Mobil MOBIL EXPLORATION NORWAY INC.
FINAL COMPOSITE LOG
WELL 33/6-2

1:500

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

Well Data

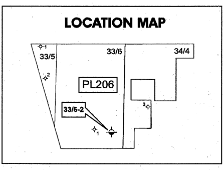
WELL CLASSIFICATION	WILDCAT
WELL LOCATION	61° 32' 16.87" N 01° 56' 33.00" E
SEISMIC LOCATION	MN9601M, LINE 884, TRACE 2964
LICENSE	PL 206 - BLOCK 33/6
LICENSEES	MOBIL (OPERATOR) 75% SAGA 25%
AFE No.	58204
RIG NAME	BYFORD DOLPHIN
DRILLING CONTRACTOR	DOLPHIN
RIG TYPE	SEMI-SUBMERSIBLE
K.B. ELEVATION	25.3 m
WATER DEPTH	316.7 m
TOTAL DEPTH	3950.0 mBRT (DRILLER)
TRUE VERTICAL DEPTH	3945.2 mTVD (DRILLER)
SPUD DATE	29th OCTOBER 1996
T.D. REACHED	23rd DECEMBER 1996
OFF LOCATION	3rd JANUARY 1997
STATUS	PLUGGED AND ABANDONED, OIL SHOWS.

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

HOLE/CASING/MUD/CEMENTING DATA

HOLE SIZE/ MUD TYPE	CASING AND THREAD	SHOE DEPTH (mBRT)	CEMENTING
36": ML-399mBRT (9-7/8" PILOT HOLE TO 990mBRT) SEAWATER/ VISCOUS PILLS (SPUD MUD 418-493m)	30": 464 LB/FT (X-52) DRILQUIP H90 D/QS 30": 309 LB/FT (X-52) DRILQUIP H90 D/QS	394	[illegible]
26": 991mBRT (9-7/8" PILOT HOLE TO 990mBRT) SEAWATER/ VISCOUS PILLS	20": 133 LB/FT (X-56) DRILQUIP S-60 20": 133 LB/FT (X-56) DRILQUIP E-60	985	[illegible]
17½": 2150mBRT KCL/GLYCOL	13-3/8": 72 LB/FT (N-80) BTC	2138.7	[illegible]
12¼": 3463mBRT KCL/POLYMER/ GLYCOL	9.625": 53.5 LB/FT (L-80) BTC/NKK-3SB	3459.5	[illegible]
8½": 3950mBRT KCL/POLYMER/ GLYCOL			

CEMENT PLUGS FOR P & A	
No.	INTERVAL (mBRT)
1	3800 - 3381 m
	EZSV AT 880 m
2	880 - 680 m
3	694 - 395 m



Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

LIST OF CONTRACTORS

DRILLING SERVICES CONTRACTORS

BITS	SBL/HUGHES/HYCALOG/SMITH INT.
CASING	WEATHERFORD
CEMENTING	HALLIBURTON
CORING	BAKER HUGHES INTEQ
DIRECTIONAL DRILLING	HALLIBURTON
DIRECTIONAL SURVEYING	SPERRY SUN
DIVING SUPPORT	OCEANEERING
DRILLING CONTRACTOR	DOLPHIN
HELICOPTER SUPPORT	STATOIL/HELIKOPTER SERVICE
JARS	WEIR HOUSTON
LOGISTICS BASE	CCB
MUD PRODUCTS	MI ANCHOR
NAVIGATION SERVICES	RACAL
P & A SERVICES	WEATHERFORD
SITE SURVEY	GEOTEAM A/S
STABILIZERS	WEATHERFORD
SUPPLY/STANDBY VESSELS	STATOIL
WEATHER FORECASTS	OCEAN ROUTES
WELLHEAD EQUIPMENT	DRILQUIP

GEOLOGICAL CONTRACTORS

BIOSTRATIGRAPHY	ROBERTSON RESEARCH INTERNATIONAL LTD.
CORE ANALYSIS	SCHLUMBERGER GEOQUEST
GEOCHEMISTRY	GEOLAB NOR
LWD	SPERRY SUN
MUD LOGGING	GEOSERVICES
WELLSITE GEOLOGY	CAMBRIAN CONSULTANTS LTD
WIRELINE LOGGING	SCHLUMBERGER
VELOCITY SURVEY	SCHLUMBERGER

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

GEOLOGICAL SAMPLES

A) DRILL CUTTINGS

TYPE OF SAMPLE	DEPTH INTERVAL AND FREQUENCY 991 - 1650	 1650 - 1920	 3200 - 3950
WASHED AND DRIED (100g)	10	5	3
DITCH CUTTINGS WET (5kg bag)	10	5	3
DITCH CUTTINGS - BIOSTRATIGRAPHY (500g)	10	5	3
CANNED SAMPLES FOR GEOCHEMISTRY	10	10	3
CANNED MUD SAMPLES	100	100	100

B) CONVENTIONAL CORES

CORE No.	DEPTH INTERVAL (mBRT) DRILLED	 RECOVERED	 LOG CORRECTED	CUT (m)	RECOVERED (m)	%
1	3800.0 - 3820.0	3800.0 - 3819.8	3800.3 - 3819.9	20.0	19.8	99.0
2	3840.0 - 3852.0	3840.0 - 3851.0	3839.6 - 3850.4	12.0	11.0	91.3

N.B. Log Corrected values are average, see Fig 2.7 for detailed values.

C) SIDEWALL CORES

RUN No.	SHOTS	MISFIRES	LOST BULLETS	EMPTY BULLETS	SAMPLES
2A	60	16	7	10	27
3F	60	0	4	12	44

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

LITHOSTRATIGRAPHIC TOPS

All measured and TVD depths measured from rotary table, RT. RT-Sea Level (LAT) = 25.3m.

GROUP	FORMATION	PROGNOSED mMD	mTVD	mSS	ACTUAL mMD	mTVD	mSS	VERT THICK	Hi-/Lo+	TWT (msec)
RT		0	0	-22	0.0	0.0	-25.3	25.3	-3.3	
Sea Level		22	22	0	25.3	25.3	0.0	316.7	0	0.0
Nordland	Seabed	337	337	315	342.0	342.0	316.7	791.9	1.7	428.6
	Utsira	1067	1067	1045	1035.0	1034.9	1009.6	99.0	-35.4	1081.1
Hordaland	Undifferentiated	1142	1142	1120	1134.0	1133.9	1108.6	597.8	-11.4	1172.7
Rogaland	Balder	1752	1752	1730	1732.0	1731.7	1706.4	38.8	-23.6	1758.6
	Sele				1771.0	1770.5	1745.2	11.5		1793.6
	Lista				1782.5	1782.0	1756.7	138.4		1803.9
	Våle				1921.0	1920.4	1895.1	11.5		1927.7
Shetland	Jorsalfare	1937	1937	1915	1932.5	1931.9	1906.6	292.7	-8.4	1938.0
	Kyrre	2252	2252	2230	2226.0	2224.6	2199.3	882.6	-30.7	2197.0
	Tryggvason				3110.0	3107.2	3081.9	343.8		2811.6
Cromer Knoll	Mime	3227	3227	3205	3454.5	3451.0	3425.7	11.0	220.7	3034.6
Viking	Draupne				3465.5	3462.0	3436.7	118.7		3040.3
	Top Munin sst unit				3486.0	3484.4	3459.1	62.9		3056.1
	Base Munin sst unit				3551.0	3547.3	3522.0			3093.8
	Heather	3597	3597	3575	3584.5	3580.7	3555.4	27.9	-19.6	3115.5
Brent	Undifferentiated	3622	3622	3600	3612.5	3608.6	3583.3	164.2	-16.7	3131.9
Dunlin	Drake	3792	3792	3770	3777.0	3772.8	3747.5	37.8	-22.5	3219.2
	Cook				3815.0	3810.6	3785.3	40.5		3240.8
	Burton				3855.5	3851.1	3825.8	18.4		3262.4
	Amundsen				3874.0	3869.5	3844.2	38.4		3273.3
	Statfjord Formation.	3982	3982	3960	3912.5	3907.9	3882.6	37.3	-77.4	3294.2
Total Depth.		4012	4012	3990	3950.0	3945.2	3919.9		-70.1	3312.0

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

SIDEWALL CORE SUMMARY SHEET

WELL: 33/6-2 FIELD: Elg
LOGGING CO.: Schlumberger DATE: 3rd Dec 1996
RUN No.: 2A GUN No. 1
GUN TYPE: A HOLE SIZE: 12.25"
GEOLOGISTS: Herrett/Feery EXPECTED BHT 100 °C

Page 1 of 2

CORE No.	DEPTH mBRT	LITHOLOGY	Delta T	Release Ring	Overpull lbs	Misfire	Lost	Empty	Rec (cm)	Remarks
1	3445	Claystone	N/A	2-3/8"	0				2.0	
2	3430	Misfire	99	2-3/8"	0	✓				
3	3416	Claystone	96	2-3/8"	200				2.0	
4	3403	Misfire	96	2-3/8"	100	✓				
5	3388	Misfire	98	2-3/8"	200	✓				
6	3376	Misfire	97	2-3/8"	200	✓				
7	3359	Misfire	97	2-3/8"	200	✓				
8	3336	Misfire	95	2-3/8"	200	✓				
9	3324	Misfire	98	2-3/8"	200	✓				
10	3309	Lost	97	2-3/8"	2000		✓			
11	3297.5	Misfire	100	2-3/8"	350	✓				
12	3285	Misfire	97	2-3/8"	100	✓				
13	3275	Misfire	100	2-3/8"	100	✓				
14	3260	Misfire	102	2-3/8"	400	✓				
15	3250	Misfire	99	2-3/8"	100	✓				
16	3241	Misfire	91	2-3/8"	100	✓				
17	3226	Claystone	92	2-3/8"	200				1.0	
18	3210	Empty	90	2-3/8"	100			✓		
19	3192	Empty	90	2-3/8"	300			✓		
20	3173	Arg. Lst.	89	2-3/8"	100				1.0	
21	3150	Misfire	88	2-3/8"	200	✓				
22	3132.5	Lost	96	2-3/8"	1500		✓			
23	3105	Calc Clyst	95	2-3/8"	400				0.5	
24	3072	Claystone	95	2-3/8"	400				0.5	
25	3058	Claystone	95	2-3/8"	1000				0.5	
26	3022	Claystone	92	2-3/8"	400				2.0	
27	2979	Clyst/Arg. Lst	102	2-3/8"	50?				2.0	
28	2954.5	Clyst/Arg. Lst	95	2-3/8"	100				1.5	
29	2930	Misfire	97	2-3/8"	50?	✓				
30	2905	Claystone	94	2-3/8"	400				1.5	

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

SIDEWALL CORE SUMMARY SHEET

WELL: 33/6-2 FIELD: Elg
LOGGING CO.: Schlumberger DATE: 3rd Dec 1996
RUN No.: 2A GUN No. 2
GUN TYPE: Z HOLE SIZE: 12.25"
GEOLOGISTS: Herrett/Feery EXPECTED BHT 100 °C

Page 2 of 2

CORE No.	DEPTH mBRT	LITHOLOGY	Delta T	Release Ring	Overpull lbs	Misfire	Lost	Empty	Rec (cm)	Remarks
31	2880	Claystone	97	2-3/8"	200				2.0	
32	2855	Arg. Lst.	95	2-3/8"	200				2.4	
33	2830	Claystone	98	2-3/8"	200				2.0	
34	2808	Claystone	102	2-3/8"	200				2.2	
35	2783	Claystone	103	2-3/8"	100				2.5	
36	2755	Arg. Lst.	103	2-3/8"	100				2.3	
37	2729	Claystone	106	2-3/8"	50?				1.5	
38	2705	Lost	105	2-3/8"	2000		✓			
39	2679	Claystone	99	2-3/8"	2000				1.4	
40	2654	Claystone	99	2-3/8"	400				1.5	
41	2630	Claystone	98	2-3/8"	2000				1.6	
42	2605	Claystone	98	2-3/8"	1400				1.5	
43	2574	Empty	98	2-3/8"	200			✓		
44	2559	Claystone	102	2-3/8"	600				2.0	
45	2525	Claystone	102	2-3/8"	300				1.8	
46	2505	Claystone	108	2-3/8"	300				2.0	
47	2480	Misfire	109	2-3/8"	50?	✓				
48	2455	Lost	110	2-3/8"	1500		✓			
49	2430	Lost	107	2-3/8"	2000		✓			
50	2405	Lost	105	2-3/8"	300		✓			
51	2380	Empty	104	2-3/8"	300			✓		
52	2345	Claystone	108	2-3/8"	600				3.2	
53	2325	Lost	119	2-3/8"	600		✓			
54	2301	Claystone	104	2-3/8"	400				3.4	
55	2275	Empty	115	2-3/8"	1000			✓		
56	2250	Empty	115	2-3/8"	50			✓		
57	2228	Empty	111	2-3/8"	100			✓		
58	2205	Empty	119	2-3/8"	850			✓		
59	2178	Empty	118	2-3/8"	200			✓		
60	2163	Empty	118	2-3/8"	850			✓		
60 Attempted					TOTALS	16 Misfire	7 Lost	10 Empty	27	
						RECOVERY % =			45	

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

WIRELINE LOGGING

SCHLUMBERGER TOOL COMBINATION	DATE RUN	RUN No.	INTERVAL (mBRT)
PI/DSI/MSFL/LDL/CNL/GPIT/EDAC/GR/AMS	12 NOV 1996	1A	214[illegible] - 988.5
PI/DSI/MSFL/LDL/CNL/GPIT/EDAC/GR/AMS	02 DEC 1996	2B	345[illegible] - 2137.0
CST/GR	03 DEC 1996	2A	344[illegible] - 2153.0
FMS/AIT/LDT/CNL/MSFL/GR/AMS	23 DEC 1996	3A	395[illegible] - 3440.5
CMR/DSI/NGT/AMS	24 DEC 1996	3B	395[illegible] - 3440.5
VSP (WSC)	24 DEC 1996	3C	294[illegible] - 1137.0
MDT/GR	25 DEC 1996	3D	349[illegible] - 3622.0
RFT/GR	26 DEC 1996	3E	349[illegible] - 3619.5
CST/GR	27 DEC 1996	3F	3916.[illegible] - 3481.0

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

SIDEWALL CORE SUMMARY SHEET

WELL: 33/6-2 FIELD: Elg
LOGGING CO.: Schlumberger DATE: 26th Dec 1996
RUN No.: 3F GUN No. 1
GUN TYPE: A HOLE SIZE: 8.5"
GEOLOGISTS: G.Wheatley / N. Feery EXPECTED BHT 140 °C

Page 1 of 2

CORE No.	DEPTH mBRT	LITHOLOGY	Delta T	Release Ring	Overpull lbs	Misfire	Lost	Empty	Rec (cm)	Remarks
1	3916.0	Sandstone	72	V Small	200			✓	E	
2	3912.5	Siltstone	70	V Small	300				2.0	
3	3906.0	Empty	75	None	500			✓	E	
4	3901.0	Silty Claystone	88	Small	400				2.0	
5	3880.0	Silty Claystone	84	Small	200				1.5	
6	3872.5	Siltstone	79	None	200				2.0	
7	3870.0	Silty Claystone	97	Medium	100				2.0	
8	3841.0	Lost	81	Medium	1500		✓		L	
9	3825.0	Siltstone	73	Small	400				2.0	
10	3810.5	Empty	88	Medium	1000			✓	E	
11	3787.5	Silty Claystone	85	Small	1500				2.0	
12	3777.5	Silty Claystone	83	Small	400				2.0	
13	3762.5	Silty Claystone	83	Small	600				3.0	
14	3736.0	Empty	89	Medium	600			✓	E	
15	3724.0	Claystone	76	None	500				3.0	
16	3708.0	Empty	88	Small	200			✓	E	
17	3699.5	Sandstone	80	Small	2000				2.0	
18	3696.0	Sandstone	78	None	600				2.0	
19	3690.5	Sandstone	78	None	200				1.5	
20	3688.0	Empty	77	None	200			✓	E	
21	3685.5	Sandstone	76	None	300				2.0	
22	3679.0	Sandstone	74	None	300				1.5	
23	3675.0	Sandstone	76	None	300				1.5	
24	3673.5	Sandstone	78	None	200				1.5	
25	3667.5	Sandstone	78	None	300				1.5	
26	3664.5	Sandstone	77	None	100				2.0	
27	3663.0	Sandstone	76	None	200				1.5	
28	3661.5	Sandstone	79	None	300				2.0	
29	3658.0	Sandstone	74	None	300				2.0	
30	3654.5	Sandstone	73	None	100				2.0	

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

SIDEWALL CORE SUMMARY SHEET

WELL: 33/6-2 FIELD: Elg
LOGGING CO.: Schlumberger DATE: 26th Dec 1996
RUN No.: 3F GUN No. 2
GUN TYPE: Z HOLE SIZE: 8.5"
GEOLOGISTS: Wheatley / Feery. EXPECTED BHT 140 °C

Page 2 of 2

CORE No.	DEPTH mBRT	LITHOLOGY	Delta T	Release Ring	Overpull lbs	Misfire	Lost	Empty	Rec (cm)	Remarks
31	3652.0	Sandstone	77	None	100				1.0	
32	3650.0	Sandstone	76	None	1000				2.0	
33	3647.5	Sandstone	81	None	1000				2.0	
34	3643.2	Sandstone	78	None	1500				2.0	
35	3642.0	Sandstone	75	None	1500				2.0	
36	3638.0	Sandstone	78	None	1000				1.6	
37	3635.5	Sandstone	77	None	1000				1.6	
38	3628.0	Sandstone	75	None	1500				2.0	
39	3625.0	Sandstone	79	None	1000				1.5	
40	3623.0	Empty	78	Small	600			✓	E	
41	3619.5	Sandstone	80	None	1100				1.5	
42	3617.0	Sandstone	77	Small	800				2.6	
43	3612.0	Lost	88	None	1200		✓		L	
44	3598.0	Silty Claystone	92	Small	1100				1.6	
45	3594.5	Claystone	90	Small	300				1.0	
46	3583.0	Claystone	101	Medium	1300				2.0	
47	3578.0	Claystone	90	Small	400				2.0	
48	3574.5	Empty	100	Medium	300			✓	E	
49	3571.5	Empty	85	Small	300			✓	E	
50	3568.5	Empty	80	Medium	400			✓	E	
51	3562.0	Empty	110	Small	300			✓	E	
52	3559.0	Claystone	105	Small	1500				2.0	
53	3556.0	Claystone	105	Small	1500				2.0	
54	3553.0	Lost	90	Medium	1500		✓		L	
55	3535.5	Claystone	100	Small	500				1.6	
56	3531.5	Claystone	108	Medium	1000				1.6	
57	3528.0	Empty	115	Medium	300			✓	E	
58	3493.0	Sandstone	80	Small	300				2.0	
59	3485.5	Claystone	86	Small	1500				1.6	
60	3481.0	Lost	113	Medium	2000		✓		L	
60 Attempted					TOTALS	0 Misfire	4 Lost	12 Empty	44	
						RECOVERY % =			73.3	

Mobil MOBIL EXPLORATION NORWAY INC. **Well 33/6-2**

RFT RESULTS

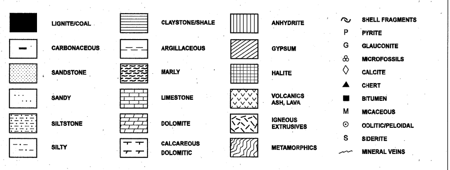
CONTRACTOR - SCHLUMBERGER

TEST No.	DEPTH mRKB	mTVD	MUD HYDROSTATIC (psia)	FORMATION PRESSURE (psia)	(kPA)	TEMP (°C)	COMMENTS
RUN 3D. MDT/GR							
1	3493.0	3489.4	7384	38.4	264.8	103.7	Dry Test
2	3493.5	3489.9	7363	529.0	3647.3	107.8	Dry Test
3	3549.8	3546.1	7602	341.0	2351.1	109.9	Dry Test
	3549.8	3546.1	-	-	-	-	Sample - Packer Leaking
4	3550.0	3546.3	7467	7121.1	49098.1	111.2	Good
5	3550.2	3546.5	7463	7015.0	48366.6	-	Good
6	3550.2	3546.5	7445	6997.0	48242.5	-	Good
			7445	6745.0	46505.0	114.3	Sample
7	3622.0	3618.1	7637	?	-	114.6	Supercharged?
8	3622.0	3618.1	7617	7057.5	48659.6	114.8	Good?
9	3622.1	3618.2	7657	7049.0	48601.0	114.8	Sample
RUN 3E. RFT/GR							
1	3493.0	3489.4	7359.0	6975.9	48097.0	-	Good
2	3549.8	3546.1	7520.4	7449.6	51363.1	113.9	Supercharged?
3	3619.5	3615.6	7646.3	7522.1	51862.9	109.2	Supercharged?
4	3622.0	3618.1	7603.0	7510.0	51779.5	114.5	Telemetry Errors.
							Abandon run.

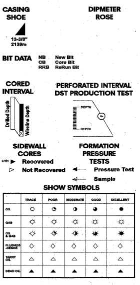
SUMMARY RUN 3D	
ATTEMPTED	9
GOOD TESTS	4
DRY	3
SUPERCHARGED	1

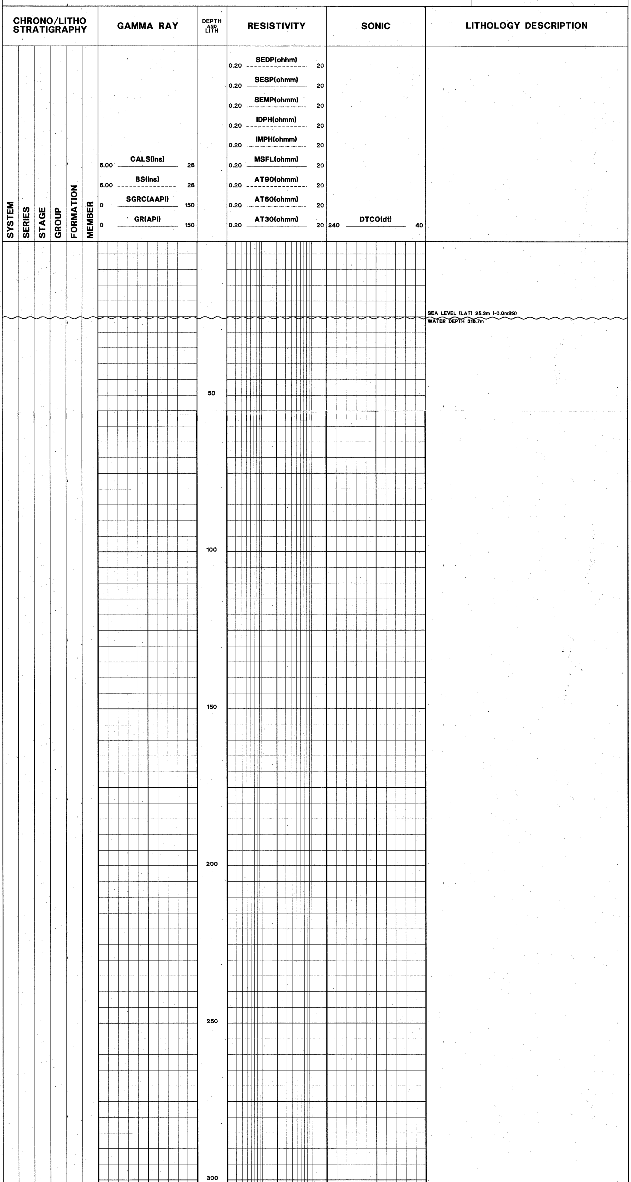
SUMMARY RUN 3E	
ATTEMPTED	4
GOOD TESTS	1
DRY	0
SUPERCHARGED	3

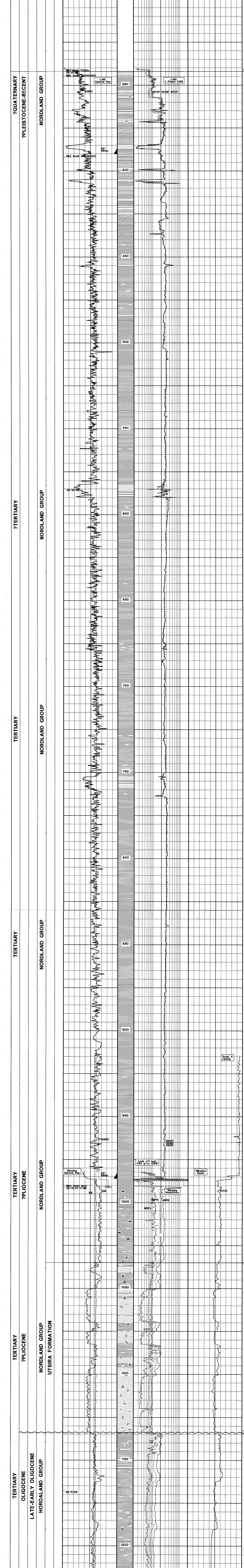
Mobil LITHOLOGY AND MODIFIER SYMBOL SET



Mobil Engineering Symbols







SEABED 342.0 m (-316.7mSS) LAT TWT 428.6msec

9-7/8" PILOT HOLE TO 990mMD
RETURNS TO SEABED
LITHOLOGY EVALUATED
FROM ROP AND LWD.

FIRST SAMPLES COLLECTED FROM 991mMD

CLAYSTONE: olive grey-dark green gray, occasional green black, generally firm-moderately hard, blocky, with crumbly texture, local soft and hydrated, slightly calcareous in part, slightly-very silty, grading siltstone, with common black specks, micromicaceous, possible igneous/metamorphic fragments, occasional microfossils and shell fragments and pyrite nodules.

TOP UTSIRA FORMATION TWT 1081.1 msec
1035.0m (-1009.6mSS)

SAND: loose, disaggregated grains, colorless, milky, occasionally orange, pink, smoky, transparent-translucent, locally opaque, occasionally with orange iron staining, very fine-very coarse grained, rounded-subrounded, occasionally angular, trace residual calcareous cement, trace glauconite, occasional shell fragments and microfossils

ROCK FRAGMENTS: dark gray black-dark green black, fine - very coarse, subangular-rounded, possible igneous/metamorphic origin, associated with sand.

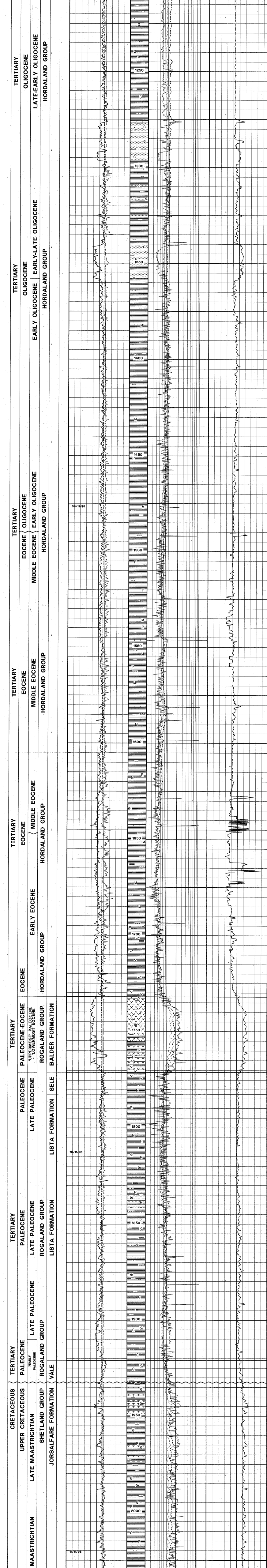
CLAYSTONE: light olive gray, light brown gray, off white-pale olive gray, very soft, amorphous-subblocky, hydrated, sandy, silty, glauconitic, moderate to very calcareous, possibly partly rock flour origin.

TOP HORDALAND GROUP TWT 1172.7msec
1134.0m (-1108.6mSS)

CLAYSTONE: light-medium gray, with green stain from glauconite, soft, amorphous, hydrated, glauconite, moderate calcareous.

SAND: loose, disaggregated, colorless, occasional milky, rarely smoky, transparent-translucent, very fine - fine grained, rarely medium, subrounded-rounded, poor-moderate sorting, up to 20% glauconite, occasional rock fragments, possibly partly caved.

CLAYSTONE: olive gray-brown gray, firm-moderate hard in large cuttings, soft, amorphous, hydrated in small cuttings, soluble and washable, generally non calcareous, silty- very silty in part, local grades siltstone, with common glauconite, occasional black specks, micromicaceous, rare trace fossil fragments.



SAND: loose, disaggregated grains with no visible cement/matrix, generally colorless grains, occasionally pale yellow, very fine-fine grained, rarely medium, subrounded-rounded, occasional subangular, glauconitic, with common fine, dark green-black, rounded glauconite grains, with occasional microfossils and pyrite fragments.

CLAYSTONE: olive gray-dark green gray, soft, amorphous, slightly sticky, also firm-moderate hard, blocky, slightly silty, micromicaceous, locally glauconitic, rare black carbonaceous specks.

SAND: loose, disaggregated, colorless, occasional milky white, transparent-translucent, very fine-fine grained, rarely medium, subangular-subrounded, moderate sorted, common rounded glauconite grains, trace pyrite.

CLAYSTONE: light-medium blue gray, medium gray, occasional green gray, soft-firm, blocky, crumbly, micromicaceous, slightly silty, non calcareous.

CLAYSTONE: medium-dark gray, occasional light gray, dark-medium green gray, soft-firm, occasionally moderately hard, blocky, occasionally subfissile, micromicaceous, slightly silty, trace fine carbonaceous material, rare pyrite, non calcareous.

LIMESTONE: occasional traces incoming, light olive gray, firm, blocky, cryptocrystalline - microcrystalline, slightly argillaceous, slightly dolomitic, locally patchily dolomitic.

CLAYSTONE: predominantly dark green gray - dark green black, occasional dark olive gray, generally firm, occasional moderate hard, blocky - platy, crumbly-flaky fracture, slightly silty, micromicaceous in part, rare black specks, trace disseminated pyrite, occasionally soft, amorphous, hydrated, washable.

LIMESTONE: olive gray, brown gray, occasional dark yellow brown and olive gray, soft-firm, locally hard, blocky, with occasional angular, slightly brittle fracture, microcrystalline-cryptocrystalline, locally dolomitic, with patchy dolomitisation, trace microfossils, local becoming soft-firm with pasty-chalky texture, slightly argillaceous, with occasional black and red-brown flakes.

CLAYSTONE: dark green gray-green black, locally becoming olive black-brown black, generally firm-moderate hard, blocky-platy, occasionally becoming subfissile, occasionally soluble, soft, amorphous, sticky, locally slightly silty, micromicaceous, with rare black carbonaceous specks.

CLAYSTONE: becoming light olive gray, then varicolored, olive gray, green gray, green black, moderate brown, firm-hard, blocky, becoming increasing soft, amorphous, washable, slightly-moderately calcareous, local grading marl, with occasional black specks, trace microfossils, rarely becoming light blue gray and light green gray, tuffaceous, crumbly-ashy texture, speckled.

TUFFS: traces, dark blue gray, speckled black, firm, blocky, ashy appearance, crumbly.

TOP ROGALAND GROUP (BALDER FORMATION) TWT 1758.6msec
1732.0m (-1706.4mSS)

TUFFS: light olive gray-light green gray, medium gray, speckled black, white, red, soft, amorphous, hydrated, local pasty-ashy texture, occasional glassy shards, locally becoming argillaceous and grading tuffaceous claystone.

CLAYSTONE: olive gray, green gray, soft-firm, amorphous, hydrated, pasty, non calcareous, slightly silty, variably tuffaceous, speckled black, occasionally green minerals (chlorite), occasional floating sand grains, slightly ashy texture in part.

TOP SELE FORMATION TWT 1793.2msec
1771.0m (-1745.2mSS)

CLAYSTONE: olive gray to green gray, soft-firm, amorphous, hydrated, pasty, non calcareous, slightly silty and tuffaceous, speckled black, with rare sand grains.

TOP LISTA FORMATION TWT 1803.9msec
1782.5m (-1756.7mSS)

CLAYSTONE: medium-dark olive gray, occasionally green gray, soft-firm, amorphous-blocky, rarely subfissile, common black, occasional green (glauconite?) specks, micromicaceous, occasional disseminated pyrite, non-slightly calcareous, occasionally very fine-fine, subrounded-rounded SAND grains, with traces glauconite.

SANDSTONE: rare traces, loose disaggregated grains, colorless, milky, occasionally with iron stain, transparent - translucent, very fine-fine, rarely medium grained, subangular-rounded, possible partly caved, also locally as sandstone, olive gray, firm-hard, very fine-fine, well sorted, micromicaceous, with trace kaolinite, poor visible porosity, trace fine lithic fragments, trace glauconite.

LIMESTONE: thin stringers, olive gray, yellow brown, generally hard, blocky, angular fracture, occasionally firm and crumbly, cryptocrystalline - microcrystalline, with occasional black specks, locally argillaceous, locally clean with chalky texture, trace microfossils, patchily dolomitic.

CLAYSTONE: dark olive gray - dark green gray, soft, occasionally moderately hard, generally amorphous and soluble, slightly sticky, occasionally firm subfissile-platy, non calcareous, slightly silty, with traces glauconite and black (?carbonaceous) specks, occasional floating sand grains, locally becoming very hard and calcareous.

VÅLE FORMATION TWT 1927.7msec
1921.0m (-1895.1mSS)

CLAYSTONE: olive gray-dark green gray, becoming moderate brown, soft, amorphous, sticky, hydrated, becoming increasing calcareous, with traces glauconite and fine black carbonaceous material.

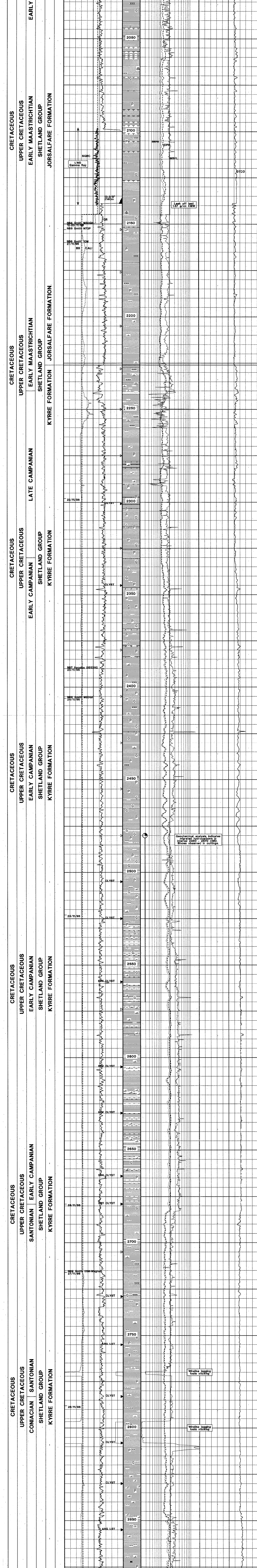
TOP SHETLAND GROUP (JORSALFARE FM.) TWT 1938.0msec
1932.5m (-1906.8mSS)

CALCAREOUS CLAYSTONE: light olive-medium gray, dark green gray, soft-firm, amorphous-blocky, soluble in part, very calcareous, with black carbonaceous specks, traces microfossils, grading argillaceous limestone.

SANDSTONE: traces loose, disaggregated grains, colorless, occasionally pale pink, with pale yellow stain, transparent, occasional translucent, fine-medium, occasional coarse grained, angular-subrounded, poor-moderate sorted?, trace glauconite.

CLAYSTONE: light-medium gray, green gray, soft-firm, blocky-crumbly, rarely subfissile, moderate-very calcareous, trace glauconite, trace pyrite, disseminated and as fragments.

LIMESTONE: as thin stringers, off white-pale brown, soft-firm, blocky-crumbly, occasionally brittle, generally microcrystalline.



CALCAREOUS CLAYSTONE: light-medium gray, occasionally dark green gray, soft-firm, amorphous-blocky, occasionally subfissile, local traces black carbonaceous specks, occasionally slightly silty and sandy, with traces pyrite.

CLAYSTONE: light olive gray, medium gray, olive gray, occasional dark green gray, soft-firm, amorphous-blocky, slightly-moderate calcareous, silty, occasional floating very fine sand grains, occasional black specks, occasional trace glauconite, occasional microfossils, trace pyrite nodules.

LIMESTONE: traces only, very thin stringers, off white-light brown, soft-firm, blocky-crumbly, microcrystalline, slightly dolomitic in part.

CLAYSTONE: very dark green gray - green black, generally firm-moderate hard, curled imbricate cuttings, locally very soft, amorphous, hygroturgid, soluble, slightly-moderately calcareous, occasionally very calcareous grading argillaceous limestone.

LIMESTONE: traces only, medium orange-pale red brown, firm, microcrystalline - cryptocrystalline, with traces DOLOMITE: white, with very fine dark ?glauconitic specks, firm, amorphous to blocky, slightly sucrosic texture.

KYRRE FORMATION TWT 2197.0msec

2226.0m (-2199.3mSS)

SANDSTONE: loose, disaggregated grains, colorless, clear, very fine-medium grained, subangular-subrounded, predominantly quartz grains.

CLAYSTONE: olive gray, dark green gray, occasionally medium to dark reddish brown, soft-firm, amorphous-blocky, plastic, sticky, hygroturgid, common slightly silty, micromicaceous, trace glauconite, with locally common floating sand grains, becoming moderately-very calcareous in part, grading to red brown marl and limestone in part.

DOLOMITE: developed as thin stringers, medium dark yellow brown, very hard, blocky, brittle and slightly splintery, microcrystalline, and locally pale brown-pale orange gray, hard, blocky, sucrosic, microcrystalline.

SANDSTONE: slight traces only, loose disaggregated grains, clear-translucent, colorless quartz, very fine-fine, occasionally medium, subangular-subrourded.

CLAYSTONE: predominantly olive gray - medium dark gray, occasional dark-medium green gray, locally very pale green, green gray, soft, amorphous-blocky, non calcareous, micromicaceous, with floating very fine-fine clear, colorless quartz grains, trace fine black carbonaceous? material.

CLAYSTONE: medium-dark green gray, olive gray, soft, amorphous, hygroturgid, soluble, non-very slightly calcareous, common fine crystalline pyrite from burrows, rare glauconite, with clear-colorless, floating quartz sand grains, very fine-fine occasional medium grained, subangular-subrounded, trace fine black carbonaceous? material.

SANDSTONE: thin stringers, traces in samples, colorless - light brown, friable, clear quartz grains, very fine-fine grained, subangular-subrounded, well sorted, well cement with calcite and silica, poor-moderate visible porosity, no SHOW.

SANDSTONE: colorless - light brown, clear quartz grains, with traces glauconite, very fine-fine grained, subangular - subrounded, well sorted, well cemented with calcite and silica, poor - moderate visible porosity, with poor SHOW.

SHOW: slight oil stain?, dull yellow fluorescence, poor pale yellow streaming cut fluorescence, poor, locally moderate, pale yellow crush cut, faint blue yellow residue fluorescence.

CLAYSTONE: medium-dark green gray, olive gray, brown gray, soft, amorphous, soluble, hygroturgid, non-very slightly calcareous, common fine crystalline pyrite from burrows, rare glauconite, slightly silty and sandy with clear-colorless floating quartz grains, very fine-fine, occasional medium, subangular-subrounded, trace black carbonaceous? specks.

DOLOMITE: thin stringers, pale orange gray, very light brown, hard, blocky, brittle, with occasional bright green, very fine glauconite and black specks ?carbonaceous material, occasionally with crystalline dolomite in fractures.

LIMESTONE: rare traces, white to pale yellow brown, soft - firm, amorphous to blocky, microcrystalline.

SANDSTONE: trace light gray-white, clear-translucent, very fine-fine grained, occasionally medium, subangular-subrounded, moderate sorting, moderately well cemented with calcite, dolomite and silica, traces pyrite, poor visible porosity, no SHOWS from this depth.

CLAYSTONE: medium-dark green gray, locally brown gray, olive gray, occasionally moderate dark brown gray, firm to moderately hard and blocky in sidewall cores, non-very slightly calcareous, common fine crystalline pyrite from burrows, rare glauconite, silty, commonly grading and interlaminated with siltstone and very fine sandstone, with traces glauconite, pyrite.

SANDSTONE: off white - light gray, mottled medium gray, clear-translucent quartz, very fine-fine grained, occasionally medium, subangular-subrounded, moderately well sorted, weak silica cement, glauconitic and micromicaceous, occasionally calcareous, rare trace pyrite

LIMESTONE: in thin stringers/laminae, traces only, white-pale brown yellow, soft-firm, amorphous-blocky, microcrystalline.

DOLOMITE: in thin stringers/laminae, traces only, pale-dark yellow brown, very hard, brittle, flaky, occasionally fissile, microcrystalline, occasionally earthy, with specks glauconite and black ?carbonaceous material.

CLAYSTONE: dark green gray, olive gray, occasional dark brown gray, occasional pale gray, light brown, soft-firm, amorphous, blocky and crumbly in sidewall core samples, slightly-moderate calcareous, silty, micromicaceous, grading to and laminated with siltstone and very fine sandstone, trace glauconite, pyrite.

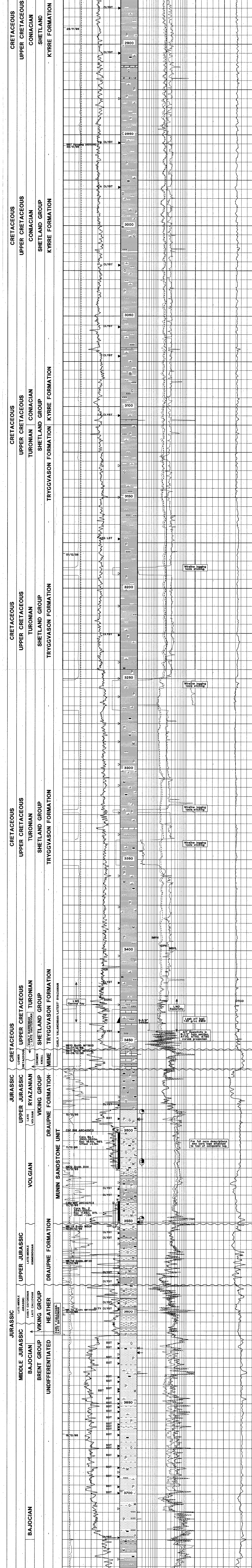
SANDSTONE: light gray-white, clear-translucent, very fine-fine grained, occasionally medium, weak non calcareous cement, trace glauconite, poor - fair visible porosity.

CLAYSTONE: dark green gray, olive gray, occasional dark brown gray, occasionally light-medium gray, rarely light brown, firm to moderately hard and blocky to subfissile in sidewall cores, slightly-moderate calcareous, silty, occasionally grading siltstone and very fine sandstone, trace glauconite, pyrite.

SANDSTONE: olive gray-moderate dark gray, soft-firm, friable, very fine, occasionally fine grained, subrounded, well sorted, with weak silica and calcareous cement, trace argillaceous matrix, trace kaolinite, no-poor visible porosity, locally becoming very argillaceous and silty, with common glauconite, occasional black specks, no SHOW.

CLAYSTONE: predominantly dark green gray to olive gray, green gray, rarely light brown, moderately hard, blocky, crumbly, soft and amorphous in cuttings samples, generally slightly calcareous, occasionally very calcareous, grading argillaceous limestone in part, silty and sandy, occasionally grading siltstone, micromicaceous, trace glauconite, pyrite, black carbonaceous specks.

DOLOMITE: good traces from thin laminae, dark yellow brown, hard, angular, blocky, microcrystalline, locally sucrosic, occasionally cryptocrystalline and argillaceous.



CLAYSTONE: olive gray - olive black, occasionally dark green gray, light-medium light gray, moderately hard, blocky to platy, slightly-moderate calcareous, occasional very calcareous grading argillaceous limestone, silty, grading siltstone in part with occasional silty and sandy laminae, trace glauconite, pyrite nodules.

SANDSTONE: dark green gray, olive gray, firm, friable, very fine-silty, occasional fine grained, subangular-subrounded, well sorted, argillaceous, local grading siltstone, trace kaolinite, weak silica and calcareous cement in part, glauconite, with local trace moderate brown and yellow lithic fragments, black specks, rare trace micromica, poor visible porosity, no SHOW.

DOLOMITE: occasional laminae, yellow brown, generally hard, blocky, microcrystalline - crystalline, occasional fibrous crystals, possible vein infill, occasional slightly sucrosic, locally slightly argillaceous.

SANDSTONE: very light gray, off white, light brown gray, occasionally light red brown, firm to hard, locally friable, blocky, very fine - fine grained, subangular to subrounded, argillaceous, silty, grading / laminated with silty claystone, trace speckled black carbonaceous material, micromicaceous, trace glauconite, trace dolomitic, calcareous and silica cement, poor visible porosity, no SHOW.

CLAYSTONE: olive gray, dark olive gray, dark gray black, dark green gray, firm to moderately hard, amorphous-blocky, locally blocky-platy with angular fracture, generally moderately calcareous, locally becoming very calcareous, grading argillaceous limestone, silty - very silty/sandy, grading siltstone, trace glauconite, trace fine black carbonaceous material, micromicaceous.

TOP TRYGGVASON FORMATION TWT 2811.6msec
3110.0m (-3081.6mSS)

CLAYSTONE: olive gray, dark olive gray, dark gray black, dark green gray, brown gray, soft - firm, amorphous - blocky, locally moderately hard and blocky - platy, moderately - very calcareous, grading argillaceous limestone, silty, with floating very fine sand grains, trace glauconite, trace specks/streaks black carbonaceous material, micromicaceous, rare traces fibrous calcite - vein infill?

CLAYSTONE: dark olive gray, dark green gray, firm-moderate hard, blocky-occasional platy, non-moderately calcareous, silty in part, with common black carbonaceous specks, rarely becoming moderate brown.

DOLOMITE: yellow brown-dusky yellow brown, moderately hard-hard, blocky, angular fracture, occasional slightly flaky, microcrystalline-crystalline, slightly argillaceous and calcareous in part, occasional slightly sucrosic texture.

CLAYSTONE: predominantly dark green gray, dark olive gray, becoming moderate brown - brown gray from 3350-3356m, soft, amorphous, occasionally firm, blocky, slightly hydrated, slightly pasty texture in part.

CLAYSTONE: olive gray-olive black, dark green gray-green black, firm-moderate hard, blocky-platy, amorphous in part, slightly calcareous, occasional moderate calcareous, rarely grading argillaceous limestone, silty, micromicaceous, with occasional black carbonaceous specks, local trace disseminated pyrite.

LIMESTONE: light olive gray, light brown gray, soft - firm, occasionally moderately hard, blocky-platy, crumbly in part, chalky texture, cryptocrystalline - microcrystalline, occasionally argillaceous, grading calcareous claystone.

CLAYSTONE: generally olive gray-dark green gray, locally becoming dark green black-black, hard - very hard, slightly brittle, angular - platy fracture, occasional hackly fracture, non calcareous, non dolomitic.

CLAYSTONE: olive gray - dark green gray, hard, blocky angular break, slightly calcareous and micromicaceous, slightly silty.

CALCAREOUS CLAYSTONE/MARL, moderate brown, locally yellow brown, olive gray, firm-moderate hard, occasionally hard, amorphous-blocky, occasionally platy, occasionally slightly hydrated and amorphous.

TOP CROMER KNOLL (MIME FM.) TWT 3034.6msec
3454.5m (-3425.7mSS)

LIMESTONE: off white, very light gray, firm-moderate hard, occasional very hard, blocky-platy, occasional angular fracture, generally cryptocrystalline, with chalky texture, occasional soft, amorphous and slightly hydrated, locally pyritic with argillaceous streaks/specks.

TOP VIKING GROUP (DRAUPNE FM.) TWT 3040.3msec
3465.5m (-3436.7mSS)

CLAYSTONE: dusky yellow brown, soft - firm, amorphous - blocky, slightly hydrated, non calcareous, slightly silty, micromicaceous, common black carbonaceous specks/streaks, with poor cut, moderate fast, diffuse to clouding yellow white cut fluorescence, dull yellow residue fluorescence with pale brown color.

TOP MUNIN SANDSTONE UNIT TWT 3056.1msec
3488.0m (-3459.1mSS)

SANDSTONE: colorless, pale gray, occasional white, brown gray mottled, hard, brittle, very fine-medium, occasionally coarse, angular-subangular, poorly sorted, occasional argillaceous/kaolinite matrix, calcareous/dolomitic cement, non - poor visible porosity, occasional rock fragments, glauconitic, with very poor SHOW.

SHOW: : very slow light yellow blooming cut, moderate blooming crush cut, pale yellow patchy residue fluorescence, pale brown smoky residue stain.

SANDSTONE: pale gray - dark gray interlaminations, occasionally pale brown gray, hard, brittle, very fine - fine, angular-subangular, clear quartz and white feldspar grains, pale laminae: kaolinite matrix, dark laminae: dark gray argillaceous/micaceous matrix, good dolomitic and occasional silica cement, poor visible porosity, abundant disseminated and nodular pyrite, abundant mica, occasional glauconite, rare fossil wood, lithic fragments.

SHOW: occasional medium brown oil stain, rare pinpoint slow oil bleeds (only after several hours recovery) from pale laminae, pale yellow - dark gold fluorescence, slow - moderate clouding, occasional streaming pale yellow-milky white cut, bright-pale yellow residue fluorescence, pale yellow brown residue stain.

CLAYSTONE: dark dusky yellow brown, medium-dark brown gray, soft to firm, occasionally moderately hard, blocky-subfissile occasionally amorphous, common mica, trace pyrite, carbonaceous, no direct fluorescence, very weak pale yellow white cut, pale yellow residue fluorescence. Occasional interlaminations with:-
LIMESTONE: white-off white, soft-firm, microcrystalline, slightly argillaceous, rarely with very fine disseminated pyrite.

SILTSTONE: medium-dark gray, moderately hard, blocky-brittle, moderate - abundant fine clear quartz, white feldspar, sandy, argillaceous, disseminated pyrite, very micaceous, occasional carbonaceous fragments, occasional, sandy laminations.

SANDSTONE: light gray, very hard, brittle-crumbly, colorless quartz, opaque white feldspar grains, very fine - fine, occasionally medium, subangular-angular, moderately well sorted, good calcareous/dolomitic, occasional silica cement, occasional kaolinite matrix, trace glauconite, pyrite.

SHOW 3549m chip only: Moderate hydrocarbon odor, chip sweating moderate brown oil, pinpoint dull gold fluorescence, instantaneous and very slow diffuse pale yellow cut, slightly improved by crushing, pale yellow residue fluorescence, very weak pale brown residue. Other chips have no shows except for very faint pale yellow fluorescence residue.

CLAYSTONE: dusky yellow brown, moderately hard to hard, blocky to flaky, subfissile, earthy - waxy texture, silty and sandy, locally grading siltstone, micromicaceous, carbonaceous plant material, no fluorescence or cut.

SANDSTONE: off white-pale gray, hard, brittle, colorless, transparent-translucent quartz, very fine-fine grained, occasionally medium, angular - subrounded, kaolinitic, occasional argillaceous matrix, good dolomitic/silica cement, ro visible porosity, occasional crystalline pyrite, glauconite, rarely micaceous, no SHOW.

TOP HEATHER FORMATION TWT 3115.5msec
3584.5m (-3555.4mSS)

SILTY CLAYSTONE: medium to dark brown gray, dusky yellow brown, soft - firm, amorphous to blocky, with carbonaceous specks, very silty and sandy and grades to siltstone, with very poor SHOW in SWC, trace diffuse to streaming yellow ehite cut and residue fluorescence.

DOLOMITIC LIMESTONE: very light - moderate yellow brown, very hard, blocky, brittle. occasional splintery, slightly argillaceous, common very fine black ?carbonaceous specks and microlaminae, microcrystalline, occasional sucrosic, occasionally white-pale orange fibrous crystalline calcareous.

CLAYSTONE: medium-dark blue gray, medium-light pale brown gray, soft-firm, amorphous-blocky, occasional waxy, occasionally silty, micaceous, trace fine carbonaceous material.

TOP BRENT GROUP TWT 3131.9msec
3612.5m (-3583.0mSS)

SAND/SANDSTONE: generally loose and disaggregated, friable, clear-colorless quartz grains, fine-medium grained, subangular - subrounded, subspherical, well sorted, rarely moderate, well cement with silica, trace mica, glauconitic and pyritic, locally common carbonaceous material.

SHOW: very poor, probably associated with locally abundant carbonaceous material, no - patchilly bright white fluorescence, weak and slow, rarely fast and streaming blue white cut and residue fluorescence.

SILTSTONE: medium-dark brown gray, locally white-pale gray, medium-dark gray, soft - firm, blocky, occasionally subfissile, trace carbonaceous material, pyrite, glauconite, occasional mica rich laminae, trace coal, grading claystone in part.

SANDSTONE: generally loose and disaggregated, friable, predominantly clear-colorless quartz, fine-medium occasional coarse, subangular-subrounded, subspherical, well sorted, rarely moderately well cemented with silica, trace weak calcareous cement, trace mica, carbonaceous and glauconitic, pyritic, no SHOW.

SILTSTONE: dark gray, gray black, occasional dark brown gray, firm-moderate hard, blocky - occasional splintery, trace mica, pyrite, carbonaceous material, also white-light gray, streaked with gray, soft -firm, blocky - amorphous.

SANDSTONE: generally loose and disaggregated, clear, colorless-pale gray quartz, very fine-coarse grained, predominantly very fine-medium, poorly sorted, subangular to subrounded, subspherical, with common calcareous and dolomitic cement, trace pale brown mica, glauconite and carbonaceous material, common loose coarse - very coarse clear, colorless quartz with bright pyrite inclusions, occasional cuttings of carbonaceous wood fragments replaced by pyrite, traces of soft sandstone rock flour, no SHOW.

LIMESTONE: trace, white, hard, blocky, brittle, microcrystalline.

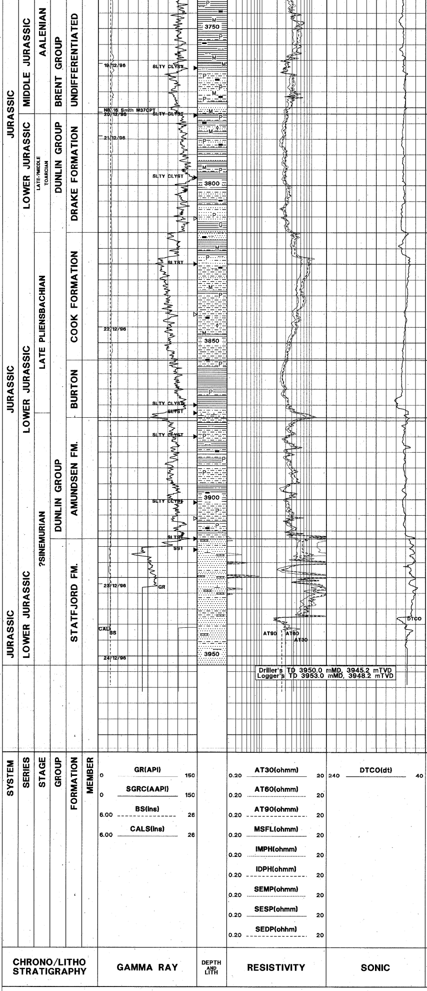
SILTSTONE: medium-dark brown gray, purple brown, moderate hard, blocky, micromica, disseminated pyrite, non calcareous.

SANDSTONE: generally loose and disaggregated, clear-translucent, becoming whiter with depth, colorless - pale gray, common milky white quartz, very fine-medium, occasional coarse, decreasing grain size with depth, subangular to angular, subspherical, moderately well - poorly sorted, commonly well cemented with silica, dolomite and increasing amounts calcareous material, occasional carbonaceous plant fragments replaced by pyrite, local pyrite inclusions in grains.

SHOW: very poor in SWC, probably from carbonaceous material, patchy dull yellow fluorescence, slow, diffuse yellow white cut, dull yellow white residue fluorescence.

LIMESTONE: trace, white - very pale brown, moderate hard-hard, blocky-splintery, brittle, microcrystalline, occasional bright orange brown, firm - moderately hard, blocky-crumbly, slightly argillaceous.

CLAYSTONE: dark brown gray to dark olive black, mottled dark dusky yellow brown, moderately hard, friable, earthy - waxy luster, trace very fine carbonaceous material, non calcareous.



LITHOLOGY DESCRIPTION

SILTSTONE: brown gray-gray brown, dark olive gray, light olive gray-light brown gray, soft - moderately firm, blocky, micromicaceous, micropyritic, pyrite, argillaceous in part, carbonaceous in part, commonly grading silty claystone.

SILTY CLAYSTONE: medium to dark olive gray, firm to hard, blocky - subfissile, with common micromica and carbonaceous material, very silty and trace sand grains, with occasional very slow, diffuse yellow white cut fluorescence, weak dull yellow to blue white residue fluorescence.

SANDSTONE: generally loose and disaggregated, clear - translucent, colorless - pale gray, common milky white quartz, very fine-medium grained, occasionally coarse, subangular-angular, subspherical, moderate well-poorly sorted, commonly with silica, dolomite and calcareous cement, with occasional carbonaceous wood fragments replaced by pyrite.

TOP DUNLIN GROUP (DRAKE FM.) TWT 3219.2msec

3777.0m (-3747.5mSS)

SILTSTONE: brown gray brown, dark olive gray, light olive gray - light brown gray, firm - moderately hard, blocky-subfissile, micromicaceous, micropyritic, pyrite nodules, argillaceous in part, carbonaceous laminae in part, grading claystone.

SILTY CLAYSTONE: medium to dark olive gray, firm to hard, blocky - subfissile, with common micromica and carbonaceous material, very silty and trace sand grains.

COOK FORMATION TWT 3240.8msec

3815.0m (-3785.3mSS)

SANDSTONE: predominantly loose and disaggregated, colorless quartz grains, very fine - fine grained, subangular - subrounded, well sorted, well cemented with dolomitic/calcareous cement, with abundant silty matrix grading to siltstone, with common micromica, pyrite, trace glauconite and carbonaceous material.

SILTSTONE: olive gray, olive green gray, light-medium brown gray, dark gray, firm - moderately hard, amorphous-blocky, occasionally subfissile, micromicaceous, micropyritic, pyrite nodules, argillaceous in part, carbonaceous laminae, grading claystone, locally sandy, grading sandstone.

BURTON FORMATION TWT 3262.4msec

3855.5m (-3825.8mSS)

CLAYSTONE: light to medium brown gray, commonly dark gray, soft to firm, amorphous to blocky, occasionally subfissile, micromicaceous, micropyritic, silty, grading SILTSTONE: predominantly olive black, hard, blocky to earthy, micaceous, slightly calcareous, with extremely slow, very weak, diffuse yellow white cut fluorescence, bright, blue white residue fluorescence.

AMUNDSEN FORMATION TWT 3273.3msec

3874.0m (-3844.2mSS)

SILTSTONE: light-medium brown gray, common dark gray, dusky yellow brown, moderately hard to hard, blocky to subfissile, slightly brittle, earthy texture, micromicaceous, micropyritic, pyrite, argillaceous in part, carbonaceous laminae, grading claystone, sandy, with extremely slow, very weak, diffuse yellow white cut fluorescence, bright, blue white residue fluorescence.

SILTY CLAYSTONE: dark dusky yellow brown to moderate yellow brow, moderately hard to hard, blocky to subfissile, occasionally slightly brittle, very silty, sandy in part, micromicaceous, trace glauconite, cuttings give very slow diffuse yellow white cut fluorescence, weak yellow white residue fluorescence.

STATFJORD FORMATION TWT 3294.2msec

3912.5m (-3919.9mSS)

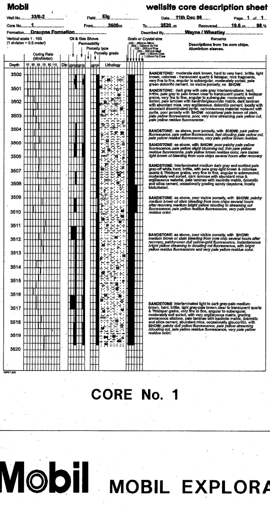
SAND/SANDSTONE: predominantly as loose and disaggregated quartz grains, colorless, clear, translucent, transparent, white, fine-coarse predominantly medium grains, angular-subrounded, well sorted, poor calcareous/silica cement, common mica, trace carbonaceous specks, no - poor visible porosity, no SHOW.

LIMESTONE: white-off white, pale gray brown, soft-firm, amorphous-blocky, microcrystalline, grading marl in part.

SANDSTONE: predominantly loose and disaggregated, clear-translucent, colorless-pale gray, occasional pale pink rosy, common opaque white quartz, very fine-very coarse grains, fractured grains, occasional well developed silica calcareous and dolomitic cement, no visible porosity, no SHOW.

TWT 3312.0msec

WELLSITE GRAPHIC CORE LOGS



Mobil **wellsite core description sheet**

Well No. 33/6-2 Field Elg Date 11th Dec 96 Page 1 of 1
Core No. 1 From 3500m To 3520 m Recovered 19.6 m 98 %
Formation Draupne Formation Described By Wayne / Wheatley
Vertical scale 1 : 100
(1 division = 0.5 meter)

Remarks
**Descriptions from 1m core chips.
Aluminium sleeves.**

SANDSTONE: moderate dark brown, hard to very hard, brittle, light brown, colorless - translucent quartz & feldspar, rock fragments, very fine to fine, angular to subangular, moderately sorted, pale green dolomitic cement, no visible porosity, no **SHOW**.

SANDSTONE: dark gray with pale gray interlaminations, hard, brittle, pale gray to pale brown clear to translucent quartz & feldspar grains, very fine to fine, angular to subangular, moderately well sorted, pale laminae with kaolinite/glauconite matrix, dark laminae with abundant mica, very argillaceous, dolomitic cement, locally with abundant disseminated pyrite, carbonaceous material replaced with pyrite, poor porosity with **SHOW**: *occasional pale brown oil stain, pale yellow fluorescence, poor, very slow streaming pale yellow cut, pale yellow residue fluorescence.*

SANDSTONE: as above, poor porosity, with **SHOW:** *pale yellow fluorescence, pale yellow fluorescence, fast clouding pale yellow cut, pale yellow residue fluorescence, very pale yellow brown residue.*

SANDSTONE: as above, with **SHOW:** *poor patchy pale yellow fluorescence, pale yellow slight blooming cut, thin pale yellow residue fluorescence, pale yellow brown residue color, rare traces light brown oil bleeding from core chips several hours after recovery*

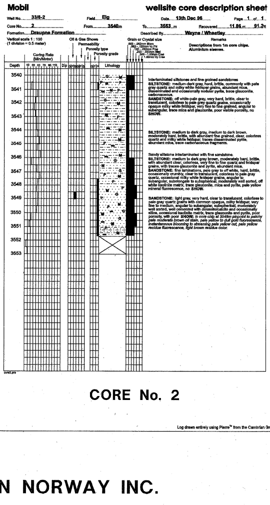
SANDSTONE: interlaminated medium dark grey and mottled pale gray-off white, hard, brittle, with pale gray-light brown & colorless quartz & ?feldspar grains, very fine to fine, angular to subrounded, moderately well sorted, dark laminae with abundant mica & argillaceous material, pale laminae with kaolinite matrix, dolomitic and silica cement, occasionally grading sandy claystone, locally bioturbated.

SANDSTONE: as above, poor visible porosity, with **SHOW:** *patchy medium brown oil stain bleeding from core chips several hours after recovery, medium bright yellow clouding to streaming cut fluorescence, pale yellow residue fluorescence, very pale brown residue color.*

SANDSTONE: as above, poor visible porosity, with **SHOW:** *medium brown oil stain bleeding from core chip several hours after recovery, patchy-even dull yellow-gold fluorescence, instantaneous bright yellow streaming to clouding cut fluorescence, with bright yellow residue fluorescence and very pale yellow residue color.*

SANDSTONE: interlaminated light to dark gray-pale medium brown, hard, brittle, light gray-pale brown clear to translucent quartz & ?feldspar grains, very fine to fine, angular to subangular, moderately well sorted, with very argillaceous matrix, grading arenaceous siltstone, pale laminae with kaolinite matrix, dolomitic and silica cement, abundant mica, occasionally glauconitic, with **SHOW:** *patchy dull yellow fluorescence, pale yellow streaming /clouding cut, pale yellow residue fluorescence, very pale yellow residue color.*

CORE No. 1



Mobil **wellsite core description sheet**

Well No. 33/6-2 Field Elg Date 13th Dec 96 Page 1 of 1
Core No. 2 From 3540m To 3553 m Recovered 11.86 m 91.2%
Formation Draupne Formation Described By Wayne / Wheatley
Vertical scale 1 : 100
(1 division = 0.5 meter)

Remarks
**Descriptions from 1m core chips.
Aluminium sleeves.**

Interlaminated siltstones and fine grained sandstones
SILTSTONE: medium-dark gray, hard, brittle, commonly with pale gray quartz and milky white feldspar grains, abundant mica, disseminated and occasionally nodular pyrite, trace glauconite, carbonaceous.
SANDSTONE: off white-pale gray, very hard, brittle, clear to translucent, colorless to pale grey quartz grains, occasionally opaque milky white feldspar, very fine to fine grained, angular to subangular, trace mica and glauconite, poor visible porosity, no **SHOW**.

SILTSTONE: medium to dark gray, medium to dark brown, moderately hard, brittle, with abundant fine grained, clear, colorless quartz and milky white feldspar, traces disseminated pyrite, abundant mica, trace carbonaceous fragments.

Sandy siltstone interlaminated with fine sandstone.
SILTSTONE: medium to dark gray brown, moderately hard, brittle, with abundant clear, colorless, very fine to fine quartz and feldspar grains, with traces glauconite and pyrite, abundant mica.
SANDSTONE: fine laminations, pale gray to off white, hard, brittle, occasionally crumbly, clear to translucent, colorless to pale gray quartz, occasional milky white feldspar grains, angular to subangular, subelongate to subspherical, moderately well sorted, off white kaolinite matrix, trace glauconite, mica and pyrite, pale yellow mineral fluorescence, no **SHOW**.

SANDSTONE: light gray, very hard, clear to translucent, colorless to pale gray quartz grains with common opaque, milky feldspar, very fine to medium, angular to subangular, subspherical, moderately well sorted, well cemented with dolomite/calcite and occasionally silica, occasional kaolinite matrix, trace glauconite and pyrite, poor porosity, with poor **SHOW:** *in core chip at 3549m pinpoint to patchy pale moderate brown oil stain, pale yellow to dull gold fluorescence, instantaneous blooming to streaming pale yellow cut, pale yellow residue fluorescence, light brown residue color.*

CORE No. 2

Log drawn entirely using Pierre™ from the Cambrian Group

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FINAL COMPOSITE LOG

33/6-2