statoil

WELLFILE

STATOIL - ESSO

COMPLETION REPORT

15/12 - 1

No. 1 SD

WELLFILE

Den norske stats oljeselskap a.s

STATOIL - ESSO

COMPLETION REPORT

15/12 - 1

No 1 SD

WELLFILE

STAVANGER
SEPTEMBER 1975

GEOLOGIC SUMMARY

CONTENTS

Page

I. INTRODUCTION 1
- a) Well Designation
- b) Well Classification
- c) Well Location
  - 1. Country
  - 2. License
  - 3. Coordinates
  - 4. Seismic Location
  - 5. Water Depth

II. PURPOSE OF WELL 1

III. RESULTS OF WELL 1

IV. WELL HISTORY 1-7
- A) General, spud date, completion date, etc.
- B) Contractors
- C) Casing
- D) Mud Program
- E) Drilling Problems
- F) Coring
  - 1. Conventional
  - 2. Sidewall
- G) Logging
  - 1. Baroid ADT Unit
  - 2. Schlumberger
  - 3. Comments on Log Analysis
- H) Testing
  - 1. Formation Interval Results
- I) Abandonment

V. STRATIGRAPHY 7
A) Table of Stratigraphy
B) Short Description of Formations

VI. RESERVOIRS 13

VII. CONCLUSION 13

VIII. LITHOLOGIC DESCRIPTION 15
1. Sample Description 15a
2. Core Description (conventional) 15b
3. Sidewall Core Description 15c

IX. ENCLOSURES

Composite Log
Mud Log
Core Analysis
Wellbore Schematic
ADT Logs:
Composite
Drillability
Pressure Profile
Formation Density - Formation Factor

formation pressure of 6108 psi at 3142.5 m, equivalent to 11.4 ppg. The formation pressure estimates developed by the Baroid ADT-unit has shown good accuracy.

The pH of the mud has been kept relatively high, i.e. approximately 11.0 after entering sloughing shales.

E) Drilling Problems

Very few problems were involved in the drilling operation. During tripping in the 12 1/4" hole, tight hole was encountered from 1890 m to 2499 m. The hole was thereafter reamed two times for sloughing shale.

The chalk sections had unexpectedly low penetration rates.

Two 8" drill collars had to be laid down due to thread-failure.

F) Coring

1. Conventional coring: (Description attached)

Core No. 1: 2612.1 m - 2614.5 m
Recovered 2.4 m, 100%

Core No. 2: 2614.5 m - 2624.6 m
Recovered 10.1 m, 100%

Core No. 3: 2635.6 m - 2651.1 m
Recovered 15.5 m, 100%

Core No. 4: 3067.2 m - 3073.3 m
Recovered 6.1 m, 100%

Core No. 5: 3125.7 m - 3143.7 m
Recovered 18 m, 100%

Core No. 6: 3143.7 m - 3154.7 m
Recovered 8.2 m, 75%

Core No. 7: 3154.7 m - 3172.7 m
Recovered 18 m, 100%

Core No. 8: 3172.7 m - 3183.0 m
Recovered 10.3 m, 100%

2. Sidewall coring: (Description attached)

Run 1. Shot 60, rec. 54 Interval 1700m-2871m
Run 2. Shot 60, rec. 49 Interval 2980m-3244m

G) Logging

1. Baroid, ADT Unit includes the following data:

a) Drilling rate
b) Lithology
c) Cutting Gas
d) Mud Gas
e) Chromatograph
f) H_2S detector
g) Shale Density
h) and 20 other parameters.

2. Schlumberger

Type of Log	Interval	Run Nos.
a) IES	399.5 - 1538	1
"	1535.5 - 2875.5	2
"	2871 - 3269 (T.D.)	3

The sandstone below the coal at 3161 m was calculated 100% SW with a porosity very similar to the top sand.

4. Velocity Survey

Conducted by Seismograph Services Limited after casing set. 23 check shots, levels from 548.6 m to T.D. minus 3 m.

H) Testing

On the basis of log analysis, two points for FIT tests (Formation Interval Tester) were picked. One point at 3142.5 m (Ø = 23%, SW = 66%) and one point at 3126.5 m (Ø = 11.2%, SW = 31%).

Test 1 3142.5 m produced: .3 liter mud
9.9 " water
Total of 10.2 liter

A light skim of oil occurred on the sample, but this probably came from the FIT tools hydraulics.

Following pressures were measured with Amarada pressure bombs:

Initial Formation pressure	4926 psi
Final " "	4718 "
Final Shut in pressure	6103 "
Final hydrostatic pressure	6535 "

Total chlorides measured 10 500 ppm which seem a bit fresher than calculated by the logs. Rw formation water was calculated to be .03 at BHT = 230° F. NaCl 85,000 ppm. This difference indicates the sample contained a large percentage of filtrate. -3245m

Test 2 (3125.5) and test 3 (3126.5) were failures due to tight formation.

I) Abandonment

The well was abandoned on 6 September 1975. The well was plugged by four cement plugs and one bridge plug. The well-head and guide-structure were retrieved after cutting the casing with explosives 4.57 m below sea-floor. The sea-floor was inspected by divers before leaving location.

The following plugs were placed in the borehole:

10 100 ft. to 10 725 ft.

Plug 1: Cement:open hole: 3 079 m to 3 267 m

Plug 2: " 9 5/8" csg shoe: 8862 ft. to 9550 ft.
2702 m to 2912 m

Plug 3: Bridge plug: Baker "N": 8850 ft. = 2698 m

Plug 4: Cement: 9 5/8" x 13 3/8" csg: squeezed 33 bbls
and 9 5/8" csg: 4547 ft. to 5030 ft.
= 1386 m to 1534 m

Plug 5: Cement 13 3/8" x 20" csg: squeezed 33 bbls
and 9 5/8" csg: 516 ft. to 1151 ft.
= 157 m to 351 m

V STRATIGRAPHY

A) Table of Stratigraphy

Stratigraphic Units	Drill Depth (m)	Subsea (m)	Thickness (m)
Quaternary/Pliocene	119	- 95	836
Upper Miocene	955	- 931	195
Middle Miocene	1150	-1126	128
Lower Miocene	1278	-1254	126,5
Oligocene	1404,5	-1380,5	368,5
Eocene	1773	-1749	681
Paleocene	2454	-2430	170
Danian	2624	-2600	114,5
Upper Cretaceous			
Maastrichtian	2738,5	-2714,5	162,5

Stratigraphic Units	Drill Depth (m)	Subsea (m)	Thickness (m)
Campanian	2901	-2877	91
Lower Cretaceous	2992	-2968	14
Malm	3006	-2982	116
Dogger	3122	-3098	86
Triassic	3208	-3184	61 +
T.D.	3269	-3245	

B) Short Description of Formations

1. Quaternary/Pliocene (119 m - 955 m, 836 m thick)

The first cutting samples were taken from 411 m. The section consists of clays, with a few silt and sand interbeds.

The clays are grey, soft, occasionally sticky, silty and sandy in part.

Traces of carbonaceous material and shell fragments occur down to 790 m. The sands are typically loose, clear quartz, ranging from fine to coarse grained, angular to subrounded, occasional trace garnet, glauconite, pyrite. Microfossils are generally abundant.

2. Miocene (955 m - 1404,5 m, 449,5 m thick)

The dominant Miocene lithology is sand and shale, with minor clay intervals. The sands consist of quartz and occasionally glauconite. The quartz is clear to tan, fine to medium grained, angular to subrounded and fairly sorted. The shales are mainly light brown and grey, silty, slightly calcareous, with fair amount of forams.

3. Oligocene (1404,5 m - 1773 m, 368,5 m thick)

This section is dominated by shales with mudstone and a few dolomite, limestone, and siltstone stringers.

The shales are medium grey-brown and green, soft to medium hard, fissile.

The mudstone is dark grey to brown, soft, non-fissile, unconsolidated and non calcareous.

The limestone is light grey to red brown, medium hard. The dolomite is light brown and silty.

Trace of forams and shell fragments are found throughout the section.

4. Eocene (1773 m - 2454 m, 681 m thick)

The Eocene lithology is mainly shales with minor limestone and dolomite stringers, and a 20 m thick sand unit from 2257 m. The shales are medium grey to medium brown and green, soft, fissile with red brown shale present at 2438 - 2472 m. The dolomite is micritic.

The sand is white, fine to medium grained, medium hard, subangular to subrounded with trace glauconite and pyrite.

At 2420 m a thin (1 - 2 mm) laminae of light grey tuff (sidewall core) was encountered.

5. Paleocene (2454 m - 2624 m, 170 m thick)

The top of the Paleocene was determined palaeontologically in a blue grey, firm shale. The dominant lithology in Paleocene (except the Danian) is shale with a few sandstone stringers.

The shales are grey-green and red-brown, the latter slightly calcareous.

The sandstones are fine grained, quartzitic, subangular, well sorted and occasionally pyritic.

6. Danian (2624 m - 2738,5 m, 114,5 m thick)

The Danian interval consists of shales, sandstone and chalk. The shales are dark grey, green-grey, brick red, occasionally silty, non-calcareous to calcareous. In the upper part some strongly bioturbated zones, with abundant pyrite. The lower part of the Danian sequence consists almost entirely of medium hard, milk white, microcrystalline chalk with some chert. The top of the Danian sandstone, one of the principle objectives, was reached at 2634 m (-2610 m). The sandstone was fine to medium grained, mostly fine quartz sand, light grey, moderately sorted, mostly subrounded with some angular grains; small amounts of calcite cement, increasing downwards, friable to moderately friable. Above the main sand, grey shale with thin sand stringers is present.

7. Upper Cretaceous (2738,5 m - 2992 m, 253,5 m thick)

Maastrichtian (2738,5 m - 2901 m, 162,5 m thick)

The Maastrichtian is represented by white, micritic chalk with traces of glauconite; also traces of green and light grey shales and limestone. The interval was determined palaeontologically.

Campanian (2901 m - 2992 m, 91 m thick)

The Campanian interval was determined palaeontologically. The lithologies are similar to those of the Maastrichtian with an increase in limestone. The limestone is light grey, grained (calcarenite), glauconitic, micaceous and very soft.

Lower Cretaceous (2992 m - 3006 m, 14 m thick)

The Lower Cretaceous has a varying lithology. The upper part consists of mainly marl and shales, with some red marl towards the base.

The shales are red, green and brown to black, soft, slightly calcareous. The black shale has abundant fine pyrite and splintery carbonaceous material.

8. Jurassic (3006 m-3208 m, 202 m thick)

Malm (3006 m-3122 m, 116 m thick)

The top of this shale interval was based on the distinctive high gamma ray response.

The shale is medium to dark grey brown-black, soft, non-calcareous to slightly calcareous and pyritic. High content of organic material.

Dogger (3122 m-3208 m, 86 m thick)

This section was one of the principle objectives of the well. It comprises the Middle Jurassic Sandstone interval. The main sandstone at the top of the section is light grey to white, moderately hard to friable, fine grained, moderately sorted, subrounded with fair to good porosity. From 3150 m (-3126 m) the section consists of sandstone units less than 2 m thick grading into, or having sharp contacts with, laminated siltstone/shale sequences, and with frequent horizons of coal.

The sand units are light grey to light brown, very fine grained, friable, subrounded, with good sorting. Porosities are poor to fair. The laminated sequences are mostly underturbed, with abundant sedimentary structures (ripple marks, load casts, flame structures, etc.).

9. Triassic (3208 m-T.D., 61 m + thick)

The Triassic interval is represented by sandstone, with increasing amount of shale towards T.D.

The sandstone consists of loose quartz grains, white to clear, very fine to fine grained, well sorted,

rounded to subrounded, slightly calcareous, good porosity, no show. The shales are medium grey, green and red-brown, soft.

VI RESERVOIRS

1. Middle Miocene sand (1150 m-1275 m), good reservoir, no show

2. Eocene sand (2252 m-2277 m), good reservoir, no show

3. Danian sandstone (2633 m-2643 m), good reservoir, no show

4. Dogger sandstone (3122 m-3151 m), fair reservoir, fluor and cut, waterwet.

5. Triassic sandstone (3208 m +), apparently good reservoir, no show.

VII CONCLUSION

The principle objectives of the 15/12-1 test were the Paleocene and Dogger sandstones where oil accumulations had been proven in the Maureen field 5 km to the southwest. The Paleocene sandstone at 2633 m to 2643 m in 15/12-1 was encountered 6 m lower than in the Maureen no. 2 well. The sandstone is medium to coarse grained with good porosity (26%), but waterwet.

The Dogger sandstone was encountered some 50 m higher than in the Maureen no. 2 well. Oil shows were encountered, but log analysis, core data and FIT's proved the sandstone to be waterbearing.

Possibly the lower part of the Dogger section and all of the Lias section were cut out of this test by an erosional unconformity and/or faulting.

The Upper Triassic has good sand development that apparently could be adequate for accumulation of hydrocarbons. During the drilling of the Triassic section, the background gas in mud and cuttings was near zero which probably is related to lack of source material for hydrocarbons.

Prepared by:

S. G. Larsen

Contributors:

Geology:	E. Lie
	K. Lien
	S. G. Larsen
	D. Barclay
	J. Hulsey
	D. James
	J. Parmenter
Formation Evaluation:	Ø. Nyberg
Engineering:	K. Kjeldstad

VIII LITHOLOGIC DESCRIPTION

1. Sample Description

WELLSITE SAMPLE DESCRIPTION

Jess D. Hulsey

HOLE SIZE: 17 ½" GEOL.: Klaus Lien

COMPANY: Statoil/Esso

DATE: July 19, 1975

WELL (Onshore/Offshore) 15/12-1

COUNTRY Norway

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
		20" at 1309' - T.D. 1355'.	
1350/80	100	Clay, soft w/tr shells, gry	Some cmt
1380/10	100	Clay A/A	Some cmt
1410/40	100	A/A	Gas Nil
1440/49	100	A/A	Gas Nil
1449/80	100	Clay, soft w/tr shells, gry - some cmt	
1470/00	90	Clay, gry	
	10	Sd, fria, m-f grn, p. std, ang-rnd, clear Qtz.	
1500/30	90	Clay A/A,	
	10	Sd A/A ranging to crse & med., silt, Qtz, Siltstone	
		w/dk bio., tr/foss., pyrite	
1530/60	100	A/A + blk, s., material	
1560/90	90	Clay, A/A	
	10	Silt + crse grn Qtz, tr. garnet	
1590/20	100	Clay A/A, + V.F.G. sd - crse to grn silt, tr. pyrite	
		foss. frag.	
1620/50	100	A/A, tr. muscovite	
1650/80	100	A/A, tr. musco. & bio?, glauc?	
1680/10	100	A/A + crse - silt sized grn glauc.	
1710/40	100	Clay, gry, sft, sd v.f.g., Qtz, silt, crse, foss.	
		frag, foramin.	
1740/70	100	A/A + tr. of epidote in silt.	
1770/00	100	Clay A/A, silt crse, foram.	
1800/30	100	A/A	
1830/60	100	Clay A/A, at least 95% of total	
1860/90	100	A/A + tr. glauc.	
1890/20	100	A/A, silt, crse	
1920/50	100	Clay, mud, silt A/A	
1950/80	100	A/A	
1980/10	100	A/A	
2010/40	100	Clay, A/A, silt, crse, tr. garnet, epidot, glauc.	
		foram.	
2040/70	100	A/A	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 17 ½"

GEOL.: Jess D. Hulsey / Klaus Lien

COMPANY: Statoil/Esso

DATE: July 19, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
2070/00	100	A/A + Tr. of py.	
2100/30	100	Clay A/A, Incr. amt of sd w/foram, tr./blk carb. material	
2130/60	100	A/A, Tr./epidote, carb. material	
2160/90	100	A/A, foram.	
2190/50	100	A/A, abd. amt. foss. fragm.	
2250/80	100	Clay A/A, sd, clear, frgm, Qtz w/glauc., foss, frgm foram.	
2280/10	100	Clay and other A/A	
2310/40	100	Clay, A/A "sh" (some mod. firm cuts)	
2340/70	100	A/A	
2370/00	100	Clay, sh, gry A/A, mostly m. firm cuttings	
2400/30	100	A/A	
2430/60	100	A/A	
2460/90	100	A/A	
2490/20	100	A/A, sh.	
2520/50	100	Clay, gry - becoming more firm.	
2550/80	100	A/A - (?more sd), more shell frags, abd forams.	
2580/10	100	Clay, sh, gry, firm-soft, w/shell frags + abd forams 3-5% sd - silt Qtz + heavy min.	
2610/40	100	A/A less sd - no shells	
2640/70	100	A/A less sd - no shells	
2670/00	100	A/A	

WELLSITE SAMPLE DESCRIPTION

Jess D. Hulsey

HOLE SIZE: 17½" GEOL.: Klaus Lien

COMPANY: Statoil/Esso

DATE: July 20, 1975

WELL (Onshore/Offshore) 15/12-1

COUNTRY Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
2700/30	100	Clay - sh. gry, sli. sdy, mod. firm, forams. essen.	
		A/A	
2730/60	100	A/A	
2760/90	100	A/A	
2790/20	100	A/A	
2820/50	100	A/A - Drlg brk - ck flow at 2855'.	
		Spot spl. ± 2865'. No change.	No Gas
2850/80	100	Clay - (Not sd) - A/A - less firm "sh"? gry	
2880/10	100	Clay - A/A, tr. sd	
2810/40	100	A/A	
2840/60	100	A/A	
2860/90	100	A/A	
2890/20	100	Clay, gy-grn, sticky, silt, gry-grn, hd, sd, clear	
		p. srtd, Qtz, tr/glauc. & py. foram.	
3020/50	100	Clay A/A, sh A/A, Incr. amt sd, f.-m. grn, m. srtd	Trip gas, 160 units
		w/epidote, ang-s.rnd. Py., glauc.	
3050/80	100	A/A (two sd populations, one A/A, the other: m-crse	
		grn, rnd)	
3080/10	100	A/A + incr. amt. of py.	
3110/40	100	A/A + incr. amt + of gry-grn silty sh abd py, fxl.	
3140/70	100	A/A, abd foss fragm.	
3170/00	100	Incr. amt sd, f. grn, m. srtd, abd foss fragm. clay	
		A/A and sh A/A	
3200/30	100	A/A, abd shell fragm.	
3230/50	100	A/A, incr. amt of foss. fragm.	
3250/80	100	Clay A/A, sh and foss. fragm. A/A, sd f. grn. g.	
		srtd, g. rnd.	
3280/10	100	A/A	
3310/40	100	A/A	
3340/70	100	A/A incr. amt of sd, polished grn.	
3370/00	100	A/A + abd glauc.	
3400/30	100	A/A	
3430/50	100	Clay A/A, incr. amt of foss. fragm. and sd	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 17½"

GEOL.: Jess D. Hulsey / Klaus Lien

COMPANY: Statoil/Esso

DATE: July 20, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
3450/70	100	A/A - Abd foss frags + sd	
3470/00	100	A/A - Abd forams (shells - bleached out)	
		Note: Single screen shaker -prob. sd passing thru.	
		Clay no longer sticky - some sh cuts. Fast	
		drlg below 3100± ?? Sd ?? Desander 3% sd.	
		(± 5% (?) Sd + shell frags w/clay in spls.)	
3500/30	100	Clay - sh A/A - gry - less shell frags. More sh	
		cuts. Little sd. Silty.	
3530/60	100	Sh, clay gry, - h. brn A/A mod firm.	No sd.
3560/90	100	Sh - A/A - No sd silty	Sh cutting qual. im-
3590/20	100	Sh - A/A - No sd silty	proved, less goopy
3620/50	100	Sh - A/A - No sd silty	clay cuts are firm
3650/80	100	Sh - A/A No sd silty	
3680/10	100	Sh - A/A - tr. sdy brn sh, py	
3710/40	100	Sh lt brn + gry, silty, sli sdy, some foss in	
3740/70	100	Sh - A/A	Lith change
3770/00	100	Sh silty lt gry & v.f.g. sd, non calc. silt firm -	Drlg v. fast
		sd loose	
3800/30	100	A/A	
3830/60	100	A/A + brn silty sh	
3860/90	100	A/A + brn silty sh	
3890/70	100	A/A + brn silty sh abd shells	
3920/50	100	A/A + shells, tr. ss sh abd shells	
3950/80	100	A/A + shells, tr. glauc.	
3980/10	100	A/A + inc. in sd abd. forams	
4010/40	100	A/A less sd no forams	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 17½" GEOL.: Jess D. Hulsey / Klaus Lien

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE: July 21, 1975	COUNTRY Norway

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
4040/70	25	Sd m.-f. Qtz, rnd, glauc.	No shows
	10	Foss. + Shell frags	v. hi ROP
	65	Sh A/A - cave	
4070/00	35	Sd A/A	
	10	Foss. A/A	
	55	Sh A/A	
4100/30	20	Sd A/A	
	10	Foss A/A	
	70	Sh A/A	
4130/60	10	Sd A/A	
	90	Sh A/A	
	Tr	Foss A/A	
4160/90	10	Sd A/A	
	85	Sh A/A	
	5	Foss A/A	
4190/20	100	Sh gry & brn silty (A/A) tr. sd & foss.	
4220/50	100	Sh lt brn + gry silty sli calc. foss. forams	
4250/80	100	Sh - A/A forams mainly brn	
4280/10	100	Sh - A/A forams mainly brn	
4310/40	100	Sh - A/A forams mainly brn (tr. shells)	4316' 25 unit gas
4340/70	100	Sh - A/A forams brn	
4370/00	100	Sh - A/A forams brn & gry, gry sh v. glauc.	
4400/30			
4430/60	80	Sh, brn, hd, splty. Silt, grn gry, hd, silty	
	20	Sd fri., f. grn., glauc.	
4460/90	100	A/A, glauc. inbd in sh, sh, sl. calc.	
4490/20	100	A/A + Ss, gry, f-v.f.grnd, g. srtd, hd, sl calc., w/	
		glauc.	
4520/50	100	A/A + sd, fri, c. grn, grnd (small amt.)	
4550/80	100	A/A	
4580/10	100	Sh, A/A, but only, small amt sd.	
4610/40	100	A/A	
4640/70	90	Sh, brn, hd, splty.	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 17½"

GEOL.: Jess D. Hulsey, Klaus Lien

COMPANY: Statoil/Esso

DATE: July 21, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
	10	Sh, grn-gry, hd, silty. Practically no sd.	
4670/00	100	A/A + tr. sd and glauc.	
4700/30	100	Sh A/A, siltstone, brn, hd, minor amt. Tr. brn dolomite.	
4730/60	100	Sh A/A, dolomite, brn, v. hd, micro-xln.	
4760/90	100	A/A	
4790/20	100	A/A, only tr./dolomite.	
4820/50	100	Sh. A/A. Tr. ss, v.f.g., firm	
4850/80	90	Sh, gry-grn, hd	
4880/10	100	Sh, A/A, Tr./dolomite	
4910/40	100	Sh. A/A, incr. amt dolomite. Tr. py.	
4940/70	100	A/A + siltstone, c. grn.	
4970/00	100	A/A	
5000/44	100	A/A	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
5050	60	Shale, dk gy to brn, sft	
	20	Siltstone, v. lt. gy, med. hd, consol	
	15	Mudstone, gy, sft, ltl. consol, non calc.	No flur
	5	Shale, v dk gy, med hd, consol	
	Tr	Limestone, micritic, silis, lt brn, hd	
	Tr	Foss (shell frags)	No flur
5060	60	Shale, dk gy to brn a/a	
	10	Siltstone a/a	
	25	Mudstone - a/a	
	5	Shale - a/a - Tr. ls and shell frags.	No flur
5090	60	Mudstone, dk gy to brn, sft, non-fiss., ltl. consol	
		non clac.	
	35	Shale, dk gy to brn, sft, consol, frly fiss.	
	5	Siltstone - a/a	
	Tr	Shell frags	No flur
5120	70	Shale, med gy, sft, fnly fiss. Tr. glauc.	
	30	Mudstone, gy, sft, unconcol., non calc.	
	Tr	Silt and limestone	No flur
5150	60	Mudstone, gy, sft, unconcol, non calc.	
	35	Shale, med gy, sft, fnly fiss.	
	< 5	Glauc.,	
	Tr	Silt and foss. frags.	No flur

WELLSITE SAMPLE DESCRIPTION

COMPANY: Statoil/Esso

WELL (Onshore/Offshore): 15/12-1

DATE: July 24 - 31, 1975

COUNTRY: Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
5180	60	Shale, med gy, sft, fnly fiss., consol	
	35	Mudstone, gy, sft, unconsol, sltly calc.	
	Tr	Glauc., gn, less 5%	
	Tr	Tr. og silt, shell frags.	
	Tr	Limestone, micr., lt brn, hd	No flur
5210	80	Shale, med gy to brn, sft, fiss. consol	
	15	Mudstone, brn, sft, unconsol, non calc.	
	Tr	Less glauc., gn	
		Tr. of silt and shell frags.	
		Tr. of limestone, micr. lt brn, hd	No flur
5240	85	Shale, lt gy to lt brn, sft, fnly fiss.	
	10	Mudstone, lt gy to tobrn, unconsol, sltly calc.	
	Tr	Silt and sandgrns - subrnd - rnd	
	Tr	Limestone, lt brn	
	Tr	Shell frags	
	Tr	Glauc, gn	No flur
5270	90	Shale, lt to med gy, sft to med hd, fnly fiss.	
	5	Mudstone, lt gy, unconsol, non calc.	
	Tr	Silt and limestone, micr lt brn, hd	
	Tr	Shell frags and glauc., gn	No flur

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: KJS/RLK

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
5300	90	Shale, lt gy to lt brn, sft, fnly fiss.	
	5	Mudstone, lt gy, unconsol, sltly calc.	
	Tr	Glauc., gn.	No flur
	Tr	Limestone, lt brn, and shell foss.	
5330	90	Shale, lt gy to brn, sft, fnly fiss.	
	5	Mudstone, gy, unconsol, non calc.	No flur
	Tr	Glauc.	
	Tr	Shell foss.	
5360	90	Shale, lt gy to brn, sft, fiss.	
	5	Mudstone gy to brn, sltly consol, sltly calc.	No flur
	Tr	Siltand shell frags.	
	Tr	Glauc. less abund.	
5390	90	Shale, lt gy to brn, sft, fiss.	
	5	Mudstone, gy to brn, sltly consol, non calc.	
	Tr	Siltstone, lt brn, med hd. more consol	
	Tr	Glauc.	No flur
	Tr	Shell foss.	
5420	90	Shale, lt gy to brn, more brittle	
	5	Mudstone, lt gy to brn, sltly consol sltly calc.	
	Tr	Siltstone, lt brn, med hd	
	Tr	Glauc. more abund.	No flur
	Tr	Limestone, lt gy to lt brn med hd	
	Tr	Silic fossils (forams?)	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
5450	90	Shale, lt gy to lt brn, fissile, brittle	
	5	Mudstone, gy to brn, sft, non calc.	No flur
	Tr	Limestone, lt gy to lt brn, med hd	
	Tr	Glauc. and silt	
	Tr	Forams	
5480	90	Shale, lt gy to brn, fissile, sft to med hd	No flur
	5	Mudstone, gy to brn, sft sltly calc.	
	Tr	Limestone, lt gy, med hd - more abund than previous samples.	
	Tr	Glauc. less silt	
	Tr	Forams	
5510	90	Shale, lt gy to brn, sft to med hd	
	5	Mudstone, lt gy to brn, med hd, more consol, sltly calc	Sltly mineral flur
	Tr	Limestone, lt gy to lt brn, med hd, more abund.	
	Tr	Glauc. less abund.	
	Tr	Silt, forams	
5540	90	Shale - A/A	
	5	Mudstone, lt gy to brn sft, non calc.	
	Tr	Limestone - A/A	
	Tr	Glauc, less abund.	
	Tr	Silt and calc. fossils	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
5570	90	Shale, brownish, gry, micac., sft, fiss.	
	5	Limestone, cream, micritic, dol., lt brn, mic., silty	
	5	Mudstone and siltstone - A/A	
5600	90	Shale, lt gy to brn, med hd, brittle	
	5	Limestone, lt to red brn, dol, lt brn, slty more abund.	No flur
	5	Mudstone, lt gy, sft, sltly calc. and siltstone, lt gy med hd.	
	Tr	Forams	
5630	90	Shale - A/A	
	5	Dol. - A/A	
	5	Limestone, mudstone, siltstone - A/A	
5660	95	Shale, pred. pale., brn med. hd, fissile, micac., glauc., tr. pyrite.	
	5	Dol. - A/A	
5690	95	Shale - A/A	
	5	Dol. - A/A	
5720	95	Shale - A/A	
	< 5	Dol and Liemstone - A/A	No flur
	Tr	Forams	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
5750	100	Shale, med gry - med brn, fissile, mic., pyritic	
	Tr	Limestone and dol. - A/A	
	Tr	Forams	
5780	100	Shale - A/A	
5810	100	Shale - A/A - becoming increasingly fissile	
	Tr	Foraminifera foram	
	Tr	Silt, friable, med gray	
		(silt is probably source of slight gas and hot wire)	
5840	100	Shale - A/A	
	Tr	Dol.	
	Tr	Silt - A/A	
5870	100	Shale - A/A	
	Tr	Dol	
	Tr	Silt - A/A glauconitic	
5900	100	Shale, med. gry - med. brn, fissile, mic., glauc.	
	Tr	Dol., - (slight increase)	
5930	100	Shale - A/A	
	Tr	Dol - A/A	
	Tr	Silt - A/A - glauconitic	
5960	100	Shale - A/A	
	Tr	Occ. loose f. grnd qtz - Dol + silt	
5990	100	Shale - A/A Foram	
	Tr	Occ. loose f. grnd qtz	
		foram v. abund.	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
6020	95	Shale - A/A	
	5	Dol., lt brn, mod hd, mic., (Pos Ø) foram	
		No qtz gnrs noticed formas remain, abund silt rare.	
6050	95	Shale - A/A	
	5	Dol - A/A	
	Tr	Silt	
6080	95	Shale - A/A	
	5	Dol - A/A	
6110	95	Shale - A/A	
	5	Dolomite - A/A	No flur
	Tr	Glauc.	
6140	95	Shale - A/A	Sly min flur
	5	Limestone, lt brn, med hd	
	Tr	Glauc. and calc. fossils	
	Tr	Dol - A/A	
6170	95	Shale - A/A	
	5	Limestone - A/A w/tr dol - A/A	No flur
	Tr	Forams	
6200	95	Shale - A/A - more silty	
	5	Limestone - A/A - dolic.	
6230	95	Shale - A/A - less silty	
	5	Limestone - A/A - and Dol - A/A - increase in dol.	
	Tr	Shell frags, calc.	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
6256	95	Shale - A/A	
	5	Limestone, lt brn, med hd, dolic	
	Tr	Abundant formas	
6290	95	Shale. med. gy to med. brn. fiss., mic.	
	5	Dolomite, lt brn, mud, hd, blacky, angular frags, tr. detrital grns, and limestone - A/A	
	Tr	Quartz gr.	
	Tr	Silt and siltstone, lt gy, fri., sft, silt thru shaker?	
6320	95	Shale - A/A	
	5	Dol and Limestone - A/A	
	Tr	Silt and Siltstone - A/A	
6350	95	Shale - A/A	
	5	Dol and Limestone - A/A - mostly dol.	
	Tr	Silt and siltstone - A/A	
6380	95	Shale - A/A	
	5	Dol. and Limestone - A/A	
	Tr	Silt and siltstone - A/A incr. in siltstone	
	Tr	Qtz grns, subang to ang., fn	
	Tr	Forams	
6410	95	Shale - A/A - incr. hd.ness.	
	5	Limestone - A/A - sltly dolic.	
	Tr	Silt and siltstone - A/A - sltly increase in sltst.	
	Tr	Forams	
	Tr	Shale, gn, fiss, soft.	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4 " GEOL.: RLK/KJS

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
6440	90	Shale - A/A	
	10	Dolomite - A/A	
	Tr	Silt	
	Tr	Forams	
6470	85	Shale - A/A	
	5-10	Dol and Limestone - A/A	
	5	Siltstone, lt gy, fri, sft	
	Tr	Limestone, gy, hd	
	Tr	Qtz grns, subang.	
	Tr	Lignite	
6500	85	Shale - A/A	
	10	Dol. and limestone - A/A - dol sltly hder.	
	5	Siltstone - A/A	
	Tr	Qtz grns - A/A	
6530	85	Shale - A/A	
	10	Dol. and Limestone - A/A - ls more abund.	
	Tr	Siltstone - A/A	
	Abnd	Qtz grns - subrnd to subang.	
6560	85	Shale - A/A - sltly sfter	
	10	Dol, lt brn, hd, micritic, detrital frags, crse grns	Some intercryst por.
	Tr	Limestone	
	Abnd	Qtz grns - A/A	
	Tr	Silt	
6590	90	Shale - A/A	
	5	Limestone and dol., lt brn, hd, gr, micr. detr. frags.	
	Tr	Silt - A/A	
	Abnd	Qtz grns - A/A	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore) 15/12-1

COUNTRY Norway

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
6620	95	Shale - A/A	
	5	Dol. and limestone - A/A	
	Tr	Limestone - dk to rd brn, crse grns, micr.	
	Tr	Silt and Qtz grns - A/A	
	Tr	Siltstone - A/A	
6650	90	Shale - A/A	
	10	Dol. - A/A	
	Tr	Limestone - A/A	
	Tr	Silt and fossils	
6680	90	Shale - A/A	
	10	Dol. - A/A	
	Tr	Limestone, dk to rd brn, crse grns, micr.	
	Tr	Siltstone, increase in cont.	
	Tr	Silt and Qtz grns.	
	Tr	Glauc.	
6710	85	Shale - A/A	
	15	Dol. - A/A	
	Tr	Limestone - A/A	
	Tr	Siltstone -<5%, lt gy, fri, sft	
	Tr	Silt, Qtz grns more ab.	
6740	85	Shale - A/A	
	15	Dol - A/A	
	Tr	Siltstone - A/A	
	Tr	Silt, qtz grns - A/A	
	Tr	Pyrite	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
6770	85	Shale - A/A - increase in amount of sftr shale,	
		med gy to med. brn, bly fiss. mic.	
	15	Dolomite - A/A	
	Tr	Silt, siltstone, limestone - A/A	
6800	90	Shale - A/A	
	10	Dol - A/A - w/pyrite	
	Tr	Silt, limestone - A/A	
	Tr	Siltstone - A/A - more abund.	
6830	85	Shale, med gy to med. brn, fissile, mic.	
	10-15	Dolomite - A/A	
	Tr	Siltstone - A/A 5%	
	Tr	Silt, Qtz grns - A/A	
	Tr	Limestone, med hd, dk to red brn, coarse grns, micr	
6860	85	Shale - A/A - Tr.	
	10-15	Dolomite, lt - dk rd brn, brittle, hd, crsely	
		crystalline, occ. detrital.	
	Tr	Siltstone - A/A	
6890	60	Shale - rd brn - A/A	
	30	Shaleå greenish-gry to lt grn, v. sft, poorly fiss.	
	10	Dolomite - A/A	
6920	60	Shale med brn- A/A	
	30	Shale greenish-gry - A/A	
	10	Dolomite - A/A	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24- 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
6950	30	Shlae - med - brn - A/A	
	70	Shale - grn - A/A - w/disseminated pyrite	
	Tr	Dol.	
6980	30	Shale - med-brn - A/A	
	70	Shale - gry-grn - A/A (Becoming slithly greyer)	
	Tr	Dol	
7010	20	Shale - med brn - A/A	
	80	Shale - gry-grn - A/A	
	Tr	Dol.	
7040	20	Shale - med. brn - A/A	
	80	Shale - gry-grn - A/A	
	Tr	Dol.	
7070	20	Shale - med brn - A/A	
	80	Shale - grey-green - A/A	
	Tr	Dol.	
7100	10	Shale - med brn - A/A	
	90	Shale - gry-grn - A/A	
	Tr	Dol.	
7130	10	Shale med brn - A/A	
	90	Shale gry-grn - A/A	
7160	90	Shale - gry-grn - A/A	
	10	Shale - med brn - A/A	
	Tr	Dol. - A/A	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
7190	90	Shale, grn-gry - A/A	
	10	Shale, brn - A/A	
	Tr	Dol. - A/A	
7220	90	Shale, grn-gry - A/A	
	10	Shale, grn - A/A	
	Tr	Dol - A/A calc.	
	Tr	Sandstone, wh, fn grns, rnd grns, subrnd - subang	High por.
		grns, med hd, calc. cement?	
7250	90	Shale, grn-gry - A/A	
	10	Shale, brn - A/A	
	Tr	Dol, red brn, brittle, hd, crse cryst. detr. micr.	
	Tr	Sandstone, wh - A/A	SS High por.
7280	90	Shale, grn-gry - A/A	
	10	Shale, brn - A/A	
	Tr	Dol, red brn - A/A and Ss, wh - A/A	SS High por.
	Tr	Siltstone, lt gy, med hd, fri.	
	Tr	Glauc.	
7310	90	Shale, grn-gry - A/A	
	10	Shale, brn - A/A	
	Tr	Dol, rd brn - A/A	
	Tr	Siltstone - A/A	
	Tr	Lignite	
7340	85	Shale, gn-gy - A/A more glauc.	
	10	Shale, brn - A/A	
	5	Dol., red brn - A/A	
	Tr	Siltstone - A/A and sandstone wh - A/A	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
7370	95	Shale, gn-gy - A/A more gy	
	5	Shale, brn - A/A	
	Tr	Sandstone, wh, fn grnd, med hd, subrnd-subang, consol, gr. glauc., qtz grns	High por.
	Tr	Silt, increasing in cont.	
7400	90	Shale, lt gy - gy-gn	
	5	Sand and sandstone	
		Sand: Qtz grns, subrnd-subang.	
		Sandstone: Wh, fn grnd, med hd, consol. subang-subrnd, qtz Ss	High por
	Tr	Dol., lt brn, hd, mic.	
7430	90	Shale - A/A	
	10	Sand and sandstone - A/A	
	Tr	Do. - A/A	
7460	30-40	Sand, qtz, fn-med grnd, subrnd, subang, unconsol.	
	Tr	Sandstone - A/A	High por.
	Tr	Dol. - A/A	
	Tr	Siltstone, lt gy, med hd, friable	
	60	Shale, lt gy-gn - A/A	
	5	Shale, lt brn - brn - A/A	
	Abnd	Pyrite	
7490	10-15	Sand - A/A	
	Tr	Sandstone - A/A calc. cement shaly glauc.	
	75	Shale, lt gy to lt gn - A/A	
	10	Shale, brn - A/A	
	Tr	Glauc.	

WELLSITE SAMPLE DESCRIPTION

COMPANY: Statoil/Esso
WELL (Onshore/Offshore): 15/12-1
DATE: July 24 - 31, 1975
COUNTRY: Norway
HOLE SIZE: 12 1/4"
GEOL.: RLK/KJS

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
7520	15	Sand and sandstone - A/A	
	75	Shale, lt gy - lt gn - A/A	
	10	Shale, brn - A/A	
	Tr	Limestone - dk brn, med hd, dol. - A/A	
7550	85	Shale, lt gy - lt gn - A/A	
	5	Sand and sandstone - A/A	
	10	Shale - brn - A/A	
	Tr	Pyrite, dol. - A/A	
7580	85	Shale, lt gy - lt gn - A/A	
	5	Shale, brn - A/A	
	5	Sand and sandstone - A/A	
	5	Dol - A/A w/tr. of glauc.	
	v.Abnd	Pyrite	
7610	85	Shale, lt gy-gn - A/A	
	5	Shale, lt brn - A/A	
	5	Sand and sandstone - A/A	
	5	Dol - A/A	
	Abnd	Pyrite	
7640	90	Shale, lt gy-gn - A/A	
	5	Shale, lt-dk brn	
	5	Dol - A/A and Limestone, lt brn	
	Tr	Sand grns	
	Abnd	Pyrite	
7670		A/A	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
7750		A/A - w/less brownish some of the shale v. high gn-cream. One grain qtz sand fluor on one grn sand. Fluoresced. Pyrite v. abnd.	
7730	95	Shale, lt gy-gn	
	Tr	Shale, dk brn	
	5	Dol - A/A	
	Tr	Sand grns	
	Abnd	Pyrite	
7760		A/A w/one chip of calcite	
7790	70	Shale, lt gn, some cream-wh	
	30	Shale, dk brn	
7807			

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
7820	80	Shale, lt gy-gn - A/A	
	20	Shale, brn - A/A	
	Tr	Dol., lt brn - A/A	
7850	80	Shale, lt gy-gn - A/A	
	20	Shale, med to brn - A/A, occ dk brn streaks and spots (carbonaceous?)	
	Tr	Lignite	
	Tr	Do. - A/A	
	Tr	Sandstone, v. fn grnd w/gy-gn mtrx (glauc.)	
7880	65	Shale, lt gy-gn - A/A	
	30	Shale, brn - A/A	
	5	Dolomite - A/A	
	Tr	Lignite	
	Tr	Siltstone, lt gy, sft to hd, fri	
7910	75	Shale, lt gy-gn - A/A	
	15-20	Shale, brn - A/A	
	5	Dol. - A/A	
	Tr	Siltstone - A/A	
7940	40	Shale, med-dk brn, commonly v. fnly laminated and occ. silty	
	60	Shale, grn - A/A	
	Tr	Dol. - A/A	
	Abnd	Limestone - creame mic.	
	Tr	Siltstone - A/A	
	Tr	V. sft clay, lt gry	(tuff??)

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore): 15/12-1

COUNTRY: Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
7970	50	Shale, med dk brn - A/A laminated	
	50	Shale, lt green - A/A	
	Abnd	Limestone	
	Tr	V. soft clay (?). Lt gy dissolves in H_2O	
8000	50	Shale, lt gn - A/A	
	40	Shale, rd-rust brn to med dk brn, v. sft to sft glauc, fri.	
	10	Shale, med dk brn, fiss - A/A	
	Tr	Glauc.	
8010	80	Shale, rust brn - A/A	
	20	Shale, lt gy to gn - A/A	
	Tr	Qtz and tuff - A/A??	
8020	75	Shale, rd-rust brn - A/A	
	25	Shale, lt gy-gn - A/A	
	Tr	Qtz grns and glauc.	
8030	75	Shale, rd-rust brn - A/A, more fiss	
	25	Shale, lt gy-gn - A/A	
	Tr	Tuff?? - A/A	
	Tr	Pyrite	
8060	50	Shale - rd-rust brn - A/A	
	50	Shale - lt gy-gn - A/A	
	Tr	Tuff.	
	Tr	Pyrite	
	Tr	Siltstone, lt gy tan, poorly consolidated	
	Tr	Sandstone v.f.grns well consolidated, v. clean, well sorted	Sand comm. fluoresence

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8070		A/A w/some sand up med grnd	Sand fluoresence
			No cut
8080	50	Shale, rd-rust brn - A/A	
	50	Shale, gn-gy to lt gy - A/A, some dk gn to wh to	
		pink pyritic w/spotted dk min.	
v.	Abnd	Pyrite	
	Tr	Qtz grns	Sltly flur. No cut
8090	50	Shale, rd-rust brn - A/A	
	50	Shale, gn-gy to lt gy - A/A	
	Tr	Pyrite	
	Tr	Qtz grns	
8100	50	Shale, rd-rdbrn - A/A	Tr. flur. No cut
	50	Shale, gn-gy to lt gy - A/A	
	Tr	Pyrite	
	Tr	Limestone, wh detr. micr., med hd dolic.	
8110	60	Shale, gn-gy to lt gy - A/A	Tr. flur.
	40	Shale, rd-rd brn - A/A	
	Tr	Pyrite	
	Tr	Limestone - A/A	
8120	60	Shale, gn-gy - A/A	Tr flur
	40	Shale, rd - A/A	
	Tr	Limestone - cream	
	Tr	Sandstone, f. grnd, qtzitic, subang, well sorted,	
		glauc.	
	Tr	Silt, lt. brown	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 24 - 31, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8150	60	Shale, gn-gy - A/A	
	40	Shale, rd - A/A	
	Tr	Limestone - A/A, dolic.	
	Tr	Sandstone - A/A	
	Tr	Pyrite	Tr. flur
8140	90	Shale, gn-gy - A/A, pyritic	
	10	Shale, rd - A/A	
	Tr	Limestone - A/A more abundant	
	Tr	Pyrite, tuff - A/A?	
	Tr	Sandstone - A/A, pyritic	Tr. flur
	Tr	Siltstone, gy to gn-gy, sft, fri.	
8150	90	Shale, lt gy-gn, turning greyer and getting more silty	
	10	Shale, rd - A/A	
	Tr	Limestone - A/A, Pyrite, qtz grns	Tr. flur
	Tr	Sandstone - A/A	
8160	40	Shale, gn-gn/gy - A/A, Pyritic	
	10	Shale, rd - A/A	
	50	Shale, gy to med brn, sft to med hd, sltly fiss. mic. pyritic	
	Tr	Limestone - A/A, dol. lt brn, hd, detr., micr., sltly calc.	
	Abnd	Pyrite	
8170	50	Shale, gn - A/A	
	10	Shale, rd - A/A	
	40	Shale, gn to med brn - A/A	Tr. flur
	Tr	Limestone - A/A	
	Tr	Pyrite	
	Tr	Siltstone, gy to gn/gy, sft, fri., lithic.	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE: 12 1/4" GEOL.: RLK/KJS

COMPANY: Statoil/Esso

DATE: July 24 - 31, 1975

WELL (Onshore/Offshore) 15/12-1

COUNTRY Norway

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8180	30	Shale, gn - A/A	
	10	Shale, rd - A/A	
	60	Shale, gy to med brn - A/A	
	Tr	Limestone, - A/A - more abundant	
	Tr	Pyrite	
	Tr	Siltstone - A/A	
8190	95	Shale, gn to gy to med brn - A/A	Tr flur
	5	Shale, rd - A/A	
	Abnd	Siltstone - A/A	
	Tr	Pyrite and lignite	
8200		A/A	
8210	90	Shale med gy	
	5	Shale, red - A/A	
	Tr	Pyrite	
8220		A/A	
8230		A/A	
8240	80	Shale, med gy, mod sft, poorly, fiss.	
	20	Clay med gy, v. gummy	
8250	80	Shale, med gy - A/A	
	10	Shale, rd - A/A	
	10	Clayey shale, med gy - A/A	
	Tr	Sand, poorly consol, qtzitic, f. grnd	
	Tr	Glauc.	
8260		A/A w/tr. of calcite	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE | GEOL: John Parmenter | COMPANY: Statoil/Esso | DATE: July 31 - Aug. 7, 1975 | WELL (Onshore/Offshore): 15/12,1 | COUNTRY: Norway

DEPTH FEET	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8270	80	Shale, med gry - A/A	
	10	Shale, red - A/A	
	10	Clayey shale, med gry A/A	
	Tr	Sand, poorly consol. qtzite fine grnd	
	Tr	Glauc.	
8300	40	Shale, red	
	50	Shale, green-gry	
	10	Shale, buff	
	Tr	Sand, consol. good, qtzitic, med gr. sd.	
	Tr	Pyrite	
	Tr	(Limestone) Carbonate	
8310	50	Shale, red	
	40	Shale, green-gry	
	10	Shale, buff	
	Tr	Pyrite	
	Tr	(Limestone) Carbonate	
	Tr	Sand, poor consol, med gr. sd.	
8320	30	Shale, red	
	60	Shale, green-gry	
	10	Shale, buff	
	Tr	Pyrite	
	Tr	Carbonate	
	Tr	Sandstone, consol good, fine gr. sd.	
8330	40	Shale, red	
	50	shale, green-gry	
	10	Shale, buff	
	Tr	Sand (caved) consol good, med gr. sd.	
	Tr	Tuff (caved)	
	Tr	Carbonate	
8340	70	Shale, green-gry	
	30	Shale, red	
	Tr	Tuff	
	Tr	Sand, good consol, med gr. sd.	

WELLSITE SAMPLE DESCRIPTION

COMPANY: Statoil/Esso
WELL (Onshore/Offshore): 15/12-1
DATE: July 31 - Aug. 7, 1975
COUNTRY: Norway
HOLE SIZE:
GEOL: John Farmenter

DEPTH FEET	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8340	Tr	Pyrite	
	Tr	Limestone	
8350	90	Shale, green-gry	
	10	Shale, red	
	Tr	Sand, good consol, med gr. sd.	
	Tr	Limestone	
	Tr	Tuff	
8360	10	Shale, red	
	10	Shale, buff	
	80	Shale, green-gry	
	Tr	Limestone	
	Tr	Pyrite	
	Tr	Sandstone	
8370	90	Shale, green-gry	
	10	Shale, red	
	Tr	Limestone	
	Tr	Sandstone, poor consol, med gr. sd.	
	Tr	Shale, light gry	
8380	80	Shale, green-gry	
	10	Shale, light gry	
	10	Shale, buff	
	Tr	Tuff	
8390	80	Shale, green-gry light-dark	
	10	Shale, light green	
	10	Shale,red brown slightly calcareous	
8400		A/A	
8410		A/A	
8420	80	Shale, gry light-dark	
	10	Shale, green-gry	
	10	Shale, red brown	

WELLSITE SAMPLE DESCRIPTION

COMPANY: Statoil/Esso
WELL (Onshore/Offshore): 15/12-1
DATE: July 31 - Aug. 7, 1975
COUNTRY: Norway
HOLE SIZE
GEOL: John Parmenter

DEPTH FUM	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8430	80	Shale gry light to dark	
	10	Shale, brick red	
	10	Shale, green gry	
	Tr	Sand well cemented buff	
	Tr	Calcite	
8440			
8450			
8460		A/A White balls of mud	
8470		filtrate are non calcareous	
8480			
8490			
8500	90	Shale, gry light to dark	
	10	Shale, brick red	
	Tr	Sand well cemented tuff	
8510		A/A	
	Tr	Limestone	
8520		A/A	
	Tr	Pyrite	
8530	10	Shale, gry-green	
	90	Shale, gry light to dark	
	Tr	Limestone	
8540	80	Shale, gry light to dark	
	10	Shale green-gry	
	10	Sand well cemented, micaceous, buff matrix	
	Tr	Shale, buff	
8545	60	Shale, gry light to dark	
	10	Shale, green-gry	
	30	Sand well cemented, micaceous,buff	
8550	60	Shale, gry light to dark	
	10	Shale, green-gry	
	30	Sand	

WELLSITE SAMPLE DESCRIPTION

COMPANY: Statoil/Esso

WELL (Onshore Offshore): 15012-1

HOLE SIZE:

GEOL: John Parmenter

DATE: July 31 - Aug. 7, 1975

COUNTRY: Norway

DEPTH FTM	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8550	Tr	Limestone	
8553	70	Shale, green-gry	
	10	Shale, dark gry	
	10	Shale, brick red	
	10	Sand, well cemented, micaceous, buff	
8559	70	Shale, green-gry	
	20	Sand well cemented micaceous	
	10	Limestone	
8559 - 8570		A/A	
		Cores (8570' - 8578')	
8570 - 8573		Sandstone, well cemented, calcareous, micaceous (biotite, muscovite), pyrite anthigenic after carbonaceous material	
8573 - 8578		Shale, dark grey, non calcareous	
		Cores (8578' - 8611')	
8578 - 8608		Shale, dark gry no calcareous	
8608 - 8611		Shale, bark-light gry, silty Calcareous, pyrite in bioturbated zones, strongly bioturbated	

WELLSITE SAMPLE DESCRIPTION

HOLE SIZE	GEOL: John Parmenter	COMPANY: Statoil/Esso	DATE: July 31 - Aug. 7, 1975	WELL (Onshore/Offshore): 15/12-1	COUNTRY: Norway

DEPTH F/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8620	90	Shale, light gry	
	10	Shale, brick red	
	Tr	Marl (Chalk?)	
	Tr	Sandstone, qt., micaceous	
8630	90	Shale, light gry	
	10	Shale, brick red	
	Tr	Marl (Chalk?)	
8638	80	Shale, light gry	
	10	Shale, brick red	
	10	Marl (Chalk?)	
	Tr	Sandstone - A/A	
8640	90	Shale, light gry - dark gry	
	10	Shale, brick red	
	Tr	Marl (Chalk?)	
	Tr	Sandstone - A/A	
8642	100	Shale, light - dark gry	
	Tr	Shale, brick red	
	Tr	Sandstone - A/A	
	Tr	Sand grains, qt. single subangular (500-1000 m)	
	Tr	Marl (Chalk?)	
8645	90	Shale, light-dark gry	
	10	Sand, single qt. grains (500-1000 m)	
	Tr	Marl - A/A	
8647	70	Sand - A/A	
	20	Shale, light - dark gry	
	10	Marl - A/A	
8650	80	Sand - A/A	
	10	Shale, light - dark gry	
	10	Marl - A/A	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
July 31 - Aug. 7, 1975	Norway

HOLE SIZE: GEOL.: John Parmenter

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8655	80	Shale, light-dark gry	
	10	Sandstone, well cemented, calc. (Cavings)	
	10	Sand - A/A	
8660	70	Shale - A/A	
	10	Sandstone - A/A	
	10	Sand - A/A	
	10	Chalk	
8665		A/A	
8670	50	Shale - A/A	
	40	Chalk	
	10	Sand - A/A	
8675	70	Shale - A/A	
	20	Chalk	
	10	Sand - A/A	
8680	80	Shale - A/A	
	10	Chalk	
	10	Sand - A/A	
8685		A/A + Tr Pyrite	
8690		A/A	
8695		A/A	
8700		90% chalk, 10% shale dark gry	
8710		"	
8720		"	
8730		"	
8740		90% chalk, soft, 10% shale dark - light gry	
8756		"	
8760	90	Chalk, milk white, med hard	
	10	Shale, light gry	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
Aug. 6, 1975	Norway

HOLE SIZE GEOL.: J.P./K.L.

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8770	90	Chalk, milk white med. hd, microscystaline	No shows
	10	Shale, light - dk grey	
8780	90	Chalk - A/A	
	10	Shale - A/A	
	Tr	Sandstone, light grey, medium grain size, qtz.	
8790	90	Chalk, milk white, soft	
	10	Shale, light-grey	
	Tr	Chert	
8800	90	Chalk - A/A	
	10	Shale - A/A	
	Tr	Shale, dk grey, alt. w chalk.	
8810	100	Chalk - A/A	
	Tr	Shale - A/A	
8820		A/A	
8830		A/A (visible grains in chalk)	
8840		A/A	
8850	90	Chalk, milk white with some yellow stain, med. hd	
	10	Shale, light grey	
8880		A/A	
8890	80	Chalk, wh, med. hd, micro xln - cryptoxln	
	20	Shale, gy-gn-brn, hd - sft. Tr. chert. NOSFC.	NOSFC
8900		Chalk and shale, - A/A. Incr. amt chert, milky wh ang. Tr./med. grnd sd. Tr./py.	
8910		A/A + appr. 5% chert. Tr./glauc.	
8920		A/A	
8930		Chert, shale and chert A/A. Tr./dolomite, cave?	
8940		Chalk and chert - A/A. Shale, gy, hd, (caving). Tr./Ls, lt-tan. Tr./f grn sd.	
8950		A/A + Tr./dolomite.	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE: August 8, 1975	COUNTRY Norway

HOLE SIZE 12 1/4" GEOL.: KL/BR/DJB

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
8960	90	Chalk - A/A	
	10	Shale, m. hd, 90% light gy, 10% gn and brn, caving	
	Tr	Chert - A/A, pyrite, med. sd, lignite? dolomite	
8970	85	Chalk - A/A	
	15	Shale - A/A	
	Tr	Chert, pyrite, med. sd, gl, tan dolomite	
8980	85	Chalk - A/A	
	15	Shale - A/A	
	Tr	Chert, pyrite, med sd, piece of siltstone with brn cl mtx	
8990	85	Chalk - A/A	
	15	Shale, med. hd, 80% light gy, 20% blue gn and brn caving, silty	
	Tr	Chert, gl, med. sd, pyrite, lignite?	
9000	85	Chalk - A/A + Ls, hd, cream	
	15	Shale - A/A	
	Tr	Chert, med. qtz sd, gl	
9010	90	Chalk - A/A	Ave 6.6'/hr/- entire
	10	Shale - A/A	run at 5'/hr now
9020	90	Chalk - A/A	
	10	Shale - A/A	
9030	90	Chalk - A/A	
	10	Shale, gy, gn, brn, frim	
	Tr	Chert	
9040	95	Chalk - A/A	
	5	Shale - A/A	
	Tr	Chert and py.	
9050	90	A/A	
9060	100	A/A	
9070	100	A/A	
9080	100	A/A	Trof. pink Ch
9090	100	A/A	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
Aug. 9, 1975	Norway

HOLE SIZE 12 1/4" GEOL.: KL/BR/DJB

DEPTH F/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
9100	100	Chalk - A/A	
	Tr	Chert - A/A, shale - A/A, slightly silty, py, cemented qtz Ss, m qtz sd	
9110	100	Chalk - A/A	
	Tr	Shale - A/A, py, piece/Ss - A/A, sd - A/A	Fossil
9120		A/A	Fossil
9130		A/A - oölite	Fossil
9140	90	Cjalk - A/A	
	10	Shale - A/A	
	Tr	Py, gl, Ss and Sd - A/A	Fossil
9150	90	Chalk - A/A	
	10	Shale - A/A	
	Tr	Py	
9160	100	Chalk - A/A	
	Tr	Shale - A/A, py, gl, Sd - A/A	
9170	100	-A/A	
	Tr	Shale - A/A, py, Sd - A/A	
9180		A/A + Tr./gl	Fossil
9190	80	Chalk - A/A	NOSFC
	20	Shale, gy,hd v. silty and Shale gy-gn hd. No chert	Ave. 6'/hr
9200-15	80	Chalk - A/A. Tr/glauc and fossil	
	20	Shale - A/A	
		TNB at 9215'.	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE:	COUNTRY
Aug. 10, 1975	Norway

HOLE SIZE: 12 1/4" GEOL.: KL/BR/DJB

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
9215-20		Chalk - A/A. Incr. amt of shale due to reent. the hole? Tr./dol. Ls, tan, hd.	
9230		Chalk and (shale - A/A, Tr./chert, glauc, py) (cavings)	
9240		Chalk - A/A. Shale gn gy splint. Shale, gy silty. Abund. amt/py. Tr/chert and glauc.	
9250		A/A	
9260		Chalk and shale - A/A. Ab. amt/pyrite v.f. xln and m. xln, py comes from chalk. Tr. sparry calc. cmt.	Tr./gas reading
9270		A/A	
9280	60	Chalk - wh, med. hd, microcrystalline	
	40	Shale - 60% greenish gry, 40% gry to brn, sltly v. silty, med. hd.	
	Tr	Py, gl, chert	
9290		A/A	Tr of gypsum, fossil
9300	60	Chalk - A/A	
	40	Shale - A/A	
	Tr	Py, gl, light red Ls	Fossil, oölite
9310	60	Chalk - A/A	
	40	Shale - A/A	
	Tr	Py, gl	
9320	60	Chalk, wh - buff, sft - med. hd, micr-xln	
	40	Shale, gn - greenish gy - gy - brn sltly v. silty, sft - med. hd	
	Tr	Py	
9330		A/A + tr/dol., tan, hd.	
9340		/A	
9350	80	Chalk - A/A	
	20	Shale - A/A	
	Tr	Py, gl, dol - A/A, Ls	
9350	100	Med. dk gy to blk, silty shale, med. hd, fissile	Prob top Low. Cret.
	Tr	Lignite	

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE: Aug. 11, 1975	COUNTRY Norway

HOLE SIZE 12 1/4" GEOL.: DJB/KL/BR

DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
9360	100	Shale - med. dk gry to blk, silty, med hd, fissile	
	Tr	Carbonaceous matter, dol, Ls, tan to buff, hd	
9370	50	Shale, med dk gy, silty, med. hd	
	50	Chalk - A/A	
	Tr	Light gy marl, calc, siltstone, brn, gypsom, py, lignite, dol and Ls - A/A	
9380	50	Shale, gy - gn, hd. Shale, red - brn (only tr.)	"Gypsom" above is
	50	Chalk - A/A. Tr./py and sparry cacite cmt.	prob. clr calcite xls
		No gypsum. Prob. no gypsum above either.	
9390		Shale and chalk - A/A. Tr/sd and oölites.	
9400	70	Chalk - A/A	
	30	Shale - A/A + Siltstone, gy brn, sft. Tr/py & Sd	
9410	50	Chalk A/A. Tr/dol, Ls	Av. dril 8'/hr
	50	Shale - A/A and incr. amt. of siltstone	
9430	70	Chalk - A/A	
	30	Shale - A/A	

WELLSITE SAMPLE DESCRIPTION

COMPANY: Statoil/Esso
WELL (Onshore/Offshore): 15/12-1
DATE: August 17, 1975
COUNTRY: Norway
HOLE SIZE: 8½"
GEOL.: JDH/EL/ADJ

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
9430-40	100	Cmt w/tr chalk, grn sh &(?) chert	10.1 lbs mud
50	100	90% cmt - chalk, tr/lt grn sh, tr/pyrite	N/S
60	90	Cahlk w/10% lt grn sh & tr/pyrite	Tr of flor & cut
70	100	Chalk tr/grn sh, tr/sd grns ang, 40% smpl dull gold flor, slt yel. cut	No gas units
80	100	Chalk a/a - 10% smpl same cut & flor a/a	No gas units
90	100	Chalk a/a -(?)contaminated w/drops oil (working on pumps)	No gas units
9500	100	Chalk a/a - tr/lt gry sh , sltly contaminated w/oil	No gas units
10	100	a/a	
20	100	a/a + 25% pink micritic Ls	No gas untis 10 M.W.
30	100	a/a + 25% pink micritic Ls	
40	100	a/a + 50% pink micritc Ls, tr/sd	No gas untis
50	100	a/a + 50% pink micritic Ls tr/lt gry sh	No gas units
60	100	Chalk, wh, tr/sh lt grn, lt gry	No gas untis 10.4 M.W
70	100	Chalk a/a - tr/sh a/a - tr/sh rd	No gas units
80	100	Chalk a/a - tr/sh lt grn lt gry, tr/sh rd-brn, tr/pyr, tr/ch	No gas units
90	100	Chalk wh tr/grns, tr/chert, tr/glauc. grns in chalk	10.1 lbs mud
9600	100	Chalk wh tr/grns (skel?) tr/glauc. + mica., tr/gry sh, tr/bun ss, tr/bk coal	
10	95	Chalk wh. micritic w/tr glauc, 5% rd + grn sh, silty traces loose rnd med. grnd sd grns	
20	100	chalk, wh, tr/grn ls, tr/pyrite + mica	No gas
30	100	a/a	No gas
40	100	a/a	No gas
50	100	a/a	No gas
60	100	a/a	No gas
70	100	a/a	No gas
80	100	Chalk, wh, 5% grn Ls, rd & grn silty sh, tr/coal	No gas
90	100	Chalk, wh, tr/grns Ls, tr/rd & grn sh, tr/coal, tr/pyr	No gas
9700	90	Chalk, wh, 10% Ls, gr tr/sh a/a, tr/pyr, tr/glauc.	No gas

WELLSITE SAMPLE DESCRIPTION

COMPANY:	WELL (Onshore/Offshore)
Statoil/Esso	15/12-1
DATE: August 17, 1975	COUNTRY Norway

HOLE SIZE 8½" GEOL.: JDH/EL/ADJ

DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
		tr/dol.	
10	90	Ls high grn, v. glauc., micaceous, very sft, floating qtz grns, tr/pyrite, "sucroisic in appearance"	
	10	Chalk	
20	80	Ls - a/a, 10% grn micaceous, marl + 10% wh chalk	.2 to 5.6 gas units
30	100	Ls high grn, glauc., micaceous, sucroisic soft	No gas units
40	90	Ls - a/a, lt tn to gry + 10% wh chalk, hvy tr/pyrite	No gas units
50	90	Ls - a/a, 10% chalk, dec. in pyrite	No gas units
60	100	Ls - a/a, tr/pyrite	No gas units

WELLSITE SAMPLE DESCRIPTION

Hole size 8½" | Core [illegible]/ADI/[illegible] | Contractor Statoil/Esso | Date 26 August, 1979 | Well No. 15/12-1 | Country Norway

DEPTH FEET	FREQ %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
9770	100	Lst high grain, glauconitic, microcrystalline, sucrosic, soft, tr chalk, tr pyr	
80	100	Lt gry to gry silty lst - A/A. Tr pyr tr chert, milky wh	
90	60	30% wh chalk, 30% wh to gry grain lst, 40% grn to rd calc, shy pyrite & glauconitic, tr sd	
9800	60	A/A	
10	80	Chalk, wh	
	20	Sh, red + grn, calc, pyrite	
9820	70	Chalk, wh	No gas
	20	Sh, grn + tr red, calc	No gas
	10	Sh, blk, fine pyr abund, splintery carb	No gas
9830	70	70% sh, 40% rd marl, soft calc, 20% grn soft calc 10% blk, slightly calc, splintery, tr glauconitic pyr, 30% wh chalk	
40	60	Marl, pink to red-brn	
	30	Chalk	
	10	Sh, blk - A/A. Poss coal?	HM 10.2
50	50	Chalk	
	45	Marl - A/A	
	5	Sh - A/A, tr pyr	
9850-60	100	Sh, brn soft high organic matl top of Jurassic	Gas
		tested gas trap O.K.	N:1
70	100	Sh, dk brn soft, non calc, pyr organic matl	
80	100	Sh - A/A	
90	100	A/A	
9900	100	A/A	
10	100	A/A bec more coaly	
20	100	Sh, gry-dk brn - non calc to sli calc orgnic matl	
30	85	Sh, dk gry, slty sli calc, organic matl	
	10	Chalk wh	
	5	Marl pint to red-brn	
40	90	Sh - A/A. Tr marl	
	10	Chalk	

WELL CUTTINGS DESCRIPTION

COMPANY: Statoil/Esso

WELL: 15/12-1

DATE: 21 August, 1975

COUNTY: Norway

DEPTH (FEET)	%	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
9950	70	Sh, slty dk gry, sli calc, org matl	MW 11.4
	10	Sh, lt gry, calc, splintery	
	10	Chalk, wh, tr pyr	
	10	Marl, r f brn. Tr carb matl	
60	60	Sh, dk gry - A/A	
	10	Sh, gra - A/A	
	10	Marl - A/A	
	10	Chalk	
	10	Lst, lt gry-gry, grained soft glauc, tr pyr	
70		A/A. Tr silt, med gry	
80	70	Sh, dk gry - A/A. Tr sh, lt grn	
	20	Chalk	
	10	Marl - A/A	
90	90	Sh, dk gry - A/A	
	5	Marl - A/A	
	5	Chalk - A/A	
		Tr carb matl	
10000	80	Sh, dk gry - A/A. Tr pyr	
	10	Sh, lt grn, soft	
	5	Chalk - A/A	
	5	Marl - A/A	
	tr	Lst, lt grn soft	
	tr	Quartz clr, in subang to subrd gt f-med grn	
	tr	Carb matl	
10	tr	A/A	
22/8/75 20	tr	A/A. Sli incr in carb matl	
30	tr	A/A	
40	90	Sh, slty dk gry-med dk gry, non calc to sli calc firm	
	5	Sh, lt grn, non calc soft	
	5	Chalk wh	
	tr	Carb matl	
	tr	Pyr tr quartz's grn, cl subrd f-med grn	

WELLSITE SAMPLE DESCRIPTION

COMPANY: Statoil/Esso
DATE: 22 August, 1975
WELL (Onshore/Offshore): 15/12-1
COUNTRY: Norway

Depth F.M	Lith %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
10050	95	Sh, slty non calc to sli calc, dk gry to med dk gry firm	
	5	Chalk wh	
	tr	Sh, lt grn, tr pyr	
	tr	Carb matl	
	tr	Qtz grn, clr subang to subrd, f-grn	
60	tr	A/A	Coring from 10063' to 10083'
63	100	Sh, sli slty, sli carb dk gry, hd/firm	
70		A/A	
75		A/A	
80		A/A	
83		A/A	
3/8/75 90	90	Sh, slty, sli calc, dk gry firm	
	5	Chalk wh	
	5	Carb matl	
		Tr marl, tr pyr	
10100	5	A/A	
10		A/A + tr sd, qtz clr, subang to subrd, f-grn	
20		A/A. Sli incr in carb matl	
30		A/A	
40		A/A	
10150	90	Sh - A/A	
	10	Siltstone calcaueous carbonaceous, dull gold flour	no cut.
	tr	Chalk	
	tr	Lignite	
10155	90	A/A	
	10	Very fine grain SS - A/A	
	tr	A/A	
10160		A/A	
10170		A/A	
10180		A/A + 5% pyr	

WELLSITE SAMPLE DESCRIPTION

[illegible]	Statoil A/S	[illegible]	
[illegible]	DATE 24 August 1975	COUNTY	

DEPTH FROM	%	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
10190	90	Sh, slty sli calc, clk gry-med gry firm	
	10	Siltst, lt gry	
	tr	Carb matl	
	tr	Pyr	
	tr	Chalk	
	tr	Sd, clr, subrd, f-grn	
10200	80	Sh - A/A	
	10	Siltst - A/A	
	10	Pyr	
		Sli incr sd cont.	
10210	40	Sh - A/A	
	20	Siltst - A/A	
	20	Sd - A/A	
	15	Pyr	
	5	Carb matl	
10220	50	Siltst, N.calc, lt gry	
	40	Sh - A/A	
	5	Carb matl	
	5	Pyr	
	tr	Sd - A/A, tr chalk	
10230	60	Sh - A/A	
	30	Siltst - A/A	
	5	Carb matl	
	5	Pyr	
	tr	Sd - A/A, tr chalk	
10240	90	Sd, lt gry - lt brnish, med hd, vf - f grn, well srtd, subrnd, poor por	Med bright gold yel fluo. Imm med pale yel cut some pieces w/ streaming pale yel cut.
	10	Sh - A/A	
	tr	Carb.matl, tr pyr	

WELLSITE SAMPLE DESCRIPTION			Company Esso/Statoil	Well [illegible] 15/[illegible]
[illegible]		[illegible] DDI, DB, FI	Date 8/23/[illegible]	[illegible]

Depth Feet	Time Min	LITHOLOGIC DESCRIPTION	Shows & Remarks
10450	60	Lt bwn shale to lt grey soft, silty	
	10%	Sd, white to lt grey, vfgr	dull gold fluor, red cut bri yel
	40%	Coal - (much coal cave)	
10460	70%	Sh as above	
	10%	Sd v v	dull gold fluor, as above
	30%	Coal (Probably much cave)	
10470	75	Sh, dk carb. hd splintery, Slhgy hd	gold flour, fast
	5	Sd aa	streaming yl cut
	10	Siltstone, lt gy hd. siltstone dk gy	
	10	Coal	
10480	55	Sh a.a.	Flour aa intrace
	15	Siltstone lt bwn shly, siltstone lt grey hd	of s.s.
	5	Sd a.a., loose sd grains	
	25	Coal	
10490	50	Coal	
	30	Siltstone, Gy - gybn hd	
	15	Slt, silty gy hd	
	5	Sd, lt gy, fgrn	Sd w/yl flour
10500	55	Coal	C.O. Drlg
	20	Stt dk bn very hd	break - coal
	20	Silt, bn hd	Sd w/yl flour
	5	Sd, lt gy, fgrn srtd	
10510	80	Coal, Shaly	
	15	Silty stt dk gy splintery hd	
	2-5	Sd, lt gy, fgrn g srtd	Sd w/yl fluor
10520	80	Coal - grading to drk sh	
	10	Siltstone gy and bn hd	
	5	Sd aa	Sd w/yl fluor
	5	Sd in wh day material	
	tr	Sd, coars grains of qtz.	
10530	80	Sand, white, good d & k, poorly cons	no show
	20	Shale - gry b&n	
		Coal	

WELLSITE SAMPLE DESCRIPTION EL,ABI, DJB	Statoil/Esso	15/12-1
	DATE 29/Aug/1975	Jorge

DEPTH M.R.	SAMPLE %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
10510-50	100	Sandstone - qtz, white, poorly cons	no show
		Sl calc., vfg to fine grn	excessive
	tr	Coal - cavings	torque at 10574
10550-60	100	Sandstone - as above	
10560-90	100	Sandstone - as above	
10590-10600	100	Sandstone - as above	Drlg increases at 10620 from 12-20'/hr.
10610-10620	100%	S.S. 1 loose qtz grains rounded to sub angular white to clear, fgr fair sorting 2 white rfgr. silic at cemented low Ø & K, lt grey s.g.fgr clay cement sub angular grains soft tr of pink K-fieldspar, tr grey sh, hard, tr pyrite tr soft grn sh.	no show 12.0lb mud
10630	100%	S.S.A.A. with strong TR of A pyritic S.S. angular fine grained also Lt. Reddish tan S.S. fine grained, angular, w&r carbonaceous material tr of mica	
10640	100%	Sand and sandstone, sand 1, friable m-grn.,g.srtd., rnd to sub ang. sand 2, friable coarse grn. tr. of K-feldspar red. tr mica	
50	100%	Sd & S.S. A.A. strong tr K feld(pink) tr lt green sh, mica	
60	100%	A.A.	

WELLSITE SAMPLE DESCRIPTION	Company: Statoil/Esso	Well (Block/Offshore): 15/12-1
Geologist: CDL,DJB,RL	Date: August 29, 1975	Location: Offshore [illegible]

DEPTH (FT)	TIME %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
10670	100	Sd, friable clear, strg tr K-feld, tr of glauconite md gr sub angular to sub rounded S.S. lt. grey, angular grains fine to md grains tr pyrite tr grey shale firm noncalcareous	No show MW 12.1
80	100%	Sd, friable, md grain, angular to coarse grain angular tr rd bwn shale, firm, tr lt grey sh, micoceons S.S. white, cilica cement, fair Ø, tr glauconite	
90	100%	Sd A.A. tr S.S. A.A. tr dk bwn silty sh, tr lt green sh	
10700	100%	Sd A.A. tr dk bwn silty sh + rd sh	
10	90%	Sd A.A.	
	10%	Sh dk grey wnd & rd (soft)	
10726	90%	Sd A.A.	
	10%	Sh. lt grey, white, rd floating qtz grains v.soft	

VIII LITHOLOGIC DESCRIPTION

2. Core Description (conventional)

STATOIL/ESSO 15/12-1

I INTRODUCTION

a) Well Designation: Statoil/Esso 15/12-1

b) Well Classification: New Field Wildcat

c) Well Location:

1. Country: Norway, Offshore
2. License: 038
3. Coordinates: Latitude 58° 10' 32.6" N
   Longitude 01° 44' 23.1" E
4. Seismic Location: Shotpoint 100, Line 511 138
   1975 Survey
5. Water Depth: 95 m

II PURPOSE OF WELL

Well 15/12-1 was drilled in order to evaluate the Paleocene and Jurassic formations on a closed structure 5 km northeast of the Maureen Field which is located just across the UK-Norwegian median line in U.K. territory.

III RESULTS OF WELL

The well was drilled to a total depth of 3269 m (KB) and bottomed in finegrained sandstone with green and red-brown shale of Triassic age.

The Paleocene sand interval was cored from 2635.6 m to 2642.3 m with no shows. The Dogger sand interval was cored from 3125.7 m to 3154.7 m with oil shows and recovered water by FIT's.

IV WELL HISTORY

A) General:

1. Spud Date: 7 July 1975
2. Completion Date: 6 September 1975

3. Status: Plugged and abandoned
4. Total Depth: 3269 m
5. KB: 24.4 m

B) Contractors

Rig: Ross Rig
Drilling: Ross Drilling Company A/S
Cementing and DST: Dowell-Schlumberger
Well Testing: Otis
Electric Logging: Schlumberger
Mud Logging: Baroid
Mud Service: Maritime
Marine Service: Grieg Offshore: Edda Sun
Karmøy Supply: Karmøy Boy
Location Service: Decca (Hi Fix)
Marconi (Satnav)
Diving: Three-X
Helicopters: Helicopter Service A/S

C) Casing

1. 30" at 154.5 m
2. 20" at 398.9 m
3. 13 3/8" at 1533.1 m
4. 9 5/8" at 2872.1 m

D) Mud Program

Initial drilling from the sea floor to 399 m was with seawater and gel.

A lignosulphonate-seawater mud system has been used from drilling out the 20" casing to T.D. Mud weight was raised in three steps: to 10.3 ppg at 2499 m, to 11.5 ppg at 3018 m, and to 12.0 ppg at 3048 m due to pressure indications from the R.O.P. curve. The F.I.T. indicated a

Type of Log	Interval	Run Nos.
b) DLL	2871 - 3262	1
c) BHC-GR-C	117 (mud line) -1533.3	1
"	1535.5 - 2875	2
"	2871 - 3269	3
d) CNL-FDC-GR	2100 - 2875.5	1
" " "	2871 - 3269	2
e) Dipmeter	2150 - 2875.5	1
"	2871 - 3269	2
f) Temperature	1119 - 1445	1
"	1825 - 2845	2

3. Comments on Log Analysis 15/12-1

A complete study was done over the log interval 3122.2 m to 3152 m. (The main zone indicating hydrocarbon in the cores). Then the hard (tight) streaks of dolomitic, calcitic material is deducted from this sand, it leaves 21.5 m of sand (fine grained) with effective porosity. The SW in the effective porosity sand is calculated to average 80 - 100%. This means a nonproducible sand. At 3125.5 m a SW = 31% is calculated, but the FIT proved this streak to be impermeable. The calculated porosity agrees well with the core porosities and ranges from 20 - 26%. The sand plots to be well cemented and contain a small amount of shale (0-25%).

The logs also indicate shows of hydrocarbon in the upper Cretaceous limestone at 2925 - 2955 m. The porosity only calculates from 0 - 6% so the formation is too tight to obtain a sample. SW was calculated from 60 - 100%.

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 1	INTERVAL; from: 2612.1 m to: 2614.5 m	CORED: 2.4 m	REC.: 2.4 — 100 %
FORM.: PALEOCENE (DANIAN)	GEOLOGIST: S.G. LARSEN, K. LIEN	DATE: 15.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
2612.1														Shale, lt.gy, firm, noncalc.	
														Marl, gy.	
														Sst., lt.gy-gy.,well-cemented, calc.cement, vf-f grnd, ang, good/fair sorting. Dk. lamina in upper part (carb. matl.?), massive in lower parts.	Clauc. Mica. Pyr.
13															NO SHOWS
														Shale, dk. gy-gy-grn, hd, non-calc.	
14															
2614.5															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 2	INTERVAL; from: 2614.5 m to: 2624.6m	CORED: 10.1m	REC.: 10.1m 100 %
FORM.: PALEOCENE (DANIAN)	GEOLOGIST: S.G. LARSEN, K. LIEN	DATE: 15.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
2614.5														Shale, grey-dark grey, hard, non-calcareous slickensides. Dark grey to black angular fragments (brecciated?)	NO SHOWS
2615															
16															
17															
18															
19															
20															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 3	INTERVAL; from: 2635.6m to: 2651.1m	CORED: 15.5m	REC.: 15.5 m 100 %
FORM.: PALEOCENE (DANIAN)	GEOLOGIST: S.G. LARSEN, K. LIEN	DATE: 15.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S F G	CUT P F G	FLUOR. P F G	Ø P F G	LITHOLOGIC DESCRIPTION	MISC.
2635							
2635.6						Sandstone, light grey, fine to medium grained, mostly fine quartz sst., moderately sorted, subrounded, non calc., firm to friable, glauconite quartz overgrowth.	garnet (rare) pyrite
36							
37							NO SHOWS
38						Sandstone a/a, w/red coating on grains concentrated in thin zones (rusty)	
39						Dark lamina shows cross-bedding (weak)	
40							
2640.5							

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 2	INTERVAL; from: 2614.5 m to: 2624.6 m	CORED: 10.1m	REC.: 10.1m 100 %
FORM.: PALEOCENE (DANIAN)	GEOLOGIST: S.G. LARSEN, K. LIEN	DATE: 15.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	F	G	CUT P	F	G	FLUOR. P	F	G	Ø P	F	G	LITHOLOGIC DESCRIPTION	MISC.
2620															
21															
22															
23														Shale a/a, but calcareous from 2622.2 m.	
24															
2624.6															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

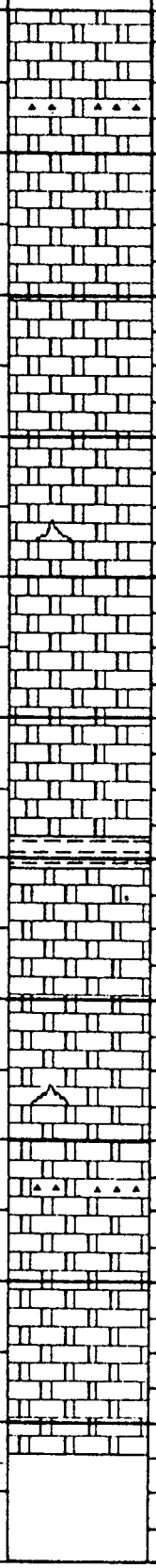
FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 3	INTERVAL; from: 2635.6 m to: 2651.1 m	CORED: 15.5 m	REC.: 15.5 m 100 %
FORM.: PALEOCENE (DANIAN)	GEOLOGIST: S.G. LARSEN, K. LIEN	DATE: 15.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
2640.5															
41															NO SHOWS
42														Sandstone a/a, but very calcareous from 2641.7 m, very angular.	
43														20° dip at contact with chalk, actual contact missing. Chalk, white-buff, hard, dense, no visible mega-fossils Abundant stylolites w/ clay infill. Chert in places, Pyrite	NO SHOWS
44															
45															
2646															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 3	INTERVAL; from: 2635.6 m to: 2651.1 m	CORED: 15.5 m	REC.: 15.5 m 100 %
FORM.: PALEOCENE (DANIAN)	GEOLOGIST: S.G. LARSEN, K. LIEN	DATE: 15.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	F	G	CUT P	F	G	FLUOR. P	F	G	Ø P	F	G	LITHOLOGIC DESCRIPTION	MISC.
2646														Chalk, a/a	NO SHOWS
47															
48															
49														0.15 m dark grey shale	
50															
2651															
2651.1															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 4	INTERVAL; from: 3067.2 m to: 3073.3 m	CORED: 6.1 m	REC.: 6.1 m 100 %
FORM.: MALM	GEOLOGIST: S.G. LARSEN, K. LIEN	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3067															
3067.2														Shale, dark grey, hard/firm, slightly silty, slightly carbonaceous, non calcareous.	
68															
69															
70															
71															
72															
3072.5															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 4	INTERVAL ; from: 3067.2 m to: 3073.3m	CORED: 6.1 m	REC.: 6.1 m 100 %
FORM.:	GEOLOGIST: S. G. LARSEN, K. LIEN	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3072.5														Shale, a/a	
73															
3073.3															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 5	INTERVAL; from: 3125.7 m to: 3143.7m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G.LARSEN, J. PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3125															
3125.7														Sandstone, light grey-clear, very hard, very fine grn., moderately sorted sub-angular, subrounded, calcareous, dolomitic, poor porosity.	TR. PYRITE MINERAL FLUORES NO CUT
26															
27														Sandstone, light grey-light brownish, friable, very fine grn.-fine grn., good sorted, subrnd, good Ø. non-calc. Shale, gy, hd., mica Sandstone a/a, but non-calc. to sli.calc.	DULL GOLD EVEN FLUOR, Pale yellow imm. strm. cut A/A
28															
29															
30															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 5	INTERVAL; from: 3125.7 m to: 3143.7 m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G.LARSEN, J.PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3131														Sandstone, a/a	a/a
32															
33															
34															
35															
36															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 5	INTERVAL; from: 3125.7 m to: 3143.7 m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G.LARSEN, J. PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3136														Sandstone, a/a	a/a
37															
38															
39														Sandstone, laminated, sli.calc., lt.gy, vf grn., and shale, gy,hd, mica.	NO SHOWS
40															
41														Sandstone, as 3126.6-3138.5	SHOWS AS 3126.6-3138.5
3141.3														Sandstone, calc.	

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 5	INTERVAL; from: 3125.7 m to: 3143.7m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G. LARSEN, J. PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3142														Sandstone, lt. gy-clr., calc., mod.hd, vf-fgrn, good srtd, subrnd, fair/poor Ø.	WEAK GOLD FLUOR.
3142.2															SLOW STRM. CUT.
43														Sandstone, lt. gy-lt. brn, friable, vf-fgrn, good srtd, subrnd, good Ø, noncalc.	DULL GOLD EVEN FLUOR. PALE YEL IMM. STRM. CUT
3143.7															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 6	INTERVAL; from: 3143.7 m to: 3154.7m	CORED: 11 m	REC.: 8.2 m 74.5 %
FORM.: DOGGER	GEOLOGIST: S.G.LARSEN, J.PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3143															
3143.7															
44															
														Sandstone, pale buff-gy, vf.-fgrn, qtz, subrnd/ subang, mod.srtd, sli.calc, fair/good Ø.	DULL GOLD FLUOR.
															PALE YEL. STRM. CUT.
45															
46															
47															
48															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY
CORE NO.: 6	INTERVAL; from: 3143.7 m to: 3154.7 m	CORED: 11 m / REC.: 8.2 m / 74.5 %
FORM.: DOGGER	GEOLOGIST: S.G. LARSEN, J.PARMENTER	DATE: 28.8.75

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3149														Lithology A/A	SHOW A/A
50															
51														Coal, black, vitr.	
52														NO RECOVERY	
53															
54															
3154.7															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 7	INTERVAL; from: 3154.7 m to: 3172.7m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G.LARSEN, J.PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
3154															
3154.7														Coal, bitum.	
55															
56															
57														Shale, gy, hd.	
58														Siltstone, dk gy, carb. irreg. lam.	
59														Coal, bitum	

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 7	INTERVAL; from: 3154.7 m to: 3172.7m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G. LARSEN, J.PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S F G	CUT P F G	FLUOR. P F G	Ø P F G	LITHOLOGIC DESCRIPTION	MISC.
3160						Coal	
61						Sandstone, lt. gy, vf-fgrn, tight, hd, good srtd, subrnd, poor/fair Ø	NO SHOWS
62							
						Shale, gy, hd	
63						Coal	
						Shale, gy, hd	
64							
						Sandstone, lt. gy/clr-lt.brn, friable, fgrn, good srtd, subrnd, good Ø.	WEAK GOLD YEL. FLUOR. 1MM.STRM CUT.
65							

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 7	INTERVAL ; from: 3154.7 m to: 3172.7m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G.LARSEN, J.PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S F G	CUT P F G	FLUOR. P F G	Ø P F G	LITHOLOGIC DESCRIPTION	MISC.
3165						Sandstone, a/a	SHOW A/A
66						Coal	
						Shale, gy, hd	
						Coal	
67							
						Shale, gy, hd	
68							
						Sandstone, shaly, poor Ø	NO SHOWS
69						Shale, gy, hd	
						Coal	
						Shale, gy, hd Increasing silt cont.	
70							

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

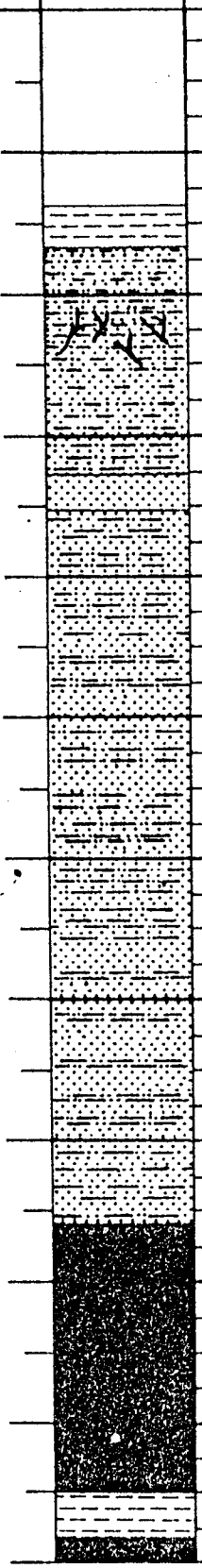
FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 7	INTERVAL; from: 3154.7 m to: 3172.7m	CORED: 18 m	REC.: 18 m 100 %
FORM.: DOGGER	GEOLOGIST: S.G.LARSEN, J.PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	F	G	CUT P	F	G	FLUOR. P	F	G	Ø P	F	G	LITHOLOGIC DESCRIPTION	MISC.
3170,5														Shale, a/a	
71															
72															
73															

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 8	INTERVAL; from: 3172.7 m to 3183.0 m	CORED: 10.3m	REC.: 10.3 m 100 %
FORM.: DOGGER	GEOLOGIST: LARSEN, LIEN, PARMENTER	DATE: 28.8.75	



DEPTH (m)	LITHOLOGY	SHOWS STAIN S F G	CUT P F G	FLUOR. P F G	Ø P F G	LITHOLOGIC DESCRIPTION	MISC.
3172							
						Shale, dk gy, slickensides	
73						Siltstone, lt. gy, well-cemented, w/silica cement, tight. Abundant fractures w/yel-brn dol. Laminated (lamina 1 cm in thickness) Ab.load casts, flame structures.	WEAK FLUOR. FAST BRIGHT CUT.
						Sandstone, fgrn, poor Ø	WEAK FLUOR. FAST YEL CUT.
74						Interbed sst. and siltst. a/a	SHOW A/A
75							
76						Coal	
77						Shale, gy-brn, slty Coal	FAST CUT

statoil
Den norske stats oljeselskap a.s

CONVENTIONAL CORE DESCRIPTION

FIELD:	WELL NO.: 15/12-1	AREA: NORTH SEA, NORWAY	
CORE NO.: 8	INTERVAL; from: 3172.7m to: 3183.0 m	CORED: 10.3 m	REC.: 10.3 m 100 %
FORM.: DOGGER	GEOLOGIST: LARSEN, LIEN, PARMENTER	DATE: 28.8.75	

DEPTH (m)	LITHOLOGY	SHOWS STAIN S	STAIN F	STAIN G	CUT P	CUT F	CUT G	FLUOR. P	FLUOR. F	FLUOR. G	Ø P	Ø F	Ø G	LITHOLOGIC DESCRIPTION	MISC.
														Coal	
3178															
														Shale, gy-brn, silty	FAST CUT
														Coal	
79															
80															
														Shale, a/a	a/a
														Coal	
81														Shale, a/a	a/a
														Coal	
82															
83															

VIII LITHOLOGIC DESCRIPTION

3. Sidewall Core Description

SIDEWALL CORE DESCRIPTION

Run No: 1 Type: SWC Hole Size: 12 1/4"

COMPANY: Statoil/Esso

DATE: August 13, 1975

WELL: 15/12-1

GEOL: K.L., B.R., D.J.B.

DEPTH Meters	REC. Inch.	LITHOLOGIC DESCRIPTION	POROSITY	SHOW
2871 1	3/4	Chalk - white - buff., firm	-	-
2861 2	1/2	Chalk - white - buff., firm	-	-
2839 3	1/2	Chalk - white - buff., firm	-	-
2727 4	1/2	Shale - med. dk grey	-	-
2720 5	1	Sandstone - white - grey, med. - fine grn	Good	None
2637 6	1 1/2	Shale - med. grey		
2636 7	1	Sandstone - white - med. crse grn	Good	None
2634 8	1 1/2	Shale - med. grey	-	-
2631 9	1 1/2	Shale - med. grey		
2580 10	1/2	Shale - lt med. grey	-	-
2500 11	1	Shale - dk grey, micaceous	-	-
2485 12	3/4	Shale - alternating light to dark grey w/tuff.	-	-
2460 13	1 1/2	Shale - med. grey	-	-
2437.5 14	2	Shale - red brown	-	-
2425 15	1 1/2	Shale - med. grey	-	-
2412.5 16	1	Shale - med. grey - thinly bedded	-	-
2402.5 17	2	Shale - brn grey	-	-
2398.0 18	1/4	Shale - lt grey to med grey	-	-
2350 19	1/4	Limestone - brn Cavings?	-	-
	NR			
2270 20	1 1/4	Sandstone - lt grey, fg - med. grn, micaceous	Good	None
2243 21	1	Shale - yellow brn - med grey	-	-
2240 22	1 1/2	Shale - med. grey	-	-
2225 23	2	Shale - med. grey - soft	-	-
2120 24	2	Shale - med grey - soft	-	-
2110 25	2	Shale - med. grey - soft		
2075 26	2	Shale - dk brn grey to tan		
2050 27	NR			
2025 28	2	Shale - dk brn grey		
2000 29	2	Shale - dk brn grey		

SIDEWALL CORE DESCRIPTION

Run No: 1 Type SWC Hole Size: 12 1/4"

COMPANY: Statoil/Esso

DATE: Aug. 13, 1975

WELL: 15/12-1

GEOL:

DEPTH Meters	REC. Inch.	LITHOLOGIC DESCRIPTION	POROSITY	SHOW
1700	1 1/2	Shale - med. grey, firm	-	-
1830	2	Shale - grey, firm	-	-
1850	2	Shale - grey, firm	-	-
2115	2	Shale - blue grey, firm	-	-
2260	1 1/2	Sandstone - white - grey, med grn.	Good	None
2275	1 1/4	Snadstone - white - grey, med. - fn grn.	Good	None
2397	2	Shale - grey, firm w/mica.	-	-
2400	2	Shale - grey, firm w/mica.	-	-
2405	1 1/2	Shale - brn grey, silty, calc.	-	-
2410	1 1/2	Shale - grey, firm	-	-
2420	2	Shale - grey, silty, calc. w/tuff.	-	-
2455	2	Shale - blue grey, firm	-	-
2463	1 1/4	Shale - grey, silty, laminated	-	-
2465	1 1/4	Shale - grey, firm	-	-
2470	2	Shale - grey, firm	-	-
2475	1/2	Shale - dark grey, silty	-	-
2480	1	Tuff - light grey	-	-
2625	2	Shale - bleu grey, soft	-	-
2628	1 1/2	Shale - grey, firm	-	-
2630	1 1/4	Shale - grey, calc.	-	-
2718	2	Shale - grey, calc.	-	-
2722	2	Shale - grey, calc.	-	-
2725	3/4	Shale - grey, calc.	-	-
2770	1/2	Chalk - white - buff, firm	-	-
2795	1/2	Chalk - white - light grey, firm.	-	-
2860	3/4	Chalk - white - light grey, frim	-	-

SIDEWALL CORE DESCRIPTION

RUN NO. 2 TOOL: SWC BIT SIZE: 8½

COMPANY: Esso/Statoil
DATE: Sept 1, 1975

WELL: 15/12-1
GEOL.: Lien & James

DEPTH	REC.	LITHOLOGIC DESCRIPTION	POROSITY	SHOW
3244	1/2	Sh gry silty firm splintery		
3236.5	1-3/4	Sd lt gry md grain poor sorted	poor	No
3228	1/2	S.S. gry fine grain poor sorted	"	"
3219.5	1	Sd gry md grain poor sorted	"	"
3212.5	5/8	Siltstone bwn gry sdy firm	–	"
3210	1/4	S.S. gry md grain poorly "Dead oil"	poor to fair	"
3206	3/4	Siltstone grey hard	–	"
3186	1	Sd gry fine grained good sorting "dead oil"	good	"
3121	3/4	Sh dk gry silty soft organic		"
3124	1/4	Sh grey hd splintery		"
3120	3/8	Sh dk grey silty		"
3125.5	1-1/4	S.S. bwn grey fine gran good sorting	good	white, fluor tr white cut
3113	1/4	Sh dk grey silty		"
3102	1/2	" " " " firm		"
3080	3/4	" " " micaceous		"
3068.5	1"	Sh dk bwn tr mica		"
3065	1-3/4"	dk grey micaceous		"
3045	1-3/8"	" " hd silty		"
3032	4-1/4"	grey firm silty		"
3017.5	3/4	Sh dk grey hd silty slgty calc		"
3001.5	1/4	L.S. lt grey hd tr floating qtz grain		"
3014	1/4	Sh dk grey hd		"
3012	1	Siltstone calc		"
3009	1-3/4	Sh dk grey hd		"
2996.3	5/8	Sh red bwn soft		"
2999.5	3/4	marl thin interbedded w l.s. lt grey green		"
2991.8	5/8	L.s. lt grey micrite		"
2989.5	1/2	L.s. " " " soft		"
2988	3/4	L.s. lt grey micritic hd		"
2981	1-1/2	marl lt grey		"
2958.5	1-3/4	siltstone lt grey green trace glauc.		"
2957	5/8	S.S. grey v fine grain calc cmt	poor	"
2967	3/8	L.s. lt grey micrite tr glauc		

Gjestain 3/12/75

SIDEWALL CORE DESCRIPTION

RUN NO: 2 TYPE: SWC HOLE SIZE:

COMPANY: Esso/Statoil
DATE: Sept. 1, 1975

WELL: 15/12-1
GEOL: Lien/James

DEPTH	REC.	LITHOLOGIC DESCRIPTION	POROSITY	SHOW
2955.5	1/2	S.S. glauconitic & calc. fine gr poorly sorted	fair	no show
2954.5	5/8	L.S. lt grey micritic tr glauc		"
2932	3/4	Marl lt grey hd		"
2924.5	1	" " "		"
2922.5	3/4	" " "		"
2917.5	3/4	" " "		"
2916	3/4	Ls. wh micritic		"
2904	3/4	Marl lt grey		"
2898.5	1/2	L.s. lt grey micritic		"
2890	3/4	Marl lt grey hd		"

N.1

BAROID CORE ANALYSIS REPORT

WELL FILE

COMPANY STATOIL / ESSO

WELL 15/12-1

AREA NORTH SEA

COUNTRY NORWAY

Type of Core Conventional Diameter 4 inch

DEPTH	LITHOLOGY	Permeability md.	% Porosity	Saturations % Pore Space		% Gas to Bulk Volume	REMARKS
				Oil	Water		
	CORE Nº 1 8570'-8578'						
8570·5	sst- lt gy fn gn calc cmt m hd tr pyr mica.	96	13	–	67	3	Water tr gas.
8572	sst- a/a.	68	15	–	93	1	a/a.
8573	sst- a/a.	83	14	–	84	2	a/a.
	CORE Nº 2 8578'-8611'						100% SH.
	CORE Nº 3 8647'-8698'						
8648	sst- lt gy fn gn fri sub ang fair sort calc cmt	62	26	–	73	6	Water tr gas.
8651	sst- a/a.	130	26	–	83	4	a/a
8654	sst- a/a.	124	26	–	83	4	a/a
8657	sst- a/a	179	28	–	88	3	a/a.
8660	sst- a/a.	137	26	–	87	3	a/a
8663	sst- a/a.	375	28	–	89	3	a/a
8667	sst- lt gy sub ang fn med gn well cmt hd tight	4	10	–	68	3	a/a
8670	chk- wh hd tr pyr occ thin vains sh parting	<1	13	–	84	2	a/a
	CORE Nº 4 10063-10083						100% SH.

BAROID CORE ANALYSIS REPORT

COMPANY STATOIL / ESSO
WELL 15/12-1
AREA NORTH SEA
COUNTRY NORWAY
Type of Core Conventional Diameter 4 inch

DEPTH	LITHOLOGY	Permeability md.	% Porosity	Saturations % Pore Space		% Gas to Bulk Volume	REMARKS
				Oil	Water		
	CORE Nº 5 10255-10314						
10255	sst-lt gy fn gn sub ang hd calc cmt	·1	2·8	19	58	0·6	POSSIBLE OIL & GAS
10261	sst-lt gy brn a/a	1·0	23	8	13	13	TRACE OIL & GAS
10267	sst-lt brn fn gn sub ang fri poor calc cmt.	10·2	30	4	59	11	a/a
10273	sst-a/a.	9·0	24	7	63	7	a/a
10279	sst-a/a.	15·3	24	6	67	6	a/a
10285	sst-a/a.	9·2	19	3	66	6	a/a
10291	sst-a/a.	10·1	20	4	78	4	a/a
10298	sst-lt. gy fn gn sub ang hd calc cmt.	·1	·5	11	62	1	a/a
10306	sst-lt brn fn gn sub ang fri poor calc cmt.	9·2	22	3	66	7	a/a
10312	sst-a/a.	2·8	20	3	52	9	a/a
	CORE Nº 6 10314-10350						
10318	sst-lt gy fn gn sub ang hd calc cmt	·26	15	8	65	4	TRACE OIL & GAS
10326	sst-a/a	·52	17	55	71	4	a/a
	CORE Nº 7 10350-10409						
10374	sst-lt gy brn fn gn sub ang f.l poor calc cmt	3·6	18	5	81	1	TRACE OIL & GAS
10383	sst-a/a	7·9	22	4	72	5	a/a
10386	sst-a/a	16·5	17	6	61	6	a/a
	CORE Nº 8 10409-10443						SH & COAL

WELL 15/12-1

WELLBORE SCHEMATIC

N01

WELLFILE

RKB-Water 82'
Water-seabed 310'
RKB-Mudline 392'

Mud in hole: 12.0 ppg below Plug #5.

ALL DEPTHS REFERRED TO "ROSS RIG" RKB.

Sea floor clear

Mudline e 392'RI

Cut csg. 15'below sea floor

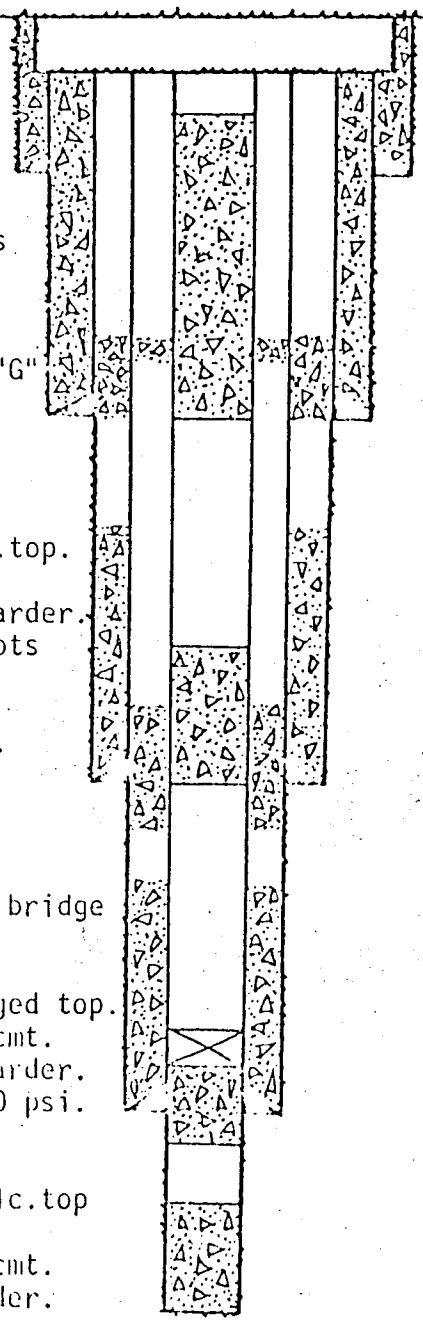
PLUG #5; 1.151'-516'(635') Tagged top. 200 sxs neat Class "G" cmt. Perf. 9 5/8" and 13 3/8" csgs. w/20 shots 1.115'-1.120'. Squeezed 13 3/8"x 20" annulus w/151 sxs. Topped w/175 sxs Class "G" neat cmt. w/2% $CaCl_2$.

PLUG #4; 5.030'-4547'(483') Calc.top. Class "G" neat cmt. w/0.04 gal/sk. D-81 retarder. Perf. 9 5/8"csg.w/20 shots 4.800'-4.805'. Squeezed 161 sxs neat cmt. into 9 5/8"x 13 3/8" annulus.

PLUG #3; 8.850', Baker Model "N" bridge plug.

PLUG #2; 9.550'-8.862'(688') Tagged top. 135 sxs Class "G" neat cmt. w/0.05 gal/sk. D-81 retarder. Pressure tested to 3.000 psi. Tagged w/20.000 lbs.

PLUG #1; 10.709'-9.884'(875') Calc.top from caliper log. 320 sxs Class "G" neat cmt. w/0.1 gal/sk D-81 retarder.



36"hole to 507'RKB
30"csg.x52 310 lbs/ft e 507'RKB
Cemented w/600 sxs Class "G" + 1% $CaCl_2$, 15,4 ppg; to surfac

26"hole to 1356'RKB
20"csg.x52 94 lbs/ft e 1309'RKB
Cemented w/935 sxs Class "G" + 12% gel-followed by 740 sxs Class "G" neat. Cmt. returns to sea bed.

17 ½"hole to 5046'RKB
13 3/8 csg. J-55 68 lbs/ft e 5030'RKB. Cemented w/516 sxs Class "G" w/8% gel + 388 sxs Class "G" neat. Top cmt. temp. survey 4018'RKB.

12 1/4"hole to 9430'RKB
9 5/8"csg. N-80 47 lbs/ft e 9423'RKB. Cemented w/300 sxs Class "G" w/8% gel + 0.07 gal/s D-81 retarder followed by 300 sxs Class "G" neat + 0.1 gal/sk D-81. Full returns Top cmt. from temp. survey 7434'RKB.

TD 10.725'RKB
8 1/2"hole to

statexas

No1

STATEX A/S LABORATORY

FINAL REPORT

WELLFILE

Company STATOIL/ESSO EXPLORATION NORWAY Date 14. AUGUST 1975

Well 15/12 - 1 Core 1 AND 3

Field State NORWAY

VERTICAL

DEPTH FEET	PERMEABILITY MILLIDARCY KA	KL	HELIUM POROSITY %	SATURATION POROSITY %	PORE SATURATION SO	STW	GRAIN DENS.	FORMATION DESCRIPTION
CORE 1								
8570'10"	0.25	0.16						
8572'	0.35	0.22						
CORE 3								
8647'10"	269	249						
8650'10"	276	256						
8653'10"	267	247						
8656'10"	286	266						
8659'10"	361	331						
8662'10"	350	320						
8666'10"	17	14						

statex a·s

STATEX A/S LABORATORY

FINAL REPORT

Company: STATOIL/ESSO EXPLORATION NORWAY — Date: 14. AUGUST 1975.

Well: 15/12 - 1 — Core: 1 AND 3

Field: — State: NORWAY

DEPTH FEET	PERMEABILITY MILLIDARCY KA	PERMEABILITY MILLIDARCY KL	HELIUM POROSITY %	SATURATION POROSITY %	PORE SATURATION SO	PORE SATURATION STW	GRAIN DENS.	FORMATION DESCRIPTION
CORE # 1								
8570'10"	0.25	0.16	10.3				2.68	
CORE # 3								
8647'10"	277	257	23.3				2.68	
8650'10"	274	254	23.4				2.69	
8653'10"	263	243	23.9				2.70	
8656'10"	291	271	23.8				2.70	
8659'10"	383	353	26.4				2.70	
8662'10"	634	604	28.0				2.76	
8666'10"	7.4	5.7	13.3				2.68	
8669'10"	0.088	0.050	13.4				2.73	

SX-106 Rog. Industritrykk A/S - Stavanger

statex a.s

STATEX A/S LABORATORY

FINAL REPORT

Company STATOIL/ESSO EXPLORATION NORWAY Date 9. Sept. 1975.

Well 15/12 - 1 Core 4, 5 and 6

Field State Norway

DEPTH FEET	PERMEABILITY MILLIDARCY KA	KL	HELIUM POROSITY %	SATURATION POROSITY %	PORE SATURATION SO	STW	GRAIN DENS.	FORMATION DESCRIPTION
10256'	0,08	~~0,05~~	1,7	3,1	29,0	9,7	2,78	
10257	0,08	~~0,05~~	2,3	7,1	42,3	42,3	2,76	
10258	11,8	9,3	14,9	18,1	17,7	44,2	2,73	
10259	76	66	21,7	25,9	14,3	40,5	2,65	
10260	101	89	19,9	27,8	10,4	43,2	2,57	
10261	62	53	22,6	25,3	10,3	47,4	2,67	$\bar{K}_{air}$ = 23 md
10265	5,0	3,7	16,4	21,3	16,0	48,4	2,63	
10266	45	38	21,5	27,5	15,3	42,9	2,63	
10267	99	88	24,9	28,7	16,0	40,0	2,69	
10268	77	67	24,8	26,5	10,9	53,9	2,74	
10269	81	71	24,0	27,6	11,2	47,5	2,67	
10270	75	65	23,3	27,4	13,9	42,3	2,67	
10271	71	62	23,3	26,1	9,6	41,8	2,66	
10272	42	35	21,6	26,0	16,9	41,1	2,64	
10273	19	15	20,6	16,3	4,3	31,3	2,72	
10274	22	18	20.2	22,2	11,3	45,9	2,68	
10275	36	30	22,4	24,6	11,0	45,1	2,69	
10276	36	30	23,0	24,2	10,7	56,6	2,71	
10277	0,98	0,67	23,3	25,9	10,4	65,2	2,72	

SX-106 Rog. Industritrykk A/S - Stavanger

stalexas

STATEX A/S LABORATORY

FINAL REPORT

Company STATOIL/ESSO EXPLPRATION NORWAY Date 9. sept. 1975:

Well 15/12 - 1 Core 4, 5 and 6

Field State Norway

DEPTH FEET	PERMEABILITY MILLIDARCY KA	KL	HELIUM POROSITY %	SATURATION POROSITY %	PORE SATURATION SO	STW	GRAIN DENS.	FORMATION DESCRIPTION
10278	32	27	22,4	26,0	10,0	41,2	2,74	
10279	24	20	21,3	24,7	11,7	44,9	2,69	
10280	29	24	21,7	26,8	10,8	40,3	2,69	
10281	20	16	20,9	27,1	10,0	45,0	2,69	
10282	20	16	20,9	27,0	11,5	50,7	2,66	
10283	25	21	21,8	22,3	5,4	41,3	2,70	
10284	34	28	22,6	26,0	11,2	47,3	2,68	
10285	33	28	23,5	24,2	11,6	36,8	2,72	
10286	14	11	19,8	29,0	13,8	29,0	2,69	
10287	40	34	23,6	27,4	13,9	41,6	2,72	
10288	44	37	23,0	27,3	11,7	43,6	2,69	
10289	24	20	22,0	25,2	9,1	42,1	2,70	
10290	27	22	23,5	25,1	10,4	51,4	2,74	
10291	19	15	23,7	24,7	12,1	51,0	2,78	
10292	22	18	22,7	24,8	10,1	47,6	2,73	
10293	8,7	6,7	18,8	23,8	10,5	53,4	2,69	
10294	3,4	2,5	21,3	27,2	15,4	51,8	2,75	
10295	38	32	24,2	26,5	11,7	34,3	2,73	
10296	3,8	2,8	17,5	21,5	15,4	40,9	2,70	

SX-106 Rog. Industritrykk A/S - Stavanger

statex a.s

STATEX A/S LABORATORY

FINAL REPORT

Company STATOIL/ESSO EXPLORATION NORWAY Date 9. Sept. 1975.

Well 15/12 - 1 Core 4, 5 and 6

Field State Norway

DEPTH FEET	PERMEABILITY MILLIDARCY KA	KL	HELIUM POROSITY %	SATURATION POROSITY %	PORE SATURATION SO	STW	GRAIN DENS.	FORMATION DESCRIPTION
10297	5,0	3,7	17,5	21,3	16,0	54,5	2,69	
10298	3,8	2,8	16,8	19,8	6,1	44,9	2,66	
10299	5,5	4,1	18,5	11,2	11,6	24,1	2,66	
10300	0,22	0,13	3,7	10,1	12,9	73,3	3,11	
10301	2,5	1,8	16,0	15,8	16,5	32,3	2,63	
10302	2,2	1,6	16,2	14,9	26,2	49,7	2,67	
10303	0,108	0,060	3,5	5,9	25,4	49,2	2,75	
10304	0,082	0,050	3,2	3,3	27,3	9,1	2,81	
10305	0,054	0,030	3,2	2,7	33,3	11,1	2,82	
10306	1,9	1,3	15,7	16,7	15,6	31,1	2,67	
10307	8,8	6,8	19,4	23,1	16,0	38,5	2,65	
10308	0,190	0,120	7,9	6,7	43,3	29,9	2,71	
10309	0,30	0,19	7,9	5,4	16,7	55,6	2,76	
10310	0,163	0,100	4,2	10,0	14,0	38,0	2,77	
10311	1,9	1,3	15,2	9,7	13,4	3,1	2,70	
10312	15	12	21,2	25,4	11,4	51,2	2,67	
10313	10,7	8,4	20,8	26,0	11,2	43,5	2,68	
10314	0,9	0,6	16,2	12,7	22,8	6,3	2,74	
10315	3,0	2,2	19,7	22,6	12,4	45,1	2,73	

SX-106 Rog. Industritrykk A/S - Stavanger

statexas

STATEX A/S LABORATORY

FINAL REPORT

Company STATOIL/ESSO EXPLORATION NORWAY Date 9. Sept. 1975

Well 15/12 - 1 Core 4, 5 and 6

Field State Norway

DEPTH FEET	PERMEABILITY MILLIDARCY KA	KL	HELIUM POROSITY %	SATURATION POROSITY %	PORE SATURATION SO	STW	GRAIN DENS.	FORMATION DESCRIPTION
10316	0,97	0,66	15,0	16,6	7,8	47,0	2,76	
10317	4,7	3,5	17,3	22,0	12,3	49,5	2,62	
10318	7,3	5,6	21,3	23,6	12,7	47,9	2,68	
10319	5,5	4,1	19,7	21,8	14,2	48,2	2,67	
10320	15	12	21,7	29,5	13,2	46,4	2,66	
10321	11,1	8,7	21,9	17,7	7,3	37,3	2,66	
10322	3,6	2,6	19,1	16,3	4,9	38,0	2,74	
10323	0,63	~~0,42~~	11,9	7,2	11,1	4,2	2,78	
10324	0,70	~~0,46~~	11,9	8,9	9,0	21,3	2,77	
10325	0,62	~~0,41~~	11,9	12,5	11,2	40,0	2,80	
10326	0,72	~~0,48~~	14,6	8,3	9,6	9,6	2,84	
10327	0,96	0,65	14,1	19,1	15,7	47,6	2,71	
10328	0,22	~~0,13~~	8,5	3,4	41,2	8,8	2,66	
10333	25	21	23,9	28,0	10,7	33,6	2,69	
10334	18	15	23,3	24,3	12,3	33,7	2,70	
10335	36	30	22,8	18,8	6,4	17,6	2,66	

SX-106 Rog. Industritrykk A/S - Stavanger

JAN 21

stokes ESSO

No. 13

COMPLETION LOG

Scale 1:500

COORDINATES: LAT 24 44 24 S
LONG 113 42 24 E

ELEV: 3 m
TOTAL DEPTH: 3 m
DATE SPUD: 1 Jan 1970
DATE COMPL: 1 Jan 1970
DRILLING TIME FILE: Available
MUD LOG: Available
MUD RESIST. DATA: Available
SONIC DATA: Available
CORE: Available
CORE DESCRIPTION: Available
CORE ANALYSIS: Available
DIPMETER: Available
SWC: Available

FORM DATA
Kb: 3 m
Gr: 3 m
Kb-Gr: 0 m
Kb-Sea Level: 3 m

LOCATION PLAN

Stokes Bay
Exploration Permit
Stokes Bay
Exploration Permit
Stokes Bay
Exploration Permit
Stokes Bay
Exploration Permit

DRILLING CONTRACTOR: Stokes Bay Drilling Co.
RIG: Stokes Bay

DATE: 1 JANUARY 1970

PROJECT DIRECT:
J.C. Stokes, Stokes Bay Drilling Co.
W.J. Stokes, Stokes Bay Drilling Co.

CASING DATA

20"	0 m	0 m	0 m
13 3/8"	0 m	0 m	0 m
9 5/8"	0 m	0 m	0 m
7"	0 m	0 m	0 m

CORE DATA

1	0 m	0 m	0 m
2	0 m	0 m	0 m
3	0 m	0 m	0 m
4	0 m	0 m	0 m
5	0 m	0 m	0 m
6	0 m	0 m	0 m
7	0 m	0 m	0 m
8	0 m	0 m	0 m
9	0 m	0 m	0 m
10	0 m	0 m	0 m
11	0 m	0 m	0 m
12	0 m	0 m	0 m
13	0 m	0 m	0 m
14	0 m	0 m	0 m
15	0 m	0 m	0 m
16	0 m	0 m	0 m
17	0 m	0 m	0 m
18	0 m	0 m	0 m
19	0 m	0 m	0 m
20	0 m	0 m	0 m
21	0 m	0 m	0 m
22	0 m	0 m	0 m
23	0 m	0 m	0 m
24	0 m	0 m	0 m
25	0 m	0 m	0 m
26	0 m	0 m	0 m
27	0 m	0 m	0 m
28	0 m	0 m	0 m
29	0 m	0 m	0 m
30	0 m	0 m	0 m
31	0 m	0 m	0 m
32	0 m	0 m	0 m
33	0 m	0 m	0 m
34	0 m	0 m	0 m
35	0 m	0 m	0 m
36	0 m	0 m	0 m
37	0 m	0 m	0 m
38	0 m	0 m	0 m
39	0 m	0 m	0 m
40	0 m	0 m	0 m
41	0 m	0 m	0 m
42	0 m	0 m	0 m
43	0 m	0 m	0 m
44	0 m	0 m	0 m
45	0 m	0 m	0 m
46	0 m	0 m	0 m
47	0 m	0 m	0 m
48	0 m	0 m	0 m
49	0 m	0 m	0 m
50	0 m	0 m	0 m
51	0 m	0 m	0 m
52	0 m	0 m	0 m
53	0 m	0 m	0 m
54	0 m	0 m	0 m
55	0 m	0 m	0 m
56	0 m	0 m	0 m
57	0 m	0 m	0 m
58	0 m	0 m	0 m
59	0 m	0 m	0 m
60	0 m	0 m	0 m
61	0 m	0 m	0 m
62	0 m	0 m	0 m
63	0 m	0 m	0 m
64	0 m	0 m	0 m
65	0 m	0 m	0 m
66	0 m	0 m	0 m
67	0 m	0 m	0 m
68	0 m	0 m	0 m
69	0 m	0 m	0 m
70	0 m	0 m	0 m
71	0 m	0 m	0 m
72	0 m	0 m	0 m
73	0 m	0 m	0 m
74	0 m	0 m	0 m
75	0 m	0 m	0 m
76	0 m	0 m	0 m
77	0 m	0 m	0 m
78	0 m	0 m	0 m
79	0 m	0 m	0 m
80	0 m	0 m	0 m
81	0 m	0 m	0 m
82	0 m	0 m	0 m
83	0 m	0 m	0 m
84	0 m	0 m	0 m
85	0 m	0 m	0 m
86	0 m	0 m	0 m
87	0 m	0 m	0 m
88	0 m	0 m	0 m
89	0 m	0 m	0 m
90	0 m	0 m	0 m
91	0 m	0 m	0 m
92	0 m	0 m	0 m
93	0 m	0 m	0 m
94	0 m	0 m	0 m
95	0 m	0 m	0 m
96	0 m	0 m	0 m
97	0 m	0 m	0 m
98	0 m	0 m	0 m
99	0 m	0 m	0 m
100	0 m	0 m	0 m
101	0 m	0 m	0 m
102	0 m	0 m	0 m
103	0 m	0 m	0 m
104	0 m	0 m	0 m
105	0 m	0 m	0 m
106	0 m	0 m	0 m
107	0 m	0 m	0 m
108	0 m	0 m	0 m
109	0 m	0 m	0 m
110	0 m	0 m	0 m
111	0 m	0 m	0 m
112	0 m	0 m	0 m
113	0 m	0 m	0 m
114	0 m	0 m	0 m
115	0 m	0 m	0 m
116	0 m	0 m	0 m
117	0 m	0 m	0 m
118	0 m	0 m	0 m
119	0 m	0 m	0 m
120	0 m	0 m	0 m
121	0 m	0 m	0 m
122	0 m	0 m	0 m
123	0 m	0 m	0 m
124	0 m	0 m	0 m
125	0 m	0 m	0 m
126	0 m	0 m	0 m
127	0 m	0 m	0 m
128	0 m	0 m	0 m
129	0 m	0 m	0 m
130	0 m	0 m	0 m
131	0 m	0 m	0 m
132	0 m	0 m	0 m
133	0 m	0 m	0 m
134	0 m	0 m	0 m
135	0 m	0 m	0 m
136	0 m	0 m	0 m
137	0 m	0 m	0 m
138	0 m	0 m	0 m
139	0 m	0 m	0 m
140	0 m	0 m	0 m
141	0 m	0 m	0 m
142	0 m	0 m	0 m
143	0 m	0 m	0 m
144	0 m	0 m	0 m
145	0 m	0 m	0 m
146	0 m	0 m	0 m
147	0 m	0 m	0 m
148	0 m	0 m	0 m
149	0 m	0 m	0 m
150	0 m	0 m	0 m
151	0 m	0 m	0 m
152	0 m	0 m	0 m
153	0 m	0 m	0 m
154	0 m	0 m	0 m
155	0 m	0 m	0 m
156	0 m	0 m	0 m
157	0 m	0 m	0 m
158	0 m	0 m	0 m
159	0 m	0 m	0 m
160	0 m	0 m	0 m
161	0 m	0 m	0 m
162	0 m	0 m	0 m
163	0 m	0 m	0 m
164	0 m	0 m	0 m
165	0 m	0 m	0 m
166	0 m	0 m	0 m
167	0 m	0 m	0 m
168	0 m	0 m	0 m
169	0 m	0 m	0 m
170	0 m	0 m	0 m
171	0 m	0 m	0 m
172	0 m	0 m	0 m
173	0 m	0 m	0 m
174	0 m	0 m	0 m
175	0 m	0 m	0 m
176	0 m	0 m	0 m
177	0 m	0 m	0 m
178	0 m	0 m	0 m
179	0 m	0 m	0 m
180	0 m	0 m	0 m
181	0 m	0 m	0 m
182	0 m	0 m	0 m
183	0 m	0 m	0 m
184	0 m	0 m	0 m
185	0 m	0 m	0 m
186	0 m	0 m	0 m
187	0 m	0 m	0 m
188	0 m	0 m	0 m
189	0 m	0 m	0 m
190	0 m	0 m	0 m
191	0 m	0 m	0 m
192	0 m	0 m	0 m
193	0 m	0 m	0 m
194	0 m	0 m	0 m
195	0 m	0 m	0 m
196	0 m	0 m	0 m
197	0 m	0 m	0 m
198	0 m	0 m	0 m
199	0 m	0 m	0 m
200	0 m	0 m	0 m
201	0 m	0 m	0 m
202	0 m	0 m	0 m
203	0 m	0 m	0 m
204	0 m	0 m	0 m
205	0 m	0 m	0 m
206	0 m	0 m	0 m
207	0 m	0 m	0 m
208	0 m	0 m	0 m
209	0 m	0 m	0 m
210	0 m	0 m	0 m
211	0 m	0 m	0 m
212	0 m	0 m	0 m
213	0 m	0 m	0 m
214	0 m	0 m	0 m
215	0 m	0 m	0 m
216	0 m	0 m	0 m
217	0 m	0 m	0 m
218	0 m	0 m	0 m
219	0 m	0 m	0 m
220	0 m	0 m	0 m
221	0 m	0 m	0 m
222	0 m	0 m	0 m
223	0 m	0 m	0 m
224	0 m	0 m	0 m
225	0 m	0 m	0 m
226	0 m	0 m	0 m
227	0 m	0 m	0 m
228	0 m	0 m	0 m
229	0 m	0 m	0 m
230	0 m	0 m	0 m
231	0 m	0 m	0 m
232	0 m	0 m	0 m
233	0 m	0 m	0 m
234	0 m	0 m	0 m
235	0 m	0 m	0 m
236	0 m	0 m	0 m
237	0 m	0 m	0 m
238	0 m	0 m	0 m
239	0 m	0 m	0 m
240	0 m	0 m	0 m
241	0 m	0 m	0 m
242	0 m	0 m	0 m
243	0 m	0 m	0 m
244	0 m	0 m	0 m
245	0 m	0 m	0 m
246	0 m	0 m	0 m
247	0 m	0 m	0 m
248	0 m	0 m	0 m
249	0 m	0 m	0 m
250	0 m	0 m	0 m
251	0 m	0 m	0 m
252	0 m	0 m	0 m
253	0 m	0 m	0 m
254	0 m	0 m	0 m
255	0 m	0 m	0 m
256	0 m	0 m	0 m
257	0 m	0 m	0 m
258	0 m	0 m	0 m
259	0 m	0 m	0 m
260	0 m	0 m	0 m
261	0 m	0 m	0 m
262	0 m	0 m	0 m
263	0 m	0 m	0 m
264	0 m	0 m	0 m
265	0 m	0 m	0 m
266	0 m	0 m	0 m
267	0 m	0 m	0 m
268	0 m	0 m	0 m
269	0 m	0 m	0 m
270	0 m	0 m	0 m
271	0 m	0 m	0 m
272	0 m	0 m	0 m
273	0 m	0 m	0 m
274	0 m	0 m	0 m
275	0 m	0 m	0 m
276	0 m	0 m	0 m
277	0 m	0 m	0 m
278	0 m	0 m	0 m
279	0 m	0 m	0 m
280	0 m	0 m	0 m
281	0 m	0 m	0 m
282	0 m	0 m	0 m
283	0 m	0 m	0 m
284	0 m	0 m	0 m
285	0 m	0 m	0 m
286	0 m	0 m	0 m
287	0 m	0 m	0 m
288	0 m	0 m	0 m
289	0 m	0 m	0 m
290	0 m	0 m	0 m
291	0 m	0 m	0 m
292	0 m	0 m	0 m
293	0 m	0 m	0 m
294	0 m	0 m	0 m
295	0 m	0 m	0 m
296	0 m	0 m	0 m
297	0 m	0 m	0 m
298	0 m	0 m	0 m
299	0 m	0 m	0 m
300	0 m	0 m	0 m
301	0 m	0 m	0 m
302	0 m	0 m	0 m
303	0 m	0 m	0 m
304	0 m	0 m	0 m
305	0 m	0 m	0 m
306	0 m	0 m	0 m
307	0 m	0 m	0 m
308	0 m	0 m	0 m
309	0 m	0 m	0 m
310	0 m	0 m	0 m
311	0 m	0 m	0 m
312	0 m	0 m	0 m
313	0 m	0 m	0 m
314	0 m	0 m	0 m
315	0 m	0 m	0 m
316	0 m	0 m	0 m
317	0 m	0 m	0 m
318	0 m	0 m	0 m
319	0 m	0 m	0 m
320	0 m	0 m	0 m
321	0 m	0 m	0 m
322	0 m	0 m	0 m
323	0 m	0 m	0 m
324	0 m	0 m	0 m
325	0 m	0 m	0 m
326	0 m	0 m	0 m
327	0 m	0 m	0 m
328	0 m	0 m	0 m
329	0 m	0 m	0 m
330	0 m	0 m	0 m
331	0 m	0 m	0 m
332	0 m	0 m	0 m
333	0 m	0 m	0 m
334	0 m	0 m	0 m
335	0 m	0 m	0 m
336	0 m	0 m	0 m
337	0 m	0 m	0 m
338	0 m	0 m	0 m
339	0 m	0 m	0 m
340	0 m	0 m	0 m
341	0 m	0 m	0 m
342	0 m	0 m	0 m
343	0 m	0 m	0 m
344	0 m	0 m	0 m
345	0 m	0 m	0 m
346	0 m	0 m	0 m
347	0 m	0 m	0 m
348	0 m	0 m	0 m
349	0 m	0 m	0 m
350	0 m	0 m	0 m
351	0 m	0 m	0 m
352	0 m	0 m	0 m
353	0 m	0 m	0 m
354	0 m	0 m	0 m
355	0 m	0 m	0 m
356	0 m	0 m	0 m
357	0 m	0 m	0 m
358	0 m	0 m	0 m
359	0 m	0 m	0 m
360	0 m	0 m	0 m
361	0 m	0 m	0 m
362	0 m	0 m	0 m
363	0 m	0 m	0 m
364	0 m	0 m	0 m
365	0 m	0 m	0 m
366	0 m	0 m	0 m
367	0 m	0 m	0 m
368	0 m	0 m	0 m
369	0 m	0 m	0 m
370	0 m	0 m	0 m
371	0 m	0 m	0 m
372	0 m	0 m	0 m
373	0 m	0 m	0 m
374	0 m	0 m	0 m
375	0 m	0 m	0 m
376	0 m	0 m	0 m
377	0 m	0 m	0 m
378	0 m	0 m	0 m
379	0 m	0 m	0 m
380	0 m	0 m	0 m
381	0 m	0 m	0 m
382	0 m	0 m	0 m
383	0 m	0 m	0 m
384	0 m	0 m	0 m
385	0 m	0 m	0 m
386	0 m	0 m	0 m
387	0 m	0 m	0 m
388	0 m	0 m	0 m
389	0 m	0 m	0 m
390	0 m	0 m	0 m
391	0 m	0 m	0 m
392	0 m	0 m	0 m
393	0 m	0 m	0 m
394	0 m	0 m	0 m
395	0 m	0 m	0 m
396	0 m	0 m	0 m
397	0 m	0 m	0 m
398	0 m	0 m	0 m
399	0 m	0 m	0 m
400	0 m	0 m	0 m
401	0 m	0 m	0 m
402	0 m	0 m	0 m
403	0 m	0 m	0 m
404	0 m	0 m	0 m
405	0 m	0 m	0 m
406	0 m	0 m	0 m
407	0 m	0 m	0 m
408	0 m	0 m	0 m
409	0 m	0 m	0 m
410	0 m	0 m	0 m
411	0 m	0 m	0 m
412	0 m	0 m	0 m
413	0 m	0 m	0 m
414	0 m	0 m	0 m
415	0 m	0 m	0 m
416	0 m	0 m	0 m
417	0 m	0 m	0 m
418	0 m	0 m	0 m
419	0 m	0 m	0 m
420	0 m	0 m	0 m
421	0 m	0 m	0 m
422	0 m	0 m	0 m
423	0 m	0 m	0 m
424	0 m	0 m	0 m
425	0 m	0 m	0 m
426	0 m	0 m	0 m
427	0 m	0 m	0 m
428	0 m	0 m	0 m
429	0 m	0 m	0 m
430	0 m	0 m	0 m
431	0 m	0 m	0 m
432	0 m	0 m	0 m
433	0 m	0 m	0 m
434	0 m	0 m	0 m
435	0 m	0 m	0 m
436	0 m	0 m	0 m
437	0 m	0 m	0 m
438	0 m	0 m	0 m
439	0 m	0 m	0 m
440	0 m	0 m	0 m
441	0 m	0 m	0 m
442	0 m	0 m	0 m
443	0 m	0 m	0 m
444	0 m	0 m	0 m
445	0 m	0 m	0 m
446	0 m	0 m	0 m
447	0 m	0 m	0 m
448	0 m	0 m	0 m
449	0 m	0 m	0 m
450	0 m	0 m	0 m
451	0 m	0 m	0 m
452	0 m	0 m	0 m
453	0 m	0 m	0 m
454	0 m	0 m	0 m
455	0 m	0 m	0 m
456	0 m	0 m	0 m
457	0 m	0 m	0 m
458	0 m	0 m	0 m
459	0 m	0 m	0 m
460	0 m	0 m	0 m
461	0 m	0 m	0 m
462	0 m	0 m	0 m
463	0 m	0 m	0 m
464	0 m	0 m	0 m
465	0 m	0 m	0 m
466	0 m	0 m	0 m
467	0 m	0 m	0 m
468	0 m	0 m	0 m
469	0 m	0 m	0 m
470	0 m	0 m	0 m
471	0 m	0 m	0 m
472	0 m	0 m	0 m
473	0 m	0 m	0 m
474	0 m	0 m	0 m
475	0 m	0 m	0 m
476	0 m	0 m	0 m
477	0 m	0 m	0 m
478	0 m	0 m	0 m
479	0 m	0 m	0 m
480	0 m	0 m	0 m
481	0 m	0 m	0 m
482	0 m	0 m	0 m
483	0 m	0 m	0 m
484	0 m	0 m	0 m
485	0 m	0 m	0 m
486	0 m	0 m	0 m
487	0 m	0 m	0 m
488	0 m	0 m	0 m
489	0 m	0 m	0 m
490	0 m	0 m	0 m
491	0 m	0 m	0 m
492	0 m	0 m	0 m
493	0 m	0 m	0 m
494	0 m	0 m	0 m
495	0 m	0 m	0 m
496	0 m	0 m	0 m
497	0 m	0 m	0 m
498	0 m	0 m	0 m
499	0 m	0 m	0 m
500	0 m	0 m	0 m

Kb-Gr: 0 m
Kb-Sea Level: 3 m

Kb-Gr: 0 m
Kb-Sea Level: 3 m

Kb-Gr: 0 m
Kb-Sea Level: 3 m

F-12693

CNC

NL Baroid

| | | |

BAROID DIVISION
NL INDUSTRIES

WELL 15/12-1
COMPANY ESSO/STATOIL
NORWAY

WELL INFORMATION SYSTEMS AND ENGINEERING

DRILLABILITY

ADT LOG

.005 .01 .05 .1 .5 1

4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100
7200
7300
7400
7500
7600
7700
7800
7900
8000
8100
8200
8300
8400
8500
8600
8700
8800
8900
9000
9100
9200
9300
9400
9500
9600
9700
9800
9900
10,000
10,100
10,200
10,300
10,400
10,500
10,600
10,700
10,800
10,900
11,000

CORE 1
CORE 2
CORE 3

T.D. 10,725

WELL INFORMATION SYSTEMS AND ENGINEERING

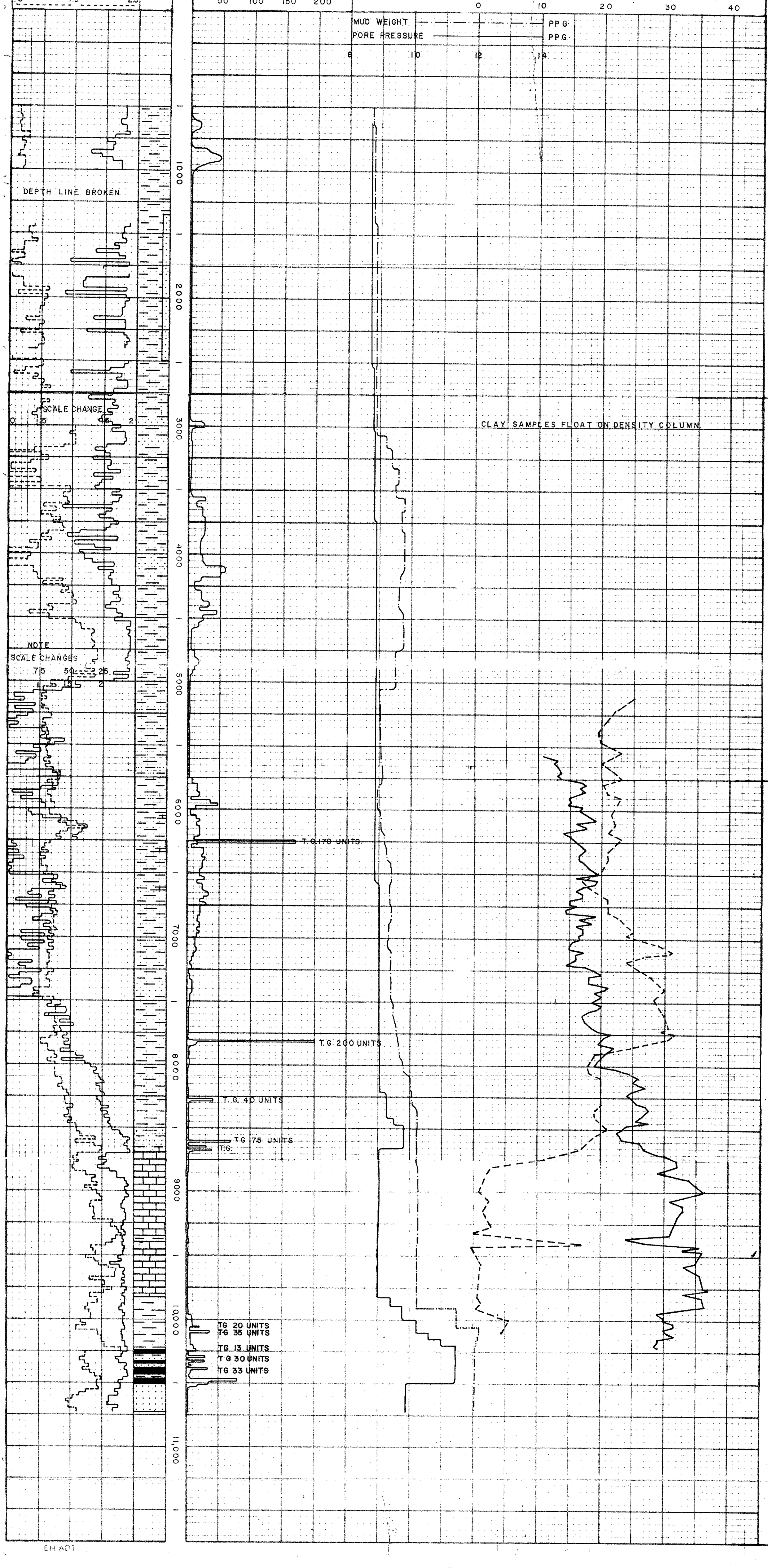
BAROID DIVISION
NL INDUSTRIES
P.O. BOX 1675 HOUSTON TEXAS 77001

WELL 15/12-1
COMPANY STATOIL/ESSO
NORWAY
NORTH SEA

LEGEND
DEPTH CORRESPONDS TO DRILL PIPE MEASUREMENTS
NB NEW BIT
NCB NEW CORE BIT
TG TRIP GAS
ST SHORT TRIP
STG SHORT TRIP GAS
DST DRILL STEM TEST
NR NO RETURNS
E LOG ELECTRIC LOG
CO CIRCULATE OUT RETURNS
CFK CHECK FOR FLOW
SAND
SHALE

ADT LOG

DRILLING RATE FT./HR. 750 500 250
"d_c" .5 1.5 2.5
Lithology
DEPTH
TOTAL GAS
CONNECTION GAS
(BAR GRAPH _____)
GAS IN AIR
50 100 150 200
SHALE DENSITY _____ gm/cc 1.6 1.8 2.0 2.2 2.4 2.6
SHALE FACTOR _____ ml/gm 0 10 20 30 40
MUD WEIGHT _____ PPG
PORE PRESSURE _____ PPG
8 10 12 14
MUD WT
REMARKS



WATER DEPTH - 391 FT
AIR GAP - 80 FT
RKB TO WELLHEAD - 388 FT

30" CASING
SHOE AT 507 FT
NB 2 OSC 3A 17.5"

20" CASING
SHOE AT 1309 FT
NB 3 OSC 3A 17.5"
TRIP FOR STAB.

NB 4 OSC 3A 17.5"

13 3/8" CASING
SHOE AT 4995 FT
NB 5 HTC XIG 12.25"
LEAK OFF TEST
13 3/8" SHOE 14.1 PPG

NB 6 HTC XIG 12 1/4"

NB 7 HTC XIG 12 1/4"

NB 8 HTC XIG 12 1/4"

NCB 1 C - 12 8 1/2"
CB 2
NB 9 XV 12 1/4"
CB 3
NB 10 XV 12 1/4"

NB 11 HTC J33

NB 12 CHRIST. MD 311

9 5/8" CASING
NB 13 HTC XV 8 1/2"
NB 14 HTC XV 8 1/2"
NB 15 HTC J-33 8 1/2"

CB 4
NB 18 HTC J-33 8 1/2"

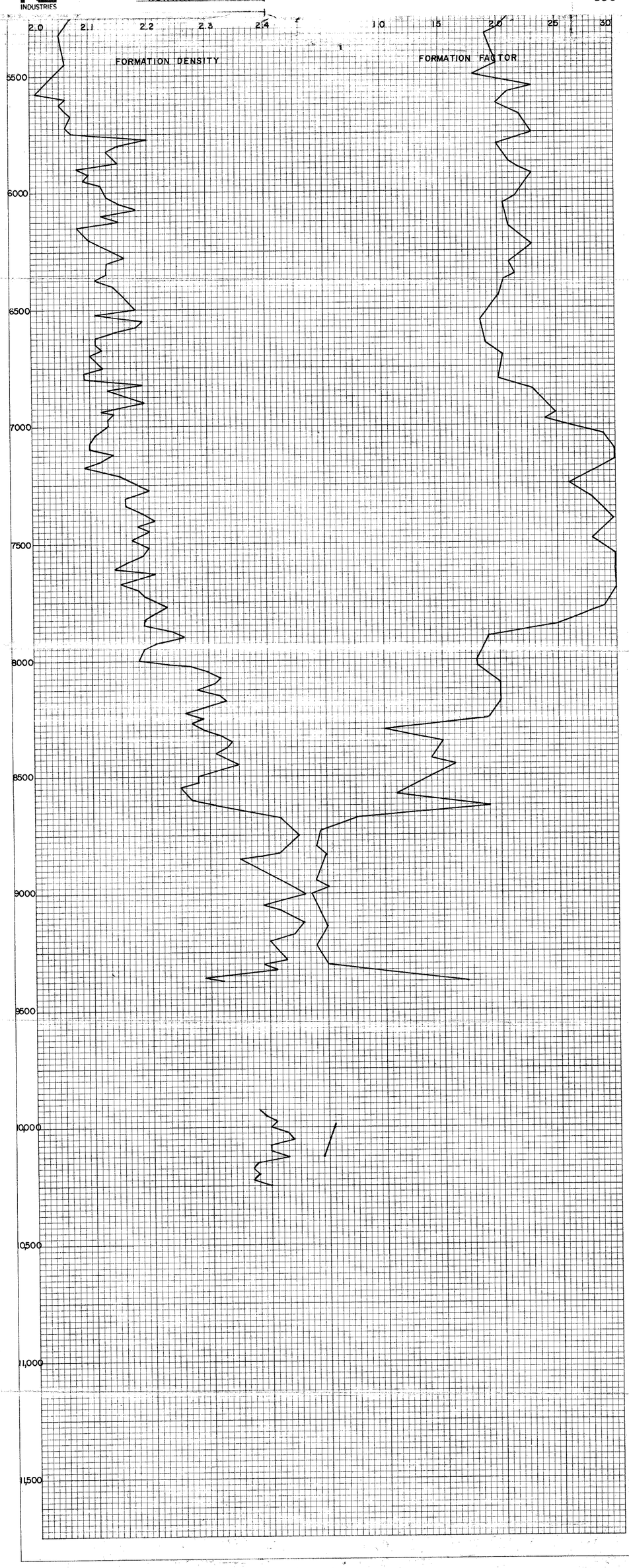
CB 5
CB 6
CB 7
CB 8
B18 RR HTC J33

T D 10,725

EH ADT

WELL INFORMATION SYSTEMS AND ENGINEERING

BAROID DIVISION
NL INDUSTRIES

WELL 15 - 12 - 1
COMPANY ESSO / STATOIL
NORWAY

ADT
LOG