FLOURESCENCE INTEN 15	FLOURESCENCE COLOR 16	CUT FLUOR. INTEN 17	CUT FLUOR. COLOR 18	CUT RESIDUE QUAN 19	CUT RESIDUE COLOR 20	SHOW 21	PROB PROD 22	REMARKS - GAS 23
69	6690	1"	SHALE	Mica, carbonaceous pyrite	M	Dark grey	Firm	Clay	Good														
70	6623	1½"	SHALE	" "	V	"	"	"	"														
71	6546	2"	SILT-STONE	Quartz, Mica, pyrite minor glauconite, carbonaceous	V	"	"	Silt	"														
72	6475	1½"	SILT STONE	Silt,quartz, pyrite	V	Dark to medium grey	Firm	Silt	Good	-	-												
73	6406	NR																					

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ATT 30 REC 29

DATE 18.12.77

IES RUN NO 4 SWC RUN NO 4

SERVICE CO SCHLUMBERGER

GEOLOGIST DO ROZARIO/KJELLGREN

WELL FLOUNDER #6 SIDETRACK

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

NO.	DEPTH	REC	ROCK TYPE	MODIFIERS	CAL	COLOR	INDUR DEG	GRAIN SIZE	SRTG	RND	DISS CLAY	STAIN	FLOURESCENCE %	FLOURESCENCE DISTR	FLOURESCENCE INTEN	FLOURESCENCE COLOR	CUT FLUOR. INTEN	CUT FLUOR. COLOR	CUT RESIDUE QUAN	CUT RESIDUE COLOR	SHOW	PROB PROD	REMARKS - GAS
1a	1	2	3	4	5	6	7	8	9	10	11	12	RK	14	15	16	17	18	19	20	21	22	23
74	8584	½	SILT-STONE	carbonaceous micaceous, argillaceous	mod	medium grey	very soft	-	-	-	40			-			-						Very low porosity
75	8546	½	SILT-STONE	carbonaceous sandy, argillaceous	non-sl	medium grey	very soft	very fine to fine Sand-stone	poorly sorted	a-sa	40			-			-						Very low porosity
76	8542	3/4	DOLO-MITE	carbonaceous silty, micaceous	non-sl	white to light grey	poorly indura-ted	medium to coarse	poorly sorted	-	10			-			-						Poor porosity sugary text, silty laminae.
77	8444	½	SILT-STONE	carbonaceous dolomitic, micaceous	non	dark grey	mod-erately indura-ted	-	-	-	30			-			-						Very low porosity
78	8390	½	SHALE	carbonaceous micaceous, subfissile	non	dark grey	modera-tely indura-ted	-	-	-	90			—			—						Very low porosity
79	8338	1"	SAND-STONE	micaceous, dolomitic	non	light grey	weak	firm to medium	modera-tely sorted	-	-		50	even	moderate to low	pale green	moderate	pale green					Tight porosity Slight hydrocar-bon odour, trace light brown oil
80	8283	E												-			-						
81	8243	3/4	SAND-STONE	micaceous, glauconitic dolomitic	-	light grey	well indura-ted	fine to very coarse grains	poorly sorted	sa-r	-		25	patchy	low	pale green			slight	pale blue to voilet			Slight hydrocar-bon odour, low porosity.
82	8228	½	SAND-STONE	micaceous, silty, dolomitic	-	medium grey	poorly indu-rated	firm to medium few very coarse	poorly sorted	sa-r	-			-			-						Low porosity
83	8148	3/4	SAND-STONE	glauconitic, trace micaceous and pyritic, dolomitic	-	light grey	weak	firm to medium few coarse	mod	a-sr	-		25	patchy	dull	white to yellow			no visible cut				Fair porosity

E = empty

PAGE 2 OF 4 ATT 30 REC 29 DATE 18.12.77

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

WELL FLOUNDER #6 SIDETRACK

GEOLOGIST DO. ROZARIO/KJELLGREN

SERVICE CO SCHLUMBERGER

IES RUN NO 4 SWC RUN NO 4

NO. 1a	DEPTH 1	REC 2	ROCK TYPE 3	MODIFIERS 4	CAL 5	COLOR 6	INDUR DEG 7	GRAIN SIZE 8	SRTG 9	RND 10	DISS CLAY 11	STAIN 12	FLOURESCENCE % RK	FLOURESCENCE DISTR 14	FLOURESCENCE INTEN 15	FLOURESCENCE COLOR 16	CUT FLUOR. INTEN 17	CUT FLUOR. COLOR 18	CUT RESIDUE QUAN 19	CUT RESIDUE COLOR 20	SHOW 21	PROB PROD 22	REMARKS - GAS 23
84	8143	3/4	SAND-STONE	very glauconitic, micaceous, and dolomitic	-	dark grey	weak to firm	very fine	mod	sa-sr	20			-				-					Very low porosity
85	8137	3/4	SAND-STONE	glauconitic, pyritic, micaceous, slightly carbonaceous very dolomitic,	-	medium grey	weak	very fine	very poor	a	20			-				-					Very low porosity
86	8132	½	SILT-STONE	micaceous, glauconitic, trace carbonaceous pyritic, dolomitic.	-	dark grey	firm	-	-	-	20			-				-					Very low porosity
87	8127	½	SILT-STONE	very glauconitic & micaceous, pyritic, slightly carbonaceous very dolomitic	-	medium to dark grey	firm	-	very poor	-	20			-				-					Very low porosity
88	8110	½	SILT-STONE	glauconitic micaceous, pyritic, slightly carbonaceous	-	dark grey	firm	-	-	-	10			NO			slow dull blue to yellow		thin	dull white to yellow			Very low porosity, no odour
89	8095	1	INTER-LAMIN-ATED SHALE & SILT-STONE	carbonaceous glauconitic, micaceous, pyritic, dolomitic	-	light grey and black	moderately indurated sub-fissile to fissile	-	-	-	30			NO			no to very weak dull yellow crush cut		not visible				Very low porosity
90	8080	3/4	SILT-STONE	carbonaceous micaceous, pyritic, glauconitic, very dolomitic	-	light to medium grey	mod	-	-	-	20			NO			no to very weak dull yellow crush cut		not visible				Very low porosity
91	8065	3/4	SILT-STONE	very glauconitic, dolomitic, micaceous, sandy.	-	brown to grey	firm	very fine to fine Sandstone	good	sa	20			-					-				Very low porosity.

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ATT 30 REC 29

DATE 18.12.77

IES RUN NO 4 SWC RUN NO 4

ESSO AUSTRALIA LTD.

SIDEWALL CORE DESCRIPTIONS

WELL FLOUNDER #6 SIDLTRACK

GEOLOGIST DO ROZARIO/KJILLGREN

SERVICE CO SCHLUMBERGER

NO.	DEPTH	REC	ROCK TYPE	MODIFIERS	CAL	COLOR	INDUR	GRAIN SIZE	SRTG	RND	DISS	STAIN	FLOURESCENCE				CUT FLUOR.		CUT RESIDUE		SHOW	PROB	REMARKS - GAS
													%	DISTR	INTEN	COLOR	INTEN	COLOR	QUAN	COLOR			
1a	1	2	3	4	5	6	7	8	9	10	11	12	RK	14	15	16	17	18	19	20	21	22	23
92	8050	½	SILT-STONE	micaceous, dolomitic, sandy, trace glauconitic	-	dark grey	mod	-	-		30			-					-				Poor porosity
93	8035	3/4	SILT-STONE	As above micaceous, trace glauconitic	-	dark grey	mod	-	-		20			-					-				Very poor porosity
94	8020	3/4	SILT-STONE	carbonaceous very glauconitic sandy, dolomitic?	-	dark grey	firm	very fine to fine Sand-stone	-		30			-					-				Very poor porosity
95	8005	3/4	SILT-STONE	very sandy, glauconitic, micaceous, dolomitic.	-	medium grey	mod	very fine to fine Sand-stone	good	sa -a	20			-					-				Poor porosity
96	7990	3/4	SILT-STONE	very sandy, glauconitic micaceous, dolomitic.	-	medium grey	mod	very fine to fine Sand-stone	good	sa -r	30			-					-				Very poor porosity
97	7975	3/4	SILT-STONE	slightly sandy, glauconitic very micaceous, carbonaceous dolomitic.	-	dark grey	mod	-	-	-	40			-					-				Very poor porosity
98	7960	½	SILT-STONE	micaceous, slightly sandy, argillaceous dolomitic.	-	dark grey	mod to well	-	-	-	30			-					-				Very poor porosity
99	7945	3/4	SILT-STONE	very sandy, micaceous, argillaceous, slightly carbonaceous, dolomitic.	-	medium grey	mod to well	very fine to fine Sand-stone	good	sa -a	20			-					-				Very poor porosity
100	7930	3/4	SILT-STONE	As above, less sandy, dolomitic.	-	medium grey	"	"	"	"	30			-					-				
101	7288	1	SILT-STONE	very argillaceous, micaceous, trace carbonaceous, dolomitic	-	medium grey	firm to sticky	-	-	-	30			-					-				Very poor porosity becoming very clayey.

FORM R 257 3/72

ATT 30 REC 29
DATE 18.12.77
IES RUN NO 4 SWC RUN NO 4

ESSO AUSTRALIA LTD.
SIDEWALL CORE DESCRIPTIONS

WELL FLOUNDER #6 SIDETRACK
GEOLOGIST D.O. ROZARIO/KJELLGREN
SERVICE CO SCHLUMBERGER

NO. 1a	DEPTH 1	REC 2	ROCK TYPE 3	MODIFIERS 4	CAL 5	COLOR 6	INDUR DEG 7	GRAIN SIZE 8	SRTG 9	RND 10	DISS CLAY 11	STAIN 12	FLOURESCENCE % RK	FLOURESCENCE DISTR 14	FLOURESCENCE INTEN 15	FLOURESCENCE COLOR 16	CUT FLUOR. INTEN 17	CUT FLUOR. COLOR 18	CUT RESIDUE QUAN 19	CUT RESIDUE COLOR 20	SHOW 21	PROB PROD 22	REMARKS - GAS 23
102	7142	1	SILT-STONE & CLAY-STONE	very argillaceous trace carbonaceous, dolomitic		medium grey	firm	-	-	-	50			-						-			Very poor porosit
103	6410	1	SILT-STONE	very argillaceous dolomitic, micaceous.		medium grey	firm to sticky	-	-	-	50			-						-			Very poor porosit

FORM R 257 3/72

FLOUNDER-6
SIDEWALL CORE DESCRIPTIONS

SWC NO.	DEPTH	RECOVERED	DESCRIPTION
1	2925	1¼"	Calcareous Claystone - light grey to light green grey, clay to silt, firm, minor mica, minor vein like finely disseminated pyrite no fissility, very calcareous, gas odour.
2	2860	1¼"	Calcareous Siltstone - light grey, clay to silt grain size, subangular grains, firm, abundant glauconite - up to 0.5mm, minor mica, gaseous odour.
3	2800	1	Calcareous Siltstone - light grey, clay to silt grain size, subangular to subrounded grains, firm, glauconite, mica, forams - appear to be mainly planktonic, gaseous odour.
4	2769	1¼	Calcarenite - buff to light grey, silty to very fine grains, subangular to subrounded, firm, some glauconite and mica, forams, gas odour, no effective porosity and permeability.
5	2700	1	Calcareous Siltstone - light olive grey, clay to silt, subangular to subrounded, glauconite, clay matrix, mica, forams, gas odour.
6	2625	1 3/4	Calcareous Claystone - light to medium grey, firm to hard, very calcareous, clay grain size, large forams (benthonic) up to 2mm, gas odour.
7	2550	1½	Calcareous Claystone - as above light olive grey
8	2475	1 5/8	As above
9	2400	1 3/4	Calcareous Siltstone - light to medium grey, silty to very fine grain size, firm, forams, clay matrix, gas odour.
10	2332	2"	Calcareous Claystone - light to medium grey, firm to soft, forams, silty, gas odour.
11	2256	1¼	Calcareous Siltstone - light olive grey, clay to silt, subangular to subrounded grains, forams, clay matrix, gas odour.
12	2180	1½	Calcarenite - light olive grey, silty to very fir subangular to subrounded grains, very calcareous firm, forams and mica, gas odour.
13	2114	N/R	Misfire.
14	2044	2	Calcareous Claystone - light to medium olive grey firm to slightly soft, very calcareous, inclusic of forams, mica, glauconite and very fine pyrite gas odour.
15	1974	1 3/4	As above.
16	1902	1 3/4	As above.
17	1832	2	Calcarenite - light olive grey, clay to very fine firm, subangular to subrounded grains, very calcareous, clay matrix forams, mica, glauconite

2/....

FLOUNDER-6
SIDEWALL CORE DESCRIPTIONS

SWC NO.	DEPTH	RECOVERED	DESCRIPTION
17	1832	2	Continued.... gas odour.
18	1762	1½	Calcareous Siltstone - light olive grey, clay to silt, subangular to subrounded grains, firm, very calcareous, clay matrix, forams, mica.
19	1692	2"	Calcareous Siltstone - as above, has speckled appearance due to darker forams in lighter clay matrix.
20	1630	1 3/4	As above
21	1536	1 3/4	Calcarenite - light olive grey, clay to very fine subangular to subrounded equant grains, very calcareous, firm, mica and foram inclusions, gas odour.
22	1475	2"	Calcarenite - as above.
23	1400	2"	Calcarenite - light olive grey, clay subangular to subrounded grains, poorly sorted, very calcareous, forams, mica, fossiliferous debris, strong gas odour - C_1 - 100ppm.
24	1342	2¼	Calcarenite - as above, strong gas odour, quite granular, very low permeability.
25	1256	1 3/8	Calcarenite - buff to light olive grey, clay to medium, poorly sorted, subangular to subrounded equant grains, saccharoidal texture, friable strong gas odour C_1 - 1000ppm, very calcareous, fossiliferous grains, good porosity, low permeability.
26	1190	2¼	As above - strong gas odour.
27	1120	2¼	As above - unconsolidated fossiliferous grains weakly bonded by calcareous mudstone.
28	1040	1½	As above
29	970	1 5/8	As above
30	900	1½	As above.

SIDEWALL CORE DESCRIPTIONS

FLOUNDER#6 MORTON

7-77

SWC NO.	DEPTH	RECOVERED	DESCRIPTION
31	6356'	1 3/4"	Marl - medium grey, medium to firm, very calcareous, glauconitic, fossiliferous with globigerina; carbonaceous fragments.
32	6354'	1"	Siltstone - black to brown grey, firm, subangular to subrounded grains, very calcareous, glauconitic, pyritic micaceous.
33	6348'	N/R	NO RECOVERY
34	6340'	1½"	Marl - medium grey, firm to soft, very calcareous, glauconitic, fossiliferous with globigerina ooze, bimodal with grains up to 1-2mm.
35	6335'	3/4"	Marl - as above.
36	6330'	2"	Marl - as above.
37	6320'	1 3/4"	Marl - as above.
38	6270'	1¼"	Shale - dark grey, firm, silty, fissile, very calcareous, glauconitic.
39	6200'	3/4"	Shale - as above.
40	6139'	3/4"	Shale - dark grey, firm, silty, fissile, very calcareous, glauconitic.
41	6056'	N/R	MISFIRE
42	5878'	N/R	MISFIRE
43	5690'	N/R	MISFIRE

FLOUNDER-6
SIDEWALL CORE DESCRIPTIONS

MORTON
30/7/77

NO.	DEPTH	REC	DESCRIPTIONS
44	7970	NR	Lost Bullet.
45	7907	1"	Siltstone - medium to dark grey, firm, quartz, mica, calcareous pyrite, carbonaceous, slightly calcareous, moderately sorted.
46	7845	¼"	Sandstone - light grey, firm, poorly sorted, silty to medium grained, subangular to subrounded, quartz, carbonaceous, pyrite, silty, non calcareous, no fluorescence.
47	7800	½"	Sandstone - light grey, firm, granule to fine grained poorly sorted, subangular to rounded, quartz, pyrite, slightly calcareous, no fluorescence.
48	7750	½"	Sandstone - light brown, firm to soft, granule to very fine, silty to clayey matrix, subangular to rounded, moderately calcareous, possibly oxidised matrix though more likely drilling mud invasion, no fluorescence.
49	7707	½"	Silty Sandstone - medium grey, firm to soft, granule to silt sized, poorly sorted, subangular to rounded, slightly calcareous.
50	7666	½"	Siltstone - medium to dark grey, firm, silty, well sorted, quartz, carbonaceous, pyrite, slightly calcareou carbonaceous fragments.
51	7600	½"	Siltstone - interbedded with Sandstone. Siltstone dark grey to black, fissile, firm, very carbonaceous, quartz, pyrite slightly calcareous interbedded with Sandstone, light grey, firm to soft, very fine to moderately sorted, quartz, pyrite, silty, slightly calcareous, no fluorescence.
52	7525	½"	Siltstone - firm, dark grey, silty to well sorted, subangular to subrounded quartz, carbonaceous, pyrite.
53	7457	½"	Siltstone - medium to dark grey, firm, silty, well sorted, subangular to subrounded, quartz, carbonaceous, pyrite.
54	7426	½"	Siltstone - medium grey, firm, silty, well sorted, subangular to subrounded, quartz, carbonaceous, pyrite, mica.
55	7413	¾"	Sandstone - light grey, firm, very coarse to very fine, poorly sorted, quartz, silty, carbonaceous, sub-angular to rounded, no fluorescence, very dirty sandstor
56	7402	1¼"	Sandstone and interbedded fine sandstone, and Siltstone. Sandstone - light grey, firm, very fine to medium, poorly to moderately sorted, subangular to subrounded, quartz, pyrite, carbonaceous, slightly calcareous, Siltstone, dark grey, firm, carbonaceous, mica, quartz, laminae 1-2mm thick, no fluorescence.
57	7376	NR	Lost Bullet.
58	7294	NR	Lost Bullet.
59	7261	1"	Sandstone - light grey, firm to soft, very fine to

FLOUNDER-6
SIDEWALL CORE DESCRIPTIONS

MORTON
30/7/77

NO.	DEPTH	REC	DESCRIPTIONS
59	7261	1"	Continued.... coarse grained, poorly to moderately sorted, subangular to rounded, quartz, glauconite, carbonaceous, pyrite, slightly calcareous, no fluorescence.
60	7186	3/4"	Sandstone - light grey, firm, very fine to medium, moderately sorted, subangular to rounded, quartz, carbonaceous, glauconite pyrite, no fluorescence.
61	7145	NR	
62	7091	1½"	Silty Sandstone - dark grey, firm, very coarse to silty, poorly sorted, subangular to rounded, quartz, silty, pyrite, carbonaceous, mica.
63	7029	1¼"	Siltstone - medium to dark grey, firm, moderately well sorted, subangular to subrounded, quartz, mica, pyrite, two silts are present, one a dirty dark grey in contact with a cleaner light grey silty, sharp contacts.
64	6949	1"	Sandstone - light grey, firm to soft, fine to medium grained, moderately sorted, subangular to rounded, quart carbonaceous, silty, pyrite, thin (2mm) coal laminae, no fluorescence.
65	6937	1¼"	Shale - dark brown to dark grey, firm, moderately sorted, silty in patches, pyrite, quartz, very calcareou carbonaceous.
66	6876	3/4"	Shale - as above, in pieces and may be cavings.
67	6805	1"	Sandstone - light grey, unconsolidated, fine to coarse, moderate to poorly sorted, subangular to rounded, quartz mica, carbonaceous, slightly calcareous, no fluorescence
68	6750	1 3/4"	Shale - dark grey, firm, thin silt laminae, well sorte carbonaceous, very calcareous.
69	6690	1"	Shale - as above, moderately calcareous.
70	6623	1½"	Shale - dark grey as above, very calcareous.
71	6546	2"	Siltstone - dark grey, firm, silty, well sorted, quart mica, pyrite, glauconite, carbonaceous, very calcareous.
72	6475	1½"	Siltstone - medium to dark grey, firm, silt, quartz, pyrite, well sorted, very calcareous.
73	6406	NR	

FLOUNDER 6 SIDETRACK

SIDEWALL CORE DESCRIPTIONS

DO ROZARIO/KJELLGREN

23/12/77

WC No.	DEPTH	RECOVERED	DESCRIPTION
74	8584'	½"	SILTSTONE: medium grey, moderately indurated, very argillaceous, moderately carbonaceous, slightly micaceous, and calcareous; no fluorescence or cut.
75	8546'	½"	SILTSTONE: medium grey, moderately indurated, laminated, very sandy consisting of very fine grained quartz, very argillaceous, moderately carbonaceous, trace of mica; no fluorescence or cut.
76	8542'	3/4"	DOLOMITE: cream to light brown, poorly indurated, fine to medium grained, angular to subrounded, moderately carbonaceou as carbonaceous laminae; no fluorescence or cut.
77	8444'	½"	SILTSTONE: alternate light and medium grey laminae, moderate ly calcareous light grey laminae, moderately indurated, slightly carbonaceous and micaceous, dolomitic, very argillaceous; no fluorescence or cut.
78	8390'	½"	CLAYSTONE: dark grey, poorly indurated, finely disseminated carbonaceous matter, very micaceous; no fluorescence or cut.
79	8338	1	SANDSTONE: light grey, fine to medium grained with some coarse quartz grains, clear, angular to subangular, moderatel sorted, poorly indurated, white clay matrix, dolomitic, slightly carbonaceous and micaceous, few grains of glauconite even low intensity pale green fluorescence and moderate pale blue cut, slight hydrocarbon odour, trace of light brown oil (?).
80	8283'	-	No recovery.
81	8243'	3/4"	SANDSTONE: mottled light and dark grey, very fine to very coarse quartz sand with rare granules, clear to milky quartz. subangular to subrounded, very poorly sorted, moderately indurated, very argillaceous and pyritic in part, slightly carbonaceous, micaceous and dolomitic, traces of glauconite, patchy low intensity pale green fluorescence, slight pale blue cut.
82	8228'	½"	SANDSTONE: medium grey, clear to milky quartz grains, subangular to subrounded, very fine to medium grained, poorly sorted, poorly indurated, light grey silty and argillaceous matrix, slightly pyritic and dolomitic, traces of mica, carbonaceous matter and glauconite; no fluorescence or cut.
83	8148'	3/4"	SANDSTONE: light grey, clear to milky quartz, subangular to subrounded, fine to medium grained, moderately sorted, friable, dolomitic, traces of carbonaceous matter and glauconite, trace of mica and pyrite; fair porosity; weak very dull white to yellow fluorescence, no visible cut.
84	8143'	3/4"	SANDSTONE: medium to dark grey, very fine grained with some coarse quartz, subangular to subrounded, poorly indurated, very argillaceous and dolomitic, moderately glauconitic and micaceous; no fluorescence or cut.
85	8137'	3/4"	SANDSTONE: medium grey, very fine grained, angular, poorly indurated, poorly sorted, very argillaceous and dolomitic, slightly glauconitic, pyritic, micaceous and carbonaceous, no fluorescence or cut.
86	8132'	½"	SILTSTONE: dark grey, laminated in part, moderately indura-

2/....

FLOUNDER 6 SIDETRACK

SIDEWALL CORE DESCRIPTIONS — DO ROZARIO/KJELLGREN

23/12/77

WC No.	DEPTH	RECOVERED	DESCRIPTION
86	8132'	½"	Continued/.... ted, very argillaceous and micaceous, slightly carbonaceous and pyritic, glauconitic; no fluorescence or cut.
87	8127'	½"	SILTSTONE: alternate light and medium grey, laminated in part, moderately indurated, very glauconitic, micaceous, pyritic and argillaceous, slightly carbonaceous, very dolomitic; no fluorescence or cut.
88	8110'	½"	SILTSTONE: dark grey, moderately well indurated, very micaceous, argillaceous, pyritic, slightly glauconitic and carbonaceous; no fluorescence, slow dull blue to yellow cut with a thin dull yellow white residue.
89	8095'	1	INTERLAMINATED SILTSTONE & SHALE: medium grey and black, moderately indurated and fissile, very micaceous, pyritic and carbonaceous, traces of glauconite, dolomitic; the shale is carbonaceous; no fluorescence, very weak dull yellow crush cut.
90	8080'	¾"	SILTSTONE: light to medium grey, weakly laminated, moderatei indurated, very dolomitic, argillaceous, moderately micaceous pyritic and carbonaceous, traces of glauconite, no fluorescence, very weak dull yellow crush cut.
91	8065'	¾"	SILTSTONE: dark grey, moderately well indurated, very glauconitic and micaceous, argillaceous, pyritic, dolomitic, traces of carbonaceous matter, no fluorescence or cut.
92	8050'	½"	SILTSTONE: dark grey, moderately well indurated, argillaceou moderately micaceous and pyritic, slightly carbonaceous traces of glauconite, dolomitic; no fluorescence or cut.
93	8035'	¾"	SILTSTONE: as above, with only traces of carbonaceous matter
94	8020'	¾"	SILTSTONE: partly laminated medium to dark grey, moderately indurated, argillaceous, very glauconitic and micaceous, slightly carbonaceous, traces of pyrite, dolomitic, no fluorescence or cut.
95	8005'	¾"	SILTSTONE: medium brown to grey, poorly indurated, argillaceous, moderately micaceous, slightly carbonaceous and glauconitic, very dolomitic; no fluorescence or cut.
96	7990'	¾"	SILTSTONE: medium grey, moderately indurated, argillaceous, moderately micaceous and carbonaceous, pyritic with traces of glauconite, dolomitic; no fluorescence or cut.
97	7975'	¾"	SILTSTONE AND SHALE INTERLAMINATED: dark grey and black, moderately well indurated to fissile, argillaceous, moderatel micaceous and carbonaceous with carbonaceous laminae slightly pyritic, traces of glauconite, dolomitic; no fluorescence or cut.
98	7960'	½"	SILTSTONE: dark grey, moderately indurated, argillaceous, very micaceous, moderately carbonaceous, traces of pyrite and glauconite, dolomitic; no fluorescence or cut.
99	7945'	¾"	SILTSTONE: medium grey, as above.
100	7930'	¾"	SILTSTONE: medium grey, as above.

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FLOUNDER 6 SIDETRACK

SIDEWALL CORE DESCRIPTIONS

DO ROZARIO/KJELLGREN

23/12/77

WC No.	DEPTH	RECOVERED	DESCRIPTION
101	7288'	1	SILSTONE: dark grey, weakly laminated, moderately well indurated, very argillaceous and micaceous, moderately carbonaceous, traces of pyrite and glauconite, dolomitic; no fluorescence or cut.
102	7142'	1	SILTSTONE AND CLAYSTONE INTERLAMINATED: dark grey, well indurated, subfissile siltstone, claystone poorly indurated moderately micaceous and carbonaceous, traces of pyrite and glauconite, dolomitic; no fluorescence or cut.
103	6410'	1	SILTSTONE: dark grey, moderately indurated, very argillaceou and micaceous, slightly carbonaceous and pyritic, traces of glauconite, dolomitic; no fluorescence or cut.

APPENDIX 4

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 4

PALYNOLOGICAL ANALYSIS OF

FLOUNDER-6, GIPPSLAND BASIN

by

A.D. Partridge

PALYNOLOGICAL ANALYSIS

OF

FLOUNDER-6 AND FLOUNDER-6 (SIDETRACK)

GIPPSLAND BASIN

by

ALAN D. PARTRIDGE

ESSO AUSTRALIA LTD.

PALAEONTOLOGY REPORT 1978/6 MARCH 31, 1978

INTRODUCTION

Forty-one sidewall core and seven core samples were examined in Flounder-6 and Flounder-6A. The zones recognised in the well are summarised below. Details of all samples examined are given on Table-1 while the confidence ratings for the zone intervals are given on the accompanying Data Sheet.

SUMMARY

UNIT	SPORE-POLLEN ZONES	DINOFLAGELLATE ZONES
Lakes Entrance Formation	P. tuberculatus 6340 feet	
UNCONFORMITY AT 6341 FEET		
Flounder Formation	P. asperopolus 6354 to 7091 feet	W. edwardsii 6475 to 6546 feet
6341 - 7424 feet		W. thompsonae 6876 to 7091 feet
	Upper M. diversus 7142 to 7413 feet	W. ornata 7288 feet
UNCONFORMITY AT 7424 FEET		
Latrobe Coarse Clastics	Upper L. balmei 7426 feet	
7424 - 7878 feet	Lower L. balmei 7600 to 7845 feet	
Upper Flounder Field Seal	Lower L. balmei 7907 to 8065 feet	T. evittii 8033 to 8065 feet
7878 - 8082 feet		
Lower Flounder Field Seal	T. longus 8095 to 8145 feet	D. druggii 8095 feet
8082 - 8145 feet		
Latrobe Coarse Clastics	T. longus 8145 to 8584 feet	D. druggii 8175 to 8444 feet
8145 - 8601 feet		

Flounder-6, T.D. = 8214 feet

Flounder-6A, T.D.= 8601 feet

GEOLOGICAL COMMENTS

1. Flounder Formation

The top of the Flounder Formation can be picked from the electric logs at 6341 feet. This is directly below the sidewall core at 6340 feet containing a good *P. tuberculatus* Zone assemblage with both spore-pollen and dinoflagellate zone species.

The base of the Flounder Formation lies between sidewall cores at 7413 and 7426 feet, which is not reflected by any marked log break.

The Flounder Formation itself is 1083 feet thick and can be subdivided into two spore-pollen zones and three dinoflagellate zones. Subtle lithological and electric log character changes can be related to the threefold dinoflagellate subdivision of the section.

The most apparent subdivision is the calcareous mudstone and siltstone unit between 6340 and 6800 feet which may be referred entirely to the *W. edwardsii* Zone even though the nominated species only occurs in the two samples at the top of this interval. The underlying unit would correspond to the interval of the *W. thompsonae* Zone between 6800 and 7100 feet. This corresponds to the highest occurrence of sands, interbedded with mudstone and siltstone in the Flounder Formation. The break at 6800 feet between the above two units may have some regional importance. It corresponds for example to the time of deep water sand emplacement in the Gurnard Formation in Kingfish-7 (see Partridge 1977).

The lowest unit between 7100 and 7426 feet corresponds to the Upper *M. diversus*. It contains dinoflagellates throughout but only the sample at 7288 feet can be referred to a specific dinoflagellate zone. This is the *W. ornata* Zone. There is not much apparent lithological distinction between the middle and lower units except for an increase in the percentage of sand in the lower unit.

2. *L. balmei* Zone Coal Measures

The division of the *L. balmei* Zone into Upper and Lower subzones is not clearly defined in Flounder-6. Considering the most recent revision of Stonefish-1 (Partridge 1976) it is probable that in the Flounder Field area the Flounder-Tuna Channel has cut down into the Lower *L. balmei* Zone. The records of the Upper *L. balmei* Zone given on data sheets for the other Flounder wells are undoubtedly wrong. Unfortunately revision of these wells is beyond the scope of this report. The source of error is that the base of the Upper *L. balmei* Zone is recognised on two different parameters. One is the first appearances of spore-pollen such as *Cyathidites gigantis* and *Banksieaeidites elongatus*. The alternative is the first appearance of the dinoflagellate *Wetzeliella homomorpha*. The difficulty lies in that the first occurrences of these forms is not always concurrent, and secondly in the Flounder wells there is difficulty in distinguishing *W. homomorpha* from various undescribed species of *Spinidinium*. These two dinoflagellate types seem to represent an evolving plexus in which speciation is difficult.

3. Flounder Field Seal

The shale-siltstone seal to the Flounder T.1 reservoir sands can be divided into two units based on palynology, as follows:

Unit A:	7878 to 8082 feet	Lower *L. balmei* Zone
Unit B:	8082 to 8145 feet	*T. longus* Zone

Although there is as yet no clearly defined lithological distinction between these units this subdivision is important as it corresponds to the Cretaceous-Tertiary boundary (as well as a major palynological zone boundary) and is elsewhere in the basin recognised as a major seismic sequence boundary.

Dinoflagellates occur throughout both units attesting to their deposition in an open marine environment. The good sidewall core sampling in Flounder-6A compared to the earlier Flounder wells has for the first time allowed the documentation of the occurrence of the Trithyrodinium evittii Dinoflagellate Zone within the Flounder Field Seal. That this zone should occur in the shale seal has been suspected for some time. The occurrence of the Deflandrea druggii Dinoflagellate Zone within the basal part of the shale seal has been documented previously from other Flounder wells.

DISCUSSION OF ZONES

Species identified from the samples examined are given on the eight attached distribution sheets. The basis for choosing the zone intervals is discussed in the following:

Tricolpites longus Zone 8095 to 8584 feet

Flounder-6 and -6A reached total depths while still within the T. longus Zone. This is based on the presence of the spore Stereisporites (Tripunctisporis) punctatus at 8584 feet in the deepest sidewall core and the dinoflagellate Deflandrea druggii at 8444 feet. Other species identified characteristic of the T. longus Zone included Quadraplanus brossus, Proteacidites gemmatus, P. otwayensis, P. palisadus, P. reticuloconcavus and the dinoflagellate Deflandrea corunata.

The diversity within the zone is quite high. This is not apparent from the distribution charts however, as the samples were not studied in detail.

The top of the T. longus Zone is identified as lying within the lower part of the Flounder Field seal.

Lygistepollenites balmei Zone 7426 to 8065 feet

The base of the L. balmei Zone is recognised by the extinction of the characteristic spore and pollen species of the underlying T. longus Zone, and the incoming of the characteristic species of the Trithyrodinium evittii Dinoflagellate Zone.

The top of the L. balmei Zone is identified on the highest mutual occurrence of Lygistepollenites balmei, Australopollis obscurus, Latrobosporites amplus and L. ohaiensis, all in the sample at 7426 feet. This sample is the only one that can possibly be referred to the Upper L. balmei subzone based on the abundant occurrence of a species of Spinidinium transitional to Wetzeliella homomorpha.

Three samples at the base of the L. balmei Zone (from 8033, 8050 and 8065 feet) can be referred to the Trithyrodinium evittii Dinoflagellate Zone based on common occurrence of the nominated species. Important accessory species are Deflandrea speciosus, Areoligera senonensis and common Hystrichosphaeridium tubiferum.

Other dinoflagellates occur in samples throughout the L. balmei Zone (see distribution charts) but are not diagnostic on any particular zone.

Upper Malvacepollis diversus Zone 7142 to 7413 feet

As is usual, the finer grained lithologies sampled in the Flounder Formation gave rich yields of diverse assemblages. The sandstone lithologies gave generally poor assemblages and sometimes could only be defined as indeterminate. In the sidewall core at 7413 feet, no species that would restrict the sample to the Upper M. diversus Zone were identified. However, there is a marked change in preservation of the fossils compared to the underlying L. balmei Zone, and the dominance of the pollen H. harrisii precludes an age older than Lower M. diversus Zone. An Upper M. diversus age for the basal sediment in the channel is preferred from comparison with Flounder-1 and -2, the closest adjacent wells.

The other samples clearly belong to the Upper M. diversus Zone because of common occurrence of Proteacidites pachypolus and Myrtaceidites tenuis. This is further supported by the dinoflagellates, especially the occurrence of Wetzeliella ornata at 7288 feet.

Proteacidites asperopolus Zone 6354 to 7091 feet

The base of the P. asperopolus Zone is normally taken at the first appearances of such species as Santalumidites cainozoicus, Conbaculites apiculatus and Proteacidites asperopolus. In this well there is a little scatter in the first appearance of these species which is reflecting the detail in which the individual samples have been worked. For convenience therefore the base of the zone is placed at the sample containing the first appearance of the dinoflagellate Wetzeliella thompsonae. Other features characteristic of the P. asperopolus Zone are common occurrence of Proteacidites pachypolus and Myrtaceidites tenuis and consistent presence of Triporopollenites helosus. The top of this zone and top of Flounder Formation is readily recognised by marked change in style of preservation and diversity of samples across the unconformity with the overlying Lakes Entrance Formation. That the top of the Flounder Formation is still within the P. asperopolus Zone is confirmed by occurrence in the highest sample, at 6354 feet, of the species Myrtaceidites tenuis, Conbaculites apiculatus and the common occurrence of the dinoflagellate Deflandrea flounderensis.

Proteacidites tuberculatus Zone 6340 feet

This zone is recognised by the occurrence of three key spores species Cyatheidites annulatus, Foveotriletes crater and F. lucunosus in the sample at 6340 feet.

The sidewall core at 6356 feet also obviously belongs to the P. tuberculatus Zone even though it was not documented in detail. It must either be misshot or mislabelled as it is obviously below the E-log pick for the top of the Flounder Formation.

REFERENCES

PARTRIDGE, A.D., 1976, Palynology of cuttings from Stonefish-1, Gippsland Basin. Esso Australia Ltd. Palaeo. Rept. 1976/1.

PARTRIDGE, A.D., 1977, Palynological analysis Kingfish-7, Gippsland Basin. Esso Australia Ltd., Palaeo. Rept. 1977/25.

SAMPLE	DEPTH (in feet)	ZONE	AGE	CONFIDENCE RATING	YIELD	DIVERSITY	COMMENTS
SWC 34	6340	P. tuberculatus	Miocene	0	Moderate	Moderate	Reworked Early Eocene present
SWC 32	6354	P. asperopolus	Early Eocene	0	High	High	Top of Flounder Formation
SWC 31	6356	P. tuberculatus	Miocene	1	Moderate	Moderate	SWC miss-shot or miss-labelled
SWC 72	6475	P. asperopolus	Early Eocene	0	High	High	Top occurrence W. edwardsii
SWC 71	6546	"	"	0	High	Moderate	W. edwardsii present
SWC 70	6625	"	"	0	High	High	
SWC 69	6690	"	"	0	High	Moderate	
SWC 68	6750	"	"	0	High	High	
SWC 67	6805	Barren of palynomorphs		-	-	-	Coarse sandstone lithology
SWC 66	6876	P. asperopolus	Early Eocene	0	High	High	Top occurrence W. thompsonae
SWC 65	6937	"	"	0	High	High	W. thompsonae present
SWC 64	6949	"	"	0	Moderate	Moderate	W. thompsonae present
SWC 63	7029	"	"	0	High	High	W. thompsonae present
SWC 62	7091	"	"	0	High	High	Lowest occurrence W. thompsonae
SWC 102	7142	Upper M. diversus	Early Eocene	2	Moderate	Moderate	
SWC 60	7186	"	"	2	Low	Low	Fine sandstone lithology
SWC 59	7261	Indeterminant	"	-	Very low	Very low	Sandstone lithology
SWC 101	7288	Upper M. diversus	Early Eocene	0	High	High	Occurrence of W. ornata
SWC 56	7402	"	"	1	High	High	
SWC 55	7413	"	"	2	Very low	Very low	Base of Flounder Formation
SWC 54	7426	Upper L. balmei	Paleocene	1	High	Moderate	
SWC 53	7457	L. balmei	"	1	Moderate	Moderate	
SWC 51	7600	Lower L. balmei	"	1	High	Moderate	Presence Palaeoperidinum pyrophorum
SWC 50	7666	Lower L. balmei	"	1	Moderate	Low	
SWC 49	7707	"	"	1	Moderate	Moderate	
SWC 46	7845	"	"	1	Low	Moderate	
SWC 45	7907	"	"	1	Moderate	Low	
SWC 100	7930	"	"	1	Moderate	Moderate	
SWC 99	7945	"	"	1	Moderate	Moderate	
SWC 98	7960	"	"	1	Moderate	Moderate	
SWC 97	7975	"	"	1	Moderate	Moderate	
SWC 96	7990	"	"	1	Moderate	Low	
SWC 94	8020	"	"	1	Moderate	Moderate	
SWC 93	8033	"	"	0	High	Moderate	Top occurrence T. evittii
SWC 92	8050	"	"	0	Moderate	Moderate	T. evittii present
SWC 91	8065	"	"	0	Moderate	Moderate	Lowest occurrence T. evittii
SWC 90	8080	Indeterminant	-	-	Moderate	Low	
SWC 89	8095	T. longus	Maestrichtian	1	Moderate	Low	Top occurrence D. druggii
Core - 2	8164	"	"	1	Moderate	Moderate	
Core - 3	8175	"	"	1	Low	Low	D. druggii present
Core - 3	8199	"	"	1	Moderate	Moderate	
Core - 4	8141	"	"	2	Very Low	Very Low	
Core - 4	8144	"	"	1	Moderate	Low	
Core - 4	8152	"	"	1	Low	Low	
Core - 4	8157	"	"	1	Moderate	Moderate	
SWC 77	8444	"	"	0	Moderate	Moderate	D. druggii present
SWC 75	8546	"	"	1	Low	Moderate	
SWC 74	8584	"	"	2	Low	Low	

N.B. Samples underlined are from Flounder 6A (sidetrack)

TABLE - 1: SUMMARY OF PALYNOLOGICAL ANALYSES, FLOUNDER - 6 AND FLOUNDER - 6A, GIPPSLAND BASIN

BASIN GIPPSLAND DATE March 17, 1978.

WELL NAME FLOUNDER-6 AND -6A ELEVATION K.B. +83 feet

AGE	PALYNOLOGIC ZONES	HIGHEST DATA					LOWEST DATA				
		Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time	Preferred Depth	Rtg.	Alternate Depth	Rtg.	2 way time
OLIG-MIO.	P. tuberculatus	6340	0				6340	0			
EOCENE	U. N. asperus										
	M. N. asperus										
	L. N. asperus										
	P. asperopolus	6354	0				7091	0			
	U. M. diversus	7142	2	7288	0		7413	2	7402	1	
	M. M. diversus										
	L. M. diversus										
PALEOCENE	U. L. balmei	7426	1				7426	1			
	L. L. balmei	7600	1				8065*	0			
	T. longus	8095*	1				8584*	2	8546*	1	
LATE CRETACEOUS	T. lilliei										
	N. senectus										
	C. trip./T.pach.										
	C. distocarin.										
	T. pannosus										
EARLY CRETACEOUS											
PRE-CRETACEOUS											

COMMENTS: *These depths are for Flounder-6A.

W.edwardsii Zone 6475 to 6546 ft; W. thompsonae Zone 6876 to 7091 ft.

W. ornata Zone 7288 ft.

T. evittii Zone 8033 to 8065 ft; D. druggii Zone 8095 to 8444 ft.

RATINGS:
0; SWC or CORE, EXCELLENT CONFIDENCE, assemblage with zone species of spores, pollen and microplankton.
1; SWC or CORE, GOOD CONFIDENCE, assemblage with zone species of spores and pollen or microplankton.
2; SWC or CORE, POOR CONFIDENCE, assemblage with non-diagnostic spores, pollen and/or microplankton.
3; CUTTINGS, FAIR CONFIDENCE, assemblage with zone species of either spore and pollen or microplankton, or both.
4; CUTTINGS, NO CONFIDENCE, assemblage with non-diagnostic spores, pollen and/or microplankton.

NOTE: If a sample cannot be assigned to one particular zone, then no entry should be made. Also, if an entry is given a 3 or 4 confidence rating, an alternate depth with a better confidence rating should be entered, if possible.

DATA RECORDED BY: A.D. Partridge DATE March 17, 1978.

DATA REVISED BY: _____ DATE _____

FORM No R 315 12/72

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 1 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DEPTHS / PALYNOMORPHS	6340	6354	6356	6475	6546	6625	6690	6750	6805	6876	6937	6949	7029	7091	7142	7186	7261	7288	7402	7413	7426	7457	7600	7666	7707	7845	7907	7950
A. qualumis																													
A. acutullus						/				/								/										
A. luteoides																													
A. oculatus																													
A. sectus																													
A. triplaxis																													
A. obscurus															/			/			/	A			/				
B. disconformis				/				/				/									/	/							
B. arcuatus							/																						
B. elongatus					/																								
B. mutabilis																													
B. otwayensis																													
B. elegansiformis						/	/							/															
B. trigonalis																													
B. verrucosus						/																							
B. bombaxoides																													
B. emaciatus		/				/								/						/									
C. bullatus																						/							
C. heskermensis						/																							
C. horrendus																													
C. meleosus																													
C. apiculatus		/			A	/		A		A	/	/	/					/											
C. leptos																													
C. striatus																													
C. vanraadshoovenii														/	/														
C. orthoteichus/major						/	/	/			/	/	/	/					/										
C. annulatus	/		/																										
C. gigantis																													
C. splendens	RW?			/	/	/	/	/		/	/		/	/	/			/	/		/	A	/		/	/	/	/	
D. australiensis																										/			
D. granulatus	/				/	/	/	/		/	/			/	/	/		/	/		/	/	/		/		/		
D. tuberculatus		/		/		/	/			/	/		/	/	/													
D. delicatus				/			/				/																		
D. semilunatus																													
E. notensis										/															/				
E. crassiexinus		/																											
F. balteus																		/											
F. crater	/																												
F. lucunosus	/																												
F. palaequetrus																													
G. edwardsii																													
G. rudata																													
G. divaricatus																													
G. gestus																													
G. catathus																									/				
G. cranwellae																													
G. wahoensis																													
G. bassensis																													
G. nebulosus																													
H. harrisii	/	/		/		/	/	/		/	/	/	/	/	/	/		/	/	A									
H. astrus						/						/																	
H. elliottii	/	/											/									/	/				/	/	
I. anguloclavatus											/																		
I. antipodus																													
I. notabilis				/			/	/		/				/															
I. gremius							/	/																					
I. irregularis	/																						/						
J. peiratus																													
K. waterbolkii	/					/		/																					
L. amplus																				/	/	/	/	/	/			/	
L. crassus						/														/	/				/	/		/	
L. ohaiensis																				/					/				
L. balmii																													
L. lanceolatus																													
L. balmei															RW					A	A		A	A				A	
L. florinii	/	/		/	/	/	/	/		/	/	/	/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	
M. diversus					/	/	/	/			/		/	/	/			/	/	/									
M. duratus																													
M. grandis																													
M. perimagnus																		/											

*C= core; S= sidewall core; T= cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 2 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	C	C	C	C	C	C	C	S	S	S
DEPTHS / PALYNOMORPHS	7945	7960	7975	7990	8020	8035	8050	8065	8080	8095	8141	8144	8152	8157	8164	8175	8199	8444	8546	8584
A. qualumis																				
A. acutullus																				
A. luteoides																				
A. oculatus																				
A. sectus																				
A. triplaxis																				
A. obscurus																				
B. disconformis			\							\										
B. arcuatus																				
B. elongatus																				
B. mutabilis																				
B. otwayensis																				
B. elegansiformis																				
B. trigonalis																		\		
B. verrucosus																				
B. bombaxoides																				
B. emaciatus																				
C. bullatus						\														
C. heskermensis																				
C. horrendus																				
C. meleosus																				
C. apiculatus																				
C. leptos																				
C. striatus																				
C. vanraadshoovenii																				
C. orthoteichus/major																				
C. annulatus																				
C. gigantis																				
C. splendens	\			\		\	\	\										\		
D. australiensis																				
D. granulatus		\	\		\	\		\	\											
D. tuberculatus																				
D. delicatus																				
D. semilunatus																				
E. notensis																				
E. crassiexinus																				
F. balteus																				
F. crater																				
F. lucunosus																				
F. palaequetrus																				
G. edwardsii																				
G. rudata			\					\		\		\		A	A		A	\		
G. divaricatus																				
G. gestus																				
G. catathus																				
G. cranwellae																				
G. wahooensis								\												
G. bassensis																				
G. nebulosus																				
H. harrisii																				
H. astrus																				
H. elliottii	A	\			\	\	\	\												
I. anguloclavatus																				
I. antipodus						\														
I. notabilis																				
I. gremius																				
I. irregularis											\									
J. peiratus																				
K. waterbolkii													\							
L. amplus								\										\		
L. crassus	\		\	\	\	\						\		\						
L. ohaiensis										\		\		\				\	A	
L. bainii																				
L. lanceolatus																				
L. balmei		A	\	A	A	A	A	\	\			\	\	\	\	\	\			
L. florinii	\	\	\	\				\	\	\			\	\			\			
M. diversus																				
M. duratus																				
M. grandis																				
M. perimagnus																				

*C = core; S = sidewall core; T = cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 3 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DEPTHS / PALYNOMORPHS	6340	6354	6356	6475	6546	6625	6690	6750	6805	6876	6937	6949	7029	7091	7142	7186	7261	7288	7402	7413	7426	7457	7600	7666	7707	7845	7907	7930
M. subtilis																												
M. ornamentalis																												
M. hypolaenoides																												
M. homeopunctatus																												
M. parvus/mesonesus																												
M. tenuis											A								A									
M. verrucosus																												
M. australis																												
N. asperus																												
N. asperoides																												
N. brachyspinulosus																												
N. deminutus																												
N. emarcidus/heterus																												
N. endurus																												
N. falcatus																												
N. flemingii																												
N. goniatus																												
N. senectus																												
N. vansteenisii																												
O. senitosa																												
P. ochesis																												
P. catastus																												
P. demarcatus																												
P. magnus																												
P. polyoratus																												
P. vesicus																												
P. densus																												
P. velosus																												
P. morganii/jubatus																												
P. mawsonii																												
P. reticulosaccatus																												
P. verrucosus																												
P. crescentis																												
P. esobalteus																												
P. langstonii																												
P. reticulatus																												
P. simplex																												
P. varus																												
P. adenanthoides (Prot.)																												
P. alveolatus																												
P. amolosexinus																												
P. angulatus																												
P. annularis																												
P. asperopolus	RW																											
P. biornatus																												
P. clarus																												
P. cleinei																												
P. confragosus																												
P. crassis																												
P. delicatus																												
P. formosus																												
P. grandis																												
P. grevillaensis																												
P. incurvatus																												
P. intricatus																												
P. kopiensis																												
P. lapis																												
P. latrobensis																												
P. leightonii																												
P. obesolabrus																												
P. obscurus																												
P. ornatus																												
P. otwayensis																												
P. pachypolus			A		A	A	A		A	A	A			A			A											
P. palisadus																												
P. parvus																												
P. plemmelus																												
P. prodigus																												
P. pseudomoides																									A	?		
P. recavus																												

*C = core; S = sidewall core; T = cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 4 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	C	C	C	C	C	C	C	S	S	S									
DEPTHS / PALYNOMORPHS	7945	7960	7975	7990	8020	8035	8050	8065	8080	8095	8141	8144	8152	8157	8164	8175	8199	8444	8546	8584									
M. subtilis																													
M. ornamentalis																													
M. hypolaenoides																													
M. homeopunctatus																													
M. parvus/mesonesus																													
M. tenuis																													
M. verrucosus																													
M. australis																													
N. asperus																													
N. asperoides																													
N. brachyspinulosus																		\											
N. deminutus																													
N. emarcidus/heterus																													
N. endurus	\																												
N. falcatus																													
N. flemingii																													
N. goniatus																													
N. senectus																\													
N. vansteenisii																													
O. sentosa																													
P. ochesis																													
P. catastus																													
P. demarcatus					\																								
P. magnus																													
P. polyoratus		\																											
P. vesicus																													
P. densus						\																							
P. velosus																													
P. morganii/jubatus																													
P. mawsonii	A	A	A	\	\	\	\	\	\	\		\	\	A			\	A	\										
P. reticulosaccatus			\																										
P. verrucosus						\													\										
P. crescentis																													
P. esobalteus																													
P. langstonii																													
P. reticulatus																													
P. simplex																													
P. varus																													
P. adenanthoides (Prot.)	\																												
P. alveolatus																													
P. amolosexinus											A	\																	
P. angulatus																													
P. annularis																													
P. asperopolus																													
P. biornatus																													
P. clarus																													
P. cleinei											\																		
P. contragosus																													
P. crassis																													
P. delicatus																													
P. formosus																													
P. grandis																													
P. grevillaensis																													
P. incurvatus																													
P. intricatus																													
P. kopiensis																													
P. lapis																													
P. latrobensis																													
P. leightonii																													
P. obesolabrus																													
P. obscurus																													
P. ornatus																													
P. otwayensis											\						\												
P. pachypolus																													
P. palisadus																			\										
P. parvus																													
P. plemmelus																													
P. prodigus									\																				
P. pseudonanoides																													
P. recavus																													

*C= core; S= sidewall core; T= cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 5 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DEPTHS / PALYNOMORPHS	6340	6354	6356	6475	6546	6625	6690	6750	6805	6876	6937	6949	7029	7091	7142	7186	7261	7288	7402	7413	7426	7457	7600	7666	7707	7845	7907	7930
P. rectomarginis																												
P. reflexus																												
P. reticulatus																												
P. reticuloconcavus																												
P. reticuloscabratus						/	/			/																		
P. rugulatus																												
P. scitus														/														
P. stipplatus																												
P. tenuiexinus											/	/										/						
P. truncatus																												
P. tuberculatus																												
P. tuberculiformis							/							/				/										
P. tuberculotumulatus														/														
P. xestoformis (Prot.)															/			/										
Q. brossus																												
R. boxatus		/																										
R. stellatus																					/	/						
R. mallatus										/	/		/	/		/		/			/			/				
R. trophus																												
S. cainozoicus		/			/	/	/	/		/	/		/	/				/										
S. rotundus																												
S. digitatoides																												
S. marlinensis																												
S. rarus																												
S. meridianus		/			/		/	/		/	/			/				/										
S. prominatus																												
S. uvatus																												
S. punctatus					/	/		/					/	/				/										
S. regium																												
T. multistrixus (CP4)																								/				
T. textus																												
T. verrucosus																										/	/	/
T. securus																												
T. confessus (C3)																												
T. gillii																					/		/					/
T. incisus												/																
T. longus																												
T. phillipsii							/																					
T. renmarkensis																												
T. sabulosus																												
T. simatus																												
T. thomasii																												
T. waiparaensis																												
T. adelaidensis (CP3)		/				/	/	/		/		/		/	/	/		/										
T. angurium																												
T. delicatus																												
T. geraniodes																												
T. leuros																												
T. lilliei																												
T. marginatus																												
T. moultonii		/								/	/																	
T. paenestriatus	/	/		/		/	/				/	A																
T. retequetrus																												
T. scabratus																												
T. sphaerica							/						/					/										
T. magnificus (P3)																												
T. spinosus																												
T. ambiguus											/								/									
T. chnosus																												
T. helosus				/		/	/	/																				
T. scabratus										/																		
T. sectilis																												
V. attinatus																												
V. cristatus																												
V. kopukuensis		/			/	/	/	/		/	/		/	/				/	/	/								

*C = core; S = sidewall core; T = cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 6 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	C	C	C	C	C	C	C	S	S	S								
DEPTHS / PALYNOMORPHS	7945	7960	7975	7990	8020	8035	8050	8065	8080	8095	8141	8144	8152	8157	8164	8175	8199	8444	8545	8584								
P. rectomarginis																												
P. reflexus																												
P. reticulatus																												
P. reticuloconcavus														\	\													
P. reticuloscabratus																												
P. rugulatus																												
P. scitus																												
P. stipplatus																												
P. tenuiexinus																												
P. truncatus																												
P. tuberculatus																												
P. tuberculiformis																												
P. tuberculotumulatus																												
P. xestoformis (Prot.)																												
Q. brossus																	\		\									
R. boxatus																												
R. stellatus						\																						
R. mallatus	\																											
R. trophus																												
S. cainozoicus																												
S. rotundus																												
S. digitatoides																												
S. marlinensis																												
S. rarus																												
S. meridianus												\																
S. prominatus																												
S. uvatus																												
S. punctatus					\	\														\								
S. regium																												
T. multistrixus (CP4)						\																						
T. textus																												
T. verrucosus	\					\	\	\					\		\													
T. securus													\	\	\													
T. confessus (C3)														\														
T. gillii					\	\								\	\		\											
T. incisus																												
T. longus																												
T. phillipsii		\																										
T. renmarkensis																												
T. sabulosus																												
T. simatus																												
T. thomasii																												
T. waiparaensis																												
T. adelaidensis (CP3)																												
T. angurium																												
T. delicatus																												
T. geraniodes																												
T. leuros																												
T. lilliei														\			\											
T. marginatus																												
T. moultonii																												
T. paenestriatus																												
T. retequetrus																												
T. scabratus																												
T. sphaerica																												
T. magnificus (P3)																												
T. spinosus																												
T. ambiguus																												
T. chnosus																												
T. helosus																												
T. scabratus																												
T. sectilis																												
V. attinatus																												
V. cristatus																												
V. kopukuensis																												

*C = core; S = sidewall core; T = cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 7 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DEPTHS / PALYNOMORPHS	6340	6354	6356	6475	6546	6625	6690	6750	6805	6876	6937	6949	7029	7091	7142	7186	7261	7288	7402	7413	7426	7457	7600	7666	7707	7845	7907	7930
Dinosph. simplex																												
Dinosph. clavatus																												
Nemat. balcombiana																												
Operc. centrocarpum																												
Reticulodinium spp.																												
Dinosph. pontus																												
Defl. flounderensis		A																A										
Spinidinium spp.							A														A							
Kenel. lophophora																												
Wetz. edwardsii				A																								
Thal. pelagica																												
Leptodinium spp.																												
Wetz. homomorpha																					?							
Spinif. ramosa																												
Defl. macmurdoensis																												
Wetz. articulata																												
Areoligera sp.																												
Homo. tasmanense																												
Defl. truncata										A																		
Defl. pachyceros																												
Wetz. thompsonae										A	A		A	A														
H/kolp. varispinosa																cf												
Cordo. inodes																												
Prae. indentata																												
Ling. machaerophorum																												
Hyst. tubiferum																												
Defl. longispinata																												
Hemicystidinium sp.																												
Seno. morayensis																												
Wetz. ornata																												
Acho. crassipellis																												
Dyph. colligerum																												
Wetz. hyperacantha																												
Defl. dilwynensis																												
Defl. medcalfii																												
Palaeo. pyrophorum																							A					

*C=core; S=sidewall core; T=cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

Well Name FLOUNDER-6 & 6A Basin GIPPSLAND Sheet No. 8 of 8

SAMPLE TYPE *	S	S	S	S	S	S	S	S	S	S	C	C	C	C	C	C	C	S	S	S								
DEPTHS / PALYNOMORPHS	7945	7960	7975	7990	8020	8035	8050	8065	8080	8095	8141	8144	8152	8157	8164	8175	8199	8444	8546	8584								
Operc. centrocarpum		/		/				/																				
Defl. speciosus		/		/		A																						
Prae. indentata		/	/			/	/																					
Hyst. tubiferum						A	/	A																				
Trithy. evittii						A	A	A																				
Arcol. senonensis						/		/																				
Defl. druggii										/						/		/										
Defl. conorata										/						/												

*C= core; S= sidewall core; T= cuttings.

A = Common or Abundant
C = Caved
RW = Reworked species

APPENDIX 5

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 5

FORAMINIFERAL SEQUENCE - FLOUNDER-6

by

David Taylor

FORAMINIFERAL SEQUENCE

FLOUNDER # 6

by DAVID TAYLOR

Consultant

Esso Australia Ltd.

Paleontology Report 1978/3 January 31, 1978.

SUMMARY

By comparison with other Flounder wells, Flounder # 6 is anomalous in that no Oligocene sediment was present, but that the complete early Miocene sequence was developed. This haphazard preservation of sediment at various times in the six Flounder wells was a function of fluctuations in mechanisms effecting stability of the continental slope.

A continuous late Neogene planktonic foraminiferal sequence was developed in Flounder # 6, but was 1600 feet thinner than in Flounder # 5. This was probably due to variation in the height of the canyon at the depositional site.

At least one sidewall core (i.e. at 6356 feet) at the base of the marine carbonate sequence was incorrectly labelled regarding depth.

INTRODUCTION.

Forty six sidewall core samples were submitted for examination from FLOUNDER # 6. Nine samples between 7091 and 6410 were barren of fauna or devoid of planktonic foraminifera. The rich planktonic foraminiferal carbonate at 6356 is obviously out of sequence so that there has been an error in sampling or labelling of this sidewall core.

It is important to note that data in this report and accompanying data sheets is related to the depths (in feet) labelled on samples as submitted. No attempt at obvious adjustments has been made.

The following sheets of factual observed data accompany this report.

Distribution Chart Sheet 1	- showing distribution of planktonic foraminifera and basis of biostratigraphic breakdown.
Distribution Chart Sheet 2	- giving distribution of benthonic foraminifera and environmental interpretation.
Two Sample Data Sheets	- listing all samples, giving quality of zonal entity and summarising residue grain character.
Biostratigraphic Data Sheet	

BIOSTRATIGRAPHY and ENVIRONMENT

The sequence will be discussed in three sections which are each discrete in age and each are regarding samples from separate sidewall core guns. Comparison with the other Flounder sequences will be made at the end of this biostratigraphic discussion.

1) PALEOGENE - Sidewall core gun 3 and 4.

Sidewall cores between 7091 and 6410 were barren of foraminifera, apart from 6625 and 6536 which contained a wholly arenaceous fauna of *Bathysiphon angleseaensis* and *Haplophragmoides rotundata*. As planktonic were absent, no age determination can be given, but this arenaceous fauna is characteristic for the Flounder Formation.

2) EARLY NEOGENE - Sidewall core gun 2.

The fauna at 6356 is a diverse Zone H-1 fauna which can be regarded as of high quality, with *Globigerina woodi connecta*, *Globoquadrina dehiscens* (both early and ultimate morphotypes), *Globorotalia bella* and *G. praescitula*. Thus the earliest marine carbonate sample in the sequence was younger than Oligocene, as it represented the basal part of the early Miocene. The bases of the other five Flounder marine carbonate sequences contained Oligocene planktonic foraminifera.

At 6354 (2 feet above the Zone H-1 sample) the grains were entirely quartz sand and sandstone without any foraminifera, suggesting the Flounder Formation and not the Lakes Entrance Formation carbonate of 6356. As the lithological sequence is reversed either or both of those samples were mislabelled or mishot.

Zone H-1 faunas were present at 6340, 6335 and 6330, with the latter fauna being of very high quality with a similar fauna to 6356, but also containing *Globorotalia kugleri*.

Fauna at 6320 represents Zone G whilst the next sample at 6270, has a Zone E-2 fauna. The Zone F to E-2 sequence appears to be abbreviated when compared with other Flounder sequences.

The base of the mid Miocene is between 6270 and 6200 with *Praeorbulina glomerosa curva* being present in the former and *Orbulina universa* in the latter. Once again abbreviation of section is evident. The samples at 6200 and 6139 represent Zone D-2.

As no samples were submitted between 6139 and 2925 no Zone D-1 or C faunas were seen.

3) LATE NEOGENE - Sidewall core gun 1.

Faunas between 2925 and 2700 were biostratigraphically indeterminant. The presence of *Globorotalia acostaensis, G. miotumida miotumida* and a morphotype close to *G. miotumida conomiozea* indicates that 2625 represented the late Miocene in Zone B-2.

G. miotumida conomiozea is abundant at 2400 which places the fauna within Zone B-1 and probably within the basal Pliocene. The Pliocene aspect of the fauna increases at and above 2332 with the appearance of *G. puncticulata sphericomiozea*.

The distinct *G. puncticulata puncticulata* and *G. crassaformis* at 2180 marks the lowest A-4 sample, but probably the base of A-4 is between 2180 and 2332 as *G. puncticulata puncticulata* evolved rapidly from *G. puncticulata sphericomiozea*. The sample at 2180 was definitely deposited in the basal Pliocene.

The initial appearance of *G. inflata* and *Globoquadrina humerosa* was at 1762 indicating the first definite Zone A-3 fauna though the base was probably below this level on evolutionary rates.

The base of Zone A-2 was picked on the earliest occurrence of *G. dutertrei*.

4) BIOSTRATIGRAPHIC COMPARISON WITH OTHER FLOUNDER SEQUENCES.

Comparison was made by re-examination of samples and analysis of distribution charts compiled by myself for Flounder # 1, # 2, # 3, # 4 and # 5. These comparisons are tabulated on page 4 and discussed on page 5.

EPOCH	ZONE		FLOUNDER SEQUENCES # 1	# 6	# 2	# 5	# 3	# 4	AGE M.Y.
MID MIOCENE	D-1	top	2983 (1)	NO DATA	3150 (3)		NO DATA	3258 (1)	
		base	5500 (3)					5100 (1)	
	D-2	top	5555 (1)	?	?	6714 (0)	?	?	
		base	5865 (1)	6200 (1)	6289 (1)	6021 (0)	6100 (3)	5774 (1)	
	E	E-1 top	?	?	6391-6416 (1)	?	6200 (3)	6150 (1)	16
EARLY MIOCENE		E-2 base	6021 (1)	6270 (1)	?	6117 (0)	6450 (3)	6200 (1)	
	F	top		?		6187 (0)		6230 (0)	
		base		?				6335 (1)	16.5
	G	top		?					
		base		6320 (0)					
	H-1	top		6330 (0)					
		base		6356 (0)					24
LATE OLIGO-CENE	H-2	top							
		base							
	I-1	top				6268 (0)			
		base							
	I-2	top							
		base							30
EARLY OLIGO-CENE	J-1	top	6250 (3)		6492 (4)		6478 (1)	6345 (1)	
		base	6289 (1)				6528 (1)		
		top							
		base							37.5

CORRELATION of FLOUNDER SEQUENCES

Late Neogene omitted as reliable data available only for # 5 & # 6

It is clear from the tabulation (page 4) that Flounder # 6 sequence was anomalous when compared with the other five Flounder sequences; in that:-

1) Two disjoint time intervals were not represented by sediment in the first five Flounder wells; these intervals being separated by a veneer of sediment within the Oligocene. These two non-depositional periods coalesced in Flounder # 6 where there is no evidence of Oligocene sedimentation.

2) The 8 m.y. span of the early Miocene was represented by continuous sedimentation in Flounder # 6, whilst only the top of the early Miocene, less than 1 m.y., was represented by sediment in the other Flounder sequences.

3) No Zone D-1 (mid Miocene) sediment was present in Flounder # 5. The presence or absence of D-1 in Flounder # 6 cannot be confirmed because of lack of samples at the appropriate interval.

The fact, that at least one sidewall core had been given an incorrect depth (i.e. at 6356), does not explain these inconsistencies. Sample spacing is such that Oligocene fauna would have been seen if present.

Late Neogene planktonic foraminiferal sequences were only well developed in Flounder # 5 and # 6. Even so the sequences (from base of Zone B-2 to modern sea floor) was some 1600 feet thicker in Flounder # 5 than in Flounder # 6.

5) MARINE CARBONATE ENVIRONMENTS ON FLOUNDER STRUCTURE.

The basal sediment of the marine carbonate sequence was deposited in the proximity of the base of the slope in all Flounder wells; no matter what was the biostratigraphic level of this initial deposit. The base of the slope, today, is unstable; sediment may not be deposited or retained because of high velocity subsurface currents and continual slumping and scouring may remove any accumulation of sediment. Thus variation of age of initial sediment in the Flounder wells (page 4) was no doubt due to one or both of these mechanisms which would have fluctuated in intensity from site to site.

All the Flounder sequences exhibit features of submarine canyon filling at differing times (e.g. during Zone D in Flounder # 1, but from Zone C into Zone A in Flounder # 5). Also thicknesses of the fill differ, as

is evident in Flounder # 6, where the late Neogene fill is some 2000 feet thinner than that in Flounder # 5. This difference was probably a function of the height of the canyon at the depositional site. Flounder # 5 may have been in a medial canyon position whilst Flounder # 6 was more towards the edge of a canyon.

6) CONCLUSION.

The preservation and thickness of particular time/rock units was dependent on the vagaries of scouring and filling mechanisms of anastomosing and superimposed submarine canyon systems which dissected the continental shelf and slope above the Flounder structure during the Neogene.

Form R 193 3/71

BASIN GIPPSLAND BY DAVID TAYLOR

WELL NAME FLOUNDER-6 DATE 1/2/78 ELEV. +83'

Foram Zonules

		Highest Data	Quality	2 Way Time	Lowest Data	Quality	2 Way Time
PLEIST.	A_1						
	Alternate						
	A_2	1191	1		1256	1	
	Alternate						
PLIOCENE	A_3	1536	2		1762	1	
	Alternate	1631	1				
	A_4	1902	1		2180	1	
	Alternate						
	B_1	2332	0		2400	0	
	Alternate						
MIOCENE	B_2	2625	0		2625	0	
	Alternate						
	C						
	Alternate						
	D_1						
	Alternate						
	D_2	6139*	1		6200	1	
	Alternate						
	E	6270	1		6270	1	
	Alternate						
	F						
	Alternate						
	G	6320	0		6320	0	
	Alternate						
	H_1	6330	0		6340*	1	
	Alternate						
	H_2						
	Alternate						
OLIGOCENE	I_1						
	Alternate						
	I_2						
	Alternate						
	J_1						
	Alternate						
	J_2						
	Alternate						

COMMENTS: SWC at 6356 feet contains good H1 faunas; but is below top of Flounder Formation.

Note: If highest or lowest data is a 3 or 4, then an alternate 0, 1, 2 highest or lowest data will be filled in if control is available.

If a sample cannot be interpreted to be one zonule, as apart from the other, no entry should be made.

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

Date Revised _____

MICROPALEONTOLOGICAL MATERIAL

WELL NAME AND NO: FLOUNDER # 6 *DATE:* 1.2.78

PREPARED BY: DAVID TAYLOR *SHEET NO:* 1 of 2

DRAW:

DEPTH	*SAMPLE TYPE*	*SLIDES*	*ADDITIONAL INFORMATION*
7091	SWC 62	N.F.F. Dom c-m ang-subrd qtz	
7029	SWC 63	N.F.F. 60-40 f ang qtz sdst & m subrd qtz, lim staining	
6750	SWC 68	N.F.F. 50-50 f ang silty qtz sdst & m-f ang qtz	
6625	SWC 70	*Bathysiphon angleseaensis, Haplophragmoides* sp?; 60-40 m-f ang qtz & f ang qtz silty sdst	
6546	SWC 71	N.F.F. 60-40 f ang qtz & f ang qtz silty sdst.	
6537	SWC 65	*Haplophragmoides rotundata*;m gy mdst & f ang qtz	
6475	SWC 72	N.F.F. 50-50 wh f ang qtz silty sdst & f ang qtz	
6410	SWC 103	N.F.F. m gy mdst & f ang qtz	
6356	SWC 31	H-1(0) Dom plank r. glauc. r c ang qtz	
6354	SWC 32	N.F.F. ?INCORRECT DEPTH f-m qtz sand & sdst.	
6340	SWC 34	H-1(1) Poor Pres. 60-40 Planks and mic. r glauc moulds	
6335	SWC 35	H-1(2) Pres. poor. Dom mic	
6330	SWC 36	H-1(0) 70-30 planks & mic	
6320	SWC 37	G(0) 60-40 mic & planks	
6270	SWC 38	E-2(1) Poor Pres. Dom calc sh	
6200	SWC 39	D-2(1) Poor Pres. Dom calc sh	
6139	SWC 40	D-2(1) Poor Pres. Dom calc sh	
2925	SWC 1	? Dom mic r. spic	
2860	SWC 2	? Dom mic r. c ang qtz	
2800	SWC 3	? Dom mic	
2769	SWC 4	? Dom mic	
2700	SWC 5	? Dom mic, r c ang qtz, r spic	
2625	SWC 6	B-2(0) 60-40 planks & benth r mic	
2550	SWC 7	B(2) Dom mic,r spic	
2475	SWC 8	B(2) Dom mic	

MICROPALEONTOLOGICAL MATERIAL

WELL NAME AND NO: FLOUNDER # 6

DATE: 1.2.78

PREPARED BY: DAVID TAYLOR

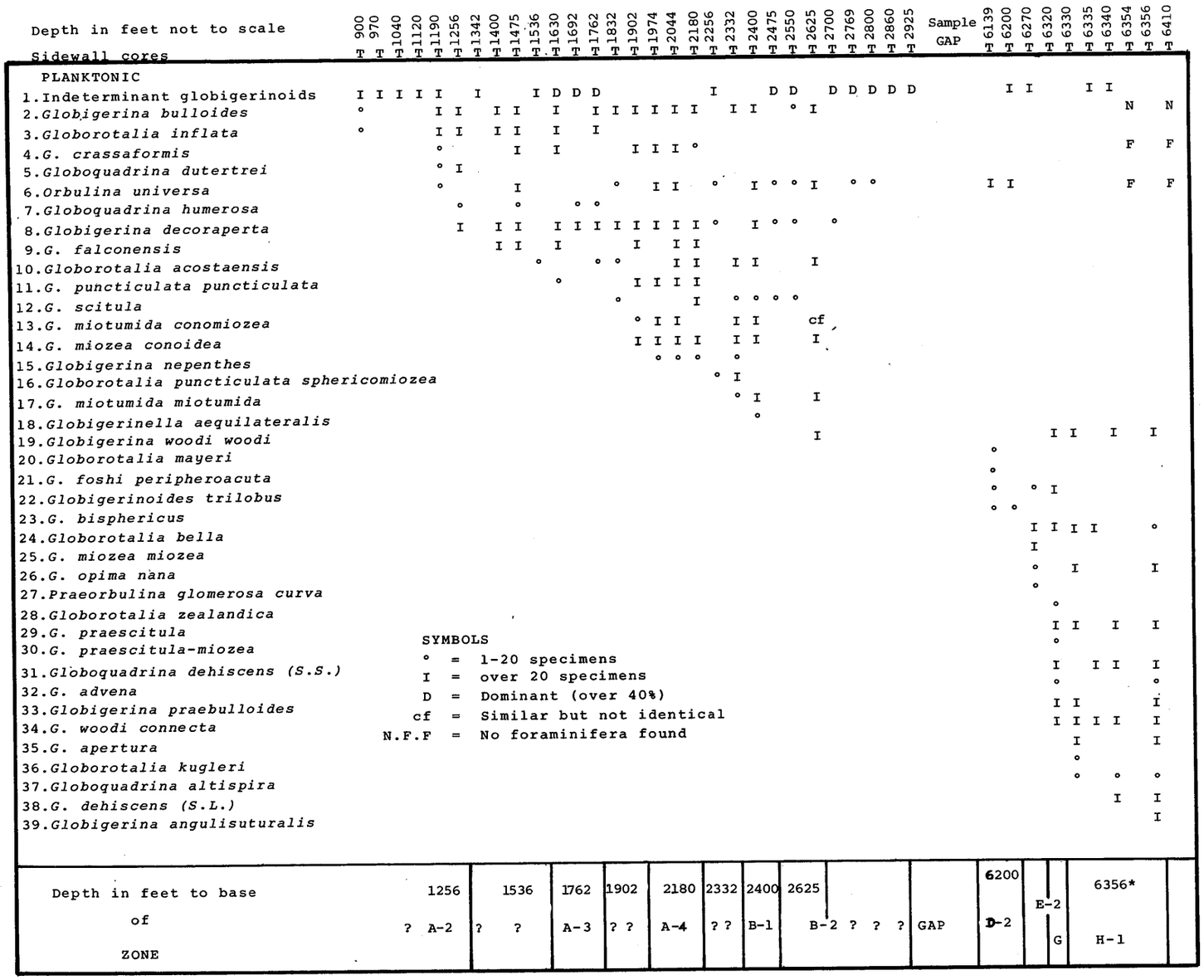
SHEET NO: 2 of 2

DRAW:

DEPTH	*SAMPLE TYPE*	*SLIDES*	*ADDITIONAL INFORMATION*
2400	SWC 9	B-1(0) 70-30 plank & mic	
2332	SWC 10	B-1(0) 50-50 planks & mic	
2256	SWC 11	Dom mic	
2180	SWC 12	A-4(1) 50-50 planks & mic	
2044	SWC 14	A-4(1) 60-40 mic & planks	
1974	SWC 15	A-4(1) Dom mic	
1902	SWC 16	A-4(1) 60-40 planks & benth	
1832	SWC 17	A-4/3(2) Dom mic	
1762	SWC 18	A-3(1) Dom mic	
1692	SWC 19	A-3(2) Dom mic	
1630	SWC 20	A-3(1) Dom mic r glauc	
1536	SWC 21	A-3(2) Dom calcar	
1475	SWC 22	A-3/2(1) Dom calcar	
1400	SWC 23	A(1) Dom calcar + bry	
1342	SWC 24	A(2) Dom calcar	
1256	SWC 25	A-2(1) Dom calcar + bry	
1190	SWC 26	A-2(1) Dom calcar + bry	
1120	SWC 27	A(2) bry calcar	
1040	SWC 28	A(2) c ang qtz + bry calcar + moll	
970	SWC 29	A(2) bry calcar + moll	
900	SWC 30	A(2) bry + moll calcar + c ang qtz + och	

FLOUNDER # 6

(Sample gap between 6139 & 2925)



Depth in feet to base of ZONE	1256 ? A-2	1536 ? ?	1762 A-3	1902 ? ?	2180 A-4	2332 ? ?	2400 B-1	2625 B-2 ? ? ?	GAP	6200 D-2	E-2 G	6356* H-1

*incorrect depth

FLOUNDER # 6

Depth in feet not to scale
Sidewall cores

BENTHONICS	900	970	1040	1120	1190	1256	1342	1400	1475	1536	1630	1692	1762	1832	1902	1974	2044	2180	2256	2332	2400	2475	2550	2625	2700	2769	2800	2860	2925	Sample GAP	6139	6200	6270	6320	6330	6335	6340	6354	6356	6410
40. *Discopulvulina berthelotti*	I							°		°																														
41. *"Rosalina" australis*	°																																					N		N
42. *Nonion victoriense*	°					°																																		
43. *Discorbinella biconcava*	°																																					F		F
44. *Euvigerina bassensis*	I					I		D	I	I					I		I	I		I	I		I	I															
45. *Textularia pseudogramen*	°																																					F		F
46. *Cibicides lobatulus*	I																																							
47. *C. opacus*	I				I	I				°					I											°		°												
48. *C. refulgens*	I				I	I																																		
49. *Discoanomalina mitchelli*						I		°																																
50. *Bolivina pseudobeyrichi*						I			I		I				I		I			°																			
51. *Lenticulina spp.*						°								°			°			°	°														°					
52. *Lagena spp.*						°			°												°																		
53. *Nodosaria spp.*						°			°		°		°	°			°			°	°																		
54. *Euuvigerina pygmea*								D	I	I	°						I	I		D	I			I														
55. *Bolivina robusta*								I			I	D	D	I	I	I	I																					
56. *Cassidulina carinata*									D	I	°	°		I		°	I	°				°			°	°	°											
57. *Sphaeroidina bulloides*									°															°											I				
58. *Gyroidinoides soldani*									°	°	°			°	°					°																			
59. *Fissurina spp.*									I	°												°			°													
60. *Astronion sp. Carter*									°				°					°																					
61. *Bulimina marginata*									°						°		°			°			°															
62. *Bolivinita compressa*									°																													
63. *B. quadrilatera*									°		I		°		I					°																		
64. *Bolivina noblis*									°						I	I	I																					
65. *Pullenia spp.*									°																											I				
66. *Valvulineria kalimnensis*									°																														
67. *Cibicides mediocris*															I		°				°																		
68. *C. subhaigdingerii*																°	°							°														°
69. *Anomalina colligera*																	°			°	°	°	°															
70. *Tritarina bradyi*																	°				°		°															
71. *Virgulina rotundata*																	°																					
72. *Notorotalia clathrata*																			°																			
73. *Globobulimina pacifica*																					°		°	°														
74. *Cassidulina subglossa*																								°														
75. *Bathysiphon sp. B*																								°														°
76. *Discammina compressa*																								°														
77. *Anomalina sp?*																								I												°		
78. *A. macroglabra*																												°										
79. *Cibicides sp?*																																	°		I				
80. *"Cyclammina" incisa*																																		I					
81. *Lenticulina mamilligera*																															°				°				
82. *Gyroidinoides zelandica*																															°				°				
83. *Alabamina sp.*																															°				°				
84. Milliolids																															°				°				
85. *Ammobaculites agglutinans*																															°				°				
86. *Siphouvigerina proboscidea*																																				°			
87. *Gyroidina broeckhiana*																																				°			
88. *Ammodiscus mestayeri*																																				°			
89. *Reophax scorpiurus*																																						°	
90. *Vulvulina granulosa*																																						°	

SYMBOLS
° = 1-20 specimens
I = over 20 specimens
D = Dominant (over 40%)
N.F.F = No foraminifera found

ENVIRONMENTAL INTERPRETATION	High energy mid to outer CONTINENTAL SHELF & CANYON HEAD	SHELF/ SLOPE BREAK CANYON	UPPER SLOPE CANYON ENERGY FLUCTUATING	LOWER SLOPE CANYON	Sample GAP	BASE of SLOPE
Depth in feet to base of	1256	1536	1762 1902 2180 2332 2400	2625		6200 E-2 6356*
ZONE	? A-2	? ?	A-3 ? ? A-4 ? ?	B-2 ? ?		D-2 G H-1

*incorrect depth

APPENDIX 6

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 6

WELL LOG ANALYSIS

Well Log Analysis

Flounder No. 6

8100'- 8600'

Purpose — This report is a brief explanation of the interpretation method and the assumptions made. The detailed work sheets, crossplots and summary were delivered to Esso on the 16th Dec. 1977.

General — A simple comparison of Density/Neutron and Induction Logs identifies three distinct zones of interest.

8144 - 8233 gas zone
8240 - 8286 oil zone
8286 - 8535 water zone

Water Zone — 8286' - 8535'
This zone was used to check the tool response and to determine the formation characteristics without the complications introduced by hydrocarbons.

Rw.

Based upon the SP of -50mV (8530') an approximate Rw of 0.065 may be inferred but at 8336' the SP is -40mV and Rw of 0.085 is implied. These are likely to be minimum values.
Based upon porosity/resistivity crossplots.
Fig 1A ρb versus Ril, Rw is 0.09
Fig 1B ρb versus Ril, has a Gamma Ray cut-off of 75 API units and hence does not include the major shales. Clearly the shales plot above the water line and may lead to too low an Rw.
Fig 2A Δt versus Ril, Rw is 0.09
Fig 2B Δt versus Ril, with Gamma Ray 75 cut-off. Here the shale points are on the same side as hydrocarbon and lithology effects, so the maximum slope is likely to correspond to Rw.
Fig 3A Øn versus Ril, Rw is .09 if sand lithology correction is made.
Fig 3B Øn versus Ril without major shales. Clearly Rsh 9.

We believe that at 8530' Rw is about 0.065 but at the hydrocarbon level 0.09 seems more appropriate.

This corresponds to a water salinity of 30,000ppm Na Cl.

These crossplots also suggest that there are no gross errors in the readings of the Density/Neutron or Sonic Logs.

Shale characteristics.

Fig 4A. ρb versus Øn
Fig 4B. ρb versus Øn with shale cut-off.
An excellent sand line and shale line is established. We find;

ρsh = 2.59 ≡ Ødsh = 3.6%

Ønsh = 24%

The few points which fall below the clean sand line are gas and these naturally occur at the high porosity area.

Although Fig 3A shows a good Rsh of 9, the clay end of the shale resistivity (lowest resistivity) is about 6 and using the usual Rcl = 0.5Rsh we chose Rcl = 3 ohm m.

To check the linearity of the Gamma Ray to clay content we plot Fig 6 Øn - Ød versus Gamma Ray some trend may be inferred. In Fig 7 ρb versus Ønc we scale this in clay content (Vclnd).
In Fig 8 Vclnd versus Gamma Ray and a similar response to Fig 6 is found- which should not suprise. Since the lithology effect is strong on Øn/ ρb plots we plot:

Fig 9 ρb versus Δt scaled in clay content (Vclsd).

Fig 10 Vclsd versus Gamma Ray.

Over the cleanest zones (low Gamma Ray) range there is good linearity and we believe that over this range the Gamma Ray may well reflect the clay content.

Saturation.

We then compute Ønc and Ødc (columns 15 & 16 in Table) corrected for clay content - good agreement is found. We then compute water saturation (column 18). Some hydrocarbons are indicated in the thin shaly zones at the top of this zone. We believe these would be tight and this may well be a transition zone.

oil zone 8240 - 8286

Porosity

Clay correction is made as before (Ødc & Ønc).
No hydrocarbon correction is expected.
Because these sands contain some Dolomite we plot:
Fig 11 Ødc versus Ønc
Excellent consistency of the points along the clean sand line clearly show that the log quality is good and the clay compensation valid. The Dolomitic points are well defined. A small hydrocarbon effect is evident but hydrocarbon correction would make neglegible change on the porosity.

Saturation

Water saturation is computed (column 19) using the shaly sand relationship:

$$\frac{1}{\sqrt{R_t}} = \left[\frac{V_{cl}}{\sqrt{R_{cl}}}^{(1 - V_{cl}/2)} + \frac{\phi}{\sqrt{a R_w}} \right] S_w.$$

gas zone 8144 - 8233

Porosity

We have marked influence of:
-hydrocarbons (gas)
-lithology (Dolomitic sands)
-shale (clay)

Hence we are at the limit of resolution of the available tools.

We make the clay correction as before. To make a hydrocarbon correction we need an approximate porosity Ø' (column 16)

$$\phi' = \sqrt{\frac{\phi_d^2 + \phi_n^2}{2}}$$

The hydrocarbon corrections are:

$$\Delta\rho = -1.07\,\phi\,Shr\,(1.11 - 1.15\rho_h)$$

$$\Delta\phi_n = -\phi\,Shr\,(1 - 1.67\rho_h + .17)$$

From the shaly sand saturation equation already given we get an approximate relationship

$$Sxo = 5\sqrt{Sw}$$

we get Sxo - column 18 and estimate a residual gas saturation in the invaded zone (Shr) of 0.25. Based upon the results of the F.I.T. at 8215' we estimate hydrocarbon density (ρh) of 0.15.

Thus we find Ønc and Ødc for both clay and hydrocarbons of columns of 19 & 20.

These values are plotted in:
Fig 12 Ønc versus Ødc
from which we infer lithology (% Dol.) and porosity (Ø), (columns 6&5). We recognise that after all these assumptions and estimates, the accuracy of the final porosity is not certain but the distribution of the points on this plot give some assurance that no gross error is involved. Comparison of Ø with Ø' clearly shows that no reiteration is necessary.

As a check we corrected Sonic Porosity Øs for the lithology, computed (column 10) and then for clay (column 11) and good general agreement with the more rigorous Ø is found. This suggests that there is little hydrocarbon influence on the Sonic Log, and adds confidence in our porosity Ø computed.

Saturation

Finally we compute the water saturation using the shaly sand equation already given (column 13)

Finally Although we were not present when these logs were run, and the calibration checks were not available; we believe that these logs have been properly recorded and are reliable.
We are confident of this interpretation and believe the results are reliable.

Hugh Crocker
December 1977

WELL LOG ANALYSIS REPORT

TO

OPERATOR ESSO AUSTRALIA WELL FLOUNDER-6 DATE 16 DECEMBER 1977

STATE ELEV.

DEPTH INTERVAL		POROSITY ESTIMATE	WATER SAT. ESTIMATE	REMARKS
8525-33	(5)	19.6	95	Water Productive
8524-28	(4)	12.1	100	" "
8520-24	(4)	17.5	86+	" "
8476-83	(7)	14.4	100	" "
8336-41	(5)	17.4	65	" "
8330-36	(6)	15.1	77	" "
8319-21	(2)	8.4	73	" " - Shaley-thin.
8311-14	(3)	19.3	42	Shaley & thin - tight
8298-03	(5)	13.6	53	Shaley - low permeability - oil.
8294-98	(4)	6.2	80	Shaley - tight.
8279-81	(2)	4.2	66	Tight
8272-76	(4)	18.0	29.7	Oil productive
8267-72	(5)	16.3	25.6	" "
8256-61	(5)	19.6	26.5	" "
8251-56	(5)	17.2	20.6	" "
8246-51	(5)24'	15.1	47.8	" " Shaley-low permeability.
8242-46	(4)30'	14.3	43.2	" " Shaley-probably tight
		RANGE:14.3-19.6	RANGE 20.6-47.8	

TESTS:

FORMATION:

LOGS:

COMMENTS:

WELL LOG ANALYSIS REPORT

TO

OPERATOR ESSO AUSTRALIA WELL FLOUNDER-6 DATE 16 DECEMBER L977

STATE ELEV.

DEPTH INTERVAL		POROSITY ESTIMATE	WATER SAT. ESTIMATE	REMARKS
8232-34	(2)	18.5	23.8	Gas productive
8229-32	(3)	17	22.7	" "
8226-29	(3)	19.1	24.1	" "
8223-26	(3)	17.2	20	" "
8219-23	(4)	21.8	10.5	" "
8212-19	(7)	17.7	17.2	" "
8197-99	(2)	20	17.7	" "
8193-97	(4)	19.1	17.5	" "
8185-91	(6)	22	8	" "
8171-75	(4)	17.7	16	" "
8168-71	(3)	5.4	18.8	" " -Probably tight
8166-68	(2)	11.9	18.1	" "
8159-64	(5)	20.1	25.8	Shaley - probably tight
8147-49	(2)	19.5	26.7	Shaley & thin.
		40' gas productive		
		10' probably gas productive		
	RANGE:	11.9-22	RANGE: 8-26.7	

TESTS:

FORMATION:

LOGS:

COMMENTS:

BY Hugh Crocker

APPENDIX 7

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 7

VELOCITY SURVEY

VELOCITY SURVEY

Well ..... FLOUNDER-6 .....

Basin ..... GIPPSLAND .....

INTRODUCTION

Esso personnel ..... I. Hawkshaw .....

Contractor ..... Velocity Data Pty.Ltd. .....

Supplied (1) Instruments

(2) Personnel

Seismic Observer ..... D.Potter .....

Marine Shooter ..... R.Doyle .....

Dynamite ..... - .....

(3) Seismic Souce

Gas Gun

Gas Pressures .....

Oxygen ..... 90 .....

Propane ..... 50 .....

(3) Licenced Shooting Boat

name .....

date loaded .....

date released .....

Agent .....

....

amount of powder ..... lbs

size of cans ..... lbs

number of cans .....

number of caps .....

number of boosters .....

Personnel and Instruments

assembled at ..... Melbourne ..... date ..... 13/12/77 .....

boarded (rig) ..... Ocean Endeavour ..... date ..... 14/12/77 .....

date of survey ..... 14/12/77 .....

casing depth ..... 2916' .....

T.D. when shot ..... 8601' ..... FTD ..... 8601' .....

water depth ..... 4306 ft .....

SURVEY PROCEDURE

Weather: sea ..... calm .....

rig movement ..... slight .....

rig noise ..... slight-moderate .....

Hydrophones: number ..... 3 .....

depth below sea level ..... 40 ft

position ..... 2. just above gas gun ..

..... 1 in moon pool .....

Shot Positioning and Charges:

marker buoys (number .....

(distance .....

(direction .....

charge depth ..... ft

number of shots ..... charge size ..... lbs.

number of shots ..... charge size ..... lbs.

number of misfires .....

amount of powder used ..... lbs

Gas gun

Depth Rel. S.L.	Av. Vertical Travel Time (check shots)	Ti Check Shots (Sec.)	Ti Sonic Log (Sec.)	(Millisecs)	Depth Interval (ft.)	Error (Microsec per ft.)
3129	0.418	0.051	0.048	3	513	5.85
3642	0.469					
3642	0.469	0.053	0.052	1	565	1.77
4207	0.522					
4207	0.522	0.067	0.064	3	690	4.35
4897	0.589					
4897	0.589	0.047	0.045	2	470	4.26
5367	0.636					
5367	0.636	0.038	0.036	2	372	5.38
5739	0.674					
5739	0.674	0.051	0.048	3	518	5.79
6257	0.725					
6257	0.725	0.045	0.043	2	460	4.35
6717	0.770					
6717	0.770	0.047	0.047	0	562	0
7279	0.817					
7279	0.817	0.022	0.021	1	248	4.03
7527	0.839					
7527	0.839	0.012	0.010	2	110	18.18
7637	0.851					
7637	0.851	0.035	0.035	0	442	0
8079	0.886					
8079	0.886	0.009	0.011	-2	123	-16.26
8202	0.895					
8202	0.895	0.020	0.020	0	265	0
8467	0.915					

Shothole information:- Elevation, Distance & Direction from Well

Company: ESSO EXPLORATION AUSTRALIA INC.

Well

Elevation (Derrick Floor)

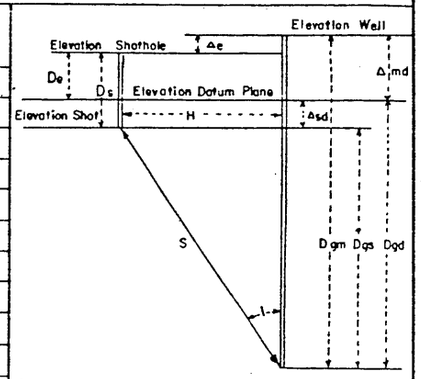
Total Depth

LOCATION

Coordinates | Section, Township, Range | County | Area or Field

DATUM :

Record Number	Shothole Number	Time of Shot	Dgm	Ds	tus	tr	T Reading	T Polarity	T Grade	Dgs	H	TAN i	Cos i	Tgs	Δsd	Δsd/V	Tgd	Tgd Average	Dgd	ΔDgd	ΔTgd	Vi Interval Velocity	Va Average Velocity
1			3212						NR	DUE TO T/B PROBLEMS													
2			3212						NR											3129	418	7486	
33			3212				410	D	G						40	8	418)	418	3129				7486
32			3212				410		G							8	418)			513	51	10059	
31			3725				460		FG							8	468)	469	3642				7765
30			3725				461		FG							8	469)			565	53	10660	
3			4290				514		G							8	522)	522	4207				8059
4			4290				514		G							8	522)			690	67	10299	
29			4980				581		G								589)	589	4897				8314
28			4980				580		G								588)			470	47	10000	
5			5450				628		FG								636)	636	5367				8439
6			5450				628		FG								636)			372	38	9789	
27			822				666		G								674)	674	5739				8515
26			5822				666		FG								674)						
7			6340				718		G								726)			518	51	10157	
8			6340				717		G								725)	725	6257				8630
9			6340				717		FG								725)			460	45	10222	
25			6800				762		FG								770)	770	6717				8723
24			6800				761		FG								769)			562	47	11957	
10			7362				808		F								816)	817	7279				8909
11			7362				809		F								817)			248	22	11273	
23			7610				831		FG								839)	839	7527				8971
22			7610				830		FG								838)						
12			7720				842		FG								850)			110	12	9167	
13			7720				843		FG								851)	851	7637				8974
14			7720				843		G								851)						
15			8162				877		PF								885)			442	35	12629	
16			8162				879		FG								887)	886	8079				9119
17			8162				878		PF								886)			124	9	13778	
21			8285				887		G								895)	895	8203				9165
20			8285				887		G								895)			264	20	13200	
18			8550				907		G								915)	915	8467				9254
19			8550				907		G								915)						



Dgm = Geophone depth measured from well elevation

Dgs = " " " " shot "

Dgd = " " " " datum "

Ds = Depth of shot

De = Shothole elevation to datum plane

H = Horizontal distance from well to shotpoint

S = Straight line travel path from shot to well geophone

tus = Uphole time at shotpoint

T = Observed time from shotpoint to well geophone.

tr = " " to reference geophone.

Δe = Difference in elevation between well & shotpoint.

Δsd = " " " " shot & datum plane

Δsd = Ds - De

Dgs = Dgm - Ds ± Δe ; $\tan i = \frac{H}{Dgs}$

Tgs = cos i T = Vert. travel time from shot elev to geophone

Tgd = $Tgs \pm \frac{\Delta sd}{V}$ = " " " datum plane " "

Dgd = Dgm - Δmd

Vi = Interval velocity = $\frac{\Delta Dgd}{\Delta Tgd}$

Va = Average = $\frac{D\,gd}{T\,gd}$

Surveyed by: .....

Date: .....

Weathering Data :

Casing Record

DWG. 1107/OP/3

amount of poweder dumped.....lbs.

Well-phone positioning:

T-bar.....

number of depths...14.....

Time: first shot.....1721 hrs.....

last shot.....2032 hrs.....

rig time.....3 hrs 11 minutes.....

RESULTS

Quality of records(good....14.....
(fair....15.....
(poor.....2.....
(not used.2.....

Comparison of Interval Times
with sonic log

/ /average.....5.40....microsec/foot

/ max/.....18.18....microsec/foot

CONCLUSION

Reliability of T-D curve...Good.....

COMMENTS

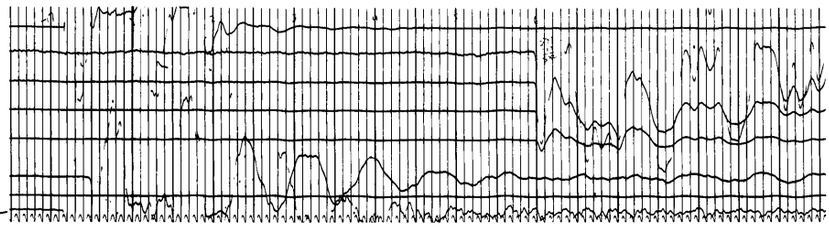
Only problem during survey involved time break phones. Instruments had apparently been modified for platform shooting. At first no T/B on tr 1 and only a small kick on tr 8. First 2 shots no good, so reshot on way out. Problem rectified and we continued. Noticed T/B on tr 8 kicking before Tr 1 - had been wired through Water Break Amplifier with very high gain and was being triggered by spark in gun. Records 18-33 are OK. Had to change out oxygen before reshooting 3212' level.

FLOUNDER-6

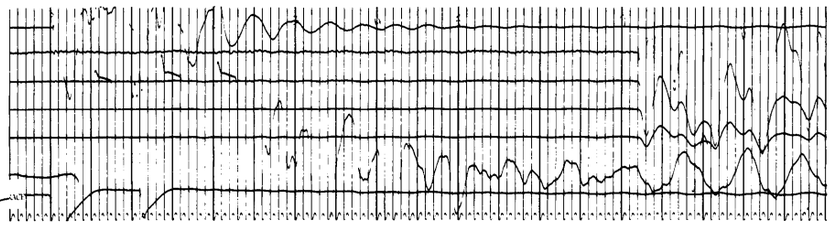
WELL VELOCITY RECORD

Rec. No 32
3212' KB
T 2031 hrs
IGNORE THIS TRACE

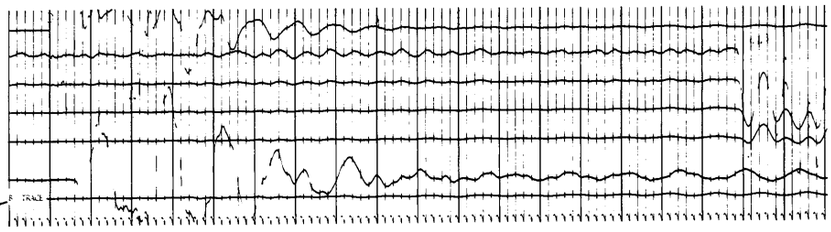
Rec. No 28
4980' KB
T 2020 hrs
IGNORE THIS TRACE



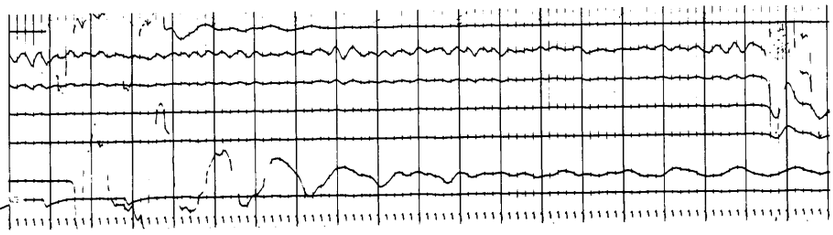
Rec. No 9
6340' KB
T 1813 hrs
IGNORE THIS TRACE



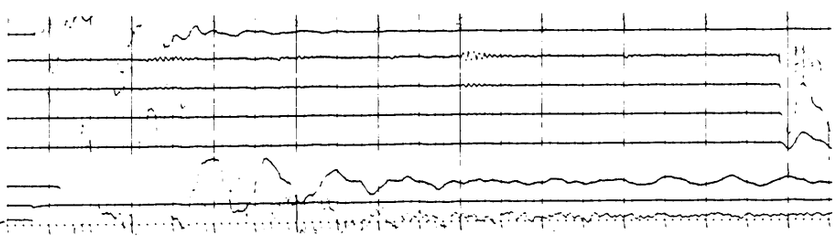
Rec No 14
7720' KB
T 1835 hrs
IGNORE THIS TRACE



Rec No 16
8162' KB
T 1850 hrs
IGNORE THIS TRACE



Rec No 1
8550' KB
T 1907 hrs
IGNORE THIS TRACE



DWG 1875/OP/3.

APPENDIX 8

WELL COMPLETION REPORT

FLOUNDER-6

APPENDIX 8

FORMATION INTERVAL TESTS RECORD

FIT & RFT PRESSURE DATA INTERPRETATION

FLOUNDER-6

Figure 1 summarizes the results of all twelve FITs and sixteen RFTs that were attempted on the Flounder-6 exploration well. Of the total 28 pressure tests, only 6 FITs and 8 RFTs could be regarded as successful in providing the required data for reservoir pressure and permeability determination. Analysis of the pressure data presented in Figure 1 leads us to the following conclusions:

1. The lower net/gross water-bearing T-1.2 sands are not in complete hydraulic communication with the T-1.1 sand unit. It appears that the sand tested by FIT-6 is in communication while the lower T-1.2 intervals as tested by FIT-12 and RFT 3, 10 and 11 are not.

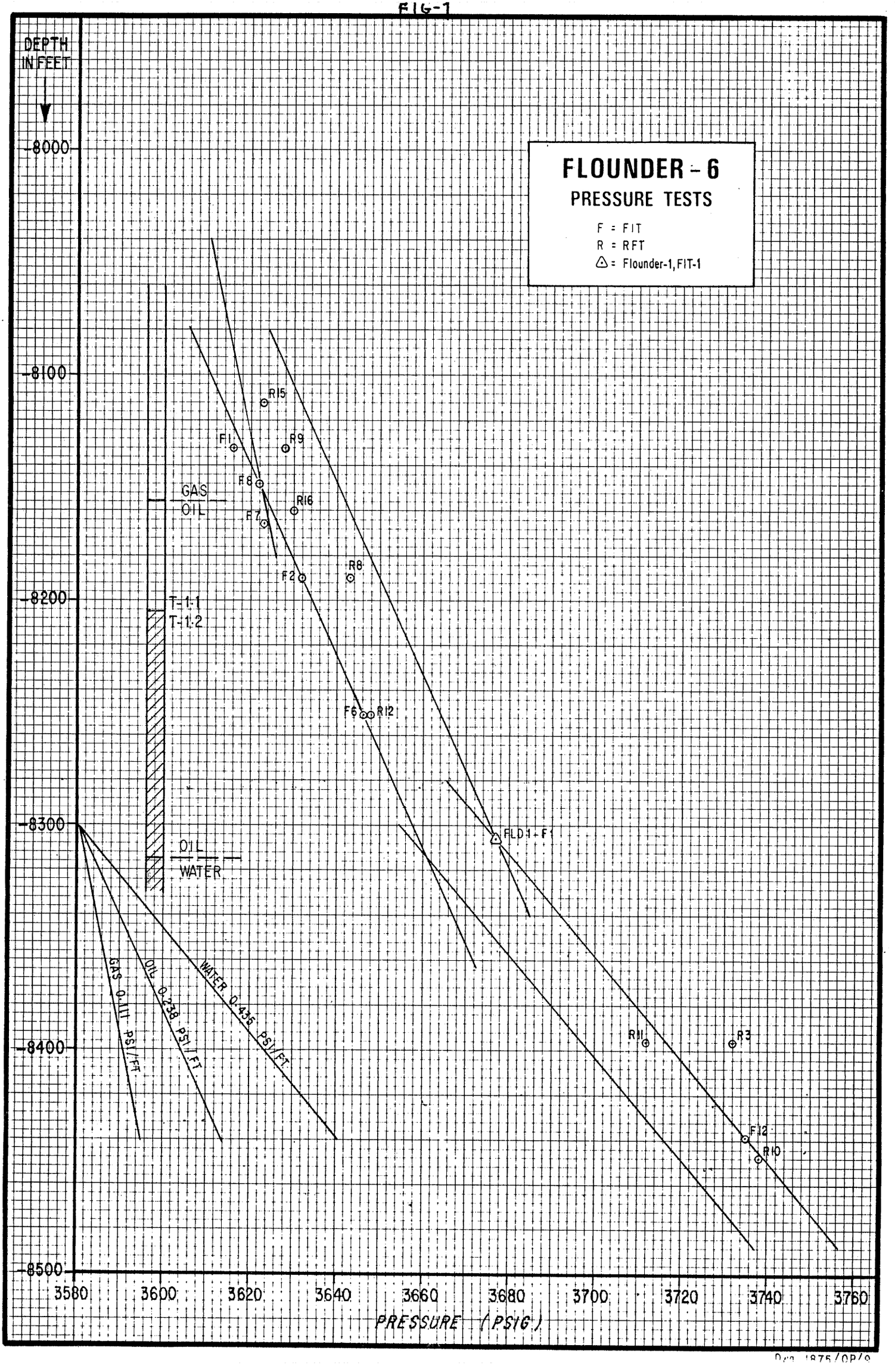
2. An oil-water contact is interpreted at -8314 ft. ss based upon pressure gradients. This is consistent with the contact interpreted in the T-1.1 sand unit at Flounder-1. Log analysis indicates the T-1.2 to have a high water saturation above the -8314 oil-water contact. This could be explained by capillary pressure forces in the apparently low permeability sands of the T-1.2.

3. About 18 psi drawdown has occurred since the Flounder-1 well was drilled. This drawdown can be attributed to hydraulic communication between the T-1.1 sand unit and the aquifer system below existing producing oil and gas fields.

There are some difficulties and uncertainties associated in interpreting pressure data from the RFT tool to obtain permeabilities especially when used in moderate to high permeability formations.

S.T. Koh

FIG-1



Dwg. 1875/OP/9

FORMATION INTERVAL TESTS - FLOUNDER 6

Designation	Depth	Details
FIT-1	8215	Recovered 151.3 ft^3 gas, 2450cc. condensate, light brown, 63° API at 61°F; 800cc mud filtrate (9200 ppm Cl -Equiv.) Pressures: Initial hydrostatic 4160 psig. On setting the tool a super charge fluctuating up to 7200 psig but steadying to 4724 psig was recorded. Tool open for 24 minutes, full after 6 min. 32 sec. Sampling pressure ranged from 3141-3168 psig. Pressure increased slowly to 3628 psig, 11 min 29 sec. after tool open, then fluctuated cyclically from a minimum of 3612 psig to a maximum of 3628 psig. Segregator open for 6 minutes, full after 19 sec. Final hydrostatic 4099 psig. Formation pressure = 3616 psig, K = 315 md.
FIT-2	8273	Recovered 65.8 ft^3 gas, 6400 cc oil, light brown, 50° API @ 72°F, 7750 cc mud filtrate, 6800 ppm Cl - Equiv., Pressures: Initial hydrostatic 4163 psig. On setting the tool an initial maximum supercharge of 4657 psig was recorded, then fluctuating between 4596 to 4635 psig. Tool open for 21 minutes 30 sec, full after 14 mins. Sampling pressure dropped initially to 17 psig and built up to 1600 psig in 3 minutes 30 sec. Pressure then stabilized around 1598-1600 psig probably due to a flowline blockage, slowly increasing until after a further 5 min. 9 sec. pressure rose rapidly to 3613 psig. Final shut-in pressure: 3625 psig. Segregator open for 8 min 14 sec. and full after 1 min. 22 sec. Final hydrostatic 4170 psig, formation pressure 3632 psig, K = 34 md
FIT-3	8301	Tool failed to open. Pressure: Initial build up pressure 3633 psig; fluctuating within 5 psig. No accurate hydrostatic pressure due to gauge fluctuating up to 8638 psig at high pressures.
FIT-4	8301	Dryrun 0 psig surface pressure, (Recovered 100cc mud, 6500 ppm Cl - equiv, 30.8 ppm No3) Pressure: Initial hydrostatic pressure not valid: pressure fluctuating around 6000 psig. On setting the tool supercharge: 4904-4809 psig. Tool open for 15 min 54 sec and did not fill. Sampling pressure dropped to 0 psig and only increased fractionally. Main chamber and segregator were sealed and a pressure built up to 3711 psig rapidly, with a very slow increase to a final maximum of 3723 psig fluctuating slightly. Final hydrostatic pressure not valid.
FIT-5	8312.5	Dry run. 0 psig surface pressure. (recovered 3500cc mud filtrate 22 ppm NO3). Pressures: Initial hydrostatic pressure 4153 psig, fluctuating slightly. On setting tool supercharge: up to 4882 psig, settling to around 4713 psig. Tool was open for 16 min 53 sec. and did not fill. Sampling pressure dropped to 0 psig and increased very slowly to 28.8 psig. Main chamber and segregator were sealed and pressure increased exponentially to 3669 psig but began fluctuating up to 5527 psig due to gauge malfunction. A final hydrostatic pressure: 4200 psig fluctuating.
FIT-6	8334	Dry run: 0 psi surface pressure. Recovered 1500 cc mud filtrate, 4000 ppm Cl -, 8ppm NO3, Pressures: Initial hydrostatic 4175 psig. On setting tool: an initial maximum supercharge of 4616 psig recorded initially, decreasing to 4601 psig. Tool open for 10 min. 9 sec. and did not fill. Sampling pressure dropped to 0 psig initially and increased very slowly to 76 psig. Main chamber segregator were sealed and pressure increased exponentially to 3645 psig. final hydrostatic pressure: 4357 psig. Formation pressure: 3646 psig K = 65 md.

....2/

FIT-7	8249	Recovered. 38.36 ft^3 gas, 2870cc oil, medium brown, 48°API @ 72°F, 14,500cc mud filtrate, 6800 ppm Cl^- equiv., 8 ppm NO3, Pressures:(Initial hydrostatic 4094 psig). On setting tool a maximum supercharge of 4636 psig was recorded, decreasing slowly to 4605 psig. The tool was open for 18 min 35 sec and filled in 8 min 6 sec. Sampling pressure dropped to 22 psig initially then built up slowly to 1998 psig when chamber full. Final shut-in pressure 3621 psig. Segregator open for 5 min 2 sec and full after 54 sec. with a final shut-in pressure: 3622 psig. Final hydrostatic pressure: 4108 psig Formation pressure 3623 psig, K = 170 md.
FIT-8	8231	Recovered 130.5 ft^3 gas, 2870 cc condensate, light green, 63° API @ 64°F, 2,200 cc mud filtrate, 7400 ppm Cl - equiv. 16 ppm NO3. Pressures: Initial hydrostatic: 4200 psig. On setting tool: initial supercharge 4607 psig decreasing to 4534 psig. Tool was open for 4 min 28 sec and was full after 6 min 59 sec. Sampling pressure: 241-3005 psig. Final build up pressure: 3617 psig. Segregator open for 4 min 28 sec and was full after 16 sec. Final shut in pressure: 3620 psig. Final hydrostatic pressure: 4191 psig. Formation pressure: 3622 psig, K = 7 md.
FIT-9	8243	Misrun. Lost seal. Pressures: Initial hydrostatic pressure: 4188 psig. On setting tool supercharge: 4722-4703 psig. Lost seal 1 min 32 sec after set tool. Final hydrostatic pressure: 4178 psig.
FIT-10	8531	Misrun. Lost seal. Pressures:,Initial hydrostatic 4315 psig. On setting tool supercharge: 4378-4428 psig. Lost seal when opened tool 24 sec after set tool. Final hydrostatic: 4323 psig.
FIT-11	8334	Misrun. Lost seal. Pressures: Did not run Hewlett Packard Gauge.
FIT-12	8522	Recovered 21,000 cc water; 14,000 ppm Cl- equiv., 4ppm $NO3^-$. Pressures: Initial hydrostatic 4291 psig. On setting tool supercharge: 4470-4457 psig. Tool opened for 26 min 33 sec and filled in 19 min 28 sec. Sampling pressure: 0-493 psig. Segregator open for 4 min and was full in 2 min. Final shut-in pressure 373 psig. Final hydrostatic pressure: 4294 psig fluctuating slightly. Formation pressure 3735 psig K = 108 md.
RFT-1	8531	Pressures:Initial hydrostatic 4296 psig. Tool open for 24 min 44 sec. Hewlett Packard gauge erratic. Formation pressure: approx, 3767 psig. Schlumberger pressure: 3749 psig. Final hydrostatic pressure: 4252 psig.
RFT-2	8479	Pressures: Initial hydrostatic 4257.5 psig. Tool open for 13 min 10 sec. Hewlett Packard gauge erratic. Formation pressure: approximately 3764 psig. Schlumberger pressure: 3776 psig. Final hydrostatic: 4239 psig.
RFT-3	8479.5	Pressure: Initial hydrostatic: 4329 psig, fluctuating. Tool open for 3 min 56 sec. Pressure dropped to 24 psig then rose to 3731 psig maximum. Final hydrostatic 4266 psig fluctuating. Formation pressure: 3732 psig K = 1.5 md.
RFT-4	8301	Run aborted - very tight zone. Pressures: Initial hydrostatic 4204-4314 psig, fluctuating. Tool open for 3 min 28 sec. Pressure dropped to -6 psig, slowly increased to 61 psig. Final hydrostatic 4186 psig.
RFT-5	8300	Run aborted - very tight zone Pressures: Initial hydrostatic 4181 psig. Tool open for 2 min 26 sec. Pressure dropped to -98 psig. Final hydrostatic: 4178-4210 psig.

RFT-6	8312.5'	Run aborted - very tight zone Pressures: Initial hydrostatic 4181 psig. Tool opened for 2 min 2 sec. Pressure dropped to -93 psig. Final hydrostatic: 4210 psig.
RFT-7	8283	Run aborted - very tight zone. Pressures: Initial hydrostatic 4249 psig. Tool open for 2 min 11 sec. Pressure dropped to -94 psig, increased slowly to 170 psig. Final hydrostatic: 4157 psig.
RFT-8	8273	Pressure: Initial hydrostatic 4150 psig. Tool open for 3 min 2 sec. Pressure stabilized @ 3642 psig. Sample chamber was then opened for 12 min 4 sec. Sampling pressure 30-250 psig. Final hydrostatic 4150 psig. Formation Pressure: 3643 psig K = 1.2 md
RFT-9	8215	Recovered: 100 ft^3 1600 cc condensate, medium brown, 61°- API at 62°- F, 1900 cc mud filtrate, 26 ppm NO_3. Recovery is combination of gas - condensate from 8215' and oil from 8273'. Pressures: Initial hydrostatic 4132 psig. Tool open for 2 min 14 sec. filled in 15 sec. Pre test chamber pressure 3622 psig. Sample chamber open for 12 min 56 sec. and was filled in 7 min 46 sec. Sampling pressure 127-3610 psig. Final shut in pressure: 3663 psig. Final hydrostatic 4115 psig. Formation pressure: 3628 psig, K = 1.3 md
RFT-10	8531	Pressures: Initial hydrostatic 4232 psig, fluctuating slightly. Tool open for 10 min 25 sec, filled in 25 sec. Initial supercharge up to 4300 psig, then pressure dropped to 3649 before building up rapidly to 3738 psig. Final hydrostatic: 4230 psig. Formation Pressure: 3738, K = 29 md.
RFT-11	8479	Pressures: Initial hydrostatic 4202 psig, fluctuating slightly. Tool open for 4 min 27 sec, filled in 24 secs. Pressure range 3220-3712 psig. Final hydrostatic 4193 psig. Formation pressure 3712 psig, K = 9 md
RFT-12	8334	Pressures: Initial hydrostatic pressure 4095 psig, fluctuating Tool open for 27 min 32 sec. full after 31 sec. Pressure range: 2617-3647 psig. Final hydrostatic pressure not valid. (4149 psig Schlumberger). Formation Pressure: 3648 psig, K = 7md.
RFT-13	8148	Pressures: Initial hydrostatic pressure 4147 psig, fluctuating slightly. Set tool but no seal.
RFT-14	8148.5	Run aborted. Very tight zone Pressure: Initial hydrostatic Pressure: 4155 psig. Tool open for 11 min 36 sec and did not fill. Initial supercharge to 4234 psig, pressure then dropped to 6 psig and built up slowly to 95.3 psig. Final hydrostatic pressure: 4153 psig.
RFT-15	8195.5	Pressures: Initial hydrostatic pressure 4179 psig. Tool open for 4 min 6 sec., full in 27 sec. Initial supercharge to 4251 psig, pressure then dropped to 3302 psig, and built up rapidly to 3622 psig. Final hydrostatic pressure 4177 psig. Formation Pressure: 3623 psig, K = 1.5 md
RFT-16	8243	Pressures: Initial hydrostatic pressure 4198 psig. Tool open for 2 min 40 sec, full in 38 sec. Initial supercharge to 4260 psig, pressure then dropped to 1546 psig and built up rapidly to 3628 psig. Final hydrostatic pressure: 4199 psig. Formation pressure: 3630 psig K = 5 md.

F.I.T. RECORD

BENEDEK
DO ROZARIO,
GEOLOGIST KJELLGREN

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 1 @ 8215 ft. (G.R. Depth) DATE 14.12.77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 22:27:40 Tool Open 22:29:11 Min. Open 24 Full After 22:35:43

Shaped Charge Shot: ~~XXX~~No at _____

Segregator Open 22:53:11 Mins. Open 0:6:00 Full After 22:53:30

Tool Closed 22:59:11 Tool Off 22:59:52

MUD DATA :

Rmf 0.672 @ 66 °F, Equiv. Cl^- 9500 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

2200 p.s.i. SURFACE PRESSURE	800 cc ~~XXXXX~~ FILTRATE (TR. MUD)
151.3 cft. GAS	cc MUD
2450 cc. ~~XXX~~ CONDENSATE	cc SAND

PROPERTIES - MAIN CHAMBER

GAS (ppm)	C_1	C_2	C_3	C_4	C_5	H_2S
	294912	58726	34560	5606		
	285081	53043	32256	7475		
	147456	15363	28800	4672		
	294912	54937	23040	7400		
CONDENSATE	9830	189440	119808	14950		

OIL 63 °API @ 61 °F; Pour Point _____ °F

Amber Colour; Light blue Fluorescent Colour

9820 G.O.R.

WATER Rrf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	3025			3141-3168
Final Shut-in (psi)	3500			3613
itial Hydrostatic (psi)	4250			4160
inal Hydrostatic (psi)	4050			4099
Sampling Time (Min)				6' 32"
Shut-in Time (Min)				17' 23"

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 201 °F, _____ °F

MAX. DEPTH TOOL REACHED: ON BOTTOM: 8350 Ft.

TIME ~~XXXXXXXXXXXXXXXX~~ : 22:00 Hrs. 14/12/77

TIME SINCE CIRCULATION: 26:10 Hrs.

REMARKS :

K = 315 MD

P_o = 3616 psi

Main Chamber 22 Litres

Segregator 2.15 Litres

Succsesful gas/condensate test

F.I.T. SEGREGATOR REPORT

GEOLOGIST BENEDEK / DO ROZARIO / KJELLGREN

WELL : FLOUNDER #6 SIDETRACK F.I.T. No. 1 @ 8215 ft.(G.R. Depth) DATE 14.12.77

SEGREGATOR TYPE Monel NUMBER 2908 DATE OPENED _____

RECOVERY - SEGREGATOR

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - SEGREGATOR

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ ^{o}API @ _____ ^{o}F; Pour Point _____ ^{o}F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - SEGREGATOR

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	3560			827-3540
Final Shut-in (psi)	3650			3612
Hydrostatic (psi)	4050			4096
Sampling Time (Min)				0' 19"
Shut-in Time (Min)				05 ' 42"

(*Corrected for Atmospheric pressure)

REMARKS :

Segregator stored for later analysis

F.I.T. RECORD

GEOLOGIST RDR/GMK/SB

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 2 @ 8273 ft. (G.R. Depth) DATE 15.12.77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 18:21:28 Tool Open 18:22:58 Min. Open 21' 30" Full After 14 mins

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open 18:42:58 Mins. Open 8:14 Full After 18:44:20

Tool Closed 18:51:12 Tool Off 18:52:07

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

1600 p.s.i. SURFACE PRESSURE	1750 cc ~~WATER~~ FILTRATE
65.8 cft. GAS	6000 cc MUD
6400 cc. OIL	cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S
	152371	60620	41472	14950		
	154828	56832	32256	7475		
	154800	56800	46080	11212		
BLENDER	9830	49254	94464	59801	11773	

OIL 50 °API @ 72 °F; Pour Point _____ °F

Light Brown Colour; Bright Pale Blue Fluorescent Colour

1635 G.O.R.

WATER Rrf 0.886 @ 74 °F, Equiv. Cl^- 6800 ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	1400			17-3613
Final Shut-in (psi)	2150			3625
nitial Hydrostatic (psi)	2250			4165
Final Hydrostatic (psi)				4170
Sampling Time (Min)				14 mins
Shut-in Time (Min)				7 mins 30 secs.

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 216 °F, 217 °F

MAX. DEPTH TOOL REACHED: 8370 Ft.

TIME SINCE CIRCULATION : 6:51 Hrs.

STOP CIRCULATING 11:30 Hrs. (15/12/77)

REMARKS :

K = 34 MD

P_o = 3632 psig

Successful Oil test

F.I.T. SEGREGATOR REPORT

GEOLOGIST RDR/GMK/SB

WELL : FLOUNDER #6 SIDETRACK F.I.T. No. 2 @ _____ ft.(G.R. Depth) DATE 15.12.77

SEGREGATOR TYPE Monel NUMBER 2910 DATE OPENED _____

RECOVERY - SEGREGATOR

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - SEGREGATOR

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ ^{o}API @ _____ ^{o}F; Pour Point _____ ^{o}F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - SEGREGATOR

	Schlumberger	Amerada	Agnew Amerada		Hewlett Packard*
Sampling (psi)					393-3619
Final Shut-in (psi)					3630.84
Hydrostatic (psi)					4170
Sampling Time (Min)					01:22
Shut-in Time (Min)					06:52

(*Corrected for Atmospheric pressure)

REMARKS :

Segregator stored for later analysis

F.I.T. RECORD

GEOLOGIST RDR/GMK/SB

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 3 @ 8301 ft. (G.R. Depth) DATE 15.12.77

VALID TEST : ~~Yes~~/No

FIRING METHOD Normal CHOKE SIZES 0.301

TIMES : Tool Set _____ Tool Open 22:46:39 Min. Open _____ Full After FAILED TO OPEN

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open 22:47:17 Mins. Open 2:27 Full After FAILED TO OPEN

Tool Closed 22:49:44 Tool Off 22:51:17

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE	_____ cc WATER
_____ cft. GAS	250 cc MUD
_____ cc. OIL	_____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf 0.841 @ 74 °F, Equiv. Cl^- 6800 ppm (Resistivity)

Cl^- - ppm NO_3^- 22 ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Build-up (psi)	3650		BUILD UP P -	3625
Final Shut-in (psi)				
itial Hydrostatic (psi)	4500			
Hydrostatic (psi)	4250			4434?
Sampling Time (Min)				No final HP gauge fluctuating
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 215 °F, 217 °F

MAX. DEPTH TOOL REACHED: 8420 Ft.

TIME SINCE CIRCULATION : 9:30 Hrs.

REMARKS : MISRUN TOOL FAILED TO OPEN.

F.I.T. RECORD

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 4 @ 8301 ft. (G.R. Depth) GEOLOGIST GMK/RDR/SB DATE 16.12.77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30 "

TIMES : Tool Set 1:15:15 Tool Open 1:16:53 Min. Open 15:54 Full After NOT FULL (SEAL MAIN CHAMBER & SEGREGATOR @ 1:32:47

Shaped Charge Shot: ~~Yes~~/No at _____

~~Segregator Open~~ _____ Mins. Open _____ Full After _____

Tool Closed 1:54:11 Tool Off 1:54:49

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200.0 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

0 p.s.i. SURFACE PRESSURE	_____ cc WATER
_____ cft. GAS	100 cc MUD
_____ cc. OIL	_____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf 0.897 @ 74 °F, Equiv. Cl^- 6500 ppm (Resistivity)

Cl^- _____ ppm NO_3^- 30.8 ppm (Titration)

PRESSURES - ~~Recorded with main Chamber and segregator~~ sealed

Recorded with main Chamber and segregator/ Agnew

	Schlumberger	Amerada	Amerada	Hewlett Packard*
Sampling (psi)	_____	_____	_____	-
Final Shut-in (psi)	_____	_____	_____	3723
Hydrostatic (psi)	_____	_____	_____	Fluctuating
Sampling Time (Min)	_____			-
Shut-in Time (Min)	_____			21:24

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, _____ °F

MAX. DEPTH TOOL REACHED: 8390 Ft.

TIME SINCE CIRCULATION : 14:24 Hrs.

REMARKS : DRY RUN - ONE THERMOMETER USED.

With main Chamber open, Schlumberger pressures =

Sampling: 15 psig, Final shut in: 22 psig

F.I.T. RECORD

GEOLOGIST SB/RDR/GMK

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 5 @ 8312.5 ft. (G.R. Depth) DATE 16.12.77

VALID TEST : Yes/No

SEAL MAIN CHAMBER AND SEGREGATOR. @

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 6:19:39 Tool Open 6:21:29 Min. Open 16:53 ~~XXXXXXXXX~~ 6:38:22

Shaped Charge Shot: ~~Yes~~/No at _____

~~Segregator Open~~ _____ Mins. Open _____ Full After _____

Tool Closed 6:38:22 Tool Off 6:55:46

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

0 p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS 3500 cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- 22 ppm (Titration)

PRESSURES - ~~MAIN CHAMBER~~ sealed.

REcorded with main chamber and segregator / Agnew

	Schlumberger	Amerada _____	Amerada _____	Hewlett Packard*
Sampling (psi)	0			0-28.8 psi
Final Shut-in (psi)	3500			3669 Not stable
nitial Hydrostatic (psi)				4153
rinal Hydrostatic (psi)				4220
Sampling Time (Min)				-
Build-up ~~XXXXXXX~~ Time (Min)				17 mins. 24 secs.

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 196 °F, _____ °F

MAX. DEPTH TOOL REACHED: 8450 Ft.

TIME AT DEPTH: 06:19

TIME SINCE CIRCULATION : 18:49 Hrs.

REMARKS : DRY TEST

F.I.T. RECORD

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 6 @ 8334ft. (G.R. Depth) GEOLOGIST RDR/GMK/SB DATE 16.12.77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 10:47:15 Tool Open 10:48:51 Min. Open 10 mins, 9 secs. Full After NOT FULL SEALED MAIN CHAMBER & SEGREGATOR @ 10:59:02

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 11:04:39 Tool Off 11:06:09

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

0 p.s.i. SURFACE PRESSURE	_____ cc WATER
_____ cft. GAS	1500 cc ~~MUD~~ FILTRATE
_____ cc. OIL	_____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- 4000 ppm NO_3^- 8 ppm (Titration)

PRESSURES - ~~MAIN CHAMBER~~

Recorded with main chamber & segregator sealed

	Schlumberger	Amerada _____	Amerada _____	Hewlett Packard*
Sampling (psi)	0			-
Final Shut-in (psi)	2820			3645
Initial Hydrostatic (psi)				4175
Final Hydrostatic (psi)				4357
Sampling Time (Min)				-
BUILD-UP ~~XXXXXXX~~ Time (Min)				5 mins, 37 secs.

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 206 °F, _____ °F

MAX. DEPTH TOOL REACHED: 8450 Ft.

TIME SINCE CIRCULATION : 22:00 Hrs.

REMARKS : DRY TEST - VERY LOW K - 65 MD

P_o - 3646 psi.

F.I.T. RECORD

GEOLOGIST RDR/GMR/SB

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 7 @ 8249 ft. (G.R. Depth) DATE 16.12.77

VALID TEST : Yes/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 13:54:58 Tool Open 13:56:23 Min. Open 18' 35" Full After 14:04:29

Shaped Charge Shot: ~~XXXX~~No at _____

Segregator Open 14:14:58 Mins. Open 5' 02" Full After 14:15:52

Tool Closed 14:19:56 Tool Off 14:22:03

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

1500 p.s.i. SURFACE PRESSURE	1,250 cc ~~WATER~~ FILTRATE
38.36 cft. GAS (5664 cc @ reservoir P.T. & V)	13,250 cc MUD
2870 cc. OIL	cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S
	113050	35994	43776	10862		
	159744	60621	34560	7534		
	164659	56832	32256	4672		
BLENDER SAMPLE	12211	21312	71424	27648	19584	

OIL 48 °API @ 72 °F; Pour Point _____ °F

Medium Brown Colour; Pale White to Blue Fluorescent Colour

2127 SCF/STB G.O.R.

WATER Rrf 0.789 @ 78 °F, Equiv. Cl^- 6800 ppm (Resistivity)

Cl^- 4000 ppm NO_3^- 8 ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Avg. Sampling (psi)	1999 -198			1900 psig
Final Shut-in (psi)	3600			3621
Initial Hydrostatic (psi)	N/A			4094
Final Hydrostatic (psi)	~~4150~~			4108
Sampling Time (Min)				8' 06"
Build up ~~XXXXXX~~ Time (Min)				10' 29"

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 208 °F, _____ °F

MAX. DEPTH TOOL REACHED: 8380 ft.

TIME SINCE CIRCULATION : 26:00 Hrs.

REMARKS : K = 170 MD

P_o = 3623

Successful oil test

F.I.T. SEGREGATOR REPORT

GEOLOGIST RDR/GMK

WELL : FLOUNDER #6 SIDETRACK F.I.T. No. 7 @ 8249ft.(G.R. Depth) DATE 16/12/77

SEGREGATOR TYPE Monel NUMBER 2907 DATE OPENED _____

RECOVERY - SEGREGATOR

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - SEGREGATOR

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ ^{o}API @ _____ ^{o}F; Pour Point _____ ^{o}F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - SEGREGATOR

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Avg. Sampling (psi)	500 -3500			~ 1900 psi
Final Shut-in (psi)	3600			3622
Hydrostatic (psi)	4120			4108 final (Fluctuating)
Sampling Time (Min)				0' 54"
Build up ~~Shut-in~~ Time (Min)				4' 04"

(*Corrected for Atmospheric pressure)

REMARKS :

Segregator kept for later analysis

F.I.T. RECORD

GEOLOGIST RDR/GMK/SB

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 8 @ 8231 ft. (G.R. Depth) DATE 17/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES .030"

TIMES : Tool Set 10:10:19 Tool Open 10:12:25 Min. Open 0:19:00 Full After 10:19:24

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open 10:31:25 Mins. Open 0:4:28 Full After 10:31:41

Tool Closed 10:35:53 Tool Off 10:36:32

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

2000 p.s.i. SURFACE PRESSURE	_____ cc WATER
130.5 cft. GAS	2,200 cc ~~MUD~~ FILTRATE
2,300 cc. ~~OIL~~ CONDENSATE	_____ cc SAND
	4,500 cc TOTAL

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S
Run 1	179,404	64,409	48,384	11,913	2,937	_____
2	181,862	58,726	38,864	8,292	1,958	_____
3	186,777	62,515	34,560	5,606	TRACE	_____
Blender	4,915	108,928	102,528	24,294	TRACE	_____

OIL 63 °API @ 64 °F; Pour Point _____ °F

Light green Colour; pale blue Fluorescent Colour

9022 G.O.R.

WATER Rrf 0.786 @ 74 °F, Equiv. Cl^- 7400 ppm (Resistivity)

Cl^- 3000 ppm NO_3^- 16 ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Avg. Sampling (psi)	1600			2800
Final Shut-in (psi)	2000			3617
Initial Hydrostatic (psi)	2200			4200
Final Hydrostatic (psi)				4191
Sampling Time (Min)				6' 59"
Shut-in Time (Min)				12' 01 secs.

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 204 °F, - °F

MAX. DEPTH TOOL REACHED: 8250 Ft.

TIME SINCE CIRCULATION : 4:40 Hrs.

REMARKS : CIRCULATION FINISHED 0:5:00 HOURS 17/12/77

FORMATION PRESSURE: 3622 psi

K: 7 MD

Successful gas/condensate test

F.I.T. SEGREGATOR REPORT

GEOLOGIST RDR/GMK

WELL : FLOUNDER #6 SIDETRACK F.I.T. No. 8 @ 8231 ft.(G.R. Depth) DATE 17/12/77

SEGREGATOR TYPE Monel NUMBER 24 DATE OPENED _____

RECOVERY - SEGREGATOR

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - SEGREGATOR

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ ^{o}API @ _____ ^{o}F; Pour Point _____ ^{o}F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - SEGREGATOR

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Avg. Sampling (psi)	760 -1900			779-2781
Final Shut-in (psi)	2000			3618
Hydrostatic (psi)	2200			4191
Sampling Time (Min)				0'16"
Shut-in Time (Min)				4'12"

(*Corrected for Atmospheric pressure)

REMARKS :

Segregator kept for later analysis

F.I.T. RECORD

GEOLOGIST SB/RDR/GMK

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 9 @ 8243 ft. (G.R. Depth) DATE 17/12/77

VALID TEST : Yes/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 19:29:05 Tool Open LOST SEAL @ 19:30:37 Min. Open _____ Full After _____

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed _____ Tool Off _____

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)				
Final Shut-in (psi)				
Initial Hydrostatic (psi)	N/A			4188
Final Hydrostatic (psi)				4178

Sampling Time (Min) _____

Shut-in Time (Min) _____

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) _____ °F, _____ °F

MAX. DEPTH TOOL REACHED: 8540 Ft.

TIME SINCE CIRCULATION : 12:19 Hrs.

REMARKS : * LOST SEAL. Unsuccessful test.

F.I.T. RECORD

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 10 @ 8531 ft. (G.R. Depth) GEOLOGIST SB/GMK/RDR DATE 17/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 22:07:37 Tool Open 22:08:01 Min. Open LOST SEAL Full After _____

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed _____ Tool Off 22:11:38

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)				
Final Shut-in (psi)				
Initial Hydrostatic (psi)	~~4300~~			4315
Final Hydrostatic (psi)	~~4250~~			4323
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 198 °F, _____ °F

MAX. DEPTH TOOL REACHED: 8540 Ft.

TIME SINCE CIRCULATION : 16:57 Hrs.

REMARKS : * LOST SEAL . Unsuccessful test.

F.I.T. RECORD

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 11 @ 8334 ft. (G.R. Depth) GEOLOGIST SB/RDR/GMK DATE 17/12/77

VALID TEST : Yes/No

FIRING METHOD _____ CHOKE SIZES 0.30

TIMES : Tool Set 23:42:40 Tool Open _____ Min. Open _____ Full After SEAL FAILURE

Shaped Charge Shot: Yes/~~No~~ at 23:43:40

Second Shaped Charge Shot:

~~Segregator Open~~ 23:49:00 Mins. Open _____ Full After _____

Tool Closed _____ Tool Off 23:51:00

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew _____ Amerada _____	Hewlett Packard*
Sampling (psi)				
Final Shut-in (psi)				
Hydrostatic (psi)				
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 208 °F, _____ °F

MAX. DEPTH TOOL REACHED: 8334 Ft.

TIME SINCE CIRCULATION : 18:42 Hrs.

REMARKS : TESTED MUD . Unsuccessful test.

Lost seal after shot fired.
Did not run Hewlett-Packard Gauge.

F.I.T. RECORD

GEOLOGIST SB/GMK/RDR

WELL: FLOUNDER #6 SIDETRACK F.I.T. No. 12 @ 8522 ft. (G.R. Depth) DATE 18/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 01:56:50 Tool Open 01:58:47 Min. Open 26:33 Full After 02:18:15

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open 02:25:20 Mins. Open 4 mins Full After 02:27:20

Tool Closed 02:29:20 Tool Off 02:29:36

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

210 p.s.i. SURFACE PRESSURE	21,000 cc WATER
_____ cft. GAS	_____ cc MUD
_____ cc. OIL	_____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf 0.462 @ 67 °F, Equiv. Cl^- 14,000 ppm (Resistivity)

Cl^- 7000 ppm NO_3^- 4 ppm (Titration) PH = 7

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	0-430			0-493
Final Shut-in (psi)	3650			3732
Hydrostatic (psi)	4370			4290
Sampling Time (Min)				26'33"
Shut-in Time (Min)				7'05"

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) NOT RUN °F, _____ °F

MAX. DEPTH TOOL REACHED: 8540 Ft.

TIME SINCE CIRCULATION : 20:56 Hrs.

REMARKS : K = 108 MD

Formation P_o - 3735

* Tested water.

F.I.T. SEGREGATOR REPORT

GEOLOGIST SB/RDR/GK

WELL : FLOUNDER #6 SIDETRACK F.I.T. No. 12 @ 8522 ft.(G.R. Depth) DATE 18/12/77

SEGREGATOR TYPE Standard NUMBER 16 DATE OPENED _____

RECOVERY - SEGREGATOR

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - SEGREGATOR

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ ^{o}API @ _____ ^{o}F; Pour Point _____ ^{o}F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - SEGREGATOR

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	70-3500			55-3716
Final Shut-in (psi)	3700			3732
Hydrostatic (psi)	4370			4261
Sampling Time (Min)				04:00
Shut-in Time (Min)				02:00

(*Corrected for Atmospheric pressure)

REMARKS :

Segregator kept for later analysis

R.F.T. RECORD Run #1

GEOLOGIST SB/GMK/RDR

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 1 @ 8531 ft. (G.R. Depth) DATE 15/12/77

VALID TEST : ~~Yes~~/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 02:48:47 Tool Open Same Min. Open 24'44" Full After _____

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 03:13:31 Tool Off same

MUD DATA :

Rmf .61 @ 66 °F, Equiv. Cl^- 9500 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)				
Final Shut-in (psi)	3749			3767 fluctuating
tial Hydrostatic (psi)	4296			4392
nal Hydrostatic (psi)	4252			4432
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, 216 °F

MAX. DEPTH TOOL REACHED: 8550 Ft.

TIME SINCE CIRCULATION : 30:10 Hrs.

REMARKS : * Schlumberger P = 3749

Hewlett-Packard P = 3767 fluctuating

unable to calibrate tool, hence unreliable pressure results

R.F.T. RECORD Run #1

GEOLOGIST SB/RDR/GMK

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 2 @ 8479 ft. (G.R. Depth) DATE 15.12.77

VALID TEST : ~~Yes~~/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 03:25:00 Tool Open same Min. Open 13'10" Full After _____

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 03:33:10 Tool Off same

MUD DATA :

Rmf 0.61 @ 66 °F, Equiv. Cl^- 9500 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE	_____ cc WATER
_____ cft. GAS	_____ cc MUD
_____ cc. OIL	_____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)				3742-3764
Final Shut-in (psi)	3776			3764-3781
tial Hydrostatic (psi)	4257.5			4432
inal Hydrostatic (psi)	~~4239~~			~~fluctuating~~
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, 216 °F

MAX. DEPTH TOOL REACHED: 8550 Ft.

TIME SINCE CIRCULATION : 30:45 Hrs.

REMARKS : Schlumberger HP (Corelab)
P_o = 3776 Erratic pressure fluctuations

Pressure data unreliable

R.F.T. RECORD Run #1

GEOLOGIST SB/RDR/GMK

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 3 @ 8479.5 ft. (G.R. Depth) DATE 15.12.77

VALID TEST : Yes/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 03:36:13 Tool Open same Min. Open 03'56" Full After _____

Shaped Charge Shot: Yes/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 03:40:09 Tool Off same

MUD DATA :

Rmf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO^-3 _____ ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ ^{o}API @ _____ ^{o}F; Pour Point _____ ^{o}F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)				
Final Shut-in (psi)	3720.5			3731
tial Hydrostatic (psi)	4264			4329-4266
inal Hydrostatic (psi)	4229			fluctuating
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 ^{o}F, 216 ^{o}F

MAX. DEPTH TOOL REACHED: 8550 Ft.

TIME SINCE CIRCULATION : 30:58 Hrs.

REMARKS : Schlumberger
P = 3720

HP (Corelab)
(Wild fluctuations in pressure)

Formation pressure 3732 psig K = 1.5 md

* Successful pressure test.

R.F.T. RECORD Run #1

GEOLOGIST SB/GMK/RDR

WELL: FLOUNDER #6 ~~SIDETRACK~~ R.F.T. No. 4 @ 8301 ft. (G.R. Depth) DATE 15/12/77

VALID TEST : ~~Yes~~/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 03:43:11 Tool Open same Min. Open 3:28 Full After _____

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 03:46:41 Tool Off same

MUD DATA :

Rmf 0.61 @ 66 °F, Equiv. Cl^- 9500 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	88			-6-61
Final Shut-in (psi)				
Initial Hydrostatic (psi)	4239			4204-4314
Final Hydrostatic (psi)	~~4174~~			~~4186~~
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, 216 °F

MAX. DEPTH TOOL REACHED: 8550 Ft.

TIME SINCE CIRCULATION : 31:08 Hrs.

REMARKS : Dry test

R.F.T. RECORD Run #1

GEOLOGIST SB/GMK/RDR

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 5 @ 8300 ft. (G.R. Depth) DATE 15.12.77

VALID TEST : Yes/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 03:49:19 Tool Open same Min. Open 2'26" Full After Not full

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 03:51:45 Tool Off same

MUD DATA :

Rmf 0.61 @ 66 °F, Equiv. Cl^- 9500 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	61			-85-98
Final Shut-in (psi)				
Initial Hydrostatic (psi)	4183			
Final Hydrostatic (psi)	4182			4178-4210
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, 216 °F

MAX. DEPTH TOOL REACHED: 8550 ft.

TIME SINCE CIRCULATION : 31:21 Hrs.

REMARKS : Dry test.

R.F.T. RECORD Run #1

GEOLOGIST SB/GMK/RDR

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 6 @ 8312.5ft. (G.R. Depth) DATE 15.12.77

VALID TEST : Yes/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 03:55:01 Tool Open same Min. Open 2:02 Full After Not full

Shaped Charge Shot: Yes/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed _____ Tool Off 03:57:03

MUD DATA :

Rmf 0.61 @ 66 °F, Equiv. Cl^- 9500ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	58			-93-85
Final Shut-in (psi)				
itial Hydrostatic (psi)	4200			4201
nal Hydrostatic (psi)	4189			4210
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, 216 °F

MAX. DEPTH TOOL REACHED: 8550Ft.

TIME SINCE CIRCULATION : 31:27Hrs.

REMARKS : Dry test.

R.F.T. RECORD Run #1.

GEOLOGIST SB/GMK/RDR

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 7 @ 8283 ft. (G.R. Depth) DATE 15.12.77

VALID TEST : ~~Yes~~/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 03:58:58 Tool Open same Min. Open 2:11 Full After Not full

Shaped Charge Shot: Yes/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 04:01:09 Tool Off same

MUD DATA :

Rmf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO^-3 _____ ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ ^{o}API @ _____ ^{o}F; Pour Point _____ ^{o}F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ ^{o}F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew _____ Amerada _____	Hewlett Packard*
Sampling (psi)	56			-94- +170
Final Shut-in (psi)				
itial Hydrostatic (psi)	4184			4249
inal Hydrostatic (psi)	4173			4157
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 ^{o}F, 216 ^{o}F

MAX. DEPTH TOOL REACHED: 8550 Ft.

TIME SINCE CIRCULATION : 31:28 Hrs.

REMARKS : Dry test.

R.F.T. RECORD Run #1.

GEOLOGIST SB/RDR/GMK

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 8 @ 8273 ft. (G.R. Depth) DATE 15.12.77

VALID TEST : Yes/No

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 04:03:18 Tool Open Pretest Min. Open 03'02" Full After _____

Shaped Charge Shot: ~~Yes~~/No at _____

Sample Chamber ~~Sequestor~~ Open 04:06:20 Mins. Open 12:04 Full After Not full

Tool Closed 04:18:24 Tool Off 04:18:24

MUD DATA :

Rmf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO^-3 _____ ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE	_____ cc WATER
_____ cft. GAS	_____ cc MUD
_____ cc. OIL	_____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	150-312			30-250
~~Initial~~ Shut-in (psi)	3675		pretest	3642
tial Hydrostatic (psi)	4166			4150
inal Hydrostatic (psi)	4159			4156
Sampling Time (Min)	03:05			
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, 216 °F

MAX. DEPTH TOOL REACHED: 8550 Ft.

TIME SINCE CIRCULATION : 31:40 Hrs.

REMARKS : Partial flow; fluid entry to test chamber restricted.
Contributed oil to an already contaminated fluid chamber.

Formation Pressure 3643 psig K = 1.2 md

* Successful pressure test.

R.F.T. RECORD Run #1

WELL: FLOUNDER #6 SIDETRACK R.F.T. No. 9 @ 8215 ft. (G.R. Depth) GEOLOGIST SB /RDR/GMK DATE 15/12/77

VALID TEST : Yes/No

FIRING METHOD Normal CHOKE SIZES ; 0.30"

TIMES : Tool Set 04:21:34 Tool Open Pretest Min. Open 02'14" Full After 15"

Shaped Charge Shot: Yes/No at

Sample Chamber Open 04:23:48 Mins. Open 12'56" Full After 7' 46"

Tool Closed 04:36:43 Tool Off (dumped) 04:36:44

MUD DATA :

Rmf 61@ 66°F, Equiv. Cl^- 9500 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER - From 8273'

NOTE: Chamber opened twice:at 8215' and the other at 8273'.

p.s.i. SURFACE PRESSURE 1900 cc WATER FILTRATE

100 cft. GAS-Presumed from 8215' cc MUD

1600 cc. OIL CONDENSATE cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S
Blender Sample	9830	12889	115200	22425		
	280166	71987	46080	7476		
	240844	73881	50688	11212		

OIL 61°API @ 62°F; Pour Point °F

Medium brown Colour; Light blue Fluorescent Colour

G.O.R.

WATER Rrf @ °F, Equiv. Cl^- ppm (Resistivity)

Cl^- ppm NO_3^- 26 ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Agnew Amerada	Amerada	Hewlett Packard*
Sampling (psi)	200-2330			127-3610
Final Shut-in (psi)	3661		Pretest Chamber	3622
Initial Hydrostatic (psi)	3668		Final Shut	3663
Final Hydrostatic (psi)	4151			4132
	4138			4115

Sampling Time (Min)

Shut-in Time (Min)

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 214 °F, 216 °F

MAX. DEPTH TOOL REACHED: 8550 Ft.

TIME AT DEPTH: SINCE CIRCULATION: 0200 Hrs. 15.12.77

TIME SINCE CIRCULATING: 31:43 Hrs.

REMARKS :

FORMATION PRESSURE - 3628 psig k = 1.3md

This test was attempted to test the functioning of the tool. Opened at Formation which produced gas-condensate previously. The slow flow indicated that the fluid entry to the chamber is restricted. Recovery is combination of gas-condensate from 8215' and oil from 8273'.

R.F.T. RECORD - RUN # 2

GEOLOGIST SB/GMK/RDR

WELL: Flounder 6 - Sidetrack R.F.T.No. 10 @ 8531 ft. (G.R. Depth) DATE 16/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30 "

TIMES : Tool Set 19:09:40 Tool Open Same Min. Open _____ Full After Instantaneous

Shaped Charge Shot: ~~Yes~~/No at _____

~~Segregator~~ Open _____ Mins. Open 10:25 Full After _____

Tool Closed 19:20:00 Tool Off Same

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Build-up ~~Sampling~~ (psi)				3649-3738
~~Initial~~ Final Shut-in (psi)	3743			
Hydrostatic (psi)	4256 ~~4237~~			4232 ~~4230~~
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) _____ °F, _____ °F

MAX. DEPTH TOOL REACHED: 8501 Ft.

TIME SINCE CIRCULATION : 31:39 Hrs.

REMARKS : FORMATION PRESSURE - 3738 psig K = 29 md

* Successful pressure test.

R.F.T. RECORD - RUN #2

GEOLOGIST SB/GMK/RDR

WELL: Flounder #6 R.F.T. No. 11 @ 8479 ft. (G.R. Depth) DATE 16/12/77

VALID TEST : Yes/~~No~~ Sidetrack

FIRING METHOD Normal CHOKE SIZES .30 "

TIMES : Tool Set 19:24:30 Tool Open Same Min. Open 4:27 Full After 24 secs.

Shaped Charge Shot: ~~Yes~~/No at _____

~~Segregator Open~~ _____ Mins. Open _____ Full After _____

Tool Closed 19:28:57 Tool Off Same

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)				3449-3712
Final Shut-in (psi)	3717			3712
Hydrostatic (psi)	4200 ~~4199~~			4202 ~~4193~~
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) _____ °F, _____ °F

MAX. DEPTH TOOL REACHED: 8501 Ft.

TIME SINCE CIRCULATION : 31:54 Hrs.

REMARKS : FORMATION PRESSURE - 3712 Psig K = 9 md

* Successful pressure test.

R.F.T. RECORD - RUN #2

GEOLOGIST SB/RDR/GMK

WELL: Flounder-6 Sidetrack R.F.T. No. 12 @ 8334 ft. (G.R. Depth) DATE 16/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES .30"

TIMES : Tool Set 19:42:28 Tool Open Same Min. Open 27' 32" Full After 31 secs

Shaped Charge Shot: ~~Yes~~/No at _____

~~Segregator Open~~ _____ Mins. Open _____ Full After _____

Tool Closed 20:10:00 Tool Off Same

MUD DATA :

Rmf 0.681 @ 68 °F, Equiv. Cl^- 9200 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

0 p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)				2617-3647
Final Shut-in (psi)	3666			
Hydrostatic (psi)	4102 4149			Int: 4095
Sampling Time (Min)				
Shut-in Time (Min)				

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) _____ °F, _____ °F

MAX. DEPTH TOOL REACHED: 8501 Ft.

TIME SINCE CIRCULATION : _____ Hrs.

REMARKS :

19:45:06 - attempt open second chamber (2200cc) - main chamber would not open.

* DRY RUN

Formation Pressure = 3648 psig

K = 7 MD

R.F.T. RECORD

GEOLOGIST SB/RDR/GMK

WELL: Flounder #6 R.F.T. Sidetrack No. 13 @ 8148 ft. (G.R. Depth) DATE 17/12/77

VALID TEST : ~~Yes~~/No

FIRING METHOD Normal CHOKE SIZES 0.30

TIMES : Tool Set 14:05:22 Tool Open Same Min. Open _____ Full After No seal

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed _____ Tool Off _____

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada _____	Amerada _____	Hewlett Packard*
Sampling (psi)					
Final Shut-in (psi)					
Hydrostatic (psi)	4190				4147
Sampling Time (Min)					
Shut-in Time (Min)					

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 8340 °F, _____ °F

MAX. DEPTH TOOL REACHED: _____ Ft.

TIME SINCE CIRCULATION : 8:55 Hrs.

REMARKS :

No Seal

* Unsuccessful test.

R.F.T. RECORD - RUN # 3

GEOLOGIST SB/RDR/GK

WELL: Flounder #6 Sidetrack R.F.T. No. 14 @ 8148.5 ft. (G.R. Depth) DATE 17/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 14:09:55 Tool Open Same Min. Open 11.36 Full After Not Full

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 14:21:31 Tool Off Same

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE _____ cc WATER

_____ cft. GAS _____ cc MUD

_____ cc. OIL _____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew Amerada	Hewlett Packard*
Sampling (psi)	51-148			0-95.3
Final Shut-in (psi)				
Hydrostatic (psi)	4190 4186			4155 4153
Sampling Time (Min)				11:36
Shut-in Time (Min)				-

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 8340 °F, _____ °F

MAX. DEPTH TOOL REACHED: _____ Ft.

TIME SINCE CIRCULATION : 8:59 Hrs.

REMARKS :

Dry Test.

Very low K.

R.F.T. RECORD - RUN #3

GEOLOGIST SB/GMK/RDR

WELL: Flounder-6 R.F.T. No. 15 @ 8195.5 ft. (G.R. Depth) DATE 17/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 14:26:52 Tool Open Same Min. Open 4:06 Full After 27 secs

Shaped Charge Shot: ~~Yes~~/No at _____

Segregator Open _____ Mins. Open _____ Full After _____

Tool Closed 14:30:58 Tool Off Same

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

_____ p.s.i. SURFACE PRESSURE	_____ cc WATER
_____ cft. GAS	_____ cc MUD
_____ cc. OIL	_____ cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL _____ °API @ _____ °F; Pour Point _____ °F

_____ Colour; _____ Fluorescent Colour

_____ G.O.R.

WATER Rrf _____ @ _____ °F, Equiv. Cl^- _____ ppm (Resistivity)

Cl^- _____ ppm NO_3^- _____ ppm (Titration)

PRESSURES - MAIN CHAMBER

	Schlumberger	Amerada	Agnew _____	Amerada _____	Hewlett Packard*
Sampling (psi)					3302-3623
Final Shut-in (psi)	3656				-
Hydrostatic (psi)	4208 4213				4173 4177
Sampling Time (Min)					
Shut-in Time (Min)					

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) _____ °F, _____ °F

MAX. DEPTH TOOL REACHED: 8340 Ft.

TIME SINCE CIRCULATION : 9:16 Hrs.

REMARKS : Formation Pressure 3623 psig K = 1.5 md

* Dry Test.

R.F.T. RECORD - RUN #3

GEOLOGIST SB/GMK/RDR

WELL: Flounder #6 R.F.T. No. 16 @ 8243 ft. (G.R. Depth) DATE 17/12/77

VALID TEST : Yes/~~No~~

FIRING METHOD Normal CHOKE SIZES 0.30"

TIMES : Tool Set 14:37:29 Tool Open Same Min. Open 2' 40" Full After 38secs

Shaped Charge Shot: ~~Yes~~/No at

Main Chamber Open: 14:40:09

Segregator Open 14:43:13 Mins. Open Closed Instantly Full After

Tool Closed 14:46:28 Tool Off same

MUD DATA :

Rmf 0.672 @ 80 °F, Equiv. Cl^- 8000 ppm (Resistivity)

Cl^- 2000 ppm NO^-3 100 ppm (Titration)

SAMPLE TAKEN AT END OF LAST CIRCULATION

RECOVERY - MAIN CHAMBER

0 p.s.i. SURFACE PRESSURE cc WATER

cft. GAS cc MUD

cc. OIL cc SAND

PROPERTIES - MAIN CHAMBER

GAS	C_1	C_2	C_3	C_4	C_5	H_2S

OIL °API @ °F; Pour Point °F

Colour; Fluorescent Colour

G.O.R.

WATER Rrf @ °F, Equiv. Cl^- ppm (Resistivity)

Cl^- ppm NO_3^- ppm (Titration)

PRESSURES - ~~MAIN CHAMBER~~ Pretest Chamber

	Schlumberger	Amerada	Agnew Amerada		Hewlett Packard*
Sampling (psi)					1546-3629
Final Shut-in (psi)	3652-3650				3629
Hydrostatic (psi)	~~4223~~ 4223				4198 Initial
Sampling Time (Min)					4198 Final
Shut-in Time (Min)					

(*Corrected for Atmospheric pressure)

TEMPERATURES : (max recorded) 204 °F, - °F

MAX. DEPTH TOOL REACHED: 8340 Ft.

TIME SINCE CIRCULATION : 9:27 Hrs.

REMARKS : Formation Pressure 3630 psig K = 5 md

* Successful pressure test, unsuccessful sampling operation.
Both chamber and segregator opened but shut off instantly.

The tool has an opening valve failure.

ENCLOSURES

PE902760

This is an enclosure indicator page.
The enclosure PE902760 is enclosed within the container PE902759 at this location in this document.

The enclosure PE902760 has the following characteristics:

ITEM_BARCODE	= PE902760
CONTAINER_BARCODE	= PE902759
NAME	= Structure Map Top of Latrobe Group
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= SEISMIC
SUBTYPE	= HRZN_CONTR_MAP
DESCRIPTION	= Structure Map Top of Latrobe Group
REMARKS	=
DATE_CREATED	= 30/06/1977
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902761

This is an enclosure indicator page.
The enclosure PE902761 is enclosed within the container PE902759 at this location in this document.

The enclosure PE902761 has the following characteristics:

ITEM_BARCODE	= PE902761
CONTAINER_BARCODE	= PE902759
NAME	= Structure Map Base if Coals Horizon
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= SEISMIC
SUBTYPE	= HRZN_CONTR_MAP
DESCRIPTION	= Structure Map Base of Coals Horizon
REMARKS	=
DATE_CREATED	= 30/06/1977
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902762

This is an enclosure indicator page.
The enclosure PE902762 is enclosed within the container PE902759 at this location in this document.

The enclosure PE902762 has the following characteristics:

ITEM_BARCODE	= PE902762
CONTAINER_BARCODE	= PE902759
NAME	= Structure Map Top of Pay Sand T Longus
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= SEISMIC
SUBTYPE	= HRZN_CONTR_MAP
DESCRIPTION	= Structure Map Top of Pay Sand T Longus
REMARKS	=
DATE_CREATED	= 30/06/1977
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902763

This is an enclosure indicator page.
The enclosure PE902763 is enclosed within the container PE902759 at this location in this document.

The enclosure PE902763 has the following characteristics:

ITEM_BARCODE	= PE902763
CONTAINER_BARCODE	= PE902759
NAME	= Structural Cross Sections Pre Drill & Post Drill
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= CROSS_SECTION
DESCRIPTION	= Structural Cross Sections Pre Drill & Post Drill
REMARKS	=
DATE_CREATED	= 30/06/1977
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE904936

This is an enclosure indicator page.
The enclosure PE904936 is enclosed within the container PE902759 at this location in this document.

The enclosure PE904936 has the following characteristics:

ITEM_BARCODE	= PE904936
CONTAINER_BARCODE	= PE902759
NAME	= Time Depth Curve
BASIN	= GIPPSLAND
PERMIT	= VIC/L11
TYPE	= WELL
SUBTYPE	= VELOCITY_CHART
DESCRIPTION	= Flounder 6 Time Depth Curve. Figure 5 of WCR.
REMARKS	=
DATE_CREATED	= 14/12/77
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	=
CLIENT_OP_CO	= Esso Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE902764

This is an enclosure indicator page.
The enclosure PE902764 is enclosed within the container PE902759 at this location in this document.

The enclosure PE902764 has the following characteristics:

ITEM_BARCODE	= PE902764
CONTAINER_BARCODE	= PE902759
NAME	= Sonic Calibration Curve
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= VELOCITY_CHART
DESCRIPTION	= Sonic Calibration Curve
REMARKS	=
DATE_CREATED	= 15/02/1978
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE601420

This is an enclosure indicator page.
The enclosure PE601420 is enclosed within the container PE902759 at this location in this document.

The enclosure PE601420 has the following characteristics:

ITEM_BARCODE	= PE601420
CONTAINER_BARCODE	= PE902759
NAME	= Well Completion Log
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= COMPLETION_LOG
DESCRIPTION	= Well Completion Log
REMARKS	=
DATE_CREATED	= 13/12/1977
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)

PE902765

This is an enclosure indicator page.
The enclosure PE902765 is enclosed within the container PE902759 at this location in this document.

The enclosure PE902765 has the following characteristics:

ITEM_BARCODE	= PE902765
CONTAINER_BARCODE	= PE902759
NAME	= Drilling Program - Days Vs Depth
BASIN	= GIPPSLAND
PERMIT	=
TYPE	= WELL
SUBTYPE	= DIAGRAM
DESCRIPTION	= Drilling Program - Days Vs Depth
REMARKS	=
DATE_CREATED	= 14/12/1977
DATE_RECEIVED	=
W_NO	= W692
WELL_NAME	= Flounder-6
CONTRACTOR	= ESSO
CLIENT_OP_CO	= ESSO

(Inserted by DNRE - Vic Govt Mines Dept)