BP Amoco

COMPOSITE WELL LOG 1:500 WELL: 15/3-6

OPERATOR:	AMOCO NORWAY		GEOGRAPHICAL COORDINATES	UTM(ED50):
COUNTRY:	NORWAY		LAT: 58 deg 46 min 23.41 sec N	X: 6515614.4 N
AREA:	SOUTH VIKING GRABEN		LONG: 01 deg 45 min 14.90 sec E	Y: 427951.2 E
LICENCE:	PL187	BLOCK: 15/3	K.B. ELEVATION: 23 m	
LICENCE INTEREST:	AMOCO	25%	WATER DEPTH: 105m	
	STATOIL	65%	TOTAL DEPTH: 2793m MD (2763.2m TVDSS)	
	NORSK HYDRO	10%	BOTTOM HOLE FORMATION: TOR FM: CRETACEOUS	

Licence PL025 farmed in for 20% of well costs:

STATOIL 46.8%	NORSK HYDRO 10%
ELF NORGE 33.2%	TOTAL NORGE 10%

PRE-SPUD CLASSIFICATION:	EXPLORATION	RIG:	MÆRSK JUTLANDER
DATE ON LOCATION:	13 Dec 1998	DRILLING CONTRACTOR:	MÆRSK
SPUD DATE:	15 Dec 1998	WIRELINE LOGGING CONTRACTOR:	SCHLUMBERGER
DATE TD REACHED:	29 Dec 1998	MWD-LOGGING CONTRACTOR:	ANADRILL
DATE OFF LOCATION:	05 Jan 1999	MUDLOGGING CONTRACTOR:	SPERRY-SUN
RIG RELEASE DATE:	05 Jan 1999	WELLSITE GEOLOGISTS:	COMPILED BY:
WELL STATUS:	Plugged and Abandoned	Ray Edmunds / Iain Greig	Iain Greig / Martin Kendall
WELL CLASSIFICATION:	Dry Hole	NPD WELL REGISTRATION NUMBER : L 941	

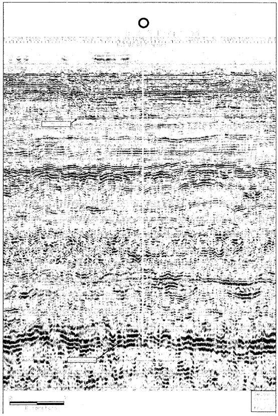
HOLE AND CASING RECORD

CASING / LINER	SHOE m RKB	HOLE SIZE	INTERVAL m RKB	REMARKS
30"	212.5	36"	128-216.5	Surface Hole
--	--	9 7/8"	212.5-1015	Pilot Hole
13 3/8"	1001	17 1/2"	212.5-1015	
--	--	12 1/4"	1015-1018	LOT 16.8 ppg
		8 1/2"	1018-2793	

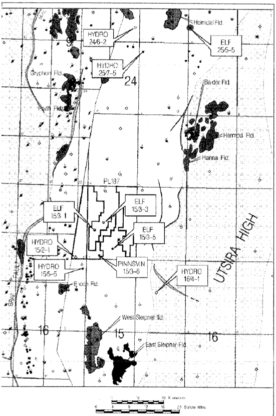
MUD DATA

FLUID TYPE	HOLE SIZE	MW ppg
Seawater/sweeps	36"	8.6
Seawater/sweeps	9 7/8"	8.6
Seawater/sweeps	17 1/2"	8.6
Anco Vert OBM	12 1/4"	10.5
Anco Vert OBM	8 1/2"	10.5

WELL PROFILE



WELL LOCATION MAP



WIRELINE/MWD LOGS RUN

LOG	CDR RESISTIVITY-GR		CDR RESISTIVITY-GR		CDR RESISTIVITY-GR		CDR RESISTIVITY-GR		Wireline AIT/DSI/PEX	
Date	18 - 19th Dec. 98		23 - 24th Dec. 98		26 - 27th Dec 98		27 - 29th Dec 98		29th Dec 98	
Run No.	1		2		3		4		1a	
Depth-Driller	1015m		2140m		2278m		2793m		2793m	
Depth-Logger	1015m		2140m		2278m		2793m		2799.7m	
Btm Log Interval	1010m		477.5m		2278m		2793m		2796.3m	
Top Log Interval	216.5m		1015m		2140m		2278m		128m	
Casing-Driller	--		--		--		--		1001.2m	
Casing-Logger	--		--		--		--		1002.3m	
Bit Size	9 7/8"		8 1/2"		8 1/2"		8 1/2"		8 1/2"	
Type Fluid in Hole	Seawater/Spud Mud		Versavert OBM		Versavert OBM		Versavert OBM		Versavert OBM	
Den & Visc	8.6ppg	--	10.5ppg	75sec	10.5ppg	94sec	10.5ppg	84sec	10.5ppg	84sec
pH & Fluid Loss	--	--	--	2.8cc	--	2.2cc	N/A	2.0cc	N/A	2.2cc
Source of Sample	--		--		--		--		No Sample	
Rm at Meas Temp	--		--		--		--		N/A	
Rmf at Meas Temp	--		--		--		--		N/A	
Rmc at Meas Temp	--		--		--		--		N/A	
Source : Rmf Rmc	--		--		--		--		No Sample	
Rmf at BHT	--		--		--		--		N/A	
Time Since Circ.	--		--		--		--		14.25hrs	
Max Rec. Temp	--		--		--		--		82 deg C	
Equip : Location	CDR 768	NOR	CDR 7010	NOR	CDR 7010	NOR	CDR 7010	NOR	NOR	NOR
Recorded by	R. Murray/ E. Larsen		R. Murray/ P. Wilkin		R. Murray/ P. Wilkin		R. Murray/ P. Wilkin		O'Keefe/ Van Dusen	
Witnessed by	R. Edmunds		R. Edmunds/ I. Greig		R. Edmunds/ I. Greig		R. Edmunds/ I. Greig		Greig/Edmunds/Pratt	
Other Logs Run	MWD surveys		MWD surveys		MWD surveys		MWD surveys		MDT/CST	

CORES & CST'S

CORES:

CORE No.1 CUT 2140.0 - 2158.0m, 18.0m
RECOVERED 2140.0 - 2158.0m, 18.0m (100.0%)

CORE No.2 CUT 2158.0 - 2176.0m, 18.0m
RECOVERED 2158.0 - 2175.7, 17.57m (98.33%)

CORE No.3 CUT 2278.0 - 2297.7m, 19.7m
RECOVERED 2278.0 - 2297.7m, 19.7m (100%)

CST'S

No	Depth	No	Depth	No	Depth
1	2767.0m	11	2454.0m	21	2266.5m
2	2760.0m	12	2434.0m	22	2264.0m
3	2752.5m	13	2412.0m	23	2253.0m
4	2727.0m	14	2401.0m	24	2238.5m
5	2698.0m	15	2391.0m	25	2211.5m
6	2643.5m	16	2377.5m	26	2181.5m
7	2628.5m	17	2354.0m	27	2035.0m
8	2549.0m	18	2336.0m	28	1967.0m
9	2537.0m	19	2320.0m	29	1860.0m
10	2522.5m	20	2314.5m	30	1556.0m

MDT

Fluid Sample at 2162.0m Balder Sandstone

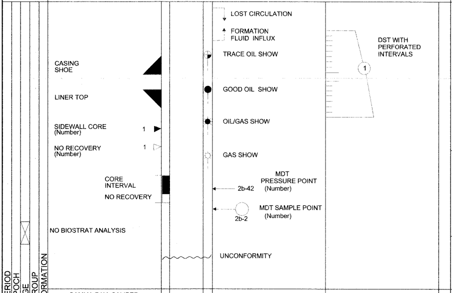
LITHOLOGY SYMBOLS

☐	SHALE/CLAYSTONE	☐	SANDSTONE
☐	SILTSTONE	▩	CONGLOMERATE
☐	LIMESTONE	☐	LIMEY DOLOMITE
☐	DOLOMITIC LIMESTONE	☐	DOLOMITE
▦	HALITE	▩	SALT IN GENERAL
☐	ANHYDRITE	☐	CHALK
☐	MARL		

QUALIFIERS

☐	ARENACEOUS	M	MICA
☐	ARGILLACEOUS	K	KAOLINITE
☐	CALCAREOUS	*	GLAUCONITE
☐	DOLOMITIC	△ △	CHERT
V	TUFFACEOUS	☐	NODULES
C	CARBONACEOUS	☐	MACROFOSSILS
●	BITUMINOUS	☐	FORAMINIFERA
☐	PYRITIC	☐	PLANT REMAINS

CHRONO STRAT	GENERAL SYMBOLS	COMMENTS



GAMMA RAY, CALIPER, BIT SIZE, ROP	RESISTIVITY, GAS	SONIC, NEUTRON, DENSITY	LITHOLOGICAL DESCRIPTIONS AND REMARKS

UPDATE HISTORY

ORIGINAL DRAFT: MARTIN KENDALL (JUNE-99)

DIGITALLY DRAFTED USING Q-LOG
(Quad Operations Ltd)

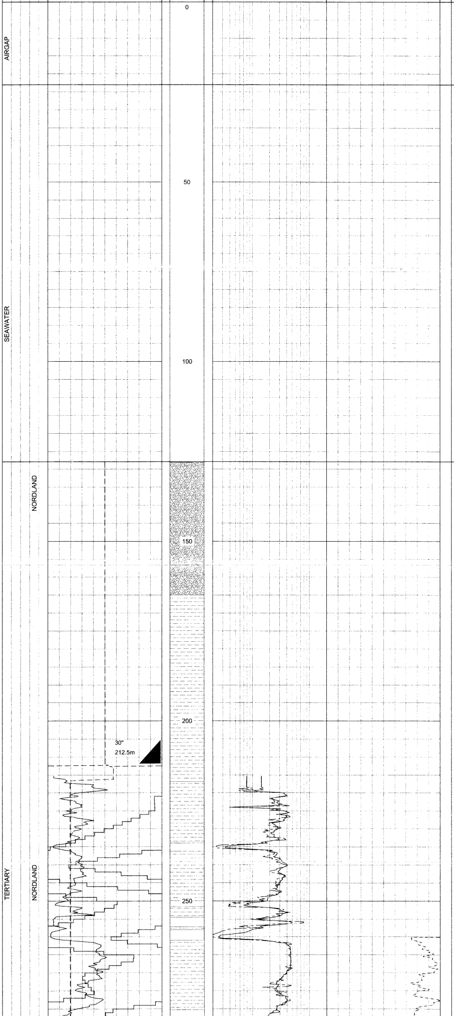
SCALE :

1/500

PERIOD | EPOCH | AGE | GROUP | FORMATION | CORES | LITHOLOGY/DEPTH | GAS/OIL SHOWS

6.00	BIT (IN)	26.00	0.2	AHT 10 (ohmm)	20.00	140.00	DTCO (ms/ft)	40.00
0.00	GR (api)	150.00	0.2	AHT 30 (ohmm)	20.00	1.95	RHOZ (gm/cc)	2.95
0.00	GR MWD (api)	150.00	0.2	AHT 90 (ohmm)	20.00	45.00	NPOR (pu)	-15.00
6.00	CAL (in)	26.00	0.2	PSR (ohmm)	20.00			
200.00	ROP (m/hr)	0.00	0.02	GAS (%)	2.00	-0.75	HDRA (gm/cc)	0.25
			0.2	ATR (ohmm)	20.00			

LITHOLOGICAL DESCRIPTIONS AND REMARKS



SEALEVEL 23.0m MD, 0.0m TVDSS.

SEABED / NORDLAND
128.0m MD, 105.0m TVDSS.

Drilled with returns to the seabed to 1015m.

Lithology interpreted from LWD and Drilling behaviour, to 1015mMD.

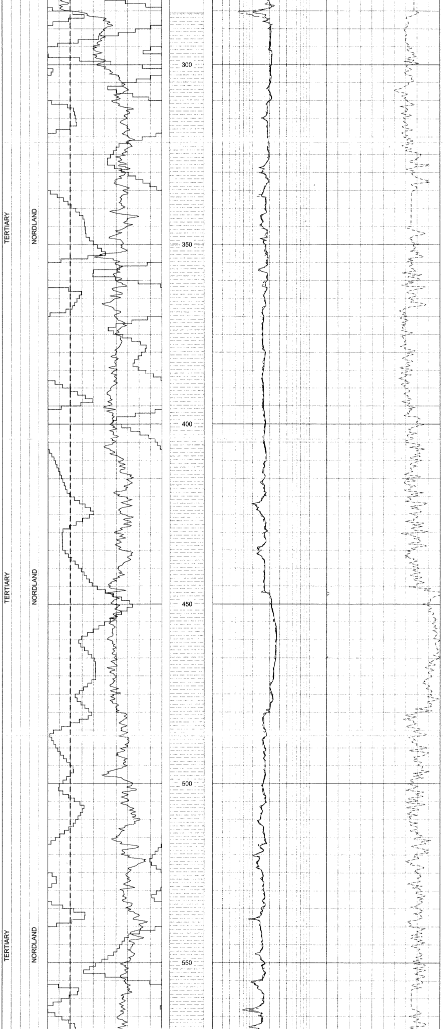
RETURNS TO SEABED

9 7/8" pilot hole drilled from 216.5 - 1015m MD.
No indications of shallow gas from LWD.

WELL DRILLED FROM MUDLINE TO 1015m WITH SEAWATER WITH HI VIS SWEEPS.

Survey @212.5m, Incl 0°, Azim 0°
TVD 212.5°

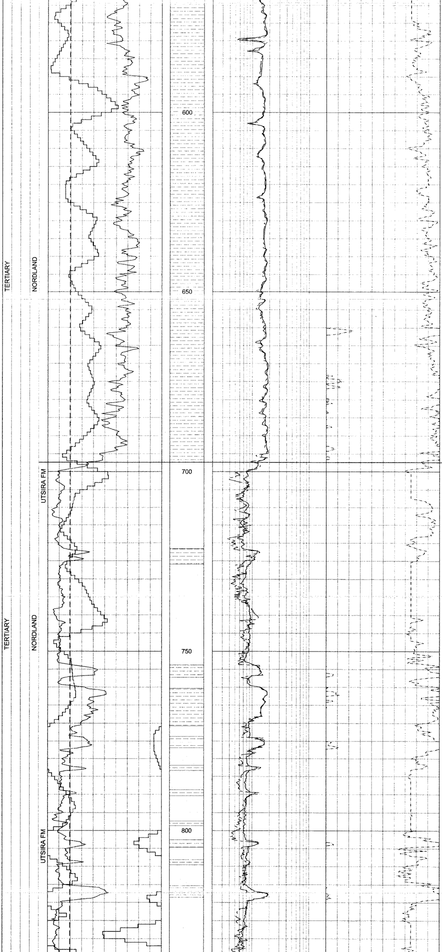
Survey @ 244.9m, Incl 0.97°, Azim 259.6°
TVD 244.9m



RETURNS TO SEABED

Survey @ 357.16°, Incl 0.68°, Azim 197.6°
TVD 357.15m

Survey @ 499.55m, Incl 0.86°, Azim 153.0°
TVD 499.53m

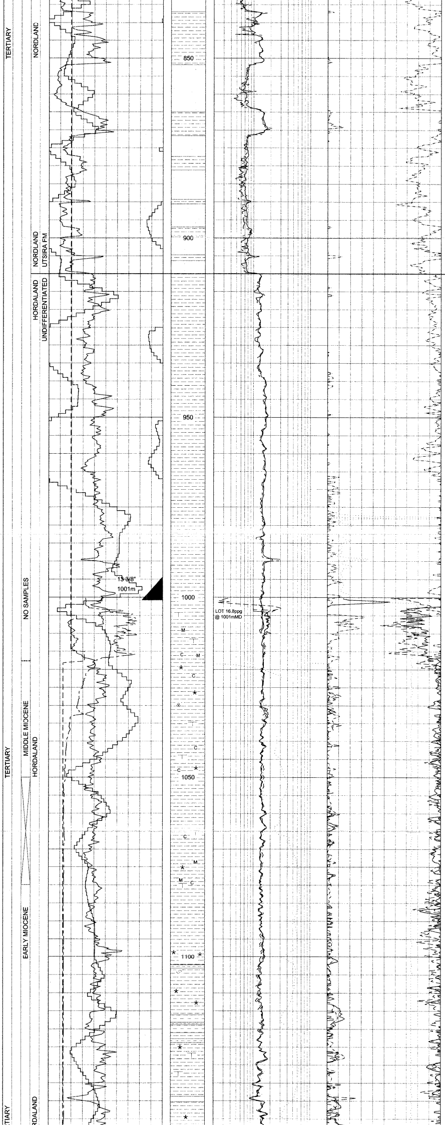


RETURNS TO SEABED

Survey @ 670.80m, Incl 0.64°, Azim 109.0°
TVD 670.76m

UTSIRA FM: 695.0m MD
672.0m TVDSS

RETURNS TO SEABED



Survey @ 841.88m, Incl 1.35°, Azim 138.1°
TVD 813.68m

RETURNS TO SEABED

HORDALAND GROUP: 910.0mMD
887.0m TVDSS

DOMINANTLY CLAYSTONE, MINOR SILTSTONE AND SANDSTONE BEDS, OCCASIONAL LIMESTONE STRINGERS.

Survey @ 986.05m, Incl 0.77°, Azim 189.0°
TVD 985.95m

12 1/4" bit used to clean out 13 3/8" casing and drill out shoe to 1018m MD.

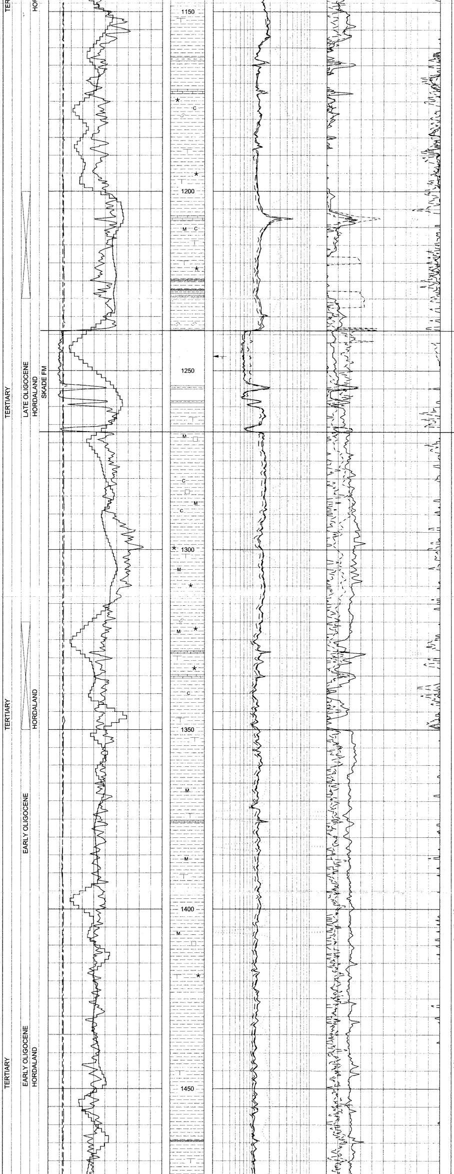
RETURNS TO RIG FROM 1015mMD

8 1/2" HOLE 1018 - 2793mMD
DRILLED WITH 10.5ppg OBM MUD.

CLAYSTONE: medium dark olive grey, becoming increasing dark grey with depth, firm, occasionally soft, hygroturgid in parts, blocky, slightly to moderately calcareous, locally micromicaceous, very silty in parts, with a trace of glauconite, occasional shell debris and rare carbonaceous specks.

Survey @ 1072.46m, Incl 1.46°, Azim 204.80°
TVD 1072.34m

SILTSTONE: Dark green grey, grading to olive grey, firm, crumbly, slightly calcareous, very glauconitic, grading to silty sandstone.



Survey @ 1157.88m, Incl 1.50°, Azim 211.20°
TVD 1157.73m

LIMESTONE: light grey to olive grey, firm to slightly hard, blocky, cryptocrystalline, slightly to moderately argillaceous, no show.

SKADE FM 1238.0mMD
1214.8mTVDSS

SANDSTONE: clear, translucent, loose fine to medium grained quartz, subrounded, subspherical, moderately sorted, also fine to coarse and poorly sorted, good visible porosity, no show.

BASE OF SKADE FM 1267m MD
1243.8mTVDSS

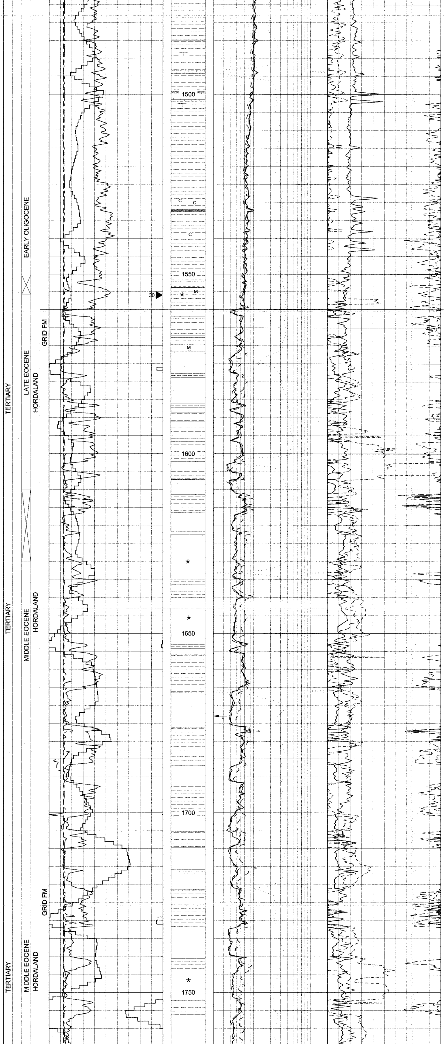
CLAYSTONE WITH MINOR LIMESTONE STRINGERS

CLAYSTONE: dominantly dark grey, locally medium grey, rarely brown, firm to locally soft, blocky to tabular, subfissile, commonly micromicaceous, trace glauconite, local pyrite, slight to moderately calcareous.

LIMESTONE: light grey brown, light brown becoming light grey, firm to hard, blocky, slightly argillaceous, microcrystalline, no show.

CLAYSTONE: Predominantly dark grey, firm to moderately hard, blocky, subfissile, also light grey, soft, commonly hygroturgid, occasionally micromicaceous, rare glauconite, rare shell debris, slightly calcareous.

Survey @ 1443.29m, Incl 1.31°, Azim 251.6°
TVD 1443.07m



CLAYSTONE: Dark grey, olive grey, firm, blocky, subfissile, also light grey, soft, commonly hygroturgid, locally highly carbonaceous, slightly calcareous.

Survey @ 1557.54m, Incl 2.20°, Azim 281.10°
TVD 1557.26m

GRID FORMATION 1560m MD 1536.7mTVDSS

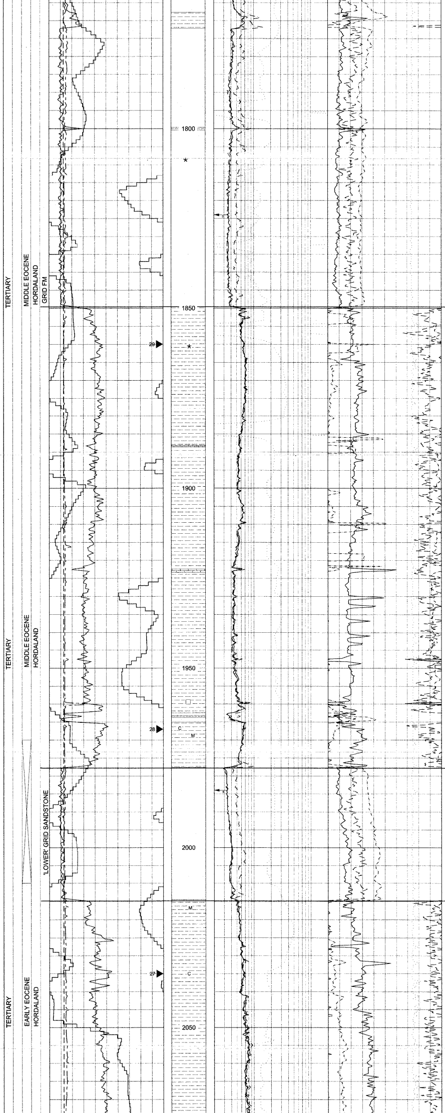
SANDSTONE WITH INTERBEDDED CLAYSTONE IN UPPER PART

SANDSTONE: predominantly loose, commonly very fine to fine grained, locally medium and coarse grained, subspherical, subangular to subrounded, moderately sorted when fine to very fine grained, occasionally friable, poorly cemented, occasionally glauconitic, good inferred porosity, no shows.

CLAYSTONE: dark grey, olive grey, firm to locally soft, blocky to tabular, subfissile, hygroturgid in places, non calcareous.

Survey @ 1642.95m, Incl 2.41°, Azim 302.20°
TVD 1642.61m

CLAYSTONE: olive grey, dark grey, firm, blocky to tabular, occasionally subfissile, non calcareous.



Survey @ 1786.21m, Incl 3.06°, Azim 285.20°
TVD 1785.66m

SANDSTONE: Quartzose, clear, translucent, fine to medium grained, subspherical, subangular to subrounded, moderately well sorted, loose, good inferred porosity, no shows.

BASE OF THE GRID FM 1849.5m MD 1825.9mTVDSS

CLAYSTONE WITH SANDSTONE INTERBEDS AND MINOR LIMESTONE STRINGERS

CLAYSTONE: dominantly medium dark to dark grey, locally trace dusky brown, olive grey, dark blue grey, soft to firm, blocky to subplaty, subfissile to occasionally fissile, slightly micromicaceous, rare trace disseminated pyrite, non calcareous.

Survey @ 1901.08m, Incl 4.47°, Azim 281.60°
TVD 1900.29m

LIMESTONE: light orange brown, light olive grey, hard, blocky, microcrystalline.

SANDSTONE: Quartzose, loose, very fine to fine, subrounded to rounded, subspherical to spherical, moderately sorted, good visible porosity, no show.

CLAYSTONE: dark green grey to green black, splintery to subplatey, subfissile, trace carbonaceous, non calcareous.

'LOWER' GRID SANDSTONE 1977.5m MD 1853.4mTVDSS

HOMOGENOUS SANDSTONE UNIT

SANDSTONE: Quartzose, loose, clear, very fine to fine, occasionally medium grained, subrounded to occasionally subangular, subspherical, moderately sorted, no visible cement, common grey lithic grains, good visible porosity, no show.

Survey @ 2014.76m, Incl 5.73°, Azim 299.50°
TVD 2013.50m

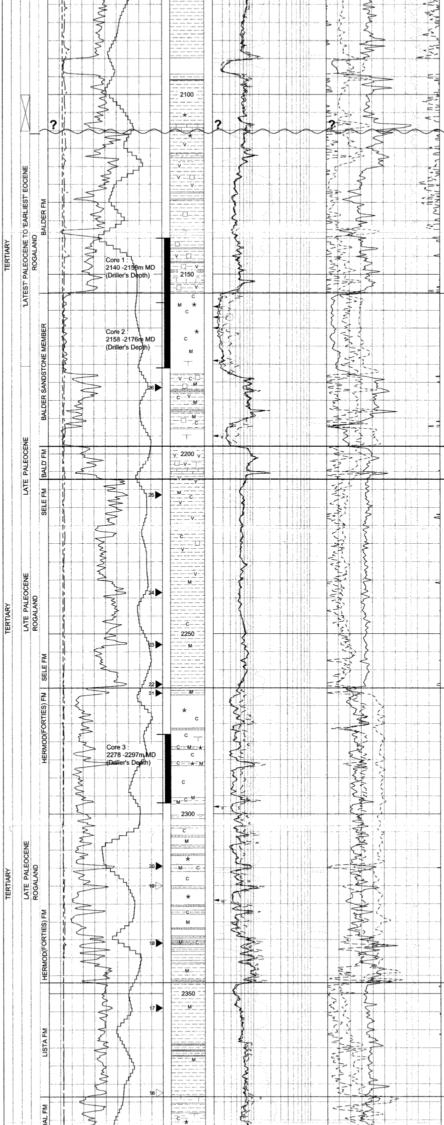
BASE OF THE 'LOWER' GRID SST 2015.0m MD 1990.7mTVDSS

PREDOMINANTLY ARGILLACEOUS, WITH MINOR SANDSTONE AND LIMESTONE TOWARDS THE BASE

CLAYSTONE: medium dark grey, firm, subplatey, sub fissile to fissile, slightly micromicaceous, trace carbonaceous debris in part, non calcareous.

DARK BROWN CLAY HORIZON 2040-2100m

CLAYSTONE: dark brown grey to brown grey, firm, blocky, subfissile, non calcareous.



CLAYSTONE: moderate to dark grey brown, also dark grey, rarely blue grey, blue green below 2100m, firm, blocky, subfissile, trace glauconite, firm, blocky, subfissile, non calcareous.

BLUE-GREY TO BLUE GREEN CLAYSTONE HORIZON 2105-2110m, TRACE TUFF

LIMESTONE: light grey, light yellow grey, moderately hard, blocky to angular, crumbly, cryptocrystalline, no visible porosity, no show.

? **POSSIBLE UNCONFORMITY**

BALDER FM 2110.0mMD 2085.3mTVDSS

VARIABLY TUFFACEOUS CLAYSTONE, MINOR SANDSTONE AND LIMESTONE

TRACE TUFF: very light grey, speckled black, firm to slightly hard, crumbly.

CLAYSTONE: predominantly medium dark grey, medium dark blue grey, trace grey brown, very firm, blocky-subplatey, subfissile, non calcareous, occasional trace micropyrite, locally TUFFACEOUS with common black speckled appearance and occasional buff specks.
SANDSTONE: off white, light grey, very fine to fine, sub angular, clear quartz, locally with hard calcite cement.

Survey @ 2176.03m, Incl 5.30°, Azim 308.10°
TVD 2174.04m

BALDER SST MEMBER 2155.0m MD 2130.2mTVDSS

SANDSTONE: off white to very light grey to yellow grey, clear, translucent, quartzose, very fine to medium grained, rarely coarse, subangular to subrounded, subspherical, moderate to poorly sorted, trace lithic grains, clean, local mica flakes, carbonaceous specks, rare glauconite, friable, poorly cemented, in parts slight calcareous cement, good visible porosity, no show.

CLAYSTONE: medium dark grey, olive grey, firm to moderately hard, blocky to tabular, rarely platey, locally subfissile, occasional silty partings, micromicaceous, trace pyrite, rare carbonaceous debris, non calcareous.
TUFF: grey, speckled, blocky, firm.
LIMESTONE: light brown, firm to moderately hard, blocky, microcrystalline.

BALDER FM (CONT'D) 2197.5 mMD 2172.4mTVDSS

CLAYSTONE, WITH MINOR LIMESTONE

SELE FM 2207mMD 2181.9mTVDSS

CLAYSTONE, WITH MINOR TUFF TOWARDS TOP

TUFFACEOUS CLAYSTONE: light grey blue and light steel grey, speckled black, firm, blocky, crumbly in places.

CLAYSTONE: medium dark grey, locally light medium grey and dark olive grey, locally mottled and microlaminated, firm, blocky, locally slightly micaceous, locally carbonaceous, trace pyrite in places, slightly calcareous at top becoming non calcareous.

Survey @ 2262.2m, Incl 3.41°, Azim 307.70°
TVD 2259.95m

HERMOD (FORTIES) FM 2265.0 mMD 2239.7mTVDSS

SANDSTONE, LOCAL SILTY HORIZONS AND MINOR CLAYSTONE INTERBEDS, RARE LIMESTONE

SANDSTONE: light grey, clear to translucent, very fine to fine, locally medium, rarely coarse, subangular to subrounded, subspherical, moderately sorted, rare glauconite, occasional scattered carbonaceous fragments, occasional lithic fragments, locally silty streaks with lignite and abundant mica, friable, poor to moderately consolidated, slightly calcareous cement.

Survey @ 2319.78m, Incl 3.58°, Azim 314.40°
TVD 2317.42m

CLAYSTONE: medium grey to medium dark grey, occasionally blue grey and dark green grey, very firm, blocky, subfissile, locally carbonaceous, locally abundant mica, non calcareous.

LIMESTONE: light yellow grey, hard, blocky, crumbly, slightly argillaceous, microcrystalline

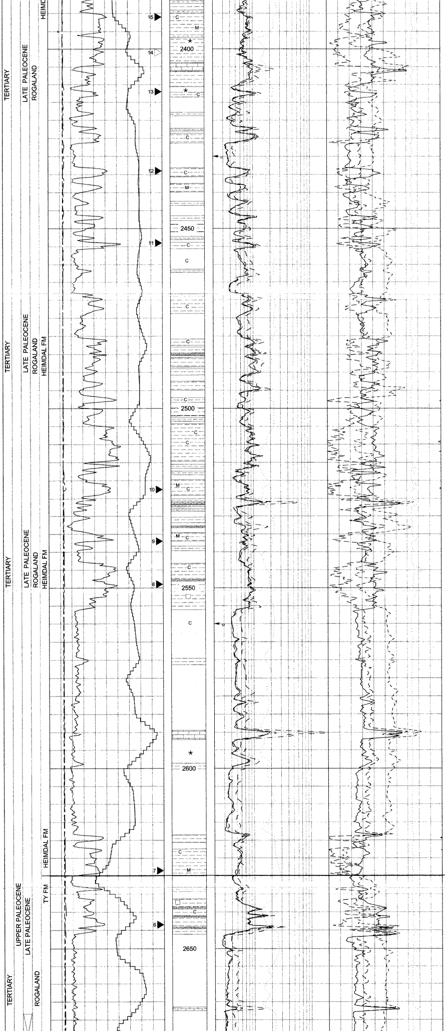
LISTA FM. 2347mMD 2321.6mTVDSS

DOMINANT VARIABLY SILTY CLAYSTONE, MINOR LIMESTONE STRINGERS

CLAYSTONE: medium to medium dark grey, occasionally dark grey, locally dark green grey and dark blue grey, firm, blocky, locally subfissile to fissile, slightly micromicaceous and microcarbonaceous, rare pyrite, non calcareous, becoming locally silty grading to
SILTSTONE: crumbly, trace black lignite fragments.

Survey @ 2376.86m, Incl 3.98°, Azim 324.40°
TVD 2374.38m

HEIMDAL FM. 2378.5mMD 2353.02mTVDSS



INTERBEDDED SANDSTONES, SILTSTONES AND CLAYSTONES, WITH MINOR LIMESTONE STRINGERS

SILTSTONE: medium dark grey, locally dark grey, firm, crumbly, non calcareous

CLAYSTONE: medium dark grey, firm, blocky, crumbly, silty, micromicaceous, non calcareous

LIMESTONE: pale yellow brown, light grey to olive grey, firm to moderately hard, blocky, variable micro to cryptocrystalline and slightly argillaceous, to very argillaceous, crumbly.

SANDSTONE: dominantly as light grey to off white rock flour due to pdc bit action, very fine to occasionally fine grained, subangular, subspherical to spherical, well sorted, no visible cement, trace pyrite, carbonaceous specks, fair visible porosity in swcs.

CLAYSTONE: dominantly dark green grey, locally medium dark grey, firm to very firm, brittle, blocky to splintery, locally subfissile, trace carbonaceous, locally slightly micaceous, waxy, slightly hygroturgid, non calcareous.

Survey @ 2461.87m, Incl 5.00°, Azim 332.00°
TVD 2459.15m

CLAYSTONE: dark green grey, medium grey, local medium brown grey, trace grey blue, firm, blocky, subfissile, common carbonaceous, locally slightly micaceous, slightly micropyritic, non calcareous, slightly hygroturgid and waxy in swc, with silt to very fine sandstone lenses.

LIMESTONE: very light grey, yellow grey, firm, blocky, crumbly, argillaceous.

SANDSTONE: dominantly as light grey to off white rock flour due to pdc bit action, commonly lower very fine to fine grained, well sorted,local trace black carbonaceous specks, texture destroyed by bit action.

Survey @ 2547.62, Incl 6.86°, Azim 339.30°
TVD 2544.43m

SANDSTONE: predominantly light grey-off white rock flour ground by PDC bit, commonly very fine to fine, also medium grained quartz, clear, translucent, subrounded to subangular, subspherical, poorly sorted, friable, rare glauconite and lithic fragments, trace carbonaceous debris, commonly weakly cemented with slightly calcareous cement.

Survey @ 2603.89m, Incl 7.96°, Azim 342.60°
TVD 2600.21m

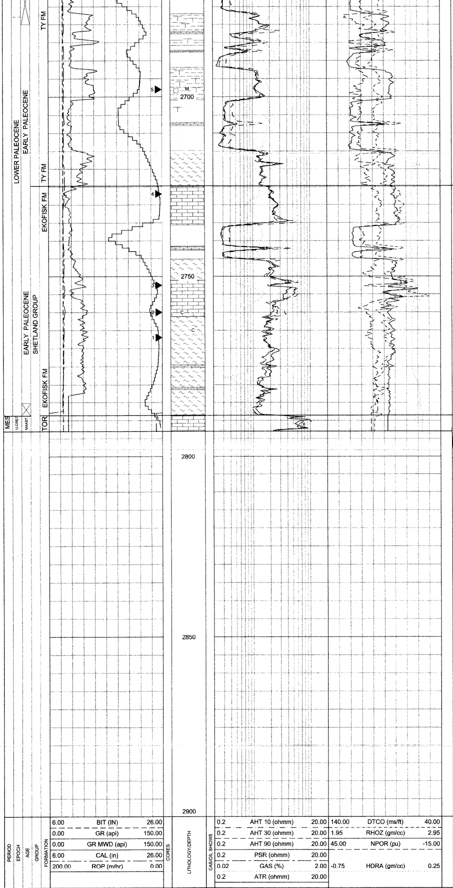
CLAYSTONE: medium grey, green grey, firm to moderately hard, blocky, locally tabular to subfissile, locally silty, local pyritic, micromicaceous, carbonaceous, non calcareous.

TY FM 2630mMD 2603.0mTVDSS

INTERBEDDED SANDSTONE AND CLAYSTONES, BECOMING INCREASINGLY CALCAREOUS, AND GRADING TO MARL

SANDSTONE: light grey to off white, fine to locally medium grained, also clear to translucent quartz, generally friable with slightly calcareous cement, occasional rock flour.

Survey @ 2661.61m, Incl 9.01°, Azim 348.00°
TVD 2657.30m



CALCAREOUS CLAYSTONE: light to medium grey, firm to very firm, blocky, tabular, locally slightly mocromicaceous with thin pyrite veins and disseminated pyrite, calcareous to very calcareous grading to marl.

SANDSTONE: light grey to off white, fine grained, clear, translucent, moderately sorted, friable, poorly indurated by slightly calcareous cement, occasional rock flour, no visible porosity.

Survey @ 2718.85m, Incl 10.97°, Azim 349.60°
TVD 2713.67m

MARL: light grey to off white, medium grey, rarely brown grey, soft to firm, blocky to tabular, very calcareous.

EKOFISK 2724.5mMD
2696.3mTVDSS

LIMESTONE, BECOMING INCREASINGLY ARGILLACEOUS, GRADING TO MARL. OCCASIONAL LIMESTONE STRINGERS

SANDSTONE: transparent, light grey, translucent, fine grained, subrounded, subspherical, slightly calcareous cement.
LIMESTONE: light grey, off white, firm to occasionally hard, blocky, tabular, locally microcrystalline, slightly argillaceous.

ARGILLACEOUS LIMESTONE: medium light grey to light olive grey, occasional green grey, also medium to dark red brown with depth, firm to slightly soft, blocky to crumbly, cryptocrystalline, trace carbonaceous, slightly to moderately argillaceous, hygroturgid, grading to marl.
MARL: dark green grey, occasional grey green, olive grey, firm, blocky, subfissile, moderately to highly calcareous, trace black carbonaceous specks.

Survey @ 2776.06m, Incl 12.51°, Azim 348.50°
TVD 2769.67m

TOR FM 2788.5m MD
2758.8mTVDSS

MARLY AND CHALKY LIMESTONE
MARLY LIMESTONE: medium light to light grey, occasionally light olive grey, trace grey red to pale red, soft-firm, crumbly, cryptocrystalline, slightly argillaceous.
CHALKY LIMESTONE: very light grey to off white, firm, blocky, crptocrystalline, clean, trace carbonaceous specks, no visible porosity, trace pale yellow to yellow mineral fluorescence, no show.

Driller's TD 2793m MD, 2763.2m TVDSS
Logger's TD 2799.7m MD, 2769.5m TVDSS

Amoco Norway Pressure Interpretation Sheet

Well	**Pinnsvin, 15/3-6**	*Permit*	**PL 187**
Type of well	**Vertical Exploration**	*Maximum Deviation*	**12.47 Deg @ 2779.2m**
Type of survey tool	**MDT w/ PO, 2x 1gal chambers**	*Acquisition date*	**29th December 1998**
Reference Datum	**MSL**	*Rotary Table Elevation,m*	**23.0**

Mud Weight **10.5** ppg **0.545** psi/ft

Tool Set	MD mBDF	TVDRT mBDF	TVDSS m	Hydrostatic Press. bef, psia	Hydrostatic Press. after, psia	Fm Pr psia	DDMob mD/cP	T °C	Time	Fm Pr G, psi/ft	Fm Pr G, ppg	Mud G psi/ft	Mud G ppg	Comments, w/ pre-test vol
1	1246.0	1245.8	1222.8	2238.72	2232.55	1802.00	371.7	46.9	23:30	0.446	8.58	0.544	10.48	Ltd drawdown, 500psi, 20cc
2	1673.0	1673.0	1650.0	3016.86	3008.64	2430.00	114.5	54.2	0:00	0.446	8.60	0.547	10.54	Ltd drawdown 800psi, 20cc
3	1824.0	1823.4	1800.4	3283.09	3276.20	2650.47	54.9	59.1	0:20	0.446	8.60	0.546	10.53	"
4	1984.0	1982.9	1959.9	3566.64	3557.73	2884.80	1026.4	62.9	0:40	0.446	8.60	0.546	10.52	"
5	2159.0	2157.0	2134.0	3876.49	3859.80	3141	1581.5	68.0	1:00	0.446	8.60	0.546	10.51	"
6	2165.0	2163.1	2140.1	3865.36	3851.03	3149.54	1818.9	69.2	1:15	0.446	8.60	0.543	10.45	"
7	2174.0	2172.0	2149.0	3865.64	3854.14	3163	2203.3	69.9	1:30	0.446	8.60	0.540	10.41	"
8	2195.0	2192.9	2169.9	3895.00	3887.05	3193	1298.4	70.5	1:40	0.447	8.60	0.539	10.39	"
9	2298.0	2295.7	2272.7	4091.32	4081.28	3345.94	194.6	72.1	2:05	0.447	8.61	0.541	10.43	"
10	2324.0	2321.6	2298.6	4131.31	4122.38	3383.74	359.6	73.9	2:15	0.447	8.61	0.540	10.41	"
11	2430.0	2427.4	2404.4	4328.88	4318.83	3537.94	359.4	76.4	2:35	0.447	8.61	0.542	10.44	"
12	2560.0	2556.7	2533.7	4568.48	4558.54	3729.38	109.4	79.3	2:55	0.447	8.61	0.543	10.46	"
13														graph on sheet # 3
14														
15	2162.0	2160.1	2137.1	3821.80	3822.40	3143.70				0.446	8.60	0.537	10.35	1gal sample pumped out 4ltre
16														flow'press 3110psi,fill= 30sec
17														

AMOCO NORWAY OIL Co.

WELL: **15/3-6 (Pinnsvin)**

RUN No.: **1C** **30 ATTEMPTED, 27 RECOVERED, 1 MISSFIRE, 2 LOST**

Depth based on log: AIT-DSI-PEX

DATE: 30-31st DEC 1998

Geologist: Ray Edmunds

BULLET TYPE: COMBO, 8gm charges

Core No.	Depth m	Rec in	Lithology	Shows	Ring Size in
1	2767.0	3/4	ARG LST/MARL: lt gy, sl hd, blk-flky, crpxln, Mdst, mod arg, v hygroturgid, swlg & grdg to Marl, no vis por.	No fluor, no show, dull wh fluor from OBM stn.	2 1/8
2	2760.0	1/2	ARG LST/MARL: highly fractured core, med lt gy-lt olv gy, sl hd, flky-blky, crpxln Mdst, w/ tr med dk gy cly/arg strks, tr blk carb spks, no vis por.	No fluor, no show, OBM fluor a/a.	2 1/4
3	2752.5	1	ARG LST/MARL: lt gy-lt olv gy, sl hd, blky-flky, crpxln Mdst, mod arg, v hygrot v sft & stky in water, w/ tr wh calcite vns, no vis por.	No fluor, no show, OBM fluor a/a.	2 1/8
4	2727.0	1/2	ARG LST: fractured core, v lt-lt gy, grdg to lt gn gy/yell gy, sl hd-hd, ang-flky, crpxln Mdst, sl hygroturgid, sl arg, tr thin blk carb/org lams, no vis por.	A/A	2 1/8
5	2698.0	1/2	CALC CLST: med dk gy-dk gy-olv blk, v frm-sl hd, blky, sbfiss, v calc, sl micromica, tr thin pyr vns & dism pyr, v sl microcarb.	A/A	2 1/4
6	2643,5	1	CLST: dk gn gy, v fr, blky-sl splntry, sbfiss, v sl calc, mod hygroturgid, waxy tex, sl icrocarb.	A/A	2 3/8
7	2628,5	1 1/2	CLST: dk gy, v frm, blky, sbfiss, non calc, v sl micromica.	No show, OBM fluor in part A/A	2 3/8
8	2549,0	3/4	CLST: dk gn gy-gn blk, v frm, blky-sbplty, sbfiss, waxy tex, non calc, tr dk brn-blk org lams, tr dism pyr, w/ SST lens: v lt gy-lt olv gy, frm-sl fri, vf-occ silt size, sbang, mod w srtd, w/ tr lith grns, carb spks, fr vis por.	No nat fluor, no show, patchy, dull wh OBM fluor only.	2 3/8
9	2537.0	1 1/2	CLST: med dk gy-med blu gy, frm, blky, sbfiss, non calc, sl hygrot, sl micmica & sl microcarb, w/ v thin SST lens: vlt gy, frm-fri, vf-silt size, w srtd, tr lith grns, carb spks, pr vis por.	A/A	2 1/8
10	2522.5	1	CLST: gy blu gn, v frm, splntry, fiss, waxy tex, shaly, non calc, sl hygrot, tr thin blk org lams, v sl microica.	No show a/a	2 3/8
11	2454.0	1	CLST/SHALE: gn blk-gy gn, v frm, blky-splntry, fiss, non calc, waxy tex, brit, non calc, sl tr blk carb lams, hygrofiss-sl hygroturgid.	No show a/a	2 3/8
12	2434.0	1	CLST: dk gn gy-gy gn, v frm, blky-splntry, sbfiss-fiss, non calc, waxy tex, brit, sl carb spks, v sl hygroturgid	No show a/a	2 3/8
13	2412.0	1 1/4	CLST: gn gy, frm, blky, non calc, sbfiss, a/a, w/ SST: lt-v lt gy, fri, vf-occ f, w srtd, sbang, no vis cmt, tr gn glauc, sl tr pyr, carb spks, fr vis por.	No nat fluor, no show a/a.	2 1/4
14	2401.0	0	LOST		2 1/8
15	2391.0	1 1/4	SLTY CLST: med dk gy, frm, blky-crmbly, non calc, v slty, grdg to Sltst, micromica, tr blk coal/lig frags.	No show a/a.	2 1/4
16	2377.5	0	MISSFIRE		2 3/8
17	2354.0	3/4	CLST: dk gy-olv blk, frm, blky, sbfiss, non calc, mod hygrot, v sl micromica	No show a/a.	2 3/8
18	2336.0	1	CLST: med dk gy, fr, blky, sbfiss, non calc, micromica, carb spks, w/ v thin slty/sdy lam.		2 1/8
19	2320.0	0	LOST		2 3/8
20	2314.5	1 1/4	CLST: med dk gy, frm, blky, sbfiss, non calc, w/ silt lam & abnt mica flks, tr carb spks.	No show a/a.	2 3/8
21	2266.5	1 1/2	CLST: med dk gy, frm, blky-sbplty, sbfiss, non calc, mod micromica, w/ layer of olv gy CLST: pale yell brn mottl, tr carb spks, biot mica - tuffaceous?	No show a/a.	2 3/8
22	2264.0	1 1/4	CLST: dk gy-olv blk, frm, blky-sbplty, sbfiss, waxy tex, microlam med gy & blk, v sl tr carb spks	No show.	2 3/8
23	2253.0	1	CLST: med dk gy, frm, blky, sbfiss, microlaminated med gy, dk gy & blk, varved appearance, non calc, micromica.	No show.	2 3/8
24	2238.5	3/4	CLST: med dk gy, frm, blky, sbfiss, non calc.	No show.	2 3/8
25	2211.5	3/4	CLST: med dk gy, v frm, blky, sbfiss, non calc, sl micromica, v sl microcarb.	No show.	2 3/8
26	2181.5	3/4	CLST: med-med dkgy, v frm, blky, sbfiss, non calc.	No show.	2 3/8
27	2035.0	1 1/4	CLST: med dk gy-olv gy, frm, blky, sbfiss, non calc, tr carb debris.	No show.	2 3/8
28	1967.0	1	CLST: dk gn gy-gn blk, v frm, splntry-sbplty, sbfiss-fiss, non calc, waxy tex, brit tr carb spks, micromica.	No show.	2 3/8
29	1860.0	2	CLST: gn blk-olv blk, frm, sbplty-blky, sbfiss, non calc, gd tr glauc.	No show.	2 1/4
30	1556.0	1 1/4	CLST: olv blk-dk gy, frm, blky, sbfiss, non calc, rr tr forams, tr glauc, v sl slty, sl micromica.	No show.	2 3/8