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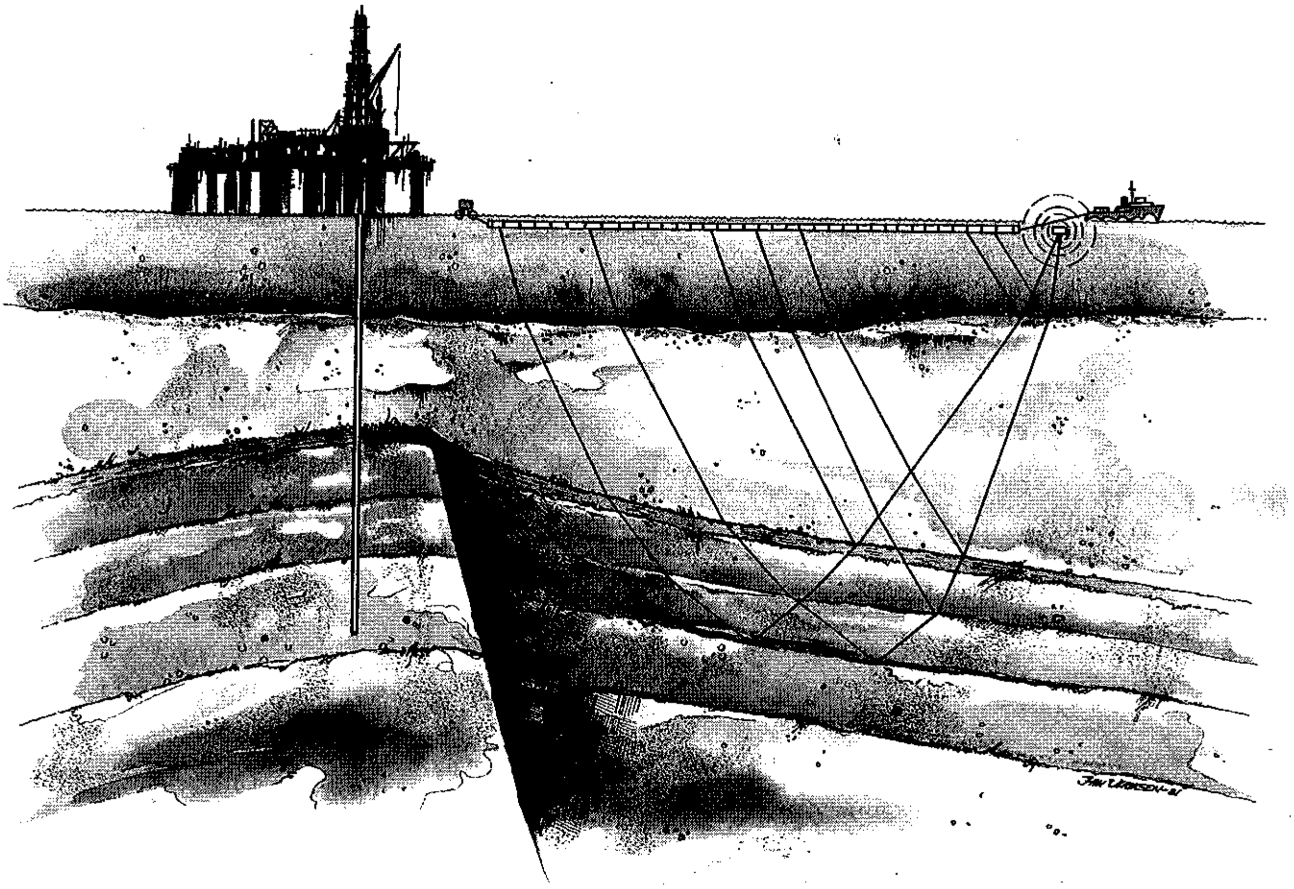

UNDERSØKELSES-
&
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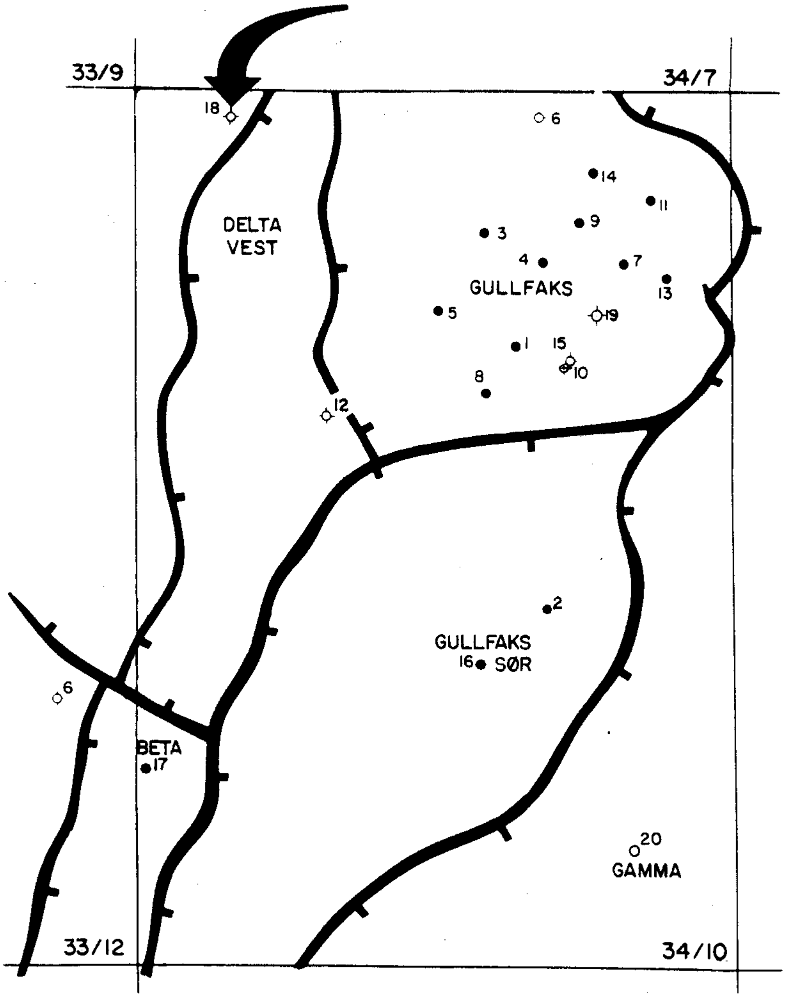
Completion Report

Well 34/10-18 PL 050

Statoil/Norsk Hydro/Saga Petroleum



COMPLETION REPORT

34/10-18

LET & BOR/BER
Feb. 84

statoil

PL 050

STATOIL - NORSK HYDRO - SAGA PETROLEUM
COMPLETION REPORT
WELL 34/10-18

OTHER REPORTS

- Geological Prognosis and Drilling Program	Statoil	3/83
- Pressure Prediction Report	Statoil	3/83
- Site Survey	Gardline	
- Rig Positioning Survey	Racal Decca	7/83
- Core Analysis	Core Lab	9/83
- Final Well Report	Exlog	7-8/83
- Core Photos Core -1-3	CoreLab	83
- Well Site Gas Analysis	Core Lab	10/83
- Paleo Report	Paleoservices	1/84
- SHDT-listing	Schlumberger	9/83
- Final DLWD Report	Exlog	8/83

TABLE OF CONTENTS

I GENERAL INFORMATION

1. Well Data Record

a) Well designation: 34/10-18

b) Well classification: Exploratory

c) Well location:
  - i) Country: Norway
  - ii) Licence: PL 050
  - iii) Latitude: 61° 14' 22.48" N
    Longitude 03° 18' 18.83" E
  - iv) Location on seismic line: Line no. 8214-402, sp. no. 190
  - v) Water depth: 141m

d) Rig data:
  - i) Rig name: "Ross Isle"
  - ii) Type: Bingo 3000 Semi-Submersible
  - iii) Drilling draft: 21.0m
  - iv) RKB-MSL: 22.0 m

2. Purpose of the well

The exploratory well 34/10-18 was designed to test the fault structure in the north-west segment of the licence 050.
The primary objective of this prospect was the Brent Group sandstones of Middle Jurassic age. It was assumed that the Brent sandstones was directly underlying rocks of Late Cretaceous age due to active Late Cretaceous erosion in this area.
Secondary prospects were Lower Jurassic Cook and Statfjord Formation sandstones.

3. Results of the well

The drilling of 34/10-18 to a total depth of 3025 m proved the absence of significant hydrocarbon accumulation at this structural position on the NW fault block of the licence.

4. Well History

a) General:

i)	Spud date:	16 July 1983
ii)	Rig released/date:	31 August 1983
iii)	Final status:	Plugged & Abandoned, dry well

b) Contractors:

i)	Drilling platform:	"Ross Isle"
ii)	Drilling contractor:	Ross Drilling Co. A/S
iii)	Cementing:	Halliburton
iv)	Casing:	Stavanger Casing Crew
v)	Rig positioning:	Decca/Geoteam
vi)	Electric logging:	Schlumberger
vii)	Mud/DLWD:	Exploration Logging (Services) Ltd.
viii)	Mud contractor:	NPS
ix)	Supplyboats:	Supply boat-pool
x)	Stand by boat:	Supply boat-pool
xi)	Conventional coring:	Christensen
xii)	Diving:	Sub Sea Dolphin
xiii)	Helicopters:	Helikopter Service A/S
xv)	Core analysis:	Core Lab Norsk A/S
xvi)	Paleo analysis:	Paleoservices Ltd.

c) Casing

i) 30" at	226.5 m KB
ii) 20" at	747.0 m KB
iii) 13.375 at	2008.0 m KB

d) Coring

1. Conventional Coring (description attached)

Core No.	Interval (m KB)	Total (m)	Recovered (m)	Recovered (%)
1	2343.5-2361 m	17.50	13.70	78
2	2361.0-2368 m	7.00	7.00	100
3	2376.5-2395 m	18.50	18.50	100

2. Sidewall Coring (description attatched)
29 samples were recovered out of 30 shot

e) Logging

1. Mudlogging

A Gemdas logging unit from Exploration Logging conducted the mudlogging with continous monitoring of the following parameters from 227 m - T.D.

Drilling rate
Force on bit
Dxc exponent
Cutting gas
H_2S-gas
Chromatographic gas analysis
Shale density

Shale factor
Calcimetry
Mud-temperature in and out pump pressure
Mud-resistivity in and out
Mud-density in and out
Lithology

2. Logging while drilling (DLWD) service was performed by Exlog with the following real-time parameters

   - gamma ray
   - downhole temperature
   - short normal resistivity
   - downhole mud resistivity
   - drilling rate

3. Schlumberger was employed for conventional wire-line logging service.

Type of log	Run no.	Interval
ISF/LSS/MSFL/GR		155.0- 764.5 m
		747.0-1999.0 m
		2007.0-3024.0 m
LDL/CNL/GR-CAL		227.0- 765.0 m
		747.0-1999.0 m
		2007.0-3025.0 m
CBL/VDL	1	162.0-2007.0 m
MERGED FINAL EDIT DISPLAY	1	2400.0-3025.0 m
SHDT	1	2007.0-3025.0 m
RFT	1	2330.0-2543.0 m

f) Vertical Seismic Profile (VSP) and seismic reference survey was also conducted by Schlumberger. 49 checkshot were taken with levels between 822.5 - 3024 m KB.

II GEOLOGICAL REPORT

1. Stratigraphy

a) Table of chronostratigraphy (all depths in meters) as interpreted by Paleoservices Ltd. from 1010 m. Section above is interpreted from correlations of log responses.

Chronostratigraphic Tops	Depth (KB)	Thickness
Section above 1010 m not studied		
Pleistocene (Sea Bed)	163	132
Late Pliocene	295	157
------------------------?UNCONFORMITY?------------------------		
Miocene	452	450
Oligocene	902	478
Oligocene/Eocene	1380	40
------------------------?UNCONFORMITY?------------------------		
Middle and Early Eocene	1420	250
Basal Eocene-Late Paleocene	1670	75
Late Paleocene	1745	125
Middle Paleocene	1870	15
------------------------?UNCONFORMITY?------------------------		
Late Maastrichtian	1885	55
Maastrichtian	1940	160
Campanian	2100	210
?Santonian	2310	26
------------------------?UNCONFORMITY?------------------------		
Early Albian	2336	4
------------------------?UNCONFORMITY?------------------------		
Early Barremian/Hauterivian	2340	4
Early Hauterivian/?Valanginian	2344	7.5
------------------------?UNCONFORMITY?------------------------		
Early Portlandian/Late Kimmeridgian	2351.5	3.5
------------------------?UNCONFORMITY?------------------------		
Bathonian	2355	6
Early Bathonian	2361	9
Early Bathonian-Bajocian	2370	105
Earliest Bathonian-Early Bajocian (=Aalenian)	2475	120

Early Bajocian (=Aalenian)	2595	10
Early Bajocian-Toarcian	2605	70
Early Toarcian	2675	65
Late Pliensbachian	2740	160
Early Pliensbachian	2900	75
Sinemurian	2975	>50
TD	3025	

b) Table of lithostratigraphy

Lithostratigraphic Tops	Depth (KB)	Depth (MSL)	Thickness
Nordland Group (sea bed)	163.0 m	- 141.0 m	739.0 m
Utsira Formation	822.0 m	- 800.0 m	80.0 m
Hordaland Group	902.0 m	- 880.0 m	787.5 m
Rogaland Group	1689.5 m	- 1667.5 m	188.5 m
Balder Formation	1689.5 m	- 1667.5 m	60.5 m
Lista Formation	1750.0 m	- 1728.0 m	128.0 m
Shetland Group	1878.0 m	- 1856.0 m	462.0 m
Cromer Knoll Group	2340.0 m	- 2318.0 m	11.0 m
Viking Group	2351.0 m	- 2329.0 m	21.5 m
Draupne Formation	2351.0 m	- 2329.0 m	4.0 m
Heather Formation	2355.0 m	- 2333.0 m	17.5 m
Brent Group	2372.5 m	- 2350.5 m	231.5 m
Tarbert Formation	2372.5 m	- 2350.5 m	39.5 m
Ness Formation	2412.0 m	- 2390.0 m	83.0 m
Etive Formation	2495.0 m	- 2473.0 m	29.0 m
Rannoch Formation	2524.0 m	- 2522.0 m	71.0 m
Broom Formation	2595.0 m	- 2573.0 m	9.0 m
Dunlin Group	2604.0 m	- 2582.0 m	374.0 m
Drake Formation	2604.0 m	- 2582.0 m	83.5 m
Cook Formation	2687.5 m	- 2665.5 m	155.0 m
Amundsen Formation	2842.5 m	- 2820.5 m	135.5 m
Statfjord Formation	2978.0 m	- 2956.0 m	
TD	3025.0 m	- 3003.0 m	>47.0 m

2. LITHOLOGICAL DESCRIPTION

a) Summary

NORDLAND GROUP (163 - 902 m KB)

The Nordland Group consist of predominantly clay with occasional interbeds of sands. The clay is light to medium grey, soft and sticky, moderate calcareous, becoming non to slight calcareous in deeper section. The sands are generally loose quartz grains, clear to translucent, very fine to coarse grained, predominantly fine to very fine, subangular to subrounded and with poor sorting. Traces of lignite, shell fragments, glauconite and pyrite are found throughout the entire group. The lower part of the Nordland Group comprises a 80 m sandier facies, the Utsira Formation. The lower part is more silica cemented.

HORDALAND GROUP (902 - 1689.5 m KB)

This lithological unit consist of an upper pale grey to brownish grey clay, with minor sand layers, and a lower brownish grey to greenish grey claystone, with thicker sand and sandstone interbeds. The clay is generally soft and sticky, slight to moderate calcareous, sandy and/or silty in places, with common occurence of fossil fragments and glauconite. Traces of pyrite with associated smell fragments are also described. The sand is mostly clear quartz, very fine to fine grained, occasionally fine to coarse, subangular to rounded, loose, moderate to poorly sorted. The lower section claystone is soft to slightly firm, blocky, slight to very micromicaceous, non calcareous, with ambundance of glauconite. Traces of pyrite are also described throughout. The sands/sandstones of the lower section are generally similar to the upper section, but with predominance of medium to coarse grain sizes. This thick clastic unit is interrupted by a few distinct streaks of limestone and dolomite; cream coloured, buff, firm to hard, variably microcrystalline to sucrosic. Traces of brown to orange brown dolomite and pyrite spots are also described from one sample interval.

ROGALAND GROUP (1689.5 - 1878 m KB)

Balder Formation & Sele Formation 1689.5 - 1750 m KB)

The Balder Formation consist of claystones with stringers of tuff and tuffaceous claystone. The claystones are brownish grey and pale green grey, occational reddish brown, firm, blocky to subfissile and slightly calcareceous.
The tuff is pale grey to cream coloured, or rarely pale green grey as tuffaceous claystone, buff, firm to friable, silty or sandy (quartz grains) and non to slight calcareous. Traces of black and cream coloured altered feldspar and pyrite are found throughout the entire section. Occasional minor streaks of limestone and dolomite, as well as traces of silty sandstone, are also described. The Sele Formation is not possible to differenciate from the overall Balder lithology in this well.

Lista Formation (1750 - 1878 m KB)

The lithology of the Lista Formation is composed of a relatively homogenous, pale brownish grey claystone, occationally black to greenish grey coloured, soft to firm, blocky to subfissure, predominantly non to slight calcareous, with traces of pyrite and glauconite. Stringers of limestone, dolomite and tuff are recorded throughout the formation. The limestones are varicoloured yellow, orange to cream, hard and microcrystalline. The dolomite is reddish brown, moderately hard and sucrosic.

SHETLAND GROUP (1878 - 2340 m KB)

The Shetland Group lithology is composed of claystones and marls with frequent stringers of limestone and siltstones. Occasional traces sandstone and dolomite are described from the lower section. The claystones are predominantly pale brownish grey, similar to the claystone described from the Lista Fm. In addition, a pale brown claystone and rarely, a pale black to pale grey claystone are notable variations. The uppermost section are firm, blocky to subfissure and calcareous. There are also good traces of calcareous claystone and silt. Glauconite and mica are less common.
The marl is very pale grey, soft and silty, generally with gas charged porosity. The marly zones are less common below 2025 m KB. In the lower part of the Shetland group there is a thin sandstone of clear quartz, very fine grained and calcareous cemented.

CROMER KNOLL GROUP (2340 - 2351 m KB)

The Cromer Knoll Group in this well is comprising an upper typical red to brown, shaly claystone (shale) and a lower bioclastic limestone. The claystone is occasionally grey coloured, but still firm and often contains a clear to white sandstone, fine to medium grained, with angular and well sorted grains. The claystone, as well as the sandier parts, are silica/dolomite cemented. The limestone is brown to buff colured, generally originated from common bivalve debris with stylolitic alterations (described from one sidewall core specimen). This lower unit is relatively sandy/marly with abundance of pyrite throughout.

VIKING GROUP (2351 - 2372.5 m KB)

The Viking Group is present in this well, comprising a near typical apperance of organic rich sediments. The shales are dark grey to black, becoming generally grey coloured with depth, shiny, moderately hard and brittle with common striations. The section is non calcareous, carboniferous, very carboniferous to coaliferious where non silty, silty and earthy in parts. Micromica and disseminated pyrite are common throughout the section.

BRENT GROUP (2372.5 - 2604 m KB)

Tarbert Formation (2372.5 - 2412 m KB)

The Tarbert Formation is composed of sandstones with minor interbeds of shale and shaly coal. The sandstones are generally white to light grey, occasionally translucent, becoming darker grey in the lower section, predominantly fine to medium grained, with apparent fining upward sequences including occasional coarse grained layers. The grains are subangular to subrounded quartz, moderate to well sorted with intergranular matrix made up of carbonaceous and argillaceous material The sand sections are generally friable/soft to firm, with non calcareous kaolinitic cement and common mica. Good visual porosities are described from the sand sections. The shale is mostly restricted to thin beds, commonly grading into shaly coals, black, shiny with apparent cleavage. Disseminated and nodular pyrite mica and traces of accessory minerals are common.

Ness Formation (2412 - 2495 m KB)

The lithology of the Ness Formation is characterized by sandstone layers with interbedded claystones, shales and coal. The sandstones are generally described as clear, occasional white quartz, predominanlty fine to medium grained, moderate to well sorted in the upper section, becoming generally coarser grained and more variably sorted in the deeper section. The grains are subangular to subrounded and generally loosely non calcareous cemented. The claystone are grey, soft and sticky in the upper section, becoming shaly and silty in parts, with abundance of micromica and pyrite nodules throughout. The entire section has frequent occurences of black, shiny, brittle coal seems of varying thickness. Pyrite is notably seen associated with the coals.

Etive Formation (2495 - 2524 m KB)

The Etive Formation is composed of a clear to white, occasional translucent sandstone in the medium grainsize fraction, becoming generally finer grained, with moderate to poor sorting. The uppermost section is consisting of a very well sorted clear sand body, while the lowermost section contains an increased proportions of silty and micaceous, dark grey shale. Some traces of pyrite modules and mica has been recorded.

Rannoch Formation (2524 - 2595 m KB)

The Rannoch Formation is comprising a sandstone, with a gradual transition to siltstone in the lowermost section of this unit. The sandstone consist of clear quartz, with very fine to fine grain size, occasionally medium to coarse. The grains are generally subrounded, but traces of angular grain is noted. The sorting is moderate in the upper section, becoming gradually poorer in the lower part of the section. The Rannoch sand is non calcareous and have a good visible porosity in the section down to approx. 2570 m KB. The section below appears with an increase in cementation, predominantly calcite with mica. Some sand grains shows red brown stain suggesting ferrous cement. No hydrocarbon indications are noted.

Broom Formation (2595 - 2604 m KB)

The lithology of the Broom Formation comprises the transition zone down to a much tighter Dunlin shale facies lithology. The unit consists of three upward coarsening sand sequences, embedded by calcareous shale. The sands are clear to white, very fine to coarse, clean and loose quartz, with predominant red - brown stain. The shale is grey to brown, soft and sticky, becoming generally harder by depth and with traces of coal,shaly coal, silt and dolomite. No hydrocarbons are indicated.

DUNLIN GROUP (2604 - 2978 m KB)

Drake Formation (2604 - 2687 m KB)

This formation is predominantly claystones with traces of micaceous sandstone. The claystones are medium grey to brown, soft to more firm , shaly, becoming destinctive shale below 2635 m KB. The shale is sticky, silty and calcareous with common mica and nodular pyrite. Traces of limestone, coals and sands are noted.

Cook Formation (2687 - 2842 m KB)

The Cook Formation can in this well be separated into an upper clean sand section (Unit III), a more argillaceous sand section (Unit II), and a lower silty claystone/shale section (Unit I).
The uppermost zone of Unit III sandstone is clear, occasional white, predominantly very fine to fine grained, but also some coarse to very coarse fraction are present. Generally well sorted, loose, subangular, occational subrounded quartz grains. This section is becoming gradually more silty, argillaceous and calcareous. There are also traces of limestone, coated with pyrite and shaly coal. The Unit II sands are generally more calcareous, with pyrite (often seen as

uniform coating) and mica. They are off white, very fine, subang and well sorted. A firm, silty and calcareous claystone forms a gradual higher fraction of the lithology. The lowermost section,(Unit I) is a pale grey to medium grey clay/claystone , occasionally dark grey, very soft to firm, sticky to blocky, slight to moderate silty. Streaks of limestone and dolomite and rare coal seems are noted. The limestone/ dolomite is tan to brown, blocky and loose, occasionally crystalline.

Amundsen Formation (2842 - 2978 m KB)

The Amundsen Formation is composed of claystones, occasionally interbedded by limestones and sandstones. The claystone are medium grey to greyish brown, soft to firm, sticky and non to moderate calcareous. Some very calcareous, dehydrated, hard, shaly streaks are noted. The limestones are tan to buff, firm, occasionally loose, argillaceous and dolomitic in places. The sandstones are generally clear, very fine to fine grained , subangular to subrounded, mostly loose, but also well calcareous cemented in places. Nodular pyrite and microcrystalline mica are common througout the section.

Statfjord Formation (2978 - 3025 m KB (TD))

The Statfjord Formation consists of sand, generally clear, very fine to medium, occasionally coarse to very coarse and mostly loose. Occasionally also with clay or silica cemented bands, increasing with depth. Argillaceous, silty, cross laminated layers, medium grey to brown coloured, are described. Traces of coal, thin streaks of limestones are also present in the upper part of the section. Mica is seen as microcrystalline flakes in the sandstone. Only poor visible porosities are described from the upper section and no hydrocarbons are indicated.

b) Wellsite sample descriptions

WELLSITE SAMPLE DESCRIPTION

Country:	NORWAY	Area:	NORTH SEA	Field:	34/10-NW
Well no.:	34/10-18				
K.B.E.	22 meters	Company:	STATOIL/N. HYDRO/SAGA		
Hole size:	12 1/4"	Geologist:	E. UNDERSRUD	Date:	18.7.83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod. lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
230	90	CLAY, gy, soft, calc	HEAVY CONTAM.
	10	SD, vf-vcrs	OF CEMENT
	tr	LIGN	BG: 2.78% á 23
240	90	CLAY a/a	----"-----
	10	SD, vf-vcrs	
	tr	LIGN	
			BG: 0,8% á 248
250	100	CLAY a/a	----"-----
	tr	SD, vf-vcrs	
	tr	LIGN, smell frags, foss	GAMMA RAY 3m
			RESISTIVITY 4m
260	90	CLAY a/a	AFTER BIT ON
	10	SD, vf-vcrs	DLWD - TOOL
	tr	Foss,	
270	80	CLAY a/a	
	20	SD, vf-crs, predom vf-f	
	tr	LIGN, foss	
280	70	CLAY a/a Becoming more sticky	
	30	SD, vf-crs, predom vf, subang-subrnd	
	tr	LIGN, pyr, glauc	
290	70	CLAY a/a	
	30	SD a/a	
	tr	a/a	
300	50	CLAY a/a	
	50	SD a/a	
310	60	CLAY a/a	
	40	SD a/a	
	tr	LIGN, glauc,	
320	90	CLAY a/a less sticky	
	10	SD a/a	
	tr	LIGN, glauc	
330	90	CLAY a/a	
	10	SD a/a	
	tr	LIGN	
340	90	CLAY a/a	
	10	SD a/a	
	tr	LIGN, mica	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW

Well no.: 34/10-18

K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA

Hole size: 12 1/4" | Geologist: E. UNDERSRUD | Date: 18/7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
350	90	CLAY, gry, soft, calc, sticky	
	10	SD, vf-f, occ m-crs	
	tr	LIGN, glauc	
360	100	CLAY a/a	
	tr	SD, glauc, foss	
370	90	CLAY a/a	
	10	SD a/a	
	tr	LIGN, foss, ls (?), glauc	
380	80	CLAY a/a	
	20	SD a/a occ v.crs	
	tr	LIGN, pyr, glauc, ls	
390	90	CLAY a/a	
	10	SD a/a	
	tr	LIGN, pyr, glauc	
400	100	CLAY a/a occ lt gry	
	tr	SD a/a	
	tr	LIGN, pyr, glauc, chlorite (?)	
410	100	CLAY a/a	
	tr	SD a/a	
	tr	LIGN, glauc, chlorite (?)	
420	60	CLAY a/a	
	20	SD a/a	
	20	Smell frags / fossils	
	tr	LIGN, glauc, pyr	
430	80	CLAY a/a	
	20	SD a/a	
	tr	LIGN, glauc, pyr	
440	80	CLAY a/a	
	20	SD a/a	
	tr	LIGN, pyr	
450	80	CLAY a/a	
	20	SD a/a	
	tr	LIGN, pyr, foss, glauc	
460	70	CLAY a/a	
	30	SD a/a	
	tr	LIGN, pyr, foss, glauc, chlor	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | Geologist: E. UNDERSRUD | Date: 18/7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
470	90	CLAY, gry-ltgry, soft, calc, sticky	
	10	SD, vf-f, occ m-v.crs	
	tr	Shell, lign, glauc, pyr	
480	90	CLAY a/a	
	10	SD, vf-f, occ m-v.crs, p.srtd, ang - subrnd	
	tr	glauc, pyr, shell frags	
490	90	CLAY a/a	
	10	SD a/a	
	tr	pyr, lign, mica, shell frags	
500	80	CLAY a/a	
	20	SD a/a	
	tr	LIGN, glauc, pyr, foss, shell frags	
510	100	CLAY a/a	DIFFICULT TO ESTIMATE PERCENTAGE OF SD, CLAY WASH OUT
	tr	SD a/a	
	tr	LIGN, glauc, pyr, foss, shell frags	
520	90	CLAY a/a	
	10	SD a/a	
	tr	Lign, glauc, pyr, foss, shell frags	
530	90	CLAY a/a Sl calc	
	10	SD a/a	
	tr	pyr, pyr.foss, zirc, glauc, shell frags, lign	
540	100	CLAY a/a	
	tr	SD a/a becmng gradually fner grns	
	tr	pyr, foss, glauc, lign, shell frags	
550	100	CLAY a/a	
	tr	a/a	
560	100	CLAY a/a sl calc	
	tr	a/a	
570	100	CLAY a/a	
	tr	a/a	
580	100	CLAY a/a	
	tr	a/a	
590	100	CLAY a/a	
	tr	a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | Geologist: E.UNDERSRUD | Date: 18/7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
600	100	CLAY non calc	
	tr	SD a/a mostly vf-f	
	tr	a/a	
610	100	CLAY, gry-lt gry, soft, non-sl calc,stky	
	tr	SD, vf-med, ang-subrnd, pr srtd,	
	tr	foss, shell frags, lign, glauc, pyr	
620	100	CLAY a/a	
	tr	SD a/a	
	tr	a/a	
630	100	CLAY a/a	
	tr	SD a/a	
	tr	a/a	
640	100	CLAY a/a	
	tr	SD a/a	
	tr	a/a	
650	100	CLAY a/a non calc	
	tr	SD, vf-f, slty	
	tr	lign, pyr, glauc,	
660	100	CLAY a/a	
	tr	Sd, vf-f. slty	
	tr	lign, pyr, foss frags	
670	100	CLAY a/a	
	tr	SD a/a	
	tr	a/a	
680	100	CLAY a/a	
	tr	SD a/a	
	tr	a/a	
690	100	CLAY a/a	
	tr	SD a/a	DR. BREAK 713 m
	tr	a/a	MAXGAS 0.65%
700	100	CLAY a/a	
	tr	SD a/a	
	tr	a/a	

WELLSITE SAMPLE DESCRIPTION

Country:	NORWAY	**Area:**	NORTH SEA	**Field:**	34/10-NW
Well no.:	34/10-18				
K.B.E.	22 meters	**Company:**	STATOIL/N. HYDRO/SAGA		
Hole size:	12 1/4"	**Geologist:**	E.UNDERSRUD	**Date:**	19/7-83

		Lithologic description	**Shows & Remarks**
Depth (m/KBE)	**Lith. %**	**Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination**	
710	50	CLAY a/a	GOOD MARKER
	25	SD vf-m, ang-subrnd, pair-pr srtd	
	25	shell/fossils	MIN. FLUOR
	tr	glauc, lign	
720	100	CLAY, gry-lt gry, soft, non calc, stcky	
	tr	SD, vf-f, occ m. subang-subrnd	
		pr srtd, slty	
	tr	shells, foss, glauc, pyr, lign	
730	100	CLAY a/a	
	tr	SD/SLTST a/a	
	tr	a/a	
740	100	CLAY a/a	
	tr	SD/SLTST a/a	
	tr	glauc, pyr,	
750	100	CLAY, slty else a/a	
	tr	SD/SLST a/a	
	tr	glauc, pyr, lign	
760	100	CLAY, slty a/a	
	tr	SD/SLTST a/a	
	tr	glauc, chlor, pyr	
765	a/a		TD 12 1/4" HOLESECTION
770		samples mostly cement contaminated	17 1/2" HOLE
	90	CLAY: gry, set, stky, sl clalc, slty	MUSLOVITE (LCM)
	10	lithic frags vf gneiss/schist	STILL IN MUD
	tr	shell frags, pyr, sd	
780	90	CLAY: gry to pa gry a/a	
	10	SD: clr, mostly fn-med, some crs,	
		subrnd-rnd, loose	
	tr	shell frags (common), forams	
790	80	CLAY: a/a	
	20	SD: a/a but subang-rnd.	
	tr	shell frags, forams (common).	
800	90	CLAY: a/a	
	10	SD. a/a vfn-med.	
	tr	shell frags, forams	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | Geologist: E.UNDERSRUD | Date: 19/7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
810	90	CLAY: a/a v slty, sandy	
	10	SD: a/a	
	tr	shell frags, forams.	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist: D.G. PATTRICK | Date: 29/7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
820	80	CLAY: gry to pa gry, sft, stcky, slty and sdy, sl calc	OCC FRAGS OF METAMORPHICS.
	20	SAND: clr, v fn-fn-med, rarely crs, rnd, pr srtd,mostly loose, occ silicia cmt	
	tr	shell frags	
830	85	CLAY: a/a	NO SHOWS
	15	SD: a/a	
	tr	shell frags	
840	90	CLAY: a/a	"
	10	SD: vfn-fn, occ med.	
	tr	shell frags	
850	75	CLAY: a/a	
	25	SD: clr, fn-med, subrnd-rnd, loose	
	tr-5	common shell frags and forams	
860	60	SD: clr, mostly fn-med, occ vfn-crs, subrnd-rnd, mod-pr srtd, loose.	
	40	CLAY: a/a	
		common shell frags and forams, tr pyrite	"
870	90	CLAY: a/a mod calc	
	10	SD: a/a	
		common shell frags and forams	
880	85	CLAY: a/a	
	15	SD: more med-crs w/common vfn-fn.	
		frequent shell frags and occ forams.	"
890	100	CLAY: a/a	
	tr	SD: a/a	
	tr	shell frags, forams, pyr.	
900	100	CLAY: a/a	
	tr	SD: a/a	
	tr	shell frags, forams, pyr.	"
910	95	CLAY: Gry to pa gry, sft, sticky, slty and mod calc	
	tr	smell frags, pyr, forams	
	5	SD: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist: D.G. PATTRICK | Date: 27-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
920	95	CLAY: pa gry to gry, sft, stky, sl-mod calc	
	5	SD: clr, vfn-fn-med, rarely crs, mstly subrnd-rnd also subang, loose.	NO SHOWS
	tr	shell frags, forams, pyr	
930	95	CLAY: a/a bcmng more brn gry	
	5	SD: a/a	
	tr	shell frags, forams, one fish? shark? tooth?, pyr	NO SHOWS
940	95	CLAY: a/a v sdy and silty	
	5	SD: a/a	
	tr	shell frags, forams, pyr	
950	100	CLAY: a/a v sdy (fine)	
	tr	SD: a/a	
	tr	shell frags, forams	NO SHOWS
960	50	CLAY: pa brn gry a/a	
	50	SD: clr, mostly fn-med, also v fn and crs, subang-rnd, large gns are more rounded, loose, mod-pr srtd	
	tr	shell frags, pyr.	
970	90	CLAY: a/a	
	10	SD: a/a	
	tr	shell frags, forams, pyr	
980	95	CLAY: a/a common glau	
	5	SD: a/a	
	tr	shell frags, forams	
990	70	CLAY: a/a w/common glau pellets, variably bright green to dk grn black.	
	30	SD: a/a	
	tr	shell frags, forams, pyr	
1000	95	CLAY: a/a - less sandy abundant glau	
	5	SD: a/a	
	tr	shell frags	
1010	85	CLAY: a/a, abundant glau	
	15	SD: a/a	
	tr	shell frags, forams	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY	Area: NORTH SEA	Field: 34/10-NW
Well no.: 34/10-18		
K.B.E. 22 meters	Company: STATOIL/N. HYDRO/SAGA	
Hole size: 17 1/2"	Geologist: D.G. PATTRICK	Date: 27-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1020	80	CLAY: pa brn gry, sft, stky, sl slty and v.sdy (v fn), sl, calc, very very abundant fine, glauconite specks and larger pellets	
	20	SD: clr, mostly vfn-fn, also med-crs, subang-rnd, loose.	
	tr	shell frags, forams and pyr	
1030	90	CLAY: pa brn gry, sft, sticky, sandy (vfn), v abundant glauc, sl calc	
	10	SD: glr, vfn-med, crs, sbrnd-ang loose	
	tr	shell frags, forams	
1040	90	CLAY: pa brn gry, sft-sl frm, sticky, sdy, v.abundant glauc, sl calc, sponge spics.	
	10	SD: a/a	
	tr	a/a	
1050	90	CLAY: pa brn gry, sft-v.sl frm, sticky, sdy v. abundant glauc, sl calc, sponge spics	
	10	SD: a/a	
	tr	a/a	CLAY FIRMING
1060	90	CLYST: a/a, abundant glauc	UP TO CLYST
	10	SD: a/a	
	tr	shell frags, forams,	
1070	95	CLYST: a/a	
	5	SD: a/a	
	tr	shell frags, pyr, common glau	
1080	95	CLYST: a/a	
	5	SD: a/a	
	tr	pyr, common glau	
1090	95	CLYST: a/a	
	5	SD: a/a	
	tr	a/a	BECOMING MUCH
1100	95	CLYST: pa brn gry, sft-slfrm, sticky, blocky, sl sdy, common glauc, v sl calc	LESS CALCAREOUS
	5	SD: a/a	
	tr	pyr, sponge spics, forams	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
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Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters
Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2"
Geologist: D.G. PATTRICK
Date: 28-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1110	100	CLYST: pa brn gry, sft, blky, sl slty, occ glau grns - green to greeny black, non calc.	NO SHOWS
	tr	SD: clr, vfn-fn, subang - rnd, loose.	
	tr	forams, sponge spics?	
1120	100	CLYST: a/a occ glau.	NO SHOWS
	tr	SD: a/a	
	tr	forams, sponge spics	
1130	100	CLYST: more pa gry brn, sft, blky, sl slty, v sl micromic, non calc, rare glau	NO SHOWS
	tr	SD: a/a	
	tr	sponge spics scattered through the clyst	
1140	100	CLYST: a/a sft to v sl firm.	NO SHOWS
	tr	SD, sponge spics, glau, forams	
1150	100	CLYST: a/a occ glau.	NO SHOWS
	tr	SD: a/a	
	tr	forams, sponge spics	
1160	100	CLYST: pa gry brn, buff, sft to sl frm, blky, v sl micromic, sl slty/ sandy in parts, rare glau	NO SHOWS
	tr	SD: clr, vfn-fn a/a.	
	tr	sponge spics,	
1170	100	CLYST: pa brn gry to pa gry brn, occ pa gn gry, otherwise a/a. rare glau.	
	tr	frags of brown-black pyritised woody material, sponge spics	
1180	95	CLYST: a/a	
	5	SD: clr, fn-med, subrnd-rnd, loose	
1190	70	CLYST: a/a blky to occ subriss.	NO SHOWS
	30	SD: Clr, mlky, vfn-med, occ crs, subang to subrnd, rnd crs grns, loose	
	tr	pyr, glau, shell frags	
1200	70	CLYST: a/a	NO SHOWS
	30	SD: a/a, common muscovite flakes	
	tr	pyr, glau	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
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K.B.E. 22 meters
Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2"
Geologist: D.G. PATTRICK
Date: 28-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod. lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
1210	40	CLYST: pa brn gry, sft to sl frm, blky to subfiss, non calc, sl slty and sandy in parts.	
	60	SD: clr and mlky, v fn-med-crs, subang to rnd, larger grns are more rnd, pr srtd, loose, micaceous	NO SHOWS
	tr	GLAU: green-black pellets and smaller grns,	
	tr	pyr.	
1220	80	SD: a/a predom med grn.	NO SHOWS
	20	CLYST: a/a	
	tr	pyr, glau becoming more common and often a blue-green/turquoise colour	
1230	90	SD: a/a clr, mlky and frstd	NO SHOWS
	10	CLYST: pa brn gry, sft, stky-blky.	
	tr	glay, pyr	
1240	80	SD: a/a	
	20	CLYST: a/a	
	tr	glau, pyr	NO SHOWS
1250	60	SD: a/a v pr silica cmt in part	
	40	CLYST: pa gry brn and minor pa gn gry, sft to slyfrm, blky to occ sobfiss, non calc, sl micromica, sl slty	
	tr	glau, pyr (often in framboidal aggregates).	NO SHOWS
1260	50	SD: a/a pos becoming coarser	
	50	CLAY: a/a pa gry brn and pa gn gry	
	tr	shell frags, pyr, glauc, mica	
1270	40	SD/SST: a/a w/pr silica cmt	
	60	CLYST	
	tr	glau, pyr	NO SHOWS
1280	80	CLYST: pa brn gry - pa gn gry, sft-frm, blky - subfiss, micromica, pyr, non calc.	
	20	SD: a/a	
	tr	glau	
1290	90	CLYST: a/a	NO SHOWS
	10	SD: a/a	
	tr	Glau, mica, pyr	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY	Area: NORTH SEA	Field: 34/10-NW
Well no.: 34/10-18		
K.B.E. 22 meters	Company: STATOIL/N. HYDRO/SAGA	
Hole size: 17 1/2"	Geologist: D.G. PATTRICK	Date: 28-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1300	85	CLYST: pa brn gry and pa gn gry, sft-frm, blky-subfiss,micromica, non calc sl pyr	NO SHOWS
	15	SD: clr, mlky, fn-med-crs, subang-rnd, pr srtd, loose, crs grns more rnded, one foram. tr glau, mica	
1310	85	CLYST: predom pa gn gry and minor pa brn gry, otherwise a/a	
	15	SD: a/a	NO SHOWS
1320	70	CLYST: a/a	
	30	SD/SST: a/a	NO SHOWS
1330	55	CLYST: a/a	
	45	SD/SST: a/a only one or two pr cmtd frags, predom med grn, rare v. crs, better srtd than above	NO SHOWS
	tr	glau.	
1340	90	CLYST: a/a	
	10	SD/SST: a/a	
	tr	shell frags, forams, mica, glauc.	
1350	95	CLYST: a/a mlky	
	5	SST: clr, v. crs, subrnd-rnd, loose, poor sdrted	
	tr	a/a	
1360	95	CLYST: a/a	
	5	SD/SST: a/a	
	tr	a/a	
1370	95	CLYST: a/a	
	5	SD/SST: a/a	
	tr	a/a	
1380	95	CLYST: a/a	
	5	SD/SST: a/a	
	tr	glauc.	
1390	100	CLYST: a/a pa gry, gry, pa gn gry, pa gry brn	
	tr	SD/SST: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" **Geologist:** D.G. PATTRICK **Date:** 28-7-83

Depth (m/KBE)	Lith. %	Lithologic description	Shows & Remarks
		Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	
1400	100	CLYST: pa gry, gry, pa gn gry, pa gry brn, sft-frm, blky-subfiss, non calc, micromic	NO SHOWS
	tr	SD/SST: clr, mlky, med-crs, subrnd, loose, pr srtd.	
	tr	glau, mica	
1410	95	CLYST: A/a	
	5	SD/SST: a/a vfn-fn-med, occ crs.	NO SHOWS
	tr	a/a	
1420	85	CLYST: a/a	
	15	SD/SST: a/a and glau.	NO SHOWS
1430	60	CLYST: a/a	
	40	SD/SST: a/a mostly fn-med, mod srt	
	tr	glau, shell frag, pyr	NO SHOWS
1440	50	CLYST	
	50	SD/SST: a/a w/pr silica cmt in part	
	tr	glau, mica	NO SHOWS
1450	55	SD/SST: a/a vfn-crs, predom med, pr srtd	NO SHOWS
	45	CLYST: a/a	
	tr	pyr, glau, mica	
	tr	LST: buff, hard, microxln	
1460	70	SD/SST: a/a, subrnd-rnd, med (predom)	
	30	CLYST: a/a subrnd occ orange and pale gn grn	NO SHOWS
	tr	glau	
1470	50	SD: clr, rare orange-yel grns, vfn-med. crs, predom med-crs, subang-rnd, pr srtd, loose, micaceous (muscovite flakes)	NO SHOWS
	50	CLYST: a/a	
	tr	glau, pyr	
1480	60	CLYST a/a	
	40	SD/SST: a/a	
	tr	LST: buff, frm-hd, microxln	NO SHOWS
	tr	pyr, glau.	
1490	90	CLYST: a/a	NO SHOWS
	10	SD: a/a (prob cvg)	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist: D.G. PATTRICK | Date: 28-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1500	95	CLYST: a/a	NO SHOWS
	5	SD: a/a	
	tr	LST: a/a	
1510	90	CLYST: pa gn gry, brn gry, gry brn, sft-frm, blky-subfiss, sl micromica, non calc, v sl pyr	NO SHOWS
	10	SD: clr, fn-med-crs-vcrs, subrnd-rnd, loose	
1520	100	CLYST: a/a	NO SHOWS
	tr.	SD: a/a	
1530	100	CLYST: a/a	NO SHOWS
	tr	SD: a/a loose crs-med grns (prob cves)	
1540	100	CLYST: a/a	NO SHOWS
	tr	SD: a/a	
	tr	LST: tan, gry, white spks, hd	
1550	100	CLYST: mostly pa bry, med gry, pa brn gry, less gn gry, otherwise a/a	NO SHOWS
1560	100	CLYST: a/a but pa gn gry bec more pa blue gry and occ w/v fn pyr spks.	NO SHOWS
1570	100	CLYST: pa brn gry and pa blue-gn gry, a/a	NO SHOWS
	tr	DOL: crm to v pa gry, hard, sucrosic	
1580	100	CLYST: a/a also minor tan-yel brn, softer clyst	NO SHOWS
	tr	DOL: a/a sl pyritic in part, also brn to orange brn, hard, cryptoxln.	
1590	100	CLYST: brn gry, pa gn gry and pa blue-gr-gry, a/a	NO SHOWS
	tr	DOL: a/a (crm)	
1600	100	CLYST: pa blue-gn-gry and pa brn gry, sft frm, blky-subfiss, non calc, sl micromica and sl pyr	NO SHOWS
	tr	LST: buff, hd, microxln	
1610	100	CLYST: a/a	NO SHOWS
	tr	LST: a/a	

WELLSITE SAMPLE DESCRIPTION

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K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist: D.G. PATTRICK | Date: 29.7.83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1620	100	CLYST: pa bl-gn gry and pa brn gry, minor dk brn, sft-frm. blky-subfiss non calc, v sl micromica, pyr in parts	NO SHOWS
1630	100	CLYST: a/a w/rare glau	TR TUFF?
	tr	LST/DOL: crm, buff, frm-hd, variably microxln to sucrosic	
	tr	TUFF??: crm, v pa gry wh, spkld w/crm flecks, sft-frm.	NO SHOWS
		WIPER TRIP AT 1632 m	
LAT 1640	100	CLYST: a/a	
	tr	LST: crm, hd, microxln	NO SHOWS
	tr	TUFF?: buff, crm-pa nauve, spkld crm, frm, non calc	
1650	100	CLYST: mostly pa bl-gn gry a/a, also pa brn gry	NO SHOWS
	tr	LST: a/a	
	tr	DOL: tan, hd, cryptoxln	
1660	100	CLYST: a/a w/rare weathered/altered glau grns bec gen sl calcs	NO SHOWS
	tr	DOL: crm, hd, sucrosic	
	tr	?TUFF: pa gry w/crm spks, frm, and glassy spks	
1670	100	CLYST: a/a frm.	NO SHOWS
	tr	SLTY LST: tan, frm-fri	
	tr	SLTST: brn, frm, subfiss w/blk carb spks	
	tr	LST - DOL: a/a	
	tr	TUFF?: a/a	
1680	100	CLYST: pa bl gry to pa bl-gn gry, also pa-med gry, traces red brown, otherwise a/a	NO SHOWS
	tr	LST, DOL: a/a	
1685	100	CLYST:pa bl-gn gry and pa brn gry, occ rep brn, sl calc, otherwise a/a	NO SHOWS
	tr	LST: a/a	
	tr	TUFF: pa gntopa gry, spkld crm, frm, sli calc.	
	tr	PYR	
1690	100	CLYST: a/a	NO SHOWS
	tr	LST: a/a	
	tr	TUFF: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist:D.G.PATTRIC/PETTERSON | Date: 29.7.83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1695	100	CLYST: pa bl gry, pa bl-gn gry, pa gry, trace red brn, frm, blky-subfiss, subfiss, sl calc, sl pyr.	
	tr	TUFF: pa gry, rarely pa gn-gry, frm, crm spks (altered feldspars),non to v sl calc	
	tr	LST: crm, buff, frm-hd, microxln	VERY WEAK PA YELLOW SOLVENT FLUOR FROM LST AFTER ACIDISING AND CRUSHING.
1700	95	CLYST: a/a	
	5	TUFF: a/a	
1705	95	CLYST A/a	
	5	TUFF: pa gry, crm, rarely pa gn-gry (tuff clyst) frm-friable, crm spks and blk spks, non to v.sl calc, sl slty in part	ONE OR TWO TUFF FRAGS AND SLTY SST GIVE MOD YEL SAMPLE FLUOR AND MOD STR YEL WH CUT
	tr	DOL: tan, hd, cryptoxln	
	tr	SST: clr, v fn, friable, slty yel brn oil stain	
1710	85	CLYST: a/a	TR FLUOR FROM GRY SLTY TUFF A/A
	15	TUFF/TUFFACEOUS CLYST: a/a	
	tr	LST: a/a	
1715	85	CLYST: a/a	
	15	TUFF/TUFFACEOUS CLYST: a/a	
	tr	DOL: a/a	
	tr	pyr	
1720	80	CLYST: a/a still trace red brn.	TR SLTY TUFF: BRIGHT YELLOW-WH SAMPLE FLUOR; FAST STR WHITE WT:
	20	TUFF/TUFFACEOUS CLYST: pa gry, buff, occ pa gn gry, w/black and crm spks, occ vfn -slty qtz grns, non to sl calc. One frag w/yel brn oil stain	
	tr	DOL: buff, hd, sucrosic	
1725	75	CLYST: a/a	FEW SPECKS OF HYDROCARBON FLUORESCENIC IN SANDY TUFFACEOUS MATERIAL A/S
	25	TUFF/TUFFACEOUS CLYST: a/a but more sandy in part, v.fn-fn, subrnd qtz grns.	
	tr	LST: pyr a/a	
1730	75	CLYSTN: a/a	"
	25	TUFF/TUFFACEOUS CLYST: pa gry, buff, w/ black and crm-brn spks, occ more sandy in parts, qts grns a/a	
	tr	LST: red-brn, hard, sucrosic	
	tr	PYR	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
Area: NORTH SEA
Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters
Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2"
Geologist:D.G.PATTRIC/PETTERSON
Date: 30.7.83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1735	80	CLYST: a/a	"
	20	TUFF/TUFFACEOUS CLYST: a/a	
	tr.	lst. dol. pyr a/a	
1740	75	CLYST: pa gry, pa bl-gn gry, pa gry, occ pa gn, tr red brn, firm, blky-subfiss, sl calc, sl pyr.	
	25	TUFF/TUFFACEOUS CLYST: pa gry, buff, occ gngry w/black and crm spks	
	tr	LST: crm, buff, firm-hard, mixroxln	
	tr	pyr	
1745	80	CLYST: a/a, but occ more sandy w/vf sl qtz grns, slty	FEW SPECKS OF HC FLUORESCENCE IN SANDY TUFFACEOUS MATERIAL
	20	TUFF/TUFFACEOUS CLYST: a/a	
	tr	LST: a/a and occ pa brn, hard, microxln	
	tr	pyr	
1750	60	CLYST: a/a more pa brn than pa bl gry non calc	
	35	CLYST: pa gry, crm, soft, non-calc, sl pyr	a/a
	5	TUFF/TUFFACEOUS CLYST: a/a	
	tr	lst, pyr a/a	
1755	70	CLYST: a/a	a/a
	20	CLYST: a/a	
	10	TUFF: a/a	
	tr	lst, pyr, a/a	
1760	80	CLYST: pa brn, 10% bl-gry, pa gn, firm, blky-subfiss, sli calc, sli pyr.	
	10	CLYST: pa gry, crm, soft, non calc	
	10	TUFF/TUFFACEOUS CLYST: a/a	
	tr	lst, pyr, a/a.	
1765	85	CLYST: a/a, tr red brn. mostly pa brn gry (non calc)	
	5	CLYST: a/a	"
	10	TUFF/TUFFACEOUS CLYST: a/a, occ vfn-slty qtz grns	
	tr	lst, pyr a/a	
1770	95	CLYSTN: a/a	TRACE SILTY TUFFACEOUS MATERIAL WITH YEL-GOLD SAMPLE FLUOR, MOD STRD
	5	TUFF/TUFFACEOUS CLYST: a/a trace w/brn oil stain.	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
Area: NORTH SEA
Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters
Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2"
Geologist: D.PATTRICK/PETTERSON
Date: 30.7.83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod. lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
	tr	lst, pyr a/a lst is crm, yell, orange , hd, microxln.	YEL-WH STR CUT.
		TRIP FOR NEW BIT AT 1772 m	
LAT 1775	95	CLYST: pa gry, occ pa gn, firm, blky-subfiss, non-sl calc, sl pyr	
	5	TUFF/TUFFACEOUS CLYST: pa gry, mod soft-firm, w/black and pa gn spks.	
	tr	LST: crm, buff, hard, microxln	
	tr	ARG DOL: red brn, mod hard, microxln	
1780	95	CLYST: pa gry- pa grn gry, occ pa gn, firm, blky-subfiss, non-sl calc, sl pyr	NO SHOWS
	5	TUFF/TUFFACEOUS CLYST: pa gry, mod soft-firm, w/black and pa gn spks	
	tr	LST: crm, buff, hard, microxln	
		DOL: red brn, mod hard, microxln	
1785	100	CLYST: a/a, but w one clr qtz grns	"
	tr	LST, DOL: a/a .	
	tr	PYR: a/a	
	tr	TUFF: a/a	
1790	100	CLYST: dom pa gry - pa brn gry, w/rare pa gn, blky-subfiss, firm, non-sl calc	"
	tr	LST: crm, buff, mod hard, microxln	
	tr	TUFF: a/a	
	tr	PYR: a/a	
1795	100	CLYST: a/a	"
	tr	TUFF: a/a	
	tr	ARG.DOL: red brn, mod hard, sucrosic	
	tr	LST: a/a	
1800	100	CLYST: dom pa gry, occ brn gry, w/rare pagn, blky-subfiss non-sl calc	"
	tr	TUFF: a/a	
	tr	ARG.DOL, LST: a/a	
1810	100	CLYST: a/a, but occ mod soft, sl slty, non calc	"
	tr	TUFF: a/a	
	5-tr	LST: pa gn, firm, w/black and red brn spks.	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist: D.PATTRICK/PETTERSON | Date: 30/31-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1820	95	CLYST: pa brn gry, frm, blky-subfiss, non calc, sl slty, rare glau grns, occ/rare pa bl gry and grn gry.	NO SHOWS
	5	LST: wh-crm, frm, sucrosic	
	tr	TUFF: a/a, pyr.	
1830	95	CLYST: a/a	NO SHOWS
	5	LST: a/a and some red-brn, hard, sucrosic	
	tr	TUFF: a/a	
	tr	forams	
1840	95	CLYST: pa brn gry, frm, blky-subfiss, non calc, sl slty, rare glauc grns; occ pa bl gry and grn gry, w/rare clr qtz grns	NO SHOWS
	5	LST: wh-crm, frm, sucrosic; occ pa gn, firm, w/black and red brn spks.	
	tr	TUFF: pa gry, mod soft-frm, w/blck and pa gn spks	
	tr	pyr	
1850	100	CLYST: a/a	NO SHOWS
	tr	LST: a/a	
	tr	pyr	
1860	85	CLYST: pa brn gry, occ pa gn gry, frm, blky-subfiss, non calc, w/rare clr and buff qtz grns	NO SHOWS
	5	LST: wh-crm, mod soft-frm, sucrosic	
	5	DOL: crm, hd and sucrosic, also yel to yel-orng, hd, cryptoxln	
	5	SD: clr, med-crs, subang-subrnd, loose, occ w/calc cmt.	
	tr	pyr	
1870		a/a	
1875	85	CLYST: pa gry-pa brn gry, occ pa gn gry, frm, oc sl soft, blky-subfiss, non calc, sl slty	NO SHOWS
	5	LST: wh-crm, frm-mod hd, sucrosic	
	5	DOL: a/a	
	5	SD: clr, med-crs, subang-subrnd, loose	
1880	75	CLYST: a/a	NO SHOWS
	15	LST: wh, crm-buff, hard and sucrosic, occ pa brn gn, hard, also wh calcite	
	5	DOL: a/a	
	5	SD: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
Area: NORTH SEA
Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters
Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2"
Geologist:D.PATTRICK/PETTERSON
Date: 31-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
1885	85	CLYST: a/a	NO SHOWS
	5	LST: wh, crm-buff, hard and sucrosic, also microxln	
	5	DOL: red-brn-yel orng, had, cryptoxln	
	5	SD: a/a, occ w/calc cmt	
1890	75	CLYST: pa gry, bl brn gry, firm, blky-subfiss, non calc, sl slty-slty	NO SHOWS
	5	MRL: gry-wh, soft, slty	
	15	LST: wh, crm, hard, sixposic, occ red brn, hard microxln	
	5	SD: clr, med-coarse, subrnd-subang, loose, occ calc cmt	
	tr	DOL: crm, hd, sucrosic	
1895	65	CLYST: a/a, but oc pa blgn, sl-mod calc	NO SHOWS
	20	MRL: a/a	
	10	LST: wh-crm, occ pa grn, hard, sucrosic, occ microxln.	
	5	SD: a/a, occ w/calc cmt v v fn-fn	
	tr	SILT: pa gn-pa gry brn, frm, sub,fissile	
	tr	DOL: a/a	
	tr	PYR	
1900	75	CLYST: a/a	NO SHOWS
	10	MRL: gry-wh, soft, slty	
	10	LST: a/a	
	5	SD: a/a	
	tr	DOL: a/a	
	tr	SILT: a/a	
1905	80	CLYST: pa brn gry, fuff, med gry, pa bl-gn gry, frm, blky-subfiss, slty in parts, non to mod calc, occ glau	Still trace of tuff
	10	MRL: v pa gry, sft, slty	
	10	LST: wh, pa gry, tan, hd, microxln, also wh xln calcite	
	tr	SD: fn-crs, loose, subrnd qtz	
1910	95	CLYST: a/a v slty in parts, micromica	
	5	LST: a/a	
	tr	SST: crm, vfn-fn, subang-subrnd, calc cmt	
1915	90	CLYST: a/a mod calc, rare red brn, glau clyst	
	5	MRL: a/a	
	5	LST: a/a	
	tr	SD: med, subrnd loose	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist: D.PATTRICK/PETTERSON | Date: 31-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
1920	85	CLYST: a/a gen mod calc and slty + vfn qtz grns	
	10	MRL: a/a	
	5	LST: a/a	
	tr	SD: a/a	
1925	90	CLYST: pa gry, pa brn gry, minor pa gn gry, tr red brn, sft-frm, blky-subfiss sl slty/v-fn qtz grns, mod calc, rarely non calc, occ glau pellets (dk gn), pyr	
	5	MARL: v pa gry, sft, sl slty	
	5	LST: wh, crm, tan, frm-hd, microxln, also fibrous calcite	mineral fluor only
	tr	SST: crm, vfn-fn, subang-subrnd, silica cmt, fri, mica	
1930	80	CLYST: a/a	
	5	LST: a/a	
	15	MARL: a/a	
	tr	SST: a/a	mineral fluor only
1935	75	CLYST: a/a occ large glau pellets in clyst	
	15	MARL: a/a	
	5	LST: a/a	
	5	SST: a/a	
1940	90	CLYST: a/a	
	5	MARL: a/a	
	5	LST: a/a	
	tr	SD: med, loose, subrnd.	"
1945	80	CLYST: a/a less pa bl-gn gry clyst	
	15	MRL: a/a	
	5	LST: a/a	
	tr	PYR frags	"
1950	80	CLYST: pa brn gry, buff, pa gry and occ pa bl-gn gry, tr red brn a/a,	
	10	MRL: v pa gry, sft, blky	
	10	LST: crm, wh, tan, frm-hd, common xln calcite occ pyr. common microscopic calcite spheres (biogen or mineral?)	
	tr	SST: a/a	
	tr	PYR: glau a/a	
1955	85	CLYST: a/a	
	10	MRL: a/a	
	5	LST: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist:D.PATTRIC/PETTERSON | Date: 31-7-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
		common calcite spheres a/a, frequently embedded in the clyst.	
	tr	pyr and glau one foram.	
1960	90	CLYST: pa brn gry, also pa gry, pa gn gry and pa bl-gn gry, tr red brn, frm, mod calc, often flecked w/glau, often silty, micromica, embedded microscopic calcite spheres, v.sl. pyr.	mineral fluor only
	5	LST: white, tan, frm-hd, microxln	
	5	MARL: v pa gry, sft-frm, blky, sl slty	
1965	65	CLYST: a/a	"
	30	MARL: a/a	
	5	LST: a/a rare shell frags	
1970	60	CLYST: a/a with occ large glau pellets	
	40	MARL: a/a	"
	tr	LST: a/a also tan-yel	
1975	70	CLYST: a/a	
	30	MRL: a/a	
	tr	LST: a/a	
1980	70	CLYST: pa gry, pa brn gry, also pa gn gry, firm, mod calc, often silt, often flecked w/glau, emb miro calc	
	30	MARL: a/a	
	tr	LST: a/a, occ flecked w/pyrite	
	tr	FORAMS, pyrite	
1985	60	CLYST: a/a	
	35	MARL: a/a	
	5	LST: a/a	
	tr	pyr	
1990		a/a	
1995	70	CLYST: pa gry, pa brn gry, pa gn gry, tr red brn, firm, sli-mod calc, often slty and flecked w/glauc, embedded microscopic sphecical calcite	
	25	MARL: a/a	
	5	LST: white, tan,firm-hard,microxln, occ flecked w/pyr	
2000	65	CLYST: a/a	
	30	MARL: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist:RUUD/PETTERSEN/BARTMES | Date: 4-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
	5	MARL: a/a	
	tr	PYR	
1910 ST	70	CEMENT	
	30	CLYST: pa brn-gry, pa bl-gr, frm, subfiss, occ glau	Drillbreake at 1416 - looser cement
	tr	QTZ: clr, med-crs, subrnd	
	tr	PYR: microxln	
	tr	foss	
1920 ST	95	CEMENT	
	5	CLYST and tr a/a	
1930 ST	95	CEMENT	
	5	CLYST and tr a/a	
1940 ST	95	CEMENT	Drilling w/controlled ROP from 1930 to 1953 m on 1-2 m/hv
	5	CLYST: a/a	
	tr	a/a	
1950 ST	95	CEMENT	
	5	CLYST a/a	
	tr	a/a	
1960 ST	90	CEMENT	
	10	CLYST: brn-gry, soft, stky, mod calc	
	tr	LIMST: wh-tan, firm	More form. in the sample at 1962
1970 ST	80	CLYST: a/a	
	20	CEMENT	
	tr	LIMST: a/a	
1980 ST	90	CLYST: pa brn-gry, pa bl-cr, firm-hd, subfiss, non calc,	NO STKY CLY
	10	CEMENT	
	tr	LIMST: wh-tan, soft-hd,	
1990 ST	90	CLYST: a/a	
	10	CEMENT	
	tr	LIMST: a/a	
2000 ST		a/a	
2005	100	CLYST a/a becom. stky again	
	tr	CEMENT	
	TR	LST	
2010		a/a	
2015		a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 17 1/2" | Geologist: RUUD/BARTNES | Date: 6.8.83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2020	100	CLYST: brn-gry, pa bl-gr, sft-hd subfiss, non calc, occ stry	
	tr	LST: wh-tan, sft-frm, xln	
	tr	CMT	
2025	90	CLYST: brn-gry, occ pa bl-gr, sft-frm subfiss, occ sl calc,	12 1/4" hole htc x16 leak of 1.83
	10	CMT	
	tr	QTZ: clr, med, subrnd	
2030	90	CLYST: a/a	
	10	CMT: a/a	
	tr	QTZ: a/a	
	tr	PYR, microxln	
2035	100	CLYST: a/a first tr of pa bl-pa cr	
	tr	QTZ: a/a	
	tr	CMT	
	tr	PYR: a/a	
	tr	LST, wh-tan, sft-hd,	
2040		a/a	
2045	50	CLYST: a/a becomming very slty	Washing away more of the soft cly.
	50	SLT: calcite cmt, well srtd	
	tr	org. content	
	tr	PYR: microxln	
	tr	LST	
	tr	SD: clr qtz, v.f.-f, subang,	
2050	50	CLYST: brn-gry, set, occ frm-hd, non calc, stky	
	50	SLT: a/a	
	tr	a/a	
2055		a/a	
2060		a/a CLYST BECOMMING MORE STKY	
2065	100	CLYST: brn-gry, sft, non-sl calc, v stky, slty	
	tr	PYR: a/a	
	tr	LST: a/a	
2070	100	CLYST, SL SLTY a/a	
	tr	a/a	
2075	100	CLYST, SLTY a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
Area: NORTH SEA
Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters
Company: STATOIL/N. HYDRO/SAGA
Hole size: 8 1/4"
Geologist: RUUD/BARTNES
Date: 9-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
	tr	a/a	
2080	100	CLYST, SLTY a/a	
	tr	a/a	
2085	100	CLYST: brn-gry, sft, non-sl calc, v stky slty	
	tr	PYR: microxln	
	tr	LST: wh-tan, soft-firm, microxln	
2090		a/a	
2095		a/a	
2100	80	CLYST: a/a	
	20	SLT: brn-gryish, well srt, lse, calc cmt	
	tr	PYR: a/a	
2105	100	CLYST: a/a occ v. slty ALSO TR OF RED CLYST, V. SFT	
	tr	a/a	
2110		a/a	
2115		a/a	
2120		a/a	
2125	90	CLYST: a/a	
	10	SLTST: a/a occ grading to v.f-f sd	
	tr	a/a	
2130		a/a	
2135	95	CLYST a/a	
	5	SLTST a/a	
	tr	a/a	
2140	100	CLYST, brn-gry, tr red, non-sl calc stky, sft-frm, slty - v.slty	
	tr	SLTST a/a	
	tr	LST and PYR a/a	
2145		a/a	
2150		a/a	
2155		a/a	
2160		a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 8 1/4" | Geologist: RUUD/BARTNES | Date: 10-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2165	100	CLYST: gry, occ red-brn, sl calc, sft, occ frm, stky, slty	
	tr	SLTST: brn-gryish, well srt, lse calc cmt grd to vf-f-sd	
	tr	LST: wh-tan, sft-frm, microxln	
	tr	PYR: microxln	
2170	90	CLYST: a/a	
	10	SLTST: a/a	
	tr	a/a	
2175	80	CLYST: a/a	
	20	SLTST	
	tr	a/a	
	tr	SD, clr qtz, subrnd, vf-f,	
2180	95	CLYST	
	5	SLTST	
2185	100	CLYST: a/a	
	tr	SLTST: a/a	
	tr	LST: a/a	
	tr	PYR: a/a	
2190	100	CLYST: a/a v.slty	Sample from desilter to prove quite a lot of silt comming up.
	tr	SLTST: a/a	
	tr	SD, clr qtz, vf-f, subang	
	tr	LST and PYR: a/a	
2195		a/a	
2200		a/a	
2205		a/a Silt grading to v.fine sand.	
2210		a/a Less silty.	
2215		a/a Clyst becomming v.slty again.	gas peak 2213 m 0,64%
2220	100	CLYST: a/a slty	
	tr	SLTST: a/a	
	tr	LST and PYR: a/a	
2225	90	CLYST: gry, sft, sl calc-calc, stky,slty	
	10	MRL: gry, frm, blky,	
	tr	LST: wh-tan, microxln	
	tr	PYR: microxln	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 8 1/4" **Geologist:** RUUD/BARTNES **Date:** 10-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod. lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
2230	85	CLYST: gry, sft, sl calc-calc, stry slty occ v.slty	
	5	MRL: gry, frm blky	
	tr	LST: wh-tan, sft-frm, microxln	
	10	SLST: brn, gry, clr, well srt, lse, calc cmt, grading to vf sd	
	tr	PYR: microxln	
	tr	SD: cir qtz, vf-f, subrnd	
2235		a/a	
2240	90	CLYST: a/a	Samples stoned? Lignosulfate.
	10	SLST: a/a	
	tr	MRL	
	tr	LST	
	tr	PYR	
2245	90	CLYST: a/a	Br. yel.fluor fast str.milky wh cut
	10	SLST: a/a	
	2	SST: CLR, vf-f, subang, lse	
	tr	LST,PYR, MRL: a/a	
2250		a/a	a/a
2255		a/a	a/a
2260		a/a	a/a
2265	50	MRL: gry, frm, blky	a/a
	40	CLYST: a/a	
	10	SLST: a/a	
	tr	SST	
	tr	PYP	
	tr	LST	
2270	80	MRL a/a	a/a
	20	CLYST a/a	
	tr	SLST	
	tr	SST	
	tr	PYR	
	tr	LST	
2275		a/a	a/a
2280		a/a	a/a

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
Area: NORTH SEA
Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters
Company: STATOIL/N. HYDRO/SAGA
Hole size: 8 1/4"
Geologist: RUUD/BARTNES
Date: 10-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2285	80	MRL: gry, frm	Br. yellow flour
	20	CLYST: gry, sft-frm, slty, non-sl calc, stky	fast str milky wh cut
	tr	SST: clr, vf-f, subang, lse	
	tr	LST: wh.tan, mod hd	
	tr	SLST: brn, fri, well srtd	
	tr	DOL: lt brn, hd, xln, tr pyr	
2290		a/a	"
2292.5	90	MRL: a/a	"
	5	CLYST: a/a	
	tr	a/a	
2295	80	MRL: a/a	"
	15	SLST: a/a	
	5	CLYST: a/a	
	tr	a/a	
2297.5		a/a	"
2300	80	MRL: a/a	"
	15	SLST: a/a	
	5	DOL: a/a	
	tr	a/a	
2302.5		a/a	
2305	95	MRL: a/a	in the sst
	5	SLST: a/a	
	5	DOL: a/a	
	tr	SST: brn-clr, vf-f, subang, fri, micromic	
2307.5		a/a	"
2310		a/a last tr of sst	"
2312.5		a/a	"
2315		a/a	"
2317		a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 12'4 | Geologist: GRACE/BARTNES/VETTI Date: 11-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod. lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
2320	100 tr	CLY: med gry grn, sft, stcky, non calc, non slty PYR: nods	
2322.5	100 tr	a/a w/ SD: clr, vf, ang, gtz, lse, w.srtd	
2325		a/a	
2327.5	100	a/a: but inc. calc	
2330	100 tr	a/a w/ SD: clr, med-f, sub ang-sub rnd, lse, qtz	
2332.5	100 tr tr	a/a w/ SD: inc f-vf PYR: nods	
2335	100	a/a	
2337,5	100	a/a w/ inc sd content	
2340	50 50 tr	CLY: a/a SD: wh, occ clr, f, qtz, shattered frags f-med, ang, w, srtd, w. cmtd, v.calc shows PYR: nods, glauc	Mod bri yellow fluor. Mod bri pale whitish yellow rapid bloom cut.
2342.5	100	SD: cmtd frags above with inc. red brn colouration, occ crs frags.	
(2343.5 bottoms up)	tr	PYR, GLAUC	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4 **Geologist:** GRACE/VETTI/ALPASLAN **Date:** 13-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2370.0	100	CLY: dk gry, sft, stcky, non slty, non clc, pyr, occ carb flecks	NO SHOWS
	tr	PYR: nods,	
	tr	SD	
2372.5	50	CLY: a/a	
	50	SD: cir, redom med, also f and crs, qtz, w std, lse, sub and - sub rnd	no shows
	tr	PYR: nods	
2375	95	SD: a/a but predom crs, vw srtd	no shows
	5	Cly: a/a	
	tr	PYR: nods	
2376.5	95	SD: clr predom med, also f and crs, else a/a	no shows
	5	CLY: a/a	
	tr	PYR: nods	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4 | Geologist: GRACE/VETTI/ALPASLAN Date: 14-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2400	90	SD: clr-wh, f-med, also crs, qtz, mod srtd, lse, subang - subrnd	no shows
	10	CLY: gry - dr gry, non slty, non calc, non stcky	
	tr	nod pyr, coal, mica	
2405		a/a	no shows
2410	50	CLY: a/a	no shows
	50	SD: a/a, predom med-crs	
	tr	nod pyr, coal, mica	
2415	50	SD: a/a	no shows
	40	CLY: a/a	
	10	COAL: shiny, brittel, blk	
	tr	nod pyr	
2420	70	CLY: gry, sft, stcky, non slty, con calc	no shows
	20	SD: clr, occ wh, predom med, some crs and f, qtz, mod srtd, lse, subang - subrnd	
	10	COAL: a/a	
	tr	nod pyr, coal	
2425	70	SD: a/a, but predom. med, v w srtd,	
	20	COAL: a/a	
	10	CLY: a/a	
	tr	nod pyr	
2430	70	SD: a/a, med, also vr, occ f and crs, poor srtd	
	20	COAL: a/a	
	10	CLY: a/a	
	tr	nod pyr	
2435	60	SD: a/a	
	20	CLY: a/a, but slty, non sticky	
	20	COAL: a/a	
	tr	a/a: inc nod pyr	
2440	50	SD: a/a, but f-med, occ crs, w srtd,	
	30	COAL: a/a	
	20	CLY: a/a, but stcky	
	tr	a/a	
2445	50	SD: a/a, but f-med, also vf and crs, poor srtd	
	25	CLY: a/a	
	25	COAL: a/a	
	tr	nod pyr	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | **Geologist:** GRACE/VETTI/ALPASLAN **Date:** 15-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2450	80	SD: clr, occ wh, predom f-med, also vf and crs, poor srtd, qtz, lse, subang - sub rnd	
	20	CLY: gry, sft, stcky, slty, non calc,	
	tr	coal	
2455	80	SD: a/a f-med, occ crs,	
	10	CLY: a/a	
	tr	coal, nod pyr	
2460	90	SD: a/a, f-med, occ crs, v w srtd	
	10	COAL: shiny-dull, brittle, blk	
	tr	cly, nod pyr	
2465	90	SD: a/a, predom med, also f and crs, mod srtd	
	10	COAL: a/a	
	tr	pyr, cly	
2470	90	SD: vf-crs, occ granules, poor srtd, lse	
	5	COAL: a/a	
	5	SHL: slty, mic, dk gry	Cutting of clyst/ sh now appearing
	tr	pyr nods, mica, cmt dvf sst, sml	
2475	85	SD: a/a	
	10	CLY/CLYST: a/a	
	5	PYR: nods	
	tr	COAL: vf-f cmtd sst, mica	
2480	50	SD: mod srtd, predom med, more rnd else a/a	
	45	CLYST: a/a occ, shly, micmic	
	5	PYR: nods	
	tr	MICA	
2485	95	SD: med, occ, crs, good srtd, else a/a	
	5	CLYST/SHL: a/a	
	heavy tr	MICA, PYR NODS ,COAL	
2490	90	SD: a/a	
	5	CLYST/SHL: a/a	End of string gers and slow ROP
	5	COAL	
	tr	CMTD f sst, mica, pyr nods	
2495		a/a: but sh crser sd	
2500	100	SD: a/a v.clean sd	
	tr	coal, clyst/sh, mica, pyr nods,	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | Area: NORTH SEA | Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | Company: STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | Geologist: GRACE/VETTI/ALPASLAN Date: 15-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2505	100	SD: a/a	
	tr	a/a	
2510	100	SD: clr, wh, transl, f-granules, predom med, clean, lse, qtz, predom good srtd, sub ang - predom sub rnd	NO SHOWS
	tr	CLYST/SHL, pyr nods, mica,	
2515	100	SD: inc in f producing poor-mod srtg, else a/a	
	tr	a/a	
2520		a/a	
2525		a/a	
2530		a/a	
2535		a/a	
2540		a/a	
2545	100	SD: a/a	
	heavy tr	COAL + nods pyr	
2550	100	SD: a/a	
	heavy tr	Coal, mica	
	tr	pyr nods	
2555	100	SD: inc poorly srtd w/inc f sd+slt else a/a	
	tr	Coal, mica, nods pyr	
2560	100	SD: predom f+vf sd, slty, occ granule else a/a	
	tr	a/a	
2565	100	SD: mod srtd, predom f, occ vf and med, some crs, else a/a	
	tr	a/a	
2570	100	SD: f-crs, predom f-med, poorly srtd inc slty, else a/a	
	tr	inc coal, else a/a	
2575	100	SD: vf-crs, predom f-med, poorly srtd inc slty, crs grns ang, else aS/a	
	heavy tr	CLY, else a/a	
2580	100	SD: Inc f, slty, a/a	
	tr	: coal, nod pyr, inc mic.	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" **Geologist:** GRACE VETTI/ALPASLAN **Date:** 15-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2585		SD: Inc f, slty, a/a : Coal, nod pyr, inc mic. SD: vf-med, some crs grns, subang-subrnd mod srtd, else a/a tr: mica, coal, nod pyr, cly	
2590	80	SD: clr, wh, transl, vf-med, occ crs, clean, lse, qtz, pred good srtd, subrnd, crs grns subang-ang, slty	
	20	CLY: gry-brn, sft, stcky,	
	tr	coal, mica, nod pyr	
2595		a/a but SD lsely cmt (non calc) i/p	
2600	50	SD: a/a w/inc granules + redbrn staining	NO SHOWS
	50	CLY: a/a	
2605	95	SD: a/a	
	5	CLY: a/a	
	tr	a/a	
2607,5	50	SD: a/a w/some grnsh yellow min grains	
	50	CLY dev. some brn colouration, else a/a	
	tr	a/a, some slty, dolom, buff-tan, hd	
2610	50	SD: vf-granules, poorly srtd, red brn stain else a/a	
	50	CLY: a/a	
	tr	a/a, inc slty dolom	
2612,5	50	SD: a/a	
	50	CLY: a/a	
	tr	a/a	
2615	60	CLY: a/a	
	40	SD: clr-wh transl, subang-ang, else a/a	
	tr	a/a	
2617,5	90	CLY: a/a	
	10	SD: vf-crs, pred med, subang-subrnd, crs grns, occ ang,	
	tr	a/a	
2620	80	CLY: a/a	
	20	SD: pred f, else a/a	
	tr	a/a, decr slty dol	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY	**Area:** NORTH SEA	**Field:** 34/10-NW
Well no.: 34/10-18		
K.B.E. 22 **meters**	**Company:** STATOIL/N. HYDRO/SAGA	
Hole size: 12 1/4"	**Geologist:** GRACE/ALPASLAN	**Date:** 17-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2622,5	90	CLY: dk gry, sft, stcky, slty, calc, occ carb flecks	NO SHOWS
	10	SD: clr, occ wh, predom med, also some vcrs, lse, qtz, sub ang-sub rnd, vcrs grains, occ ang.	
	tr	coal, pyr nods, mica, slty dol, brn min grains	
2625	90	CLY: occ brn colouration, else a/a	
	10	SD: a/a	
	tr	a/a	
2627,5	100	CLY: gry-med gry, else a/a	
	tr	SD, some wh-tan, frm lst, else a/a	
2630	100	CLY: a/a	
	tr	a/a	
2632,5	100	CLY: a/a	
	tr	sd, else a/a	
2635	100	SHL: med-dk gry, frm, stcky, slty, calc mica	
	tr	a/a	
2637,5	100	SHL: a/a	
	tr	dissem. pyr, else a/a	
2640	100	SHL: a/a	
	tr	a/a	
2642,5	100	SHL: a/a	
	tr	a/a	
2645	100	SHL: mod calc, occ non calc, else a/a	
	tr	f-med cmtd sst, else a/a	
2647,5	100	SHL: predom non calc, else a/a	
	tr	a/a	
2650	100	SHL: frm-mod hd, subfiss i/p, occ slty, else a/a	
	tr	a/a	
2652,5	100	SHL: lt gry, slty, v mic, more calc, else a/a	
	tr	lst flecked w/pyr, inc pyr, else a/a	
2655	100	SHL: non slty, mic mic, else a/a	
	tr	a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" **Geologist:** GRACE/ALPASLAN. **Date:** 17-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2657,5	100	SHL: a/a	
	tr	dec coal and pyr nods, few sd grains.	
2660	100	SHL: gry, predom mod hd, inc calc, else a/a	
	tr	lst wh, frm-mod hd, sucrosic, else a/a	
2662,5	100	SHL: predom gry, occ dk gry, frm-mod hd, predom non calc, occ calc, else a/a	
	tr	some wh flecked w/brn w/brn min grains, else a/a	
2665	100	SHL: gry-med gry, calc i/p, else a/a	
	tr	wh-pa gry lst, some red-brn min grains, else a/a	
2667,5	100	SHL: predom calc, occ non calc, else a/a	
	tr	inc lst and pyr nods, else a/a	
2670	100	SHL: calc, else a/a	
	tr	a/a	
2672,5	100	SHL: med gry, predom calc, occ non calc	
	tr	dec lst, some dk gry shl, else a/a	
2675	100	SHL. med gry, predom calc, occ non calc	
	tr	dec lst, some dk gry shl, else a/a	
2677,5	100	SHL: inc carb flecks, else a/a	
	tr	a/a	
2680	100	SHL: a/a	
	tr	a/a	
2682,5	100	SHL: a/a	
	tr	a/a	
2685	95	SHL: lt gry-med gry, predom calc and mic where non slty, occ non calc slty w/mica, else a/a	
	5	SD: clr-trans, f-med and some crs, qtz, lse, sub ang	
	tr	a/a	
2687,5	90	SD: predom clr, occ wh, predom f-med but also some v crs, poor, srtd, qtz, lse, sub ang, occ subrnd	
	10	CLY: a/a	
	tr	some shly coal, else a/a	
2690	90	SD: a/a	
	10	CLY: lt gry where predom calc, med gry where non calc, slty where non calc and non slty where calc, else a/a	
	tr	inc wh silty lst, occ lst, coated w/pyr, inc pyr, and shly coal, else a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" **Geologist:** GRACE/PATTRIC/ALPASLAN **Date:** 17-8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2692,5	90	SD: predom mod srtd, else a/a	NO SHOWS
	10	CLY: dk gry, else a/a	
	tr	a/a	
2695	90	SD: a/a	NO SHOWS
	10	CLY: a/a	
	tr	a/a	
2700	95	SD: clr, f-med, well srtd, else a/a	NO SHOWS
	5	CLY: a/a	
	tr	a/a	
2702,5	100	SD: clr, fn-med, ang-subang, occ subrnd, well srtd,loose (prdb calc cmt at depth) cos common calcite frags and occ calc cmt sst frags	NO SHOWS
	tr	CLYST: gry to dk gry, frm, slty mic	
	tr	PYR: nods, musscovite flakes (from SD)	
2705	95	SD: a/a	NO SHOWS
	5	CLYST: a/a	
	tr	pyr and mica: a/a	
2707,5	95	SD: a/a but a few grns w/gry colour and occ w/v thin pyr coating (like a gold spray paint layer).	NO SHOWS
	5	CLYST: a/a	
	tr	PYR. mica: a/a	
2710	90	SD: a/a	NO SHOWS
	10	CLYST: a/a	
	tr	pyr and mica (bec more abundant)	
2712.5	90	SD: a/a	NO SHOWS
	10	CLYST: a/a	
	tr	a/a	
2715	50	SD: crl, frstd, pa gry, vfn-med, otherwise a/a	NO SHOWS
	50	CLYST: gry, frm, slty, micromica, mica, calc	
	tr	pyr. mica: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 **meters** | **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | **Geologist:** GRACE/PATTRIC/ALPASLAN | **Date:** 18/8-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2717.5	50	SD: clr + gry (often w/a gold-gry v.thin pyr coating), vfn-med, ang-subang, occ subrnd, mod srtd, calc cmt in parts	NO SHOWS
	50	CLYST: gry, frm, micromica, sl slty, calc	
	tr	pyr (nodular), mica (muscovite flakes)	
2720	85	SD: clr. gry a/a, fn-med, mod well srtd a/a	NO SHOWS
	15	CLYST: a/a	
	tr	pyr (nodular) and mod common, mod common muscovite flakes	
2722,5	85	SD: a/a	NO SHOWS
	15	CLYST: a/a	
	tr	a/a	
2725	90	SD: mostly fn else a/a	
	10	CLYST: a/a	
	tr	mica more abundant, occ pyr nodules	NO SHOWS
	tr	DOL: brn, hd	
2727,5	70	SD: a/a	
	30	CLYST/CLY: a/a	NO SHOWS
	tr	a/a	
2730	60	SD: a/a	
	40	CLYST: a/a	
	tr	mica, lst, cmtd sst (sl calc)	
	heavy tr	Pol, pyr nods	L.A.T.
2732,5	60	CLYST: a/a bec sltst, brn col w/black carb specks, prod dk gry col, mic,mic,	
	40	SD: a/a	
	tr	DOL: pyr	
2735	80	CLYST: a/a	To sm samples
	20	SD: a/a inc f sd + slt	
2740		a/a cont. inc in f. sd + slt	
2745	60	CLYST: a/a	
	40	SD: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 **meters** | **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | **Geologist:** GRACE/PATTRIC/ALPASLAN | **Data:** 18-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2750	60	SD: wh, clr-transl, vf-f, occ med + granules, good srtg, predom subang-sub rnd, occ cmtd calc	
	40	CLYST/CLY: lt gry, sft, v.slty + sdy, carb frags, argill, pyr i/p, v.mic, mic mic	
	tr	SLTST: dk brn gry, frm, blcky, v.slty, mic, micromic, occ pyr	
	tr	pyr nods, coal, mica, lst/dol	
2755	50	SD: a/a	
	50	CLYST/CLY: a/a	
	tr	a/a	
2760		a/a	
2765		a/a	
2767,5	80	CLYST: a/a markedly less slty, still mic	Back to 2 1/2m samples
	20	SD: a/a	
2770		a/a	
2772,5		a/a	
	tr	continuing pyr nods, mica	
2775		a/a	
2777,5		a/a	
2780	95	CLYST: a/a	
	5	SD dec noticeably	SD/SST: PROB CAVINGS.
2782,5	95	CLYST: lt gry-med gry, sft-frm, sl slty, sl calc	
	5	SD/SST: clr, mlky, vfn, loose or calc cmtd	
	tr	LST: tan, crm, frm, arg.	
	tr	pyr nodules	
2785	95	CLY/CLYST: a/a micromica	cly is v.sft in cuttings but must be well consol at depth
	5	SD/SST: a/a	
	tr	pyr, lst	
2787,5	95	CLY/CLYST: a/a sl-mod slty	
	5	SD/SST: a/a	
	tr	pyr nods, lst, coal, occ woody structure in pyr frags.	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 **meters** **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" **Geologist:** GRACE/PATTRIC **Date:** 19-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
2790	90	CLYST: pa gry, gry, occ dk gry, sft-frm, blky td subfiss in part, sl-mod slty, micromica, sl calc, occ carb flecks and COALY FRAGS	NO SHOWS SST/SD MIGHT BE CUGS! BUT PROB DRILLED FORMATION.
	10	SD/SST: clr, vfn-fn, mostly subang, loose to poorly consol w/calc cmt, mica, no-show, often slty, poor vis por	
	traces	LST: tan, buff, crm, frm, arg. PYR: nodular coaly frags	
2792,5	80	CLYST: a/a	COMMON PIPE DOPE IN SAMPLES.
	10	SD/SST: a/a	
	10	LST/DOL/LST: a/a	
	traces	a/a	
2795	85	CLYST: a/a	ONE FRAG OF SST W/MOD YELLOW-GOLD SAMPLE FLUOR AND V.SLOW DIFFUSE BLOOMING YEL-WH SOLVENT CUT PROBABLY CAVED
	10	SD/SST: a/a	
	5	LST/DOL: a/a	
	tr	a/a	
2797,5	95	CLYST/CLY: (v.sft and stky in cuttings a/a a/a	
	5	SD/SST: a/a	
	tr	pyr, lst/dol, coal frags (rarer): a/a	
2800	95	CLY/CLYST: a/a	NO SHOWS
	5	SD/SST: clr + mlky, fn-slty, mostly loose, a/a	
	tr	good trace DOL/LST: a/a also occ coaly frags, nodular pyr, one microfossil (tubular).	A few frags of black "plasticy" "rubbery""greasy " "bituminous" material(contamination from rig)
2802,5	85	CLY/CLYST: a/a	
	5	SD: a/a	
	10	LST/DOL: a/a	
	tr	pyr, coaly frags	
2805	90	CLY/CLYST: a/a	
	5	SD/SST: a/a	
	5	LST/DOL: a/a	
	tr	a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" **Geologist:** GRACE/PATTRICK **Date:** 19-08-83

Depth (m/KBE)	Lith. %	Lithologic description	Shows & Remarks
		Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	
2807,5	90	CLY/CLYST: pa gry-med gry, (v.sft and stky in cuttings, gry brn, occ frm and subfiss, sl slty, micromic, occ carb flecks and small coaly frags	
	5	SD/SST: clr and mlky, vfn-fn, mostly loose, occ calc cmt, often slty and mica pr vis por	NO SHOWS
	5	LST/DOL: tan, buff, crm, off wh, frm-rarely hd, arg	
	tr	pyr (nodular), coaly frags	
2810	90	CLY/CLYST: a/a	
	5	SD: a/a	
	5	LST/DOL: a/a	
	tr	com nodular pyr, occ coaly frags	
2812,5	90	CLY/CLYST: a/a	
	5	SD: a/a	
	5	DOL/LST: a/a	
	tr	a/a	
2815	95	CLY/CLYST: a/a also w/red brn woody or micaceous like colouring	Common frags of black "rubbing plasticy"material contamination from rig!!
	tr	SD: a/a	
	5	DOL/LST: tan, buff, crm, frm-hd, arg	
	tr	nodular pyr, rare coaly frags	
2817,5		a/a	
2820		a/a	
2822,5		a/a	
2825		a/a	
2827,5	90	CLY/CLYST: a/a	
	5	SD: a/a	
	5	DOL/LST: a/a	
	tr	a/a	
2830	50	SD: a/a	
	45	CLY/CLYST: a/a	
	5	DOL/LST: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY
Area: NORTH SEA
Field: 34/10-NW
Well no.: 34/10-18
K.B.E. 22 **meters**
Company: STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4"
Geologist: GRACE/PATTRICK
Date: 19-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2832,5	50	CLY/CLYST: slty, mic, dk gry brn, frm some hd + more shly pieces but rare, mod calc, micro ic, dissem pyr i/p, carb flecks i/p	
	45	SD: clr-transl, wh, vf-f, predom lse, occ frm calc cmtd sst, slty, occ granules	
	5	DOL/LST: dk brn-buff, arg, frm	
	tr	nod pyr, coal frags	
2835	50	CLY/CLYST: a/a	Slow ROP's - argill lsts rarely seen as such in samples but as vf sd+slt
	50	SD: a/a	
	tr	a/a inc lst/dol	
2837,5	70	CLY/CLYST: a/a	
	30	SD: a/a	
	tr	LST/DOL, nod + xl of pyr	
2840	85	CLY/CLYST: a/a	
	15	SD: a/a	
	tr	LST/DOL	
2842,5	85	CLY/CLYST: a/a	
	15	SD: a/a	
	tr	LST/DOL, nod pyr	
2845	25	CLY/CLYST: gry, gry brn, predom sft + stky, occ frm/and subfiss, micromica, slty, sl calc occ nod pyr, dissem pyr and rare carb flecks	NO SHOWS
	15	SD: clr, vfn-fn, subang-subrnd, loose, rarely calc cmt, slty, mica	
	10	LST: tan, buff, frm, v arg	
2847,5	85	CLYST/CLY: more frm, subfiss, mod gry brn, non to sl calc, slty ip, micromica, often w/carb flecks, common nodular pyr, occ euhedral.	
	10	SD/SST: a/a but more cmtd, tight	
	5	LST:S a/a	
2850	80	CLYST: a/a + common nodular pyr	
	10	SD/SST: a/a	
	10	LST: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" **Geologist:** GRACE/PATTRICK **Date:** 20-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2852,5	85	CLYST: predom soft, stky lt gry clay (hydrated) also frm, subfiss, sl slty, sl micromica, sl-mod calc, occ carb flecks	NO SHOWS
	5	SD/SST: clr to v pa brn, vfn-fn, slty, mostly loose, occ calc cmtd, pr vis por, mic.	
	10	LST: tan, buff, crm, frm to occ hd, arg.	
	traces	coaly frags, nodular pyr, microfossils (incl forams)	
2855	90	CLYST: a/a	NO SHOWS
	tr	SD: a/a	
	10	LST: a/a	
	tr	coaly frags, nodular pyr, occ microfossils	
2857,5	80	CLYST: a/a	NO SHOWS
	10	SD: a/a	
	10	LST: a/a	
	tr	Nodular pyr, occ framboidal, coaly frags	
2860	95	CLY/CLYST: a/a	NO SHOWS
	tr	SD: a/a	
	5	LST: a/a	
	tr	coaly frags, nod pyr	
2862,5	90	CLYST: a/a	
	5	SD/SST: a/a	
	5	LST: a/a	
	tr	coaly frags nod pyr	
2865	95	CLYST: partly soft, stky pa gry brn, partly med gry brn, frm, subfiss, sl micromica, non-sl calc, occ carb flecks	
	5	LST: a/a	
	tr	SD/SST: a/a	
	tr	nod pyr, coaly frags	
2867,5	90	CLYST: a/a	
	5	SD/SST: a/a	
	5	LST: a/a	
	tr	coaly frags/nod pyr	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY **Area:** NORTH SEA **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 **meters** **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" **Geologist:** GRACE/PATTRICK **Date:** 20-08-83

Depth (m/KBE)	Lith. %	Lithologic description	Shows & Remarks
		Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	
2870			Lost in trip
2872,5	100	SH: slty, gry brn - lt and med gry where v. calc, micro mic, calc, predom subfiss, mod hd, dissem pyr, occ carb flecks	
	tr	sd, slt, pyr xls + nods, mica	
2875	100	a/a	
	tr	a/a	
2877,5		a/a but w/occ microfoss	
2880		a/a	
	5	a/a plus lst: lt tan, blky, argil	
2882,5	90	CLY/CLYST: soft, pa gry brn and frm, med gry brn, subfiss, micromica, sl calc, occ carb flecks	NO SHOWS
	10	LST: tan, brn, crm, off wh, frm-hd, mostly v arg	
	tr	sd, nod pyr (framboidal ip), rare microfoss	
2885	100	CLY/CLYST: a/a	NO SHOWS
	tr	lst, sd, pyr nods,	
2887,5	100	CLYST: a/a	NO SHOWS
	tr	lst, pyr a/a	
2890		a/a	
2892,5		a/a	
2895	100	CLYST: a/a	NO SHOWS
	tr	lst + pyr nod.	
2897,5	95	CLYST: a/a	NO SHOWS
	5	LST: a/a	
	tr	sd, nod pyr, microfoss	
2900	95	CLYST: a/a	
	5	LST: a/a	
	tr	sd, nod, euhedral pyr, rare microfoss	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW

Well no.: 34/10-18

K.B.E. 22 meters | **Company:** STATOIL/N. HYDRO/SAGA

Hole size: 12 1/4" | **Geologist:** GRACE/PATTRICK | **Date:** 21.08.83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod. lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
2902,5	85-95	CLYST: gry brn to med gry, frm, subfiss, sl-mod slty, micromica, occ carb flecks, non to sl calc	
	5-10	LST: tan, buff, off wh, frm-hd, often v. arg	
	tr-5	SD/SST: clr, vfn-fn, subang-subrnd, mostly loose, occ calc cmt	
	tr	nod pyr, rare microfoss	
2905	95	CLYST: a/a (still abundant soft, stky hydrated clay)	common brown-black "rubbery" bituminous flaky frags (rig contaminant)
	5	LST: A/a	
	tr	sd, pyr	
2907,5	100	CLYST: a/a	
	tr	lst, sd, pyr	
2910	100	CLYST: a/a	
	tr	lst, sd, pyr	
2912,5	100	CLYST: a/a possibly more slty	
	tr	lst, sd, pyr nodules a/a	
2915		a/a	
2917,5		a/a	
2920	95	CLYST: a/a	
	5	SD: a/a	
	tr	a/a	
2922,5		a/a	
2925	90	CLYST: a/a	
	10	SD: a/a	
	tr	a/a	
2927,5	90	CLYST: a/a	
	5	SD: a/a	
	5	LST	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY	**Area:** NORTH SEA	**Field:** 34/10-NW
Well no.: 34/10-18		
K.B.E. 22 **meters**	**Company:** STATOIL/N. HYDRO/SAGA	
Hole size: 12 1/4"	**Geologist:** GRACE/PATTRICK	**Date:** 21-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2930	100	CLYST: med gry to gry brn, frm occ hd and sft, subfiss, mod slty to v.slty i/p occ carb flecks, micromic, non-mod calc	
	tr	LST: buff, frm-hd, blcky, argill, sl dolom.	
	tr	SD: clr, vf-f, sub ang-sub rnd, lse but occ frm calc cmtd sst	
	tr	nod pyr,	
2932,5		a/a	
2935	80	CLYST: a/a	
	20	SD: a/a	
	tr	a/a	
2937,5		a/a	
2940	95	CLYST: a/a	
	5	SD: a/a	
	tr	a/a	
2942,5	100	CLYST: a/a	
	tr	SD: a/a	
	tr	a/a	
2945	95	CLYST: v slty i/p, a/a	NO SHOWS
	5	SD: clr, v fn, subrnd, loose	
	tr	lst, pyr nod (framboidal i/p)	
2947,5	100	CLYST: v slty, a/a	
	tr	sd, lst, pyr nod	
2950	95	CLY/CLYST: pa brn gry, mostly v sft, stky (hydrated), v slty-fn sd,	
	5	SD: clr, v fn-slt grade a/a	
	tr	lst, pyr	
2952,5	100	CLY/CLYST: v fn sdy clyst a/a	
	tr	LST, PYR: a/a	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 **meters** | **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | **Geologist:** GRACE/PATTRICK | **Date:** 22-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name,mod.lith,colour,grain size, sorting,roundness,matrix,cementation, hardness,accessories,fossils,porosity, contamination	Shows & Remarks
2955	85	CLYST: med gry brn (also pa gry brn wher v.sft and hydrated), frm, subfiss, micromica, non-sl calc, slty i/p, occ nod pyr.	LAT
	10	LST: tan, brn, crm, frm-hd, often arg, occ clr-amber xln cal.	
	5	SD: clr, vfn-fn, subang-subrnd, mostly loose, i/p calc and silica cmt.	
2957,5	95	CLYST: a/a	One or two sltst /sst frags give mod yellow wh sample fluor anc fast blooming mlxy-wh cut
	5	LST: a/a	
	tr	SD: a/a	
	tr	SLTST: brn, frm-fri, grd to v.fn slty sst	
2960	90	CLYST: a/a	A few specks of fluor a/a
	5	SLTST: a/a, mica i/p, also w/dissem pyr	
	5	SD/SST: mostly v fn and grd to sltst, a few med, subang-subrnd loose qtz grns	
	tr	LST: a/a	Only C1 drilled gas
2962,5	50	CLYST: a/a	
	30	SLTST: a/a	
	20	SD/SST: a/a also some med+crs ang-subang	
	tr	lst, pyr nods	
2965		a/a	
2967,5	50	SD: clr, vfn-granules, v-poor srtg, lse ang-subang	
	30	SLTST: a/a	
	20	CLYST: a/a	
	tr	pyr, various microfoss (forams)	
2970	50	CLYST: bec inc. shly else a/a	
	40	SLTST: a/a	
	10	SD: a/a	
2972,5	95	CLYST: a/a	
	5	SLTST: a/a	
	tr	lst, sd, forams	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW
Well no.: 34/10-18
K.B.E. 22 meters | **Company:** STATOIL/N. HYDRO/SAGA
Hole size: 12 1/4" | **Geologist:** GRACE/PATTRICK | **Date:** 22-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod. lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
2975	60	CLYST: med gry/brn, frm-hd where stky, sub fiss - occ fiss where stky, micro mic, sl calc, slty, occ pyr.	
	20	SLTST: brn, frm, occ f. v sst	
	20	SD: clr, vf-granules, lse, ang-subang, occ subrnd, poor srtd, qtz.	
	tr	lst, nod pyr, forams	
2977,5	90	SD: a/a	
	10	CLYST: a/a	Coal at 2979 m causing nr.bit stab to hang up (bit at 2981 m)
	tr	a/a	
2979,5	70	SD: a/a	
	20	coal, blk, shiny, sli pyr i/p	
	10	CLYST: a/a	
2980	90	SD: a/a	SD is probably well cmtd sst at depth (very slow ROP).
	5	COAL: a/a	
	5	CLYST: a/a	
2982,5	40	SD/SST: clr, vf-fn-med, some crs and occ v crs mostly loose, some vfn-fn.is silicia cmtd, + clay cmt ang-subang, rarely subrnd, poorly srtd, mica, por inferred as moderate	
	60	CLYST: med gry brn, frm, subfiss, micro-mica, slty i/p, non-sl calc	
	tr	COAL: brn-black, brittle, arg in places	
	tr	LST, PYR	
2984	70	SD: a/a	
	30	CLYST: a/a	
	tr	pyr, lst	Trip at 2985 m
2987,5	45	SD: a/a	
	55	CLYST: a/a mostly v mica/micromica	
	tr	lst, coal, pyr nod	
2990	100	SD: a/a some composite grns of vf silic cmtd appears as v.crs + granules	
	tr	CLYST	

WELLSITE SAMPLE DESCRIPTION

Country: NORWAY | **Area:** NORTH SEA | **Field:** 34/10-NW

Well no.: 34/10-18

K.B.E. 22 meters | **Company:** STATOIL/N. HYDRO/SAGA

Hole size: 12 1/4" | **Geologist:** GRACE/PATTRICK | **Date:** 23-08-83

Depth (m/KBE)	Lith. %	Lithologic description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, accessories, fossils, porosity, contamination	Shows & Remarks
2992,5	100	SD: clr, vf-v.crs + granules of silica cmtd (composite grains) sst, v.hd, ang-subang, rarely subrnd, conchoidal fractured + smattered i/p qtz, lse, poor srtd	
	tr	lst, clyst, sltst, coal, mica	NO SHOWS
2995	100	SD: a/a but more mlky-wh, transl	
	tr	a/a	
2997,5		a/a	
3000		a/a	NO SHOWS
3002,5		a/a	
3005	100	SD: a/a	
	tr	heavies tr of clyst	
3007,5	50	SD: a/a	
	45	CLYST/SLTST: med gry brn, micromic, blcky i/p, subfiss i/p, some carb frags, some pieces red/brn	coal may be from 2979 m as stabilizer hung up at this bit depth for ca 2 hrs!!
	5	COAL: blky, shiny, dull blk shly i/p	
	tr	lst, pyr, mica. Only here red/brn colouration suggestion of unlikely? Eriksson - Middle Statfjord memb	
3010	100	SD: a/a	
	tr	clyst, sltst, coal, mica sltst containing dissem + nod pyr.	
3012,5	100	sd, gen med-crs, mod-good srtd in this sample else a/a	
	tr	a/a	
3015	100	SD: return to v.poor srtg a/a	
	tr	a/a	
3017,5	100	SD: a/a	
	tr	a/a	
3020	100	SD: a/a	
	tr	a/a	
3022,5	95	SD: a/a	
	5	SLTST/CLYST: a/a	
	tr	lst, sft, wh, argill,	
3025	70	SD: a/a	TD
	25	SLTST/CLYST: a/a	
	5	LST: a/a	

c) Conventional Core Description
Wellsite Description

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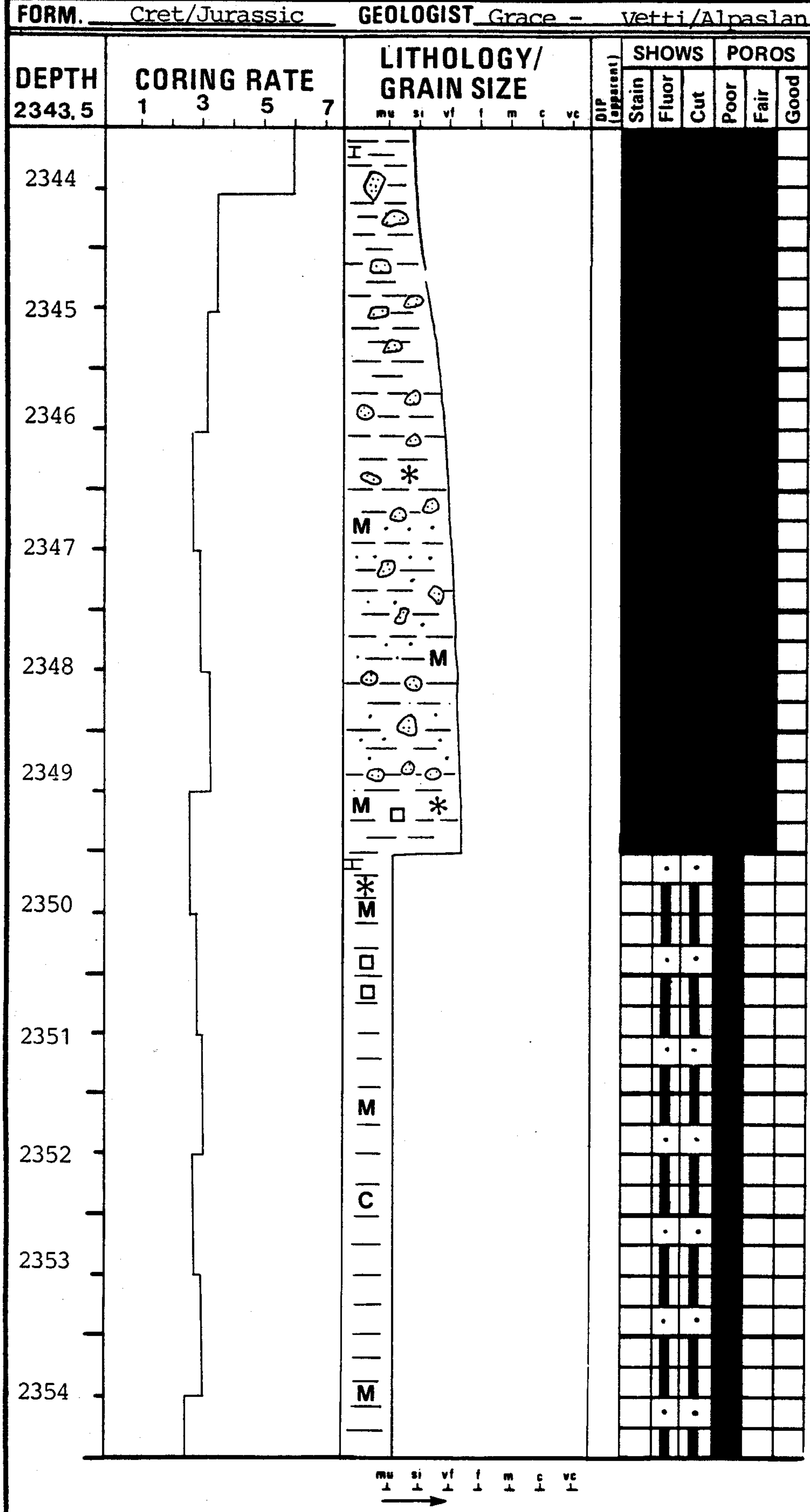
CONVENTIONAL CORE DESCRIPTION

FIELD NW FAULT BLOCK | WELL NO. 34/10-18 | AREA North Sea
CORE NO. 1 | INTERVAL from 2343.5 to 2361 | CORED 17.5 | REC 13.7 | 78 %
FORM. Cret/Jurassic | GEOLOGIST Grace - Vetti/Alpaslan | DATE 12.08.83



LITHOLOGIC DESCRIPTION	MISC.
Cgl: mtx shl	
Sh: lithoclasts sst grn, mod hd, fiss-subfiss, shiny striated slty, calc, free oil	
Sst: lt-med brn, vf-f, qtz, hd, w. cmtd, mod calc, dol +/ or silicic cmt, micmic, heavy oil staining, bright straw fluor, continual strmg cut	2344 m 3.2% gas C1 15240 C_2 1710 C_3 1942 iC_4 271 nC_4 975
Sh: dk gry, fiss, sft, mic mic, w/incr sst, A/A w/glauc	
Smaller sst lithoclasts 1-2 cm + w rnd/sph some dissem pyr	
Shl: lt grn-gry, hd, mod calc, shiny cleavage, mic mic, glauc	
Abundant pyr	BG .48%
Patchy bri straw fluor in sdy parts + cut A/A	
Shl: blk, shiny, mod hd, brittle, striations, non calc. Bec more slty, earthy, mic & mic mic	
Patchy fluor + cut A/A	

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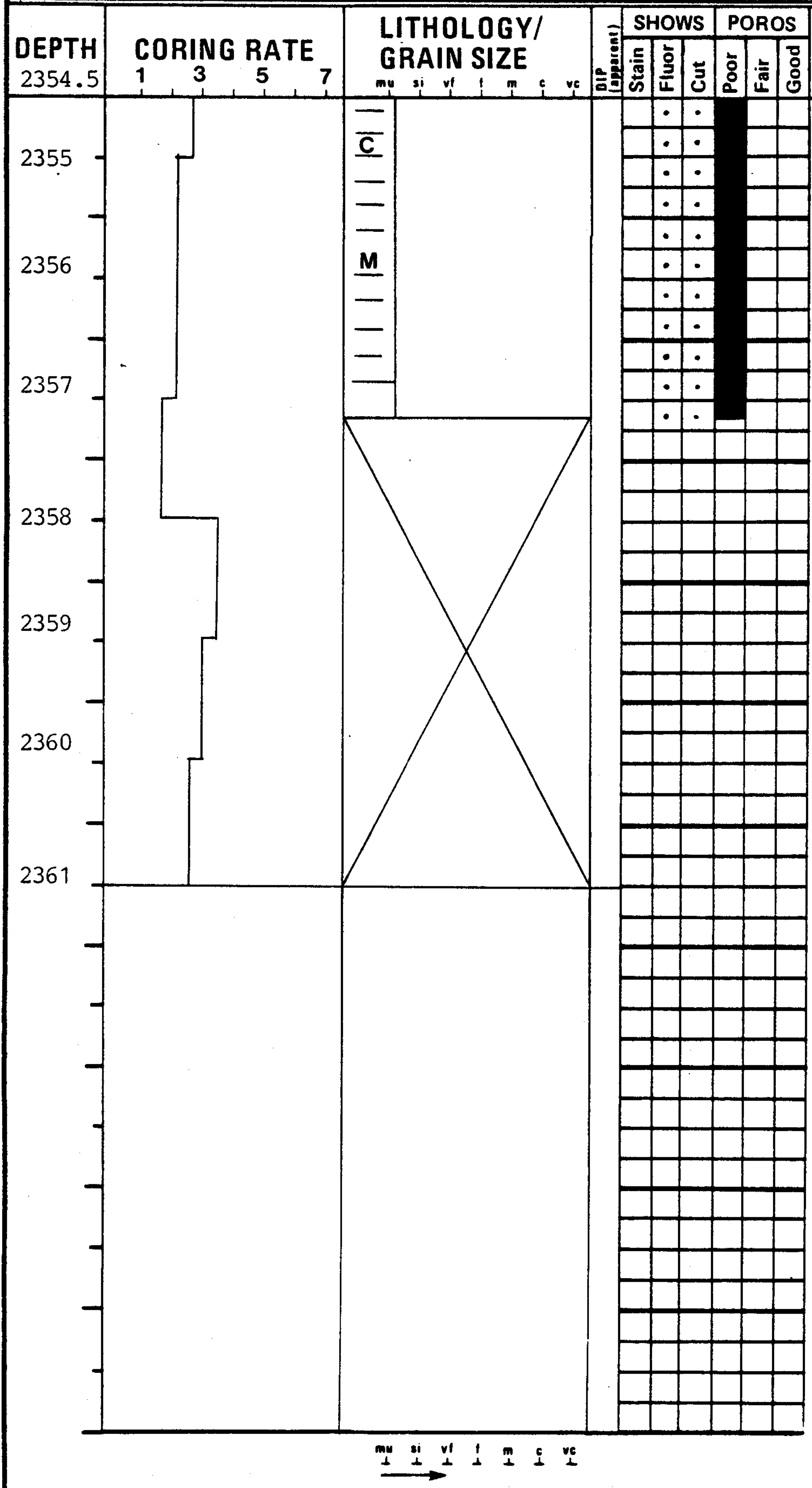
CONVENTIONAL CORE DESCRIPTION

FIELD NW FAULT BLOCK | WELL NO. 34/10-18 | AREA North Sea

CORE NO. 1 | INTERVAL from 2343.5 to 2361 | CORED 17.5 | REC 13.7 | 78 %

FORM. CRET./JURASSIC | GEOLOGIST GRACE VETTI/ALPASLAN | DATE 12.08.83



DEPTH	LITHOLOGIC DESCRIPTION	MISC.
2355	Shls: dk gry a/a	
2356	Less bri fluor, more patchy, little or no cut	BG .40%
2359	Not recovered	

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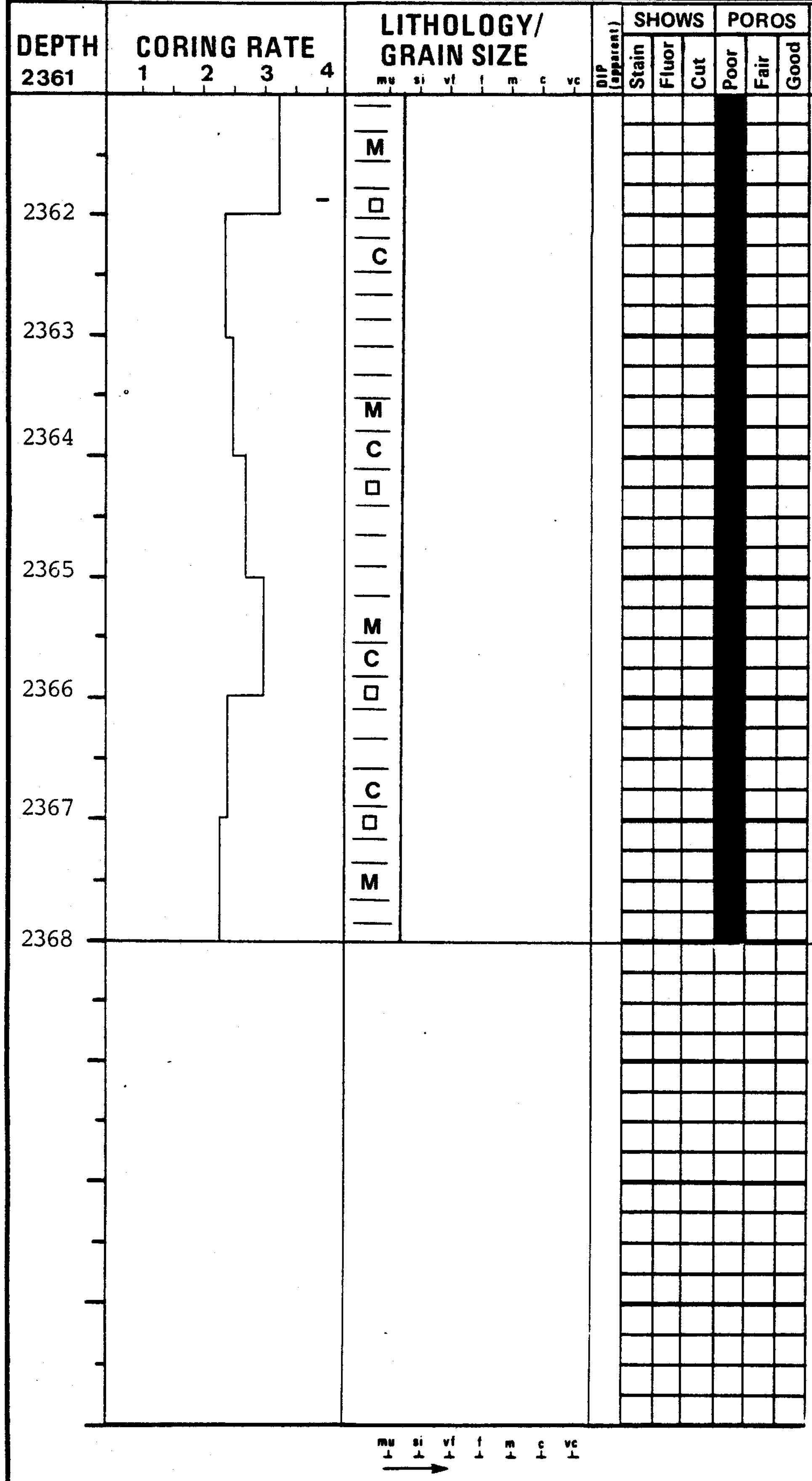
CONVENTIONAL CORE DESCRIPTION

FIELD NW FAULT BLOCK WELL NO. 34/10-18 AREA North Sea
CORE NO. 2 INTERVAL from 2361 to 2368 CORED 7 m REC 7 m 100 %
FORM. Heather GEOLOGIST Grace Vetti/Alpaslan DATE 13.08.83



LITHOLOGIC DESCRIPTION	MISC.
Sh: dk gry-blk, to gry colour w/depth, hd-frm, occ sft, v. brittle, sub-fiss-v. fiss, slty I/P, dissem pyr throughout, v. mic mic + mic where slty, carb to coalferous where non slty, non calc, no shows	BG 0.15% Core rec. was pre-dom small pieces and rubble
	Core jammed

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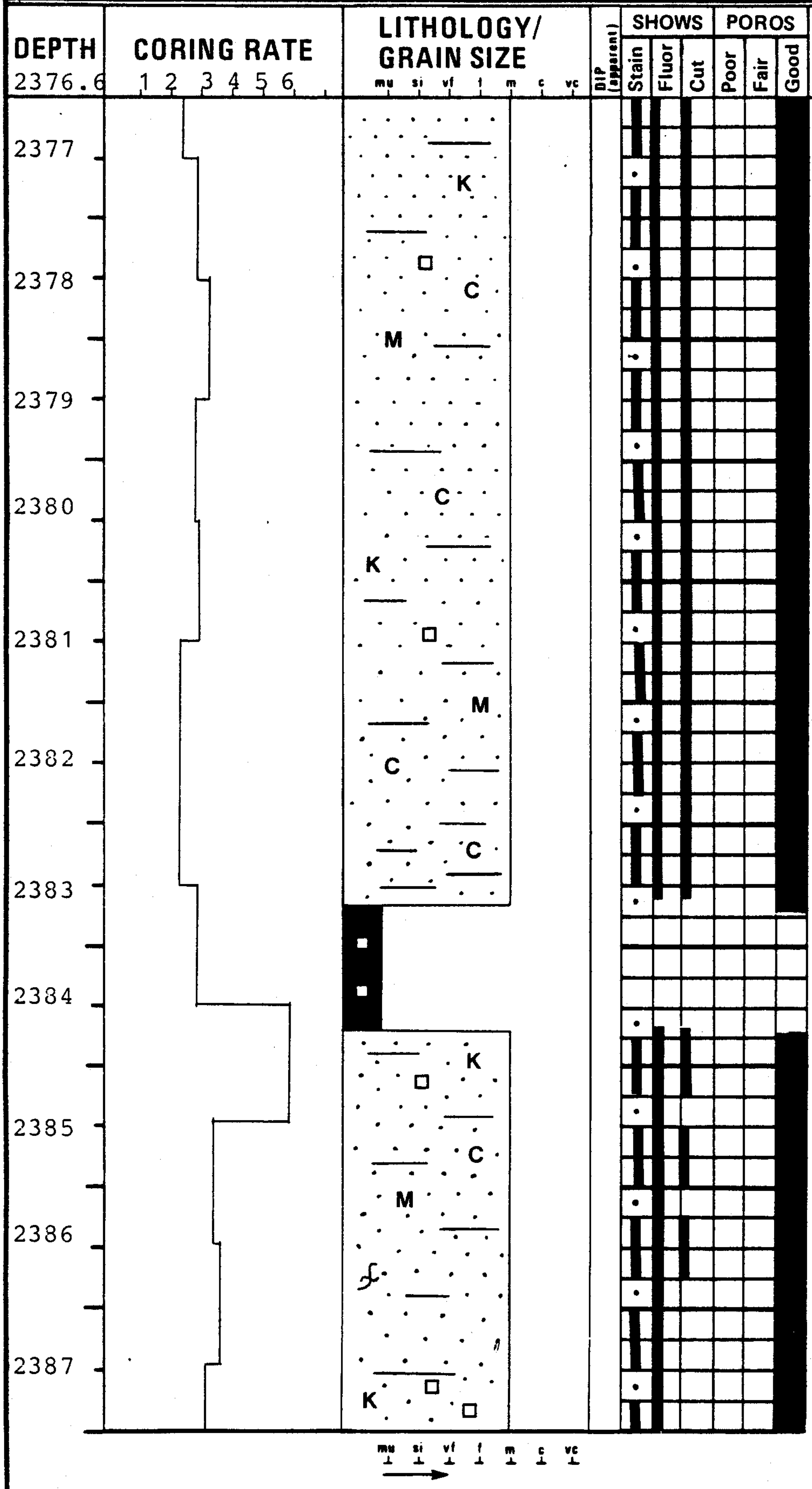
CONVENTIONAL CORE DESCRIPTION

FIELD NW | WELL NO. 34/10-18 | AREA North Sea
CORE NO. 3 | INTERVAL from 2376.5 to 2395 | CORED 18.5 | REC 18.5 | 100%
FORM. Tarbert | GEOLOGIST Grace/Vetti/Alpaslan | DATE 14.08.83



LITHOLOGIC DESCRIPTION	MISC.
SST: wh-lt gry, transl f-crs, subang-subrnd, mod- good srtg, qtz, carb, argill, mic, fri, frm-sft non calc kaolinitic cmt, good to excellent vis pos	BG .04% v. dull brn fluor no cut patchy residual/dead oil
cyclic, fining upward sequences	
Bec. flazer bedded dk gry-blk shly coals small fining upward sequences	
Shly coal: blk, horiz. cleavage, shiny, dull I/P, dissem pyr + pyr nods,	PEAK .29%
Sst: a/a	BG 0.8%
Flazer bedding thinner carb + argill bands	
Dissem pyr	BG .13%

PAGE 2 OF 2.

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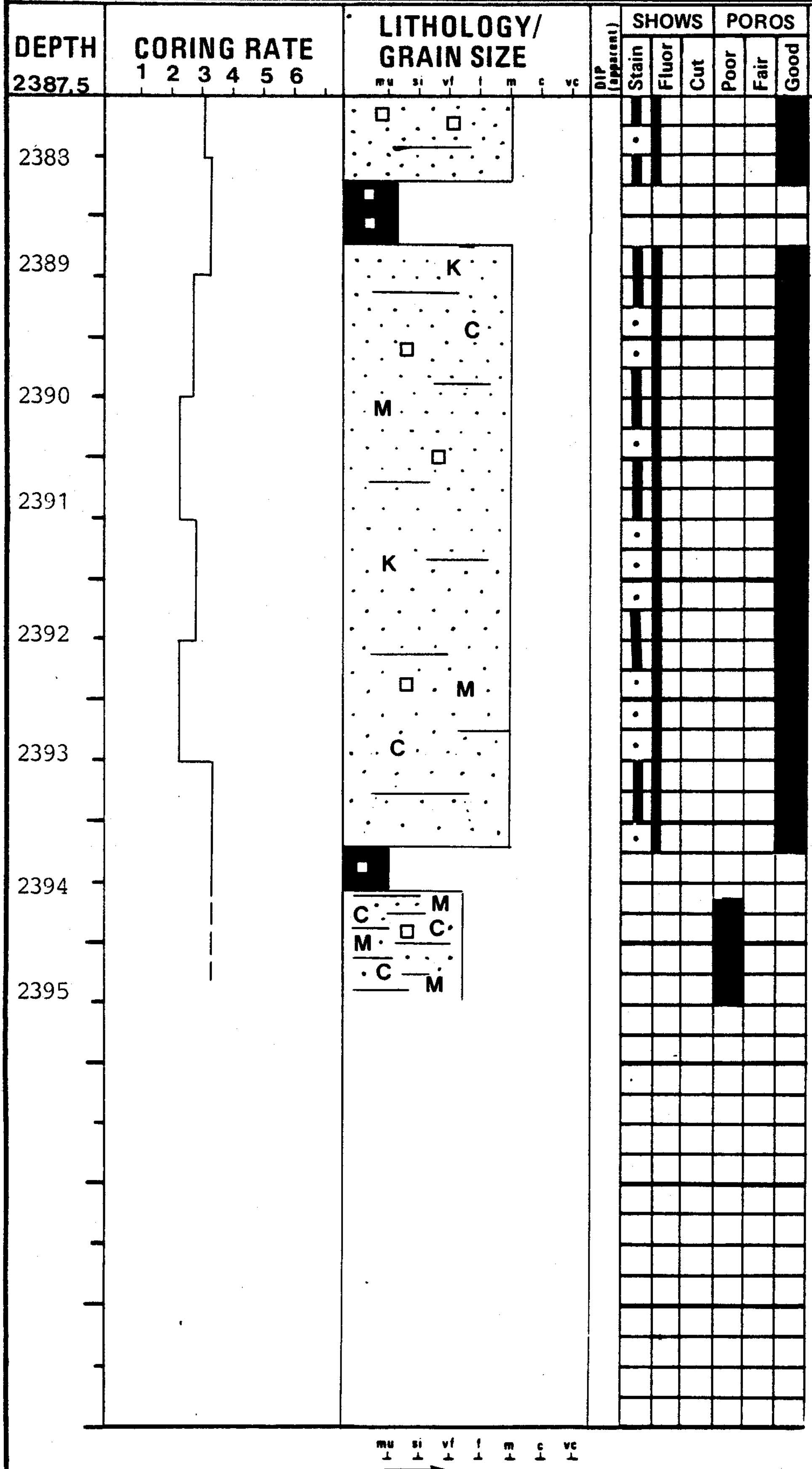
Den norske stats oljeselskap a s

CONVENTIONAL CORE DESCRIPTION

FIELD NW | WELL NO. 34/10-18 | AREA North Sea

CORE NO. 3 | INTERVAL from 2376.5 to 2395 | CORED 18.5 | REC 18.5 | 100 %

FORM. Brent (Tarbert) | GEOLOGIST Grace Vetti/Alpaslan | DATE 14.08.83



LITHOLOGIC DESCRIPTION	MISC.
Steeper dipping flazer bedding	BG .06%
Coal: shaly	
Dissem pyr occ nods	BG .05%
Rippled flazer beds	Patchy dead oil stain
	No or dull brn fluor, No cut
Coal: shaly	
Sd: dk gry, else a/a extremely shly, coaly + mic thin intercalations	

4.00.17

d) Sidewall Core Description

SIDEWALL CORE DESCRIPTION

Country:	NORWAY	Area:	NORTH SEA	Field:	34/10 NW
Well no.:	34/10-18	Run no.:	1	Interval:	3008 - 2108 m
Co ordinates:	61 ° 14 ' 22.0"N 02 ° 03 ' 17.3"				
K. B. E.	22 meters	Company:	STATOIL/NORSK HYDRO/SAGA		
Hole size:	12 1/4"	Geologist:	GRACE/PATTRICK	Date:	25.08.83

Depth	Rec.	Lithologic description	Porosity	Shows
2526	30	SST: gry, vf-med, qtz, ang-sub ang, mod srtd, sft, fri, non calc, lse clay cmt, agrill, mic, w/carb flecks	Good	Dull grnsh brn fluor no cut -perhaps some min fluor pro- viding grnsh col.
2494.5	30	COAL: blk, brittle, shiny, pyr	Poor	
2492	25	CLY: med gry, sli grn/brn, sft, sticky, laminated, coal frags, non calc	Poor	
2469	35	CLY: a/a, but more brn colour + less sticky	Poor	
2451	40	CLY: a/a, but aker brn-blk i/p w/coaly laminations	Poor	
2440	40	COAL: blk, brittle, dull + shiny, laminated	Poor	
2422	35	SST: gry, f-med, qtz, w. srtd, ang -occ sub rnd, fri, lse cmtd if at all, argill, mic, some dissem pyr, non calc	Good	v.dull brn flour -no cut
2400	40	SST: gry where cleanest, vf-med, qtz, mod-good srtg, ang-sub rnd, mic, argill, laminated w/mica + argill rich layers + coal streaks	Fair-good	Dull brn fluor no cut
2341	30	SST/CLYST: gry grn, f-m sd either cmtd by clay or v. sdy clyst, sft, v. calc, h/c odour, oil staining	Fair to poor predom	Mod bri yell fl. blooming fast yellow wh fluor cu
2336	50	CLYST: dk gry, frm, micromic, sub laminated -not fiss, calc	Poor	
2334	45	CLYST: dk gry/grn, else a/a	Poor	
2296	50	CLYST: only sli calc, else a/a	Poor	
2234	45	Clyst: sli lt gry, only v. sli calc, else a/a		
2210	45	CLYST: lt grnsh gry, sft, micromic, non slty, pyr, micropyr, sli calc	Poor	
2177	50	CLYST: dk grnsh gry, fri, slty, sli calc, micromic	Poor	
2108	50	CLYST: more grnsh, mod calc, else a/a	Poor	

III DRILLING REPORT

III 1. SUMMARY

The rig "Ross Isle" arrived the location 34/10-18 July 15. 1983 at 0600 hours.
The well was a wildcat well designed to test for possible hydrocarbon accumulations in a fault structure in the north-west part of the block 34/10.
The primary objective was the Middle Jurassic Brent sandstone, which was expected to be oil bearing in this area. The Cook and the Statfjord sands were also regarded as potential prospects.
This well was the first well to be drilled in this north-west fault block.
The well was drilled to 3025 m, about 50 m into the Statfjord sand without recovering any hydrocarbon accumulations. After the anchors were run, a 36" hole was drilled from the seabed at 163 m to 227.5 m and a 30" casing run and cemented.
A 12 1/4'' pilot hole was then drilled and logged to 765 m. The 12 1/4'' pilot hole was underreamed to 26". Lost circulation to shallow sandlenses delayed the operation for 27 hours prior to pulling the marine riser. Ran and cemented a 20" casing at 747 m.
A 17½" hole was drilled and logged to 2000 m, about 100 m into the Cretaceous. 2 joints of 13 3/8" casing were dropped in the hole and the well was plugged back and side tracked to 2024 m.
The 13 3/8" casing was run and cemented at 2008 m. A 12 1/4" hole was drilled and logged to the total depth at 3025 m. 3 cores were taken in this section. The well was plugged back and abandoned, the anchors were pulled and the rig was transferred from 34/10-18 to 34/10-16 Re-entry August 30. 1983 at 2400 hours.
The well was completed in 47 days, 17 days before prognosis, and the total well cost per January 31. 1984 is NOK 65.2 MM.

III 2. DRILLING OPERATION IN INTERVALS

The rig "Ross Isle" arrived the location 34/10-18 July 15. 1983 at 0600 hours.
The anchors were run and pretensioned to 170 metric tons prior to spudding in the well in 141 meters of water July 16. at 0740 hours.
The final position was 61° 14' 22.48"N
02° 03' 18.83"E
This was 16 m - 068° deviation from the intended position.

36" hole section, 163-227,5 m

The 36" hole was spudded in without using a temporary guidebase. A 26" bit and a 36" holeopener were used to drill the 64.5 meters in 10 effective rotating hours, and the returns were to the seabed. The upper part of the section consisted of hard and stony clays and sands which resulted in a low penetration rate the first 30 meters.
A 3 m^3 high viscous pill was pumped at each connection and at bottom the hole was displaced to high viscous mud.
At total depth, a wiper trip was made and a single shot survey taken prior to POOH.
With assistance from the mini submarine, the 30" casing was stabbed into the hole, run to 227 m and cemented.

26" hole section, 227,5-765 m

The cement and the 30" casing shoe were drilled out using a 26" rerun bit. The pin connector on the marine riser was run, latched on to the 30" wellhead and pulltested with 25 tons. A 12 1/4" bit was then run to bottom, the hole displaced to 1.05 s.g mud and the diverterlines flushed.
A 12 1/4" pilot hole was drilled as a precaution against high pressure shallow gas. The pilot hole was drilled to 765 m in 24.8 effective rotating hours using a milled tooth bit.

The rate of penetration ranged from 17 m/hr to drilling breakes of up to 800 m/hr, but generally the rates of penetration were controlled to 20 m/hr to optimize hole cleaning and data aquistion from the Exlog DLWD (Downhole Logging While Drilling) tool.
The background gas averaged 0.2-0.3% and the gas peaks associated with the sand sections ranged between 0.65% and 2.78% which was recorded from a sandlense just below the 30" casing shoe.
The lithology of the section was predominantly clay with stringers of sand, and a saltwater/gel mud with densities ranging from 1.05 s.g to 1.12 s.g was used.
The desander and the mudcleaners were run continously and generous amounts of prehydrated bentonite and seawater were added to the mudsystem to keep the mud density as low as possible.
The Exlog DLWD-tool worked satisfactorily through the section and deviation surveys were taken at each third connection.
At bottom, a wiper trip to check the hole was made, the mud circulated around, and the bit pulled out of the hole.
The 12 1/4" pilot hole was then logged, and the logs confirmed the results from the Exlog DLWD-tool and what was experienced while drilling the hole.
The 12 1/4" pilot hole was underreamed to 26" in two runs using a 12 1/4" bit with a 17½" holeopener and a 26" underreamer run simultaneously.
The rate of penetration while underreaming was controlled to an average of 15-20 m/hr in order to reduce the problem of mud solids control associated with drilling the clay sections, to minimize the risk of lost circulation through overloading the annulus with cuttings, and to avoid a spiral hole.
At bottom, a 3.9 m^3 nutplug and mica spacer and 168 m^3 1.45 s.g mud were pumped and the bit pulled out to 300 m.
When circulating with 1.10 s.g mud from 300 m, the circulation was lost after 3000 strokes. Filled the hole with 15.7 m^3 1.09 s.g mud and pulled the bit out of the hole.
An open ended drill pipe was then run to the 30" casing shoe, and a 16.7 m^3 LCM-pill was pumped and displaced with 1.09 s.g mud.
Had mudlosses under both dynamic and static conditions, and therefore a 10.8 m^3 cement plug was placed around the casing shoe

to cure the most possible lost circulation zone. After the cement from 207-236 m was drilled out, the 1.45 s.g mud below 300 m was circulated to the surface in steps to check the formation integrity at the casing shoe. The shoe did stand a pressure equivalent to a 1.20 s.g mudcolumn. The hole was displaced with 1.25 s.g mud from 370 m to the wellhead, the well found to be static, and the drill pipe pulled out of the hole. The lost circulation problem delayed the operation for a total of 27 hours. The pinconnector and the marine riser were pulled, and a conditioning trip to gauge the hole was made prior to running and cementing the 20" casing.

The 18 3/4" x 690 bars Cameron BOP stack was run on the marine riser and latched on to the wellhead.

Prior to landing the BOP stack, gas bubbles were observed between the 20" and the 30" casings, but 2 hours later, the gas was almost disappeard.

The BOP was then pressure and function tested prior to drilling the next hole section.

17½" hole section, 765-2024 m

The cement and the 20" casing shoe were drilled out using a 17½" rerun bit, but was not able to get a proper penetration rate when trying to drill new formation. This could be caused by metamorphic boulders, probably knocked down when running the 20" casing.

A formation integrity test was performed at 768 m and showed a leak off equivalent to 1.57 s.g mudweight.

The 17½" hole was drilled in 67.1 effective rotating hours and the total time spent on this section was 13 days. Three rock-bits were used to the planned casing shoe depth at 2000 m, but since 2 joints of 13 3/8" casing were dropped in the hole at this depth, a 104 m cement plug was set. The well was then sidetracked to 2024 m.

The first bit run only drilled 5 m in 3.5 hours and was pulled at 770 m.

The second bit, made a total of 1002 m in 44.7 hours at an average of 22.4 m/hr and was POOH at 1772 m due to a breakdown on the rotary gear.

The last bit drilled into the Cretaceous to the planned 13 3/8" casing shoe depth at 2000 m in 16.4 hours at an average of 13.9 m/hr.

At 2000 m, Schlumberger ran ISF/LSS-GR and LDL/GR. When running the 13 3/8" casing, the shoejoint and the collarjoint were accidently dropped in the hole due to a too early opened slip type elevator.

One attempt was made trying to screw a swedge into the casing, but when pulling out of the hole, no casing was recovered.

A balanced cement plug was then set from 2000-1882 m, and the hole sidetracked to 1988 m using a rock bit on a turbine and a 2 degree bent sub. The last section to 2024 m was drilled with a regular bottom hole assembly and a rock-bit.

The 17½" section was drilled without any special drilling problems.

The average penetration rate through the section was 20 m/hr, but drilling breaks through sand stringers to 1650 m was quite common.

The clay in the Eocene caused some tight hole problems and when making a wiper trip at 1632 m, maximum 40 tons overpull was recorded.

Close to the bottom, drag at connections became a problem and the mudweight had to be increased to overcome this problem.

On the final trip overpull still occured between 1880 m and 1652 m averaging 11 tons with a maximum of 28 tons recorded at 1680 m.

The porepressure was normal down to the lower section of the Eocene at 1640 m and from this depth the estimated porepressure started to increase slightly up to 1.26 s.g at the casing shoe depth.

A gel/lignosulphonate mud with densities ranging from 1.08 s.g to 1.32 s.g was used to drill this section.

Gas caused no special problems and background gas ranged from between 0.02% to a maximum of 0.48% recorded at 875 m.

From 1780-2000 m the gas levels showed a marked increase, but neither the background gas, the connection gas nor the wiper trip gas exceeded 0.5%.
The Exlog DLWD-tool was run in the drill string through the entire section and worked satisfactorily. 14 directional surveys were taken with the tool and 2 single shot surveys were taken when side-tracking the well at 2000 m.
After the well was side-tracked down to 2024 m, a multishot survey was taken prior to running the 13 3/8" casing.
The casing shoe was set at 2008 m and the casing cemented to 750 m.

12 1/4" hole section, 2024-3025 m

The cement and the 13 3/8" casing shoe were drilled out with the 1.32 s.g mud and a formation integrity test performed. The test showed a leak off equivalent to 1.80 s.g mudweight.
The 12 1/4" section was drilled through the Cretaceous and the Jurassic to a total depth of 3025 m without recovering any hydrocarbons neither in the primary objective; the Brent sand, nor the secondary objectives; the Cook and the Statfjord sands.
The section was drilled in a total of 196.9 hours including 16.8 hours coring.
9 rock bits were used to drill a total of 958 m and 1 core-bit cored a total of 43 m.
The first bit run drilled deep into the lower Cretaceous to 2317 m and made a total of 293 m at an average of 9.3 m/hr. The second bit was pulled after a drilling break at 2343.5 m, from where it was decided to start the coring.
3 cores were cut from 2343,5-2395 m except for a short section in between from 2368-2376,5 m which was drilled with a 12 1/4" rock bit.
Since the Brent sand which was hit at 2372,5 m, did not contain any hydrocarbons of interest, it was decided to drill ahead with a regular drilling assembly. The next bit run drilled from 2395 m and 18 m into the Dunlin to 2622 m in 30 hours at an average of 7.6 m/hr, and was pulled to run a Repeat Formation Tester. (RFT)

The RFT showed a maximum formation porepressure in the top of the Brent equivalent to 1.53 s.g mudweight, and the mudweight was reduced from 1.65 s.g to 1.58 s.g to improve the drilling rate.
The last section from 2622 m was drilled 47 meters into the Statfjord sand to a total depth of 3025 m using 5 rock bits.
The average penetration rate ranged between 2.5-4.5 m/hr, but when drilling through the Cook and the Statfjord sands the drilling rate increased considerably and averaged 10-12 m/hr.
The background gas ranged between 0.04% and 0.42% through the 12 1/4" section and small gas peaks were generally associated with sand bodies or the occasional coal horizons. The highest background gas recorded was through the Brent sand where an average of 0.4% was recorded.
Trip gases were never significantly high, the highest being 1.2% from 2731 m. Connection gas was not recorded at all.
A gel/lignosulphonate mud with densities ranging from 1.32 s.g to 1.65 s.g was used to drill this section.
The porepressure increased through the section and reached a maximum of 1.53 s.g in the top of the Jurassic at 2372 m.
Few hole problems were encountered during this hole section.
Significant drilling breaks were all flowchecked, but no mud flow or loss was observed.
Tight hole problems were also minor throughout the section and only caused some overpull when tripping out at 2343 m and 2871 m.
Some reaming was also necessary to reach bottom after trips at 2376 m and 2871 m, but mainly the hole was in good condition.
A considerable angle build up from 1.35 degrees at 2605 m to 5 3/4 degrees at 2948 m was recorded from single shot surveys and this could be the reason for the drag encountered when tripping out from 2871 m. Nevertheless, no drag was encountered when tripping out after the total depth was reached.
The DLWD-tool was run in the drill string from 2317-2343,5 m and from 2395-2622 m. The tool worked tolerable good, but the mud resistivity sensor was bad and in one occation also the directional survey failed.
At total depth Schlumberger ran ISF/SONIC-MSFL-GR, LDL/CNL-GR, SHDT, VSP, CST and CBL.

4 cement plugs were set in the open hole to seal off the sand sections and 1 cement plug was set in the 13 3/8" shoe area. The cement and the casing were then pressure tested to 100 bars and a bridge plug set above the cement at 1894 m.

Two attempts without success were made trying to perforate the 13 3/8" casing at 605 m and squeeze mud into the 13 3/8" x 20" annulus.

The 13 3/8" casing were cut and retrieved at 501 m and two cement plugs set from 550-200 m.

Prior to cutting the 20" and the 30" casings, the BOP and the marine riser were pulled. When cutting the 20" and the 30" casings the spacer sub above the cutting tool twisted off and the tool dropped to the top of the cement at 200 m. On the second attempt with a overshot dressed with a basket grapple, the cutting tool assembly was recovered. Explotec blew off the 20" and the 30" casings at 168.5 m.

The anchors were pulled and the rig was transferred from 34/10-18 to 34/10-16 Re-entry.

III EXTRACT OF DAILY ACTIVITIES 34/10-18

15.07 The rig "Ross Isle" was under tow to the location 34/10-18. Anchor handling. Had to reset anchor no. 7. Had some chaser problems. Ballasted the rig down to drilling draft 22 m. Made up and ran a 30" casing. Landed the 30" housing joint and the permanent guide base in the base plate trolly.

16.07 Made up a 26" bit and a 36" holeopener and RIH. Tagged the seabed at 163 m. Lowered the Scandive mini submarine to position the pinger. Drilled a 36" hole from 163-177 m and had to lower the mini submarine to help stabbing the bit into the crater after the first connection. Drilled a 36" hole from 177-229 m. Pumped 3 m^3 high viscous mud at each connection. Displaced the hole with a high viscous mud and made a wiper trip to 170 m. Ran back to bottom, displaced the hole with a high viscous mud and dropped the single shot survey. POOH and retrieved the survey. Prepared to run the 30" casing.

17.07 Ran the 30" casing. Lowered the mini submarine to observe the hole when trying to stab the casing into the hole. Cemented the 30" casing with the shoe at 227 m. Backed out the running tool, flushed the wellhead and POOH. RIH with a 26" bit. Pressure tested the standpipe manifold and the kelly cocks while WOC. The Regan inclinometer on the baseplate showed 0 degree. Drilled cement, the casing shoe and new formation down to 229 m. POOH. Washed the 30" housing on the way out. Ran the pin connector on the marine riser. Latched the pin connector to the wellhead and pulltested with 25 tons, ok. Made up a new bottom hole assembly on a 12 1/4" bit.

18.07 RIH to 228 m and displaced the hole and the riser to 1.05 S.G. mud. Flushed through the diverter lines. Drilled a 12 1/4" pilot hole from 229-555 m. Made DLWD

(Downhole Logging While Drilling) surveys every third connection. Flowchecked at 369 m and 397 m, ok.

19.07 Drilled a 12 1/4" hole from 555-765 m. Drilling break at 713 m. Flowchecked, negative. Circulated and conditioned the mud. Maximum gas 0.8%. Made a wiper trip to the 30" shoe. No drag. RIH. Circulated bottoms up. Maximum gas 0.85%. Dropped a single shot survey and POOH. Schlumberger ran log no. 1 ISF/LSS-MSFL-GR.

20.07 Schlumberger ran log no. 2 LDT/CNL-GR. Laid down 5" drill pipes. Made up a 12 1/4" bit, a 17½" hole opener and a 26" underreamer. Tested the underreamer in the rotary, ok. RIH to 229 m. Underreamed the 12 1/4" hole to 26" from 229-375 m.

21.07 Underreamed the 12 1/4" hole to 26" from 375-589 m. Circulated bottoms up. Max gas 0.38%. POOH. Broke and laid down the 17½" hole opener and the 26" underreamer. Made up a new 17½" hole opener and a 26" underreamer and RIH to 589 m.
Underreamed the 12 1/4" hole to 26" from 589-608 m.

22.07 Underreamed the 12 1/4" hole to 26" from 608-763 m. Circulated bottoms up. Pumped a 3.9 m^3 nutplug and mica spacer and 168 m^3 1.45 S.G. mud. POOH to 300 m. Started to circulate bottoms up with 1.10 S.G. mud, but lost the circulation at 3000 strokes. (Bottoms up was 4100 strokes). Filled the hole with 15.7 m^3 1.09 S.G. mud. The mud level dropped to 7 m below the rotary table. POOH. RIH with a open ended drill pipe to 226 m. Pumped a 16.7 m^3, 1.2 S.G. lost circulation materials (LCM) pill and displaced same with 1.09 S.G. mud. Had slight returns. Filled the hole from the trip tank. The mud level in the riser dropped to maximum 13.5 m. Circulated with the booster pump. No losses. Circulated at 222 m with 10 strokes per minute slowly increasing to 49 strokes per minute. Had 3 m^3 mudloss after 13.6 m^3 was pumped.

23.07 Stopped pumping. The mudlevel in the riser dropped to 15 m below the rotary table.
Mixed and pumped 10.8 m^3 1.90 S.G. neat cement through the drillpipe at 226 m. Had 9 m^3 in returns when pumping the cement and full returns when displacing same.
Pulled out to 170 m. Circulated the long way with 20-40 strokes per minute with partial losses. POOH. WOC.
RIH with a 17½" bit and a 26" underreamer. Tagged the cement at 207 m. Drilled the cement from 207-236 m. Reamed from 236-250 m. Circulated bottoms up and conditioned the mud to 1.10 S.G. in steps at 250 m, 320 m, 340 m and 370 m to check the formation integrity at the 30" shoe. Stopped the pumps for 10 min and flowchecked when the 1.45 S.G. slug had been circulated into the riser. The 30" casing shoe was exposed to a maximum pressure equivalent to 1.20 S.G. mudweight. Displaced the hole from 370-160 m with 1.25 S.G mud in two steps. Displaced the riser to seawater, observed the well for 15 min and POOH. Broke and laid down the 26" underreamer. Prepared for pulling the riser and the pin connector.

24.07 Pulled the riser and the pin connector. Made up a 26" bit, installed a guide frame and RIH to the wellhead. Had to position the rig and lower the mini submarine to be able to stab into the wellhead. Washed and reamed down to bottom. Circulated bottoms up with 1.25 S.G. mud. Pulled out to 185 m and displaced the string volume. POOH. Ran a 20" casing. Filled every second joint with 1.25 S.G. mud.

25.07 Continued running the 20" casing. Cemented the 20" casing with the shoe set at 747 m. Bumped the plug with 35 bars. Tested the 20" casing to 100 bars for 10 min, ok. Backed out the running tool and POOH. Ran in with a jetting tool and washed the wellhead area. POOH. Ran the BOP on the riser and tested the kill and the choke line to 350 bars every third joint.

26.07 Continued running the BOP on the riser. Lowered the mini submarine to assist when landing the BOP. Observed gas bubbles between the 20" and the 30" casing. The gas bubbles disappeard after the BOP was landed. Installed the diverter element and the master bushing. Made up and RIH with the BOP testing tool. Pressure tested the BOP stack on the blue pod and function tested same on the yellow pod. POOH with the testing tool. Made two attempts setting the wear bushing. RIH with a 17½" rerun bit and tagged the cement at 721 m. Displaced the casing and the riser with 1.08 S.G. mud. Flushed the kill and the choke lines and took a slow pump rate. Drilled out the float, the cement, the shoe and cleaned out the rathole to 765 m.

Drilled a 17½" hole from 765-768 m, but did not get a proper penetration rate. Pulled out to the 20" casing shoe and performed a formation integrity test equivalent to 1.57 S.G. mudweight. Ran back to bottom and drilled a 17½" hole from 768-770 m, but was still not able to get a proper penetration rate. POOH.

Picked up the Exlog DLWD tool and made it up to the new bottom hole assembly.

27.07 RIH to 770 m, tested the diverter lines and drilled a 17½" hole from 770-1108 m. Flowchecks at drilling breaks below 847 m were all negative.

28.07 Drilled a 17½" hole from 1108-1498 m. Had drilling breaks through sandstringers, but flowchecks were all negative.

29.07 Drilled a 17½" hole from 1498-1632 m. Circulated. Made a wiper trip to the 20" casing shoe. Tight hole from 1520-1490 m caused up to 40 tons overpull. Slipped and cut the drilling line. Had no tight spots when running in to 1632 m.

Drilled a 17½" hole from 1632-1772 m. Flowchecked at 1753 m, ok.

30.07	The greasepump for the rotary gear broke down, but had no success when trying to repair same. POOH to change the bit while waiting for the repair on the greasepump for the rotary gear. Tight spots at 1711 m, 1644 m and 1616 m caused maximum 30 tons overpull. Made up a new 17½" bit and RIH to 1766 m. Washed and reamed to 1772 m. Drilled a 17½" hole from 1772-1889 m. Flowchecked, ok. Circulated and raised the mudweight to 1.18 S.G. Drilled a 17½" hole from 1889-1900 m.
31.07	Drilled a 17½" hole from 1900-1974 m. Flowchecked, ok. Circulated and raised the mudweight to 1.25 S.G. Drilled a 17½" hole from 1974-2000 m. Made a wiper trip to the 20" shoe. Several tight spots caused 40 tons maximum overpull. Had also tight spots when running in to 1768 m. Reamed from 1768-1822 m and from 1844-1860 m.
01.08	Pumped a high viscous pill and raised the mudweight to 1.32 S.G. Reamed from 1860-2000 m. Pumped a high viscous pill and circulated bottoms up. Max gas 0.2%. POOH to the 20" casing shoe. Tight spot at 1863 m. Changed out the motor for the rotary gear. RIH to 2000 m. No tight spots. Circulated bottoms up, dropped the single shot survey and POOH. Schlumberger ran log no. 1 ISF/LSS-GR.
02.08	Schlumberger ran log no. 2 LDL/GR. Made up the 13 3/8" casing hanger running tool on 2 joints heavy weight drill pipe. Made up the subsea cement plugs and casing hanger running tool to the 20" casing hanger joint and set same back in the derrick. RIH with a 17½" bit to 2000 m. No tight spots. Circulated bottoms up and dropped the single shot survey. Max gas 0.9%. POOH. Retrieved the survey, misrun. Retrieved the wear bushing. Prepared to and started running the 13 3/8" casing. When lowering down the shoe joint and the collar joint, the slip type

elevator was opened before the casing was landed in the spider and the two casing joints dropped in the hole. Rigged down the casing running equipment and set the wear bushing.
Made up a 13 3/8" casing swedge to a heavy weight drill pipe.

03.08 RIH to 1965 m.
Circulated for 10 min. Tagged the top of the fish at 1973 m. Attempted to screw the swedge into the fish, but when POOH, no fish was recovered. Laid down 2 stands 9½" drill collars from the derrick. RIH with open ended drill pipe to 1974 m but was not able to pass the top of the fish. Pressure tested the surface lines and set a balansed cement plug from 1974-1915 m. Pulled out to 1619 m, circulated and POOH. Retrieved the wear bushing and RIH with the BOP testing plug. Pressure tested the BOP on the blue pod and function tested same on the yellow pod. POOH with the BOP testing plug and set the wear bushing. RIH with a 17½" bit and tagged the cement at 1882 m.
Drilled the cement from 1882-1895 m.

04.08 Drilled the cement from 1895-1904 m. Circulated and conditioned the mud, dropped the survey and POOH. Retrieved the survey.
Made up a 17½" bit, a turbine section and a 2 degree bent sub. RIH with the kick off assembly to 1900 m. Reamed from 1900-1904 m. Turbodrilled a 17½" hole from 1904-1907 m, but was unable to continue due to turbine stalling. POOH. Broke and laid down the turbine section. Made up and RIH with a new 17½" bit and a new turbine section. Turbodrilled the 17½" hole from 1907-1910 m.

05.08 Turbodrilled a 17½" hole from 1910-1988 m. Circulated, dropped and retrieved the survey.

06.08 POOH. Broke and laid down the turbine section. RIH with a new rock bit. Reamed the hole from 1980-1988 m. Drilled a 17½" hole from 1988-2003 m and made a wiper trip to 1958 m. Had no drag. Drilled the 17½" hole from 2003-2024 m. Made a new wiper trip to 1958 m. The hole was ok.

Circulated bottoms up and dropped a multishot survey. Pulled out to the 20" casing shoe, retrieved the survey and RIH. Circulated and conditioned the mud. POOH. Had no drag.

07.08 Flushed the wellhead, the kill and the choke line. Retrieved the wear bushing and ran the 13 3/8" casing. Cemented the casing with the casing shoe set at 2008 m. The plug was bumped with 130 bars. Backed out the running tool, washed the wellhead and the kill and the choke line.

RIH with a jetting tool and washed the wellhead area for 20 min. Circulated a 6 m^3 pill with high gel strength.

08.08 Broke and laid down the 17½" string stabilizers and the excess drill collars. When making up the seal assembly running tool to a 8" drill collar, the pin end on the crossover in between did not shoulder out on the box on the running tool. The threads on the seal assembly running tool seemed to be squeezed, and therefore a 4½" IF pin x 4½" IF box saver sub was made up and welded to the running tool. RIH and set the seal assembly and pressure tested same to 268 bars. Pressure tested the BOP on the yellow pod and function tested on the blue pod. POOH with the seal assembly running tool.

Pressure tested the casing to 268 bars for 20 min and set the wear bushing. Pressure tested 3 kelly cocks, the kelly and the inside Gray BOP to 345 bars, ok. Made up and RIH with a new bottom hole assembly. Tagged the cement at 1921 m. Performed a slow pump rate and a BOP drill. Drilled out plugs, float collar and soft cement.

09.08 Drilled out the shoe joint, the rat hole and 3 m new formation. Circulated and conditioned the mud. Performed a formation integrity test at the 13 3/8" shoe equivalent to 1.80 S.G. mudweight.
Drilled a 12 1/4" hole from 2027-2120 m. Raised the mudweight form 1.32 S.G. to 1.45 S.G. Dropped the survey, pulled out to the casing shoe, retrieved the survey and RIH. Drilled a 12 1/4" hole from 2120-2167 m.

10.08 Drilled a 12 1/4" hole from 2167-2225 m. Raised the mudweight from 1.45 S.G to 1.65 S.G. and dropped the survey. Pulled out to the casing shoe, retrieved the survey and RIH. Drilled a 12 1/4" hole from 2225-2303 m.

11.08 Drilled a 12 1/4" hole from 2303-2317 m. Circulated bottoms up. Max gas 0.08 %. Dropped the survey and POOH to change the bit. Retrieved the survey. RIH with a new bit and DLWD-tool on a new bottom hole assembly. Slipped and cut the drilling line. Reamed from 2256-2317 m. Drilled a 12 1/4" hole from 2317-2343,5 m. Flowchecked, ok. Circulated bottoms up for samples. Max gas 2.1 %. POOH.

12.08 POOH. Broke and laid down the 8" monel and the DLWD tool. Made up a corebarrel on a new bottom hole assembly and RIH. Circulated bottoms up, dropped the ball and cut core no. 1 from 2343.5-2361 m. Circulated. Max gas 0.49%. POOH. Recovered core no. 1, serviced the core barrel and RIH.

13.08 Circulated, dropped the ball and cut core no. 2 from 2361-2368 m. The corebarrel jammed and it was impossible to restart the coring. Circulated and POOH. Recovered core no. 2. RIH with a 12 1/4" rock bit and drilled from 2368-2376.5 m. Flowchecked after a drilling break at 2376.5 m, negative. Circulated bottoms up and POOH. Made up and RIH with coring assembly, but was unable to pass 2374 m.

14.08 Reamed the hole from 2374-2376.5 m and experienced high torque. Circulated and cut core no. 3 from 2376.5-2395m. Circulated and POOH. Recovered core no. 3. RIH with a 12 1/4" rock bit to 2370 m. Reamed the hole from 2370-2395 m. Drilled a 12 1/4" hole from 2395-2469 m.

15.08 Drilled a 12 1/4" hole from 2469-2479 m. Circulated and attempted to take a directional survey with the DLWD-tool, negative. Dropped the single shot survey, pulled out with 17 stands drillpipe and retrieved the survey. RIH and drilled a 12 1/4" hole from 2479-2618 m. Max gas 0.24% at 2580 m.

16.08 Drilled a 12 1/4" hole from 2618-2622 m. Circulated the shakers clean and POOH. No drag. Pressure tested 3 kelly cocks and the inside Gray BOP. Schlumberger ran a Repeat Formation Tester (RFT). Retrieved the wear bushing and RIH with the BOP testing tool. Pressure tested the BOP stack on the blue pod and function tested same on the yellow pod. POOH with the testing tool and set the wear bushing. RIH with a 12 1/4" rock bit.

17.08 Continued RIH with the 12 1/4" rock bit. Reamed the hole from 2602-2622 m and drilled a 12 1/4" hole from 2622-2691 m. Reduced the mudweight from 1.65 S.G. to 1.58 S.G. while drilling. Flowchecked at 2686 m and 2691 m, negative.

18.08 Circulated bottoms up. Max gas 0.29%. Drilled a 12 1/4" hole from 2691-2731 m. Circulated, dropped the single shot survey and POOH. Retrieved the survey. Made up a new rock bit and RIH. Drilled a 12 1/4" hole from 2371-2787 m.

19.08 Drilled a 12 1/4" hole from 2787-2861 m.

20.08	Drilled a 12 1/4" hole from 2861-2871 m. Circulated, dropped the single shot survey and POOH to change the bit. Retrieved the survey. Changed out the jar and the bit and RIH. Drilled a 12 1/4" hole from 2871-2903 m.
21.08	Drilled a 12 1/4" hole from 2903-2956 m. Circulated and dropped the single shot survey. POOH and retrieved the survey.
22.08	Made up and RIH with a new 12 1/4" rock bit. Drilled a 12 1/4" hole from 2956-2961 m. Flowchecked, ok. Circulated bottoms up for samples. Max gas 0.05%. Drilled a 12 1/4" hole from 2961-2985 m. Experienced high torque and a low rate of penetration. POOH and observed excessive wear on the bottom stabilizer blades. Made up a new bit, modified the bottom hole assembly and RIH to 1893 m.
23.08	Slipped and cut the drilling line. Continued RIH to 2968 m. Reamed the hole from 2968-2985 m. Drilled a 12 1/4" hole from 2985-3003 m. Experienced a high torque. Reamed tight spots at 2982 m. Drilled a 12 1/4" hole from 3003-3025 m. Circulated bottoms up and dropped the single shot survey. POOH and retrieved the survey. Schlumberger ran ISF/SONIC-MSFL-GR.
24.08	Schlumberger ran LDL/CNL-GR, SHDT and VSP.
25.08	Schlumberger ran CST and CBL. RIH with open ended drill pipe to 3025 m. Circulated bottoms up. Max gas 0.85%. Rigged up and tested the cement lines. Set cement plugs from 3025-2925m, from 2780-2635m, from 2625-2475m, from 2475-2320m and from 2058-1908m. Circulated bottoms up and flushed the kill and the choke lines.

26.08	POOH. Laid down excess drill pipes and drill collars while waiting on the cement to set. RIH with a 12 1/4" bit and a 13 3/8" casing scraper and tagged the cement at 1877 m. Drilled the cement from 1877-1908 m. Circulated bottoms up, closed the middle pipe rams and tested the cement plugs and the 13 3/8" casing to 100 bars, ok. POOH and laid down excess drill pipes. Ran a gauge ring and a junkbasket on wire-line.
27.08	Set a bridge plug at 1894 m. Schlumberger ran a casing puncher and fired 4 shots at 605 m while keeping 35 bars pressure in the annulus. The pressure dropped 7 bars when firing. POOH and attempted to establish an injection rate but had no success due to pressure build up. Made a second run with the casing puncher and fired 4 shots at 605 m, but had no success when trying to establish injection rate. Retrieved the wear bushing. RIH to 500 m, and circulated while reducing the mudweight from 1.58 S.G. to 1.32 S.G. POOH. RIH with A-1 13 3/8" casing cutting equipment. Cut the 13 3/8" casing at 501 m. Flowchecked, ok. POOH. RIH with a 13 3/8" casing spear and retrieved the 13 3/8" casing using maximum 70 tons overpull. Circulated bottoms up. Max gas 1.3%. POOH with 29 joints 13 3/8" casing and laid down same.
28.08	Rigged up and pressure tested the cement lines, ok. Set cement plugs from 550-375 m and from 375-200 m. Reverse circulated and POOH. Broke and laid down excess drill pipes. Disconnected the kill, the choke and the booster lines and pulled the BOP stack. Installed the 2 arm guide frame and the subsea TV. RIH to the wellhead and attempted to stab the 20" and the 30" casing cutting assembly into same, but had no success due to a bent guide frame. Pulled out with the guide frame and the casing cutting assembly. Installed ropes for guiding, ran back to the wellhead and attempted to stab into same, no success. Pulled out and repaired the 2 arm guide frame.

29.08 Re-installed the guide frame and ran back to the wellhead and succeeded in stabbing the casing cutting assembly into the wellhead. While cutting the 20" and the 30" casing at 169 m, the pump pressure and the torque suddenly dropped to zero. POOH and found the pin end on the spacer sub between the cutting tool and the marine swivel to be parted. POOH with the marine swivel and the parted saver sub. Modified an 11 3/4" overshot to make it possible for the fishneck to reach into the basket grapple. RIH and tagged the fish at 166.5 m. When pulling with 15 tons overpull, the tension suddenly dropped off. Lowered the mini submarine to inspect the wellhead and the pipe. The heavy weight drill pipe was reported bent. POOH and laid down 3 joints heavy weight drill pipes. RIH and attempted to catch the fish, no success. The fish had dropped to 195 m. POOH with the overshot, inspected and modified same and RIH. Succeeded in catching the fish after a few attempts. POOH with the overshot and the fish.

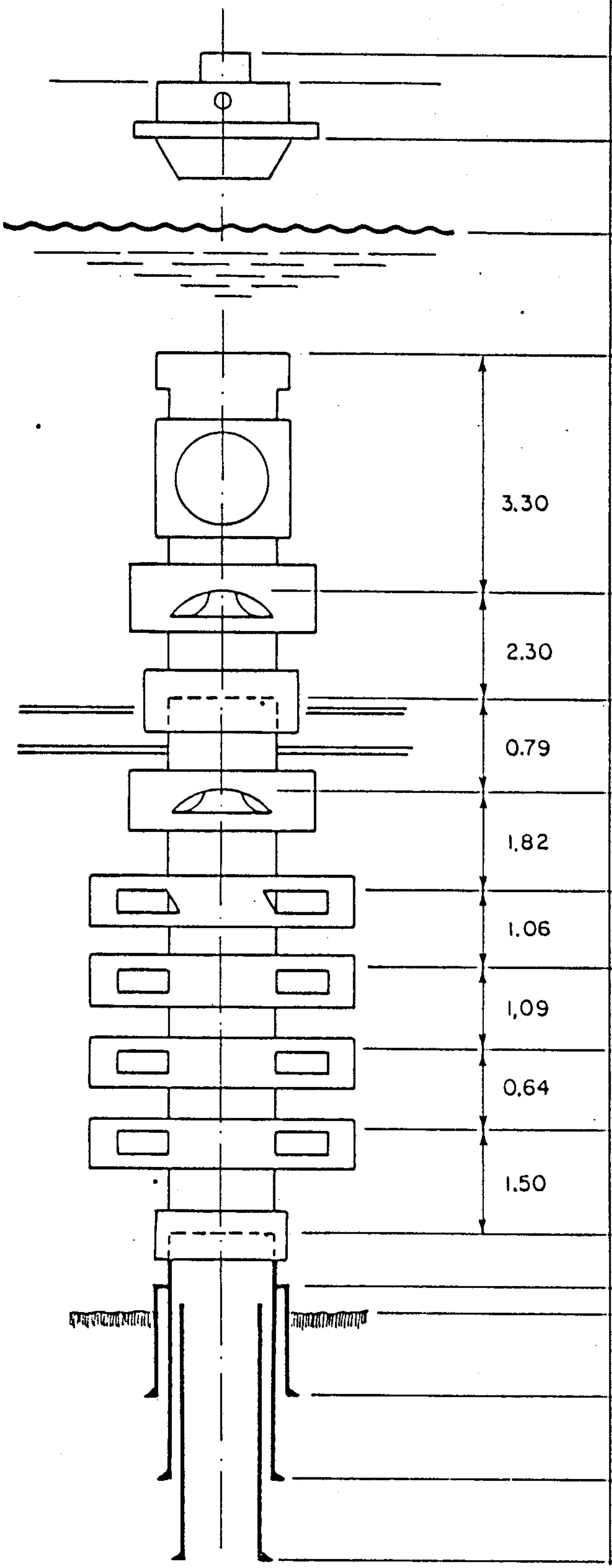
30.08 Explotec RIH to blow off the 20" and the 30" casing. Pulled the rig 50 m forward and fired the explosives at 168.5 m. Repositioned the rig and ran into the wellhead and retrieved same, the 20" and the 30" casing using 10 tons overpull. Lowered the mini submarine to inspect the seabed. Waited on weather to pull the anchors. Anchor handling. The chaser passed the chaser-stopper on anchor no. 3, no. 4, no. 6 and no. 7.
The rig "Ross Isle" was transferred from 34/10-18 to 34/10-16 reentry at 2400 hours the 30th of August 1983.

III 4 WELL AND SUBSEA SCEMATIC

ROSS ISLE 18 3/4" SUBSEA ASSEMBLY

WELL 34/10-13

(NOT TO SCALE)



M	
0	RKB
	DIVERTER RISER CONN. FLANGE
22	MEAN SEA LEVEL
148,6	JOINT RISER CONNECTOR FLANGE
151,9	UPPER ANNULAR RUBBER TOP (CLOSED)
154,20	LOWER STACK ASSEMBLY TOP
154,99	LOWER ANNULAR RUBBER TOP (CLOSED)
156,81	SHEAR RAMS TOP
157,87	U. P. RAMS TOP
158,96	M. P. RAMS TOP
159,60	L. P. RAMS TOP
161,10	18 3/4" WELL HEAD TOP
161,50	30" HOUSING TOP
163	MUD LINE
227	30" SHOE
747	20" SHOE
2008	13 3/8" SHOE

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ORIGINAL:
TEGNET: AM
DATO: 6-4-83

III 5. FORMATION INTEGRITY TESTS

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FORMASJONSSTYRKETEST

Dato: 26.07.83

Brønn nr.: 34/10-18 **Dybde:** Brønn: 768m Foring: 747m Test: 747m

Fartøy: Ross Isle **Høyde R.K.B.:** Over vannfl.: 22m Over sjøb.: 161m

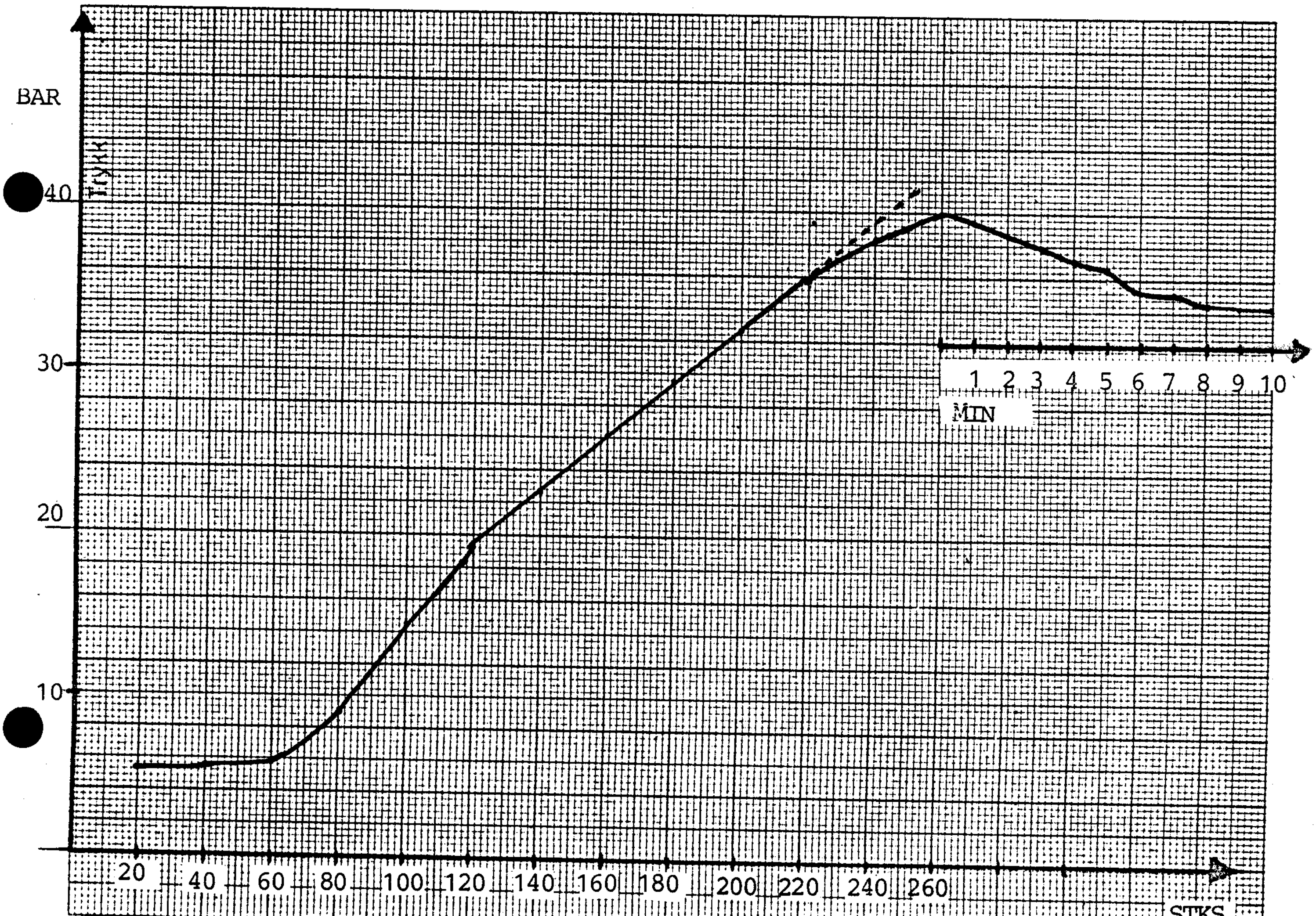
Foring: Diam.: 20" Tyngde: 133/94 lbs/ft. Grad: K-55/X-56 Maks. trykk: 123 bars

Boreslam: Tetthet: 1.08 s.g. Vis: 44sec P.V.: 9 c.p. Y.P.: 10 lbs/ 100 ft. Filt: 14 cc/ 30 min Gel.: 2/16 lbs/ 100 ft.

Pumpe: Type: Triplex (Dowell) Kapasitet: 2.08 ltr/stk Vol./tidsenh.: 160 ltr/min Tilb.str.: 70 ltr.

Antatt styrke: 1.58 s.g. Obs. spr. trykk: 35.9 bars Ekv. formasj. styrke: 1.57 s.g.

STKS	BAR	STKS	BAR	MIN	BAR	MIN	BAR	Anmerkninger
20	5.2	180	29.6	1	39.6	9	34.5	Pumped total 540 ltr.
40	5.5	200	32.7	2	38.6	10	34.5	
60	5.9	220	35.9	3	37.9			
80	9	240	38.6	4	37.2			
100	14.5	260	40	5	36.5			
120	19.3			6	35.1			
140	22.7			7	35.1			Sign.: S.Bogre M.Florvaag
160	26.2			8	34.5			



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FORMASJONSSTYRKETEST

Dato: 09.08.83

Brønn nr.: 34/10-18 **Dybde:** Brønn: 2027m Foring: 2008m Test: 2008m

Fartøy: Ross Isle **Høyde R.K.B.:** Over vannfl.: 22m Over sjøb.: 161m

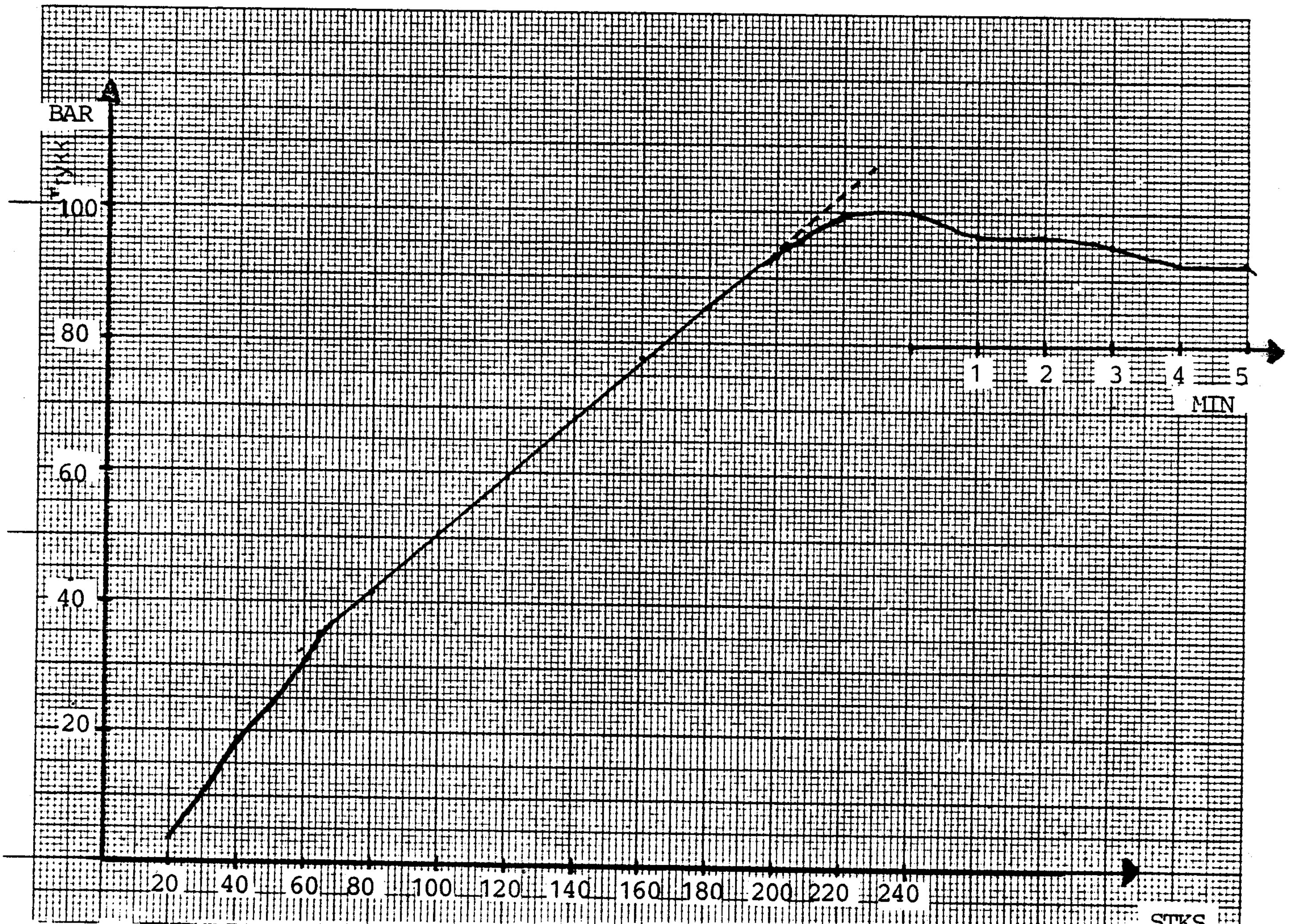
Foring: Diam.: 13 3/8" Tyngde: 72 lbs/ft. Grad: N-80 Maks. trykk: 315 bars

Boreslam: Tetthet: 1.32 s.g. Vis: 48 sec. P.V.: 14 c.p. Y.P.: 10 lbs/100ft^2 Filt: 13 cc/30 min Gel.: 4/31 lbs/100 ft^2

Pumpe: Type: Triplex (Dowell) Kapasitet: 4.16ltr/stk. Vol./tidsenh.: 94 ltr/min Tilb.str.: 700 ltr.

Antatt styrke: 1.87 s.g. Obs. spr. trykk: 94 bars Ekv. formasj. styrke: 1.80 s.g

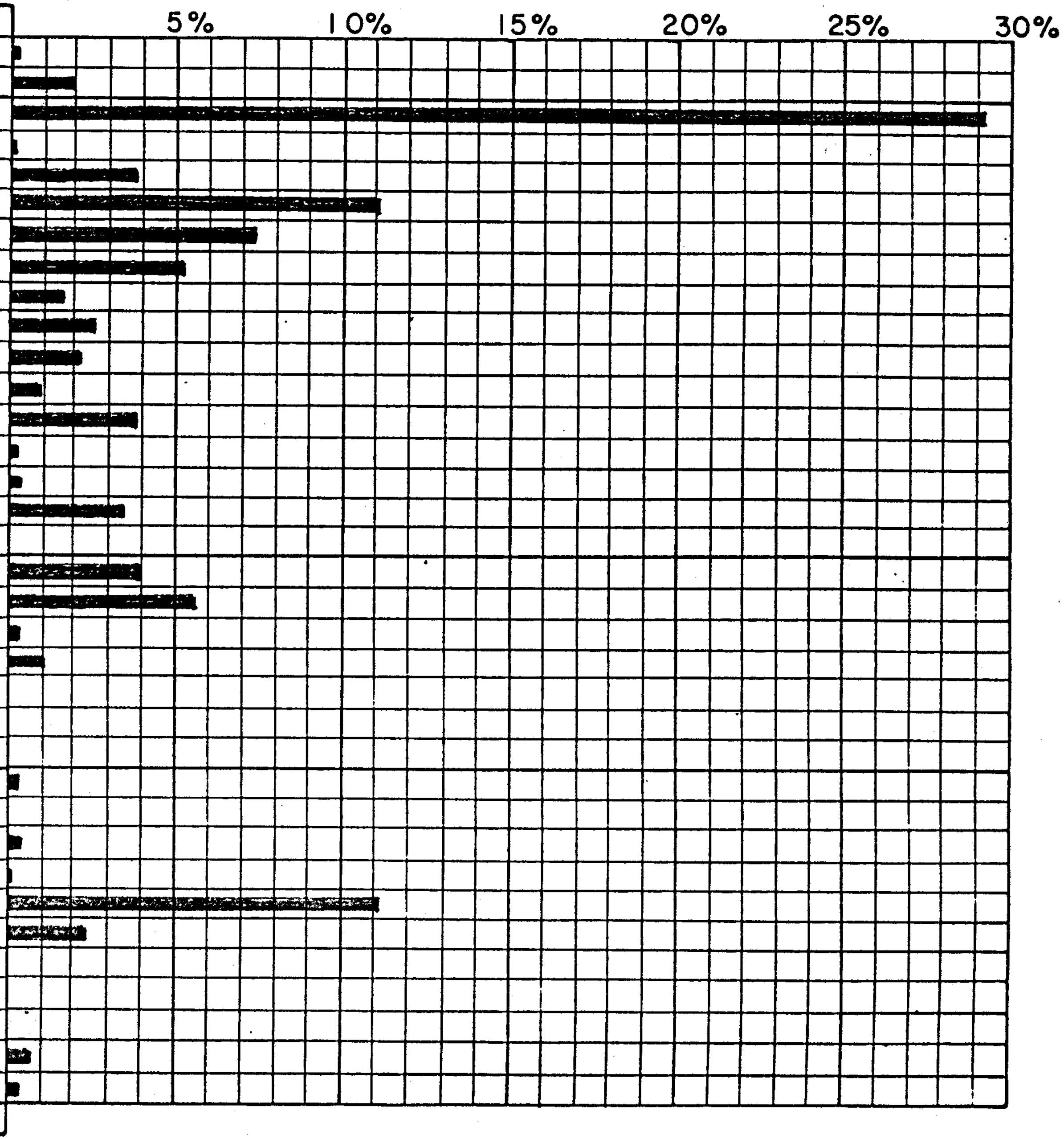
STKS	BAR	STKS	BAR	MIN	BAR	Anmerkninger
20	3.4	180	85.5	1	96.5	Pumped 1000 ltr.
40	19	200	93.1	2	96.5	Bled back 700 ltr.
60	31	220	100	3	95.2	
80	41.3	240	100	4	92.4	
100	51			5	92.4	
120	59.3					
140	68.3					Sign.: S.Sætervik
160	77.6					



III 6. RIG TIME DISTRIBUTION
DRILLING TIME VS. DEPTH
DRILLING COST VS. DEPTH

RIG TIME DISTRIBUTION FOR WELL 34/10-18

		HRS	%
	Moving	2,5	0,22
	Mooring	22	1,96
DRILLING OPERATION	Efficient drilling	328,5	29,21
	Other drilling	1,5	0,13
	Hole opening	42,5	3,78
	Regular tripping	124,5	11,07
	Casing and cementing	82,5	7,34
	Sub sea eq. and BOP	59	5,25
	Abnormal press. detection	19,5	1,73
	Cond. and circ.	30	2,67
	Reaming	24,5	2,18
	Directional survey	10,5	0,93
	Plugging	43	3,82
	Formation leak-off test	3	0,27
	Maintenance	4	0,36
	Other	29	2,58
FORMATION EVALUATION	Coring	44,5	3,96
	El. logging	64	5,69
	Circ. for samples	4	0,36
	RFT	11,5	1,02
	Production testing		
	Other		
DOWNTIME	Rig repairs	3,5	0,31
	Rig moving		
	Waiting on weather	4,5	0,40
	Subsea eq. and BOP	1	0,09
	Fishing	125	11,12
	Lost sirculation	27,5	2,45
	Well control		
	Hole problems		
	Formation evaluation		
	Diving	8	0,70
	Other	4,5	0,40
	TOTAL	1124,5	100



WELL 34/10-18

DRILLING TIME V.S. DEPTH.

RIG : ROSS ISLE

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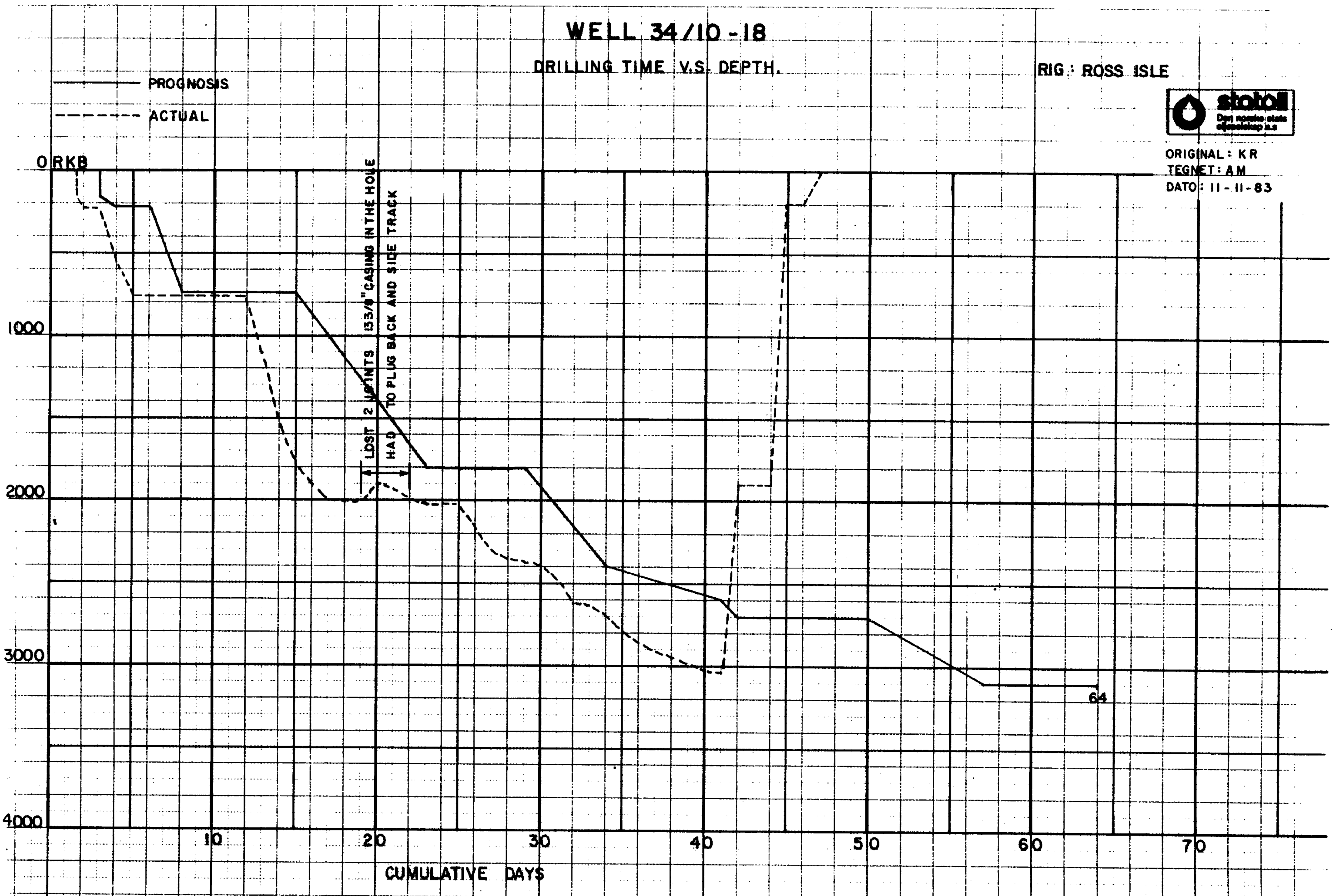
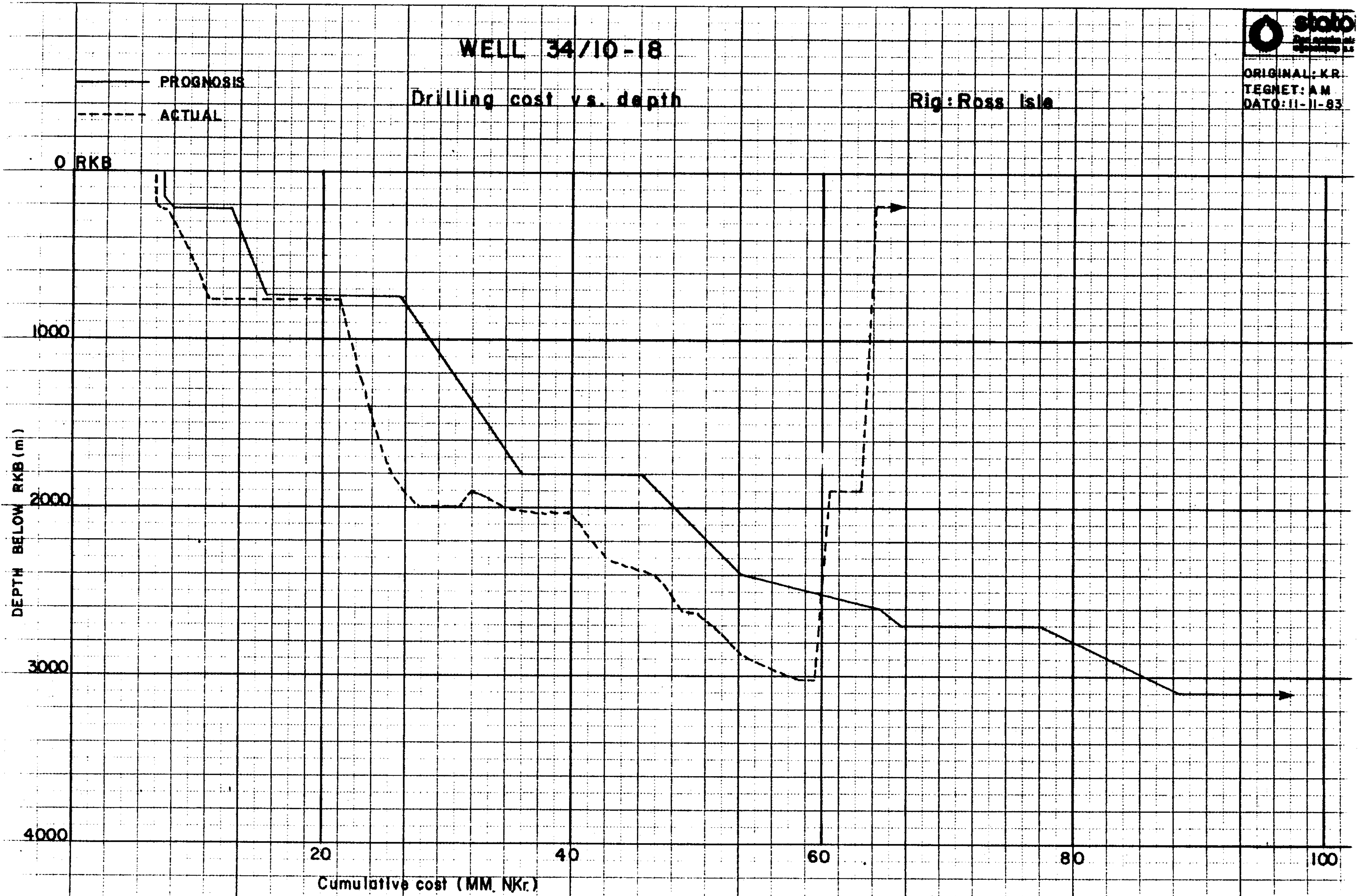
ORIGINAL : KR
TEGNET : AM
DATO : 11-11-83




WELL 34/10-18
Drilling cost vs. depth
Rig: Ross Isle
ORIGINAL: K.R.
TEGNET: A M
DATO: 11-11-83
PROGNOSIS
ACTUAL
0 RKB
1000
2000
3000
4000
DEPTH BELOW RKB (m)
20
40
60
80
100
Cumulative cost (MM. NKr.)

III 7 BIT RECORD AND LITHOLOGY COLUMN

statoil

BORKRONEDATA

Brønn nr.: 34/10-18

Nr.	B. k. Nr.	Diam.	Fabr.	Type	Serie no.	Dyser 1/32"	Dybde ut	Fremdrift	Rot. tid	Total rot.tid	Bore-hast.	V.p.b.	O.p.m.	Pumpe			Tilstand			Anmerkninger
														Trykk	V.grad	v/t	T	B	G	
21	11RR	12 1/4"	D.B	CB403	7083453	–	2395	18.5	6.4	208.8	2.9	15-17	115	92	0.97	1197				20% worn
22	13	12 1/4"	STC	FDGH	CP6849 1-3-7	3x15	2622	227	30	238.8	7.6	17-20	90	204	"	2050	5	6	$\frac{1}{8}$	
23	14	12 1/4"	SEC	S44	4671 1-3-4	3x15	2731	109	24.6	263.4	4.4	20	90	203	"	2145	5	6	$\frac{1}{8}$	B.T.
24	15	12 1/4"	HTC	J3	987LF 1-3-6	3x15	2871	140	34.3	297.7	4.1	22-25	90	218	"	2221	5	8	I	B.T.
25	16	12 1/4"	HTC	J3	992LF 1-3-6	"	2956	85	29.6	327.3	2.9	23	70-90	220	"	2183	5	5	I	B.T.
26	17	12 1/4"	HTC	J4	008JF 2-1-6	"	2985	29	13	340.3	2.2	5-25	90	215	"	2164	3	4	I	
27	18	12 1/4"	STC	SVH	XB4882 2-1-5	"	3025	40	11.7	352	3.4	22	90	214	"	2126	4	5	$\frac{1}{8}$	

statoil

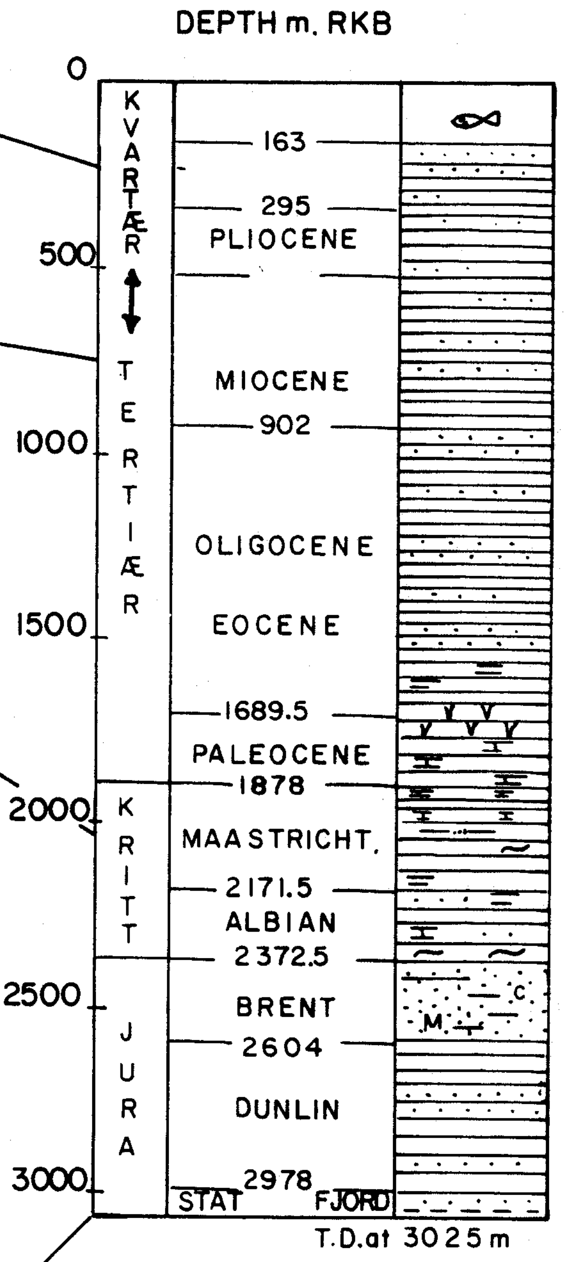
BORKRONEDATA

Brønn nr.: Ross Isle 34/10-18

Nr.	B. k. Nr.	Diam.	Fabr.	Type	Serie no.	Dyser 1/32"	Dybde ut	Fremdrift	Rot. tid	Total rot.tid	Bore-hast.	V.p.b.	O.p.m.	Pumpe			Tilstand			Anmerkninger
														Trykk	V.grad	v/t	T	B	G	
1	1	26x36	HTC	OSC-3A	KH-218 1-1-1	3x20	227,5	64.5	10	10	6,5	0-5	75	45	0.97	3000	1	1	I	Rerun bit.Dif to start.Hard seabed
2	RR1	26"	"	"	"	"	229	1,5	0.5	0.5 Drilled out cement,shoe+new formation							1	1	I	
3	2	12 1/4"	SEC	S33SF	129136 1-1-6	3x18	765	536	24.8	35.3	21.6	0-10	95-105	125	"	2835- 3400	3	5	$\frac{1}{8}$	Pilot hole
4	3	12½x17½ Ho.x26UR	STC	SDS	CA8365 1-1-4	3x18h.o 3x18	589	360	21	Ran approx 300RPM/Meter		0-5	100-110	130- 157	"	3540				Pooh changed H.O.+U.R.
5	RR3	"	"	"	CA8365 1-1-4	3x16	765	176	11	88	15.8	0-5	110	157	"	"	1	1	I	H.O:2T,6B,I UR:3T,4B,I
6	4	17½"+ 26"U.R	HTC	X3A	282LF 1-1-4	None	-	Drilled cmt from 207 - 236m									1	1	I	
7	RR1	26"	"	OSC-3A	KH-218 1-1-1	3x20		Wiper trip to 763 m									2	2	I	Reaming
8	RR4	17½"	"	X3A	282LF 1-1-4	3x18	770	5	3,5	91,5	1,43	1-20	40-150	123-126	"	3515	2	2	I	Also drilling float+cmt.
9	5	17½"	STC	SDT	XC4292 1-2-4	1x14 3x18	1772	1002	44.7	136.2	22.4	7-15	120-130	210	"	3570	4	5	I	
10	6	17½"	STC	SDT	XC4276 1-2-4	1x14 3x18	2000	228	16.4	152.6	13.9	9-12	125	213	"	3350	2	2	I	
11	RR6	17 ½"	"	"	"	"	-	Wiper trip / Circ. bottoms up									2	2	I	
12	RR6	"	"	"	"	"	-	Drilling cmt from 1882-1904												Side-tracking
13	7	17½"	HTC	OSC-1G	192SR 1-3-1	None	-	Drilling 3m cmt			-	0-2,5	-	227	"	3226	1	1	I	Pulled out due to turb.stalling
14	8	"	"	"	"	None	-	Side-tracking.Drilling both cmt and formation				0-5	-	213	"	3226	3	5	I	Trubine
15	RR7	"	"	"	"	3x20	2024	24	2,5	155.1	9.6	15.5	80	207	"	3120	2	2	I	Side-tracking +new hole.
16	9	12 1/4"	"	X1G	194SR 1-3-4	3x15	2317	293	31.7	186.8	9.3	13-16	115	209	"	2145	6	4	I	
17	10	12 1/4"	"	"	044EK 1-3-4	3x15	2343.5	26.5	3.4	190.2	7.8	15-18	100-115	207	"	2107	4	2	I	
18	11	12 1/4"	D.B	CB-403	7083453	-	2361	17.5	6.5	196.7	2.7	16	115	92	"	1242				5% worn.
19	RR11	"	"	"	"	-	2368	7	3.9	200.6	1.79	15-17	115	92	"	1197				core bbl.jammed off 5% worn
20	12	12 1/4"	STC	FDGH	LX-0228 1-3-7	3x15	2376,5	8.5	1.8	202.4	4.7	18	90	204	"	2102	2	2	1	

LITHOLOGY COLOUMN V.S. BIT RECORD WELL 34/10-18

BIT NO.	TYPE	DEPTH OUT(M)	TIME (HOURS)	ROP (M/HR)	HOLE SIZE
1	OSC-3A	227.5	10	6.5	26" x 36"
RR1	OSC-3A	229	0.5	0.5	
2	S 33 SF	765	24.8	21.6	12 1/4" Pilot
3	12 1/4" SDS 17 1/2" H.O. 26" U.R.	765	32	16.7	26"
RR4	X 3 A	770	3.5	1.4	17 1/2"
5	SDT	1772	44.7	22.4	
6	SDT	2000	16.4	13.9	
RR 7	SIDETRACKING OSC-1G	2024	2.5	9.6	
9	X 1 G	2317	31.7	9.3	12 1/4"
10	X 1 G	2343.5	3.4	7.8	
11	CB-403	2368	10.4	2.4	
12	FDGH	2376.5	1.8	4.7	
RR11	CB-403	2395	6.4	2.9	
13	FDGH	2622	30	7.6	
14	S 44	2731	24.6	4.4	
15	J 3	2871	34.3	4,1	
16	J 3	2956	29.6	2.9	
17	J 4	2985	13	2.2	
18	SVH	3025	11.7	3.4	



statoil
Den norske stats oljeselskap a.s

Original: KR
Tegnet: AM
Dato: 6-2-84

III 4 WELLBORE SCHEMATIC 34/10-18

statoil
Den norske stats oljeselskap a.s

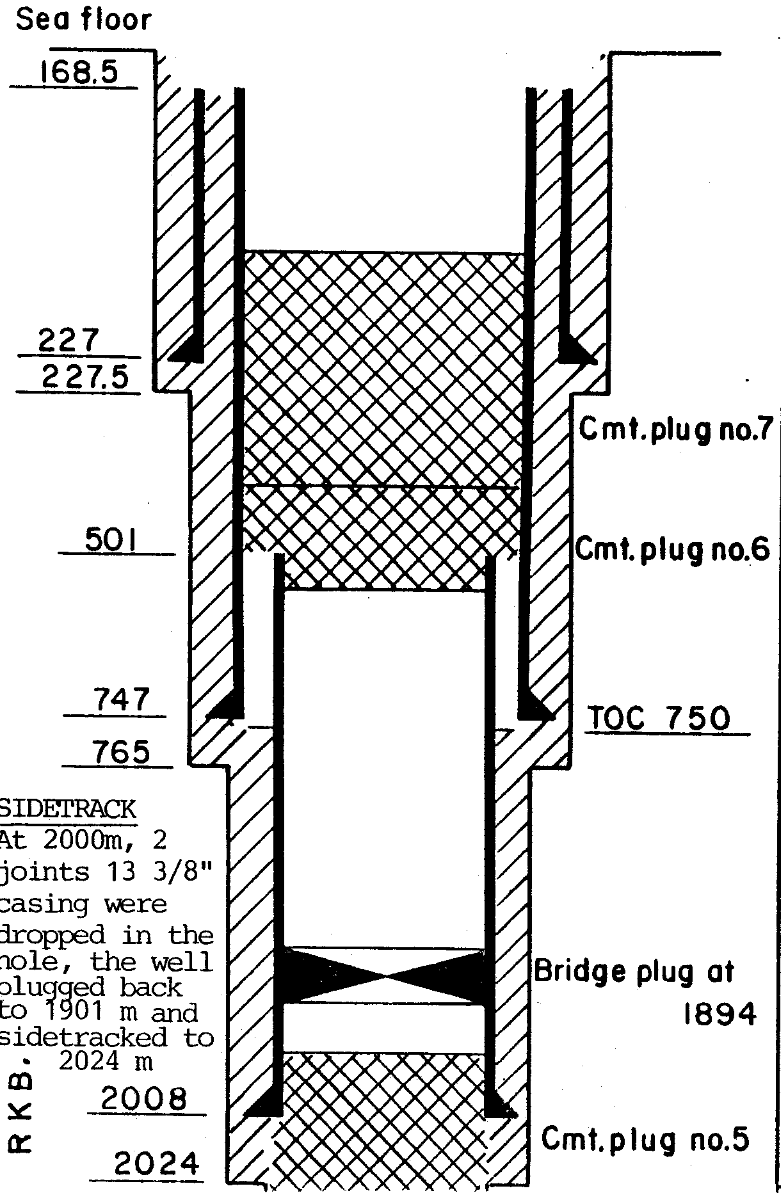
ORIGINAL AV: KR
TEGNET AV: AM
DATO: 11-11-83

(NOT TO SCALE)

RKB-MSL : 22 m.

WATER DEPTH : 141 m.

HOLE	CASING
36"	30" GRADE B VETCO ATD/RB
26"	20" 94 lb/ft X-56 VETCO LS + 133 lb/ft K-55 BUTTRESS X-O at 637m
17 1/2"	13 3/8" 72 lb/ft N-80 BUTTRESS



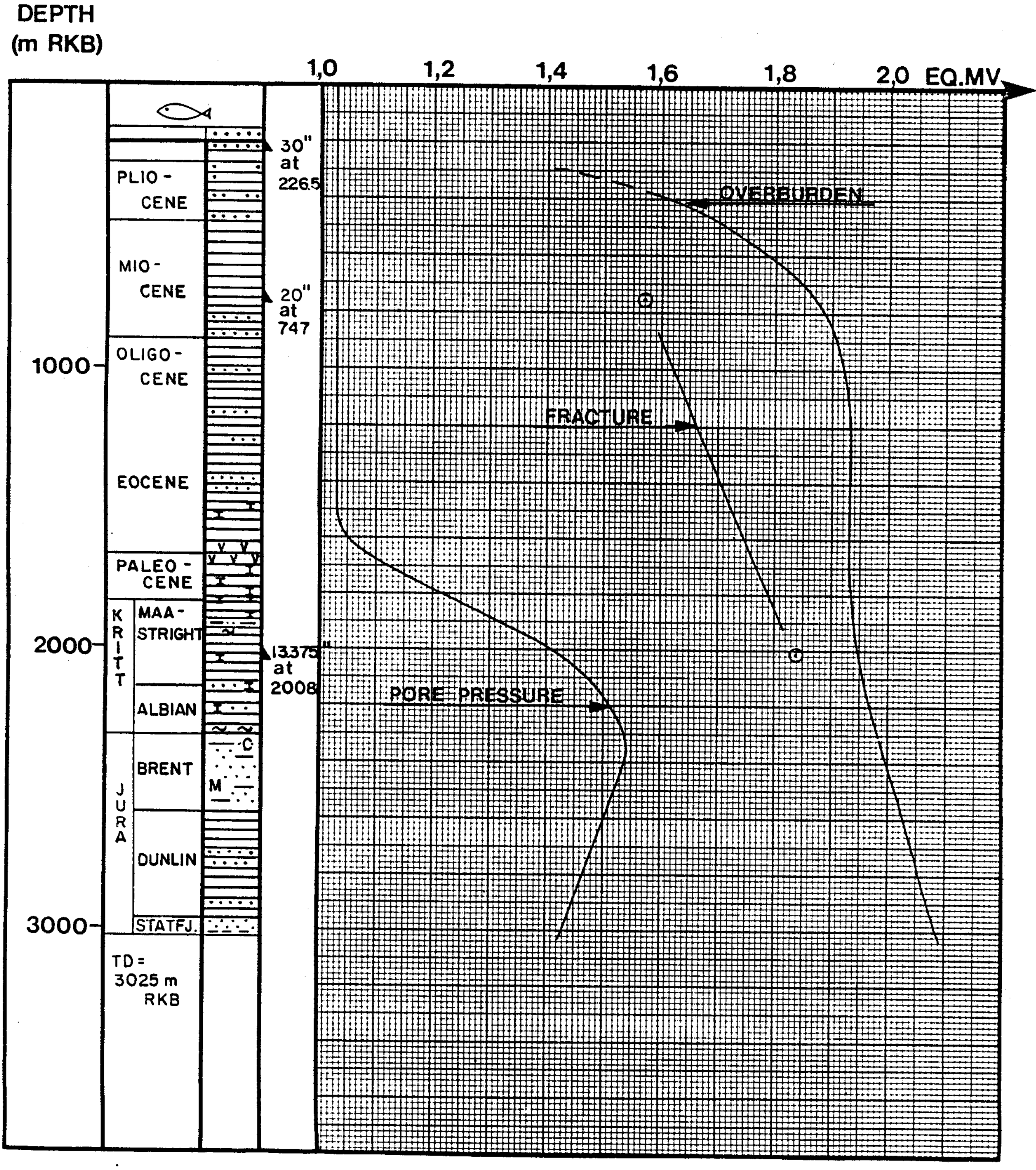
SIDETRACK
At 2000m, 2 joints 13 3/8" casing were dropped in the hole, the well plugged back to 1901 m and sidetracked to 2024 m

CASING CEMENT	PLUGS/SQUEEZE
LEAD SLURRY: 18.2 tons "G" cement + 3.2 1/100kg D-75 mixed with seawater to 1.56 s.g TAIL SLURRY: 13.1 tons "G" cement + 1.8 1/100kg D-77 mixed with seawater to 1.91 s.g - 150% excess in open hole	-20" and 30" blown off (Explotec) at 168.5 m Cmt. plug no 7 200-375 43 tons "G" cement mixed with seawater to 1.91 s.g. Cmt plug no 6 375-550 36 tons "G" cement mixed with seawater to 1.91 s.g.
LEAD SLURRY: 120 tons "G" cement + 3.2 1/100kg D-75 + 0.93 1/100kg D-81 mixed with seawater to 1.56 s.g TAIL SLURRY: 13.2 tons "G" cement mixed with seawater to 1.91 s.g. -100% excess in open hole	-13 3/8" csg. cut at 501 m
LEAD SLURRY: 68.9 tons "G" cement + 3.2 1/100kg D-75 + 1.33 1/100kg D-80 + 1.69 1/100kg D-81 mixed with seawater to 1.56 s.g. TAIL SLURRY: 14.4 tons "G" cement + 0.53 1/100kg D-81 mixed with freshwater to 1.9 s.g.	Bridge plug at 1894 m Cmt. plug no 5 1908-2058 20 tons "G" cement + 0.53 1/100kg D-81 mixed with freshwater to 1.9 s.g.

III 8 PRESSURE PROFILES

PRESSURE COMPOSITE PLOT

34/10-18



K.G. 26.01.84.

III 9 SURVEY

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                         WELL DEFLECTION SURVEY                 Page :  2

STATOIL                  Slot :                        Our ref : S04770.OST
34/10-18                 Well : 34/10-18           Date printed : 23-NOV-83
                         PBHL : N  0  0 E

Measured  Drift    Drift      Course  Vertical   Vertical   R E C T A N G U L A R   Dogleg
 Depth    Angle  Direction    Length   Depth     Section    C O O R D I N A T E S  Severity
           D  M     D  M

   0.00   0  0  N  0  0 E     0.00      0.00       0.00        0.00 N     0.00 E   0.00
 221.50   0 45  N 80  0 W   221.50    221.49       0.25        0.25 N     1.43 W   0.10
 748.00   0 18  S 56 18 W   526.50    747.97       0.09        0.09 N     5.97 W   0.03
1898.00   0 30  S 33  0 W   ******   1897.94      -5.79        5.79 S    11.21 W   0.01
1977.00   1 45  N 19  0 W    79.00   1976.93      -4.94        4.94 S    11.79 W   0.80

2114.00   1  6  N 90  0 W   137.00   2113.90      -2.96        2.96 S    13.78 W   0.38
2218.00   1  0  N 21 42 W   104.00   2217.89      -2.12        2.12 S    15.12 W   0.34
2311.00   0 15  N 23  0 E    93.00   2310.88      -1.18        1.18 S    15.34 W   0.27
2458.00   1  0  N 44 42 E   147.00   2457.87       0.03        0.03 N    14.31 W   0.16
2727.00   2 30  N 40  0 E   269.00   2726.74       6.19        6.19 N     8.89 W   0.17

2863.00   4 30  N 77 42 E   136.00   2862.49       9.60        9.60 N     1.77 W   0.65
2948.00   5 45  N 72 42 E    85.00   2947.15      11.58       11.58 N     5.56 E   0.47
3017.00   5  0  N 63 42 E    69.00   3015.85      13.94       13.94 N    11.55 E   0.49

  Calculation Method : Minimum curvature          Report Units : Metres
    Slot Coordinates :      0.00 N      0.00 E
Bottom hole Location : Referenced to Centre
            Distance :    18.10
           Direction : N 39 40 E


                                 SURVEY RUN INFORMATION
                                 ======================
              MAGNETIC SINGLE SHOTS 221.50-3017 MT.MD.
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WELL DEFLECTION SURVEY

STATOIL
34/10-18

Slot :
Well : 34/10-18
PBHL : N 0 0 E

Our ref : S04769.0ST
Date printed : 23-NOV-83

Measured Depth	Drift Angle D M	Drift Direction D M	Course Length	Vertical Depth	Vertical Section	RECTANGULAR COORDINATES		Dogleg Severity
0.00	0 0	N 0 0 E	0.00	0.00	0.00	0.00 N	0.00 E	0.00
244.00	0 44	S 47 0 W	244.00	243.99	-1.07	1.07 S	1.15 W	0.09
253.00	0 36	N 80 0 W	9.00	252.99	-1.11	1.11 S	1.24 W	2.04
327.00	0 31	S 35 0 W	74.00	326.99	-1.31	1.31 S	1.82 W	0.25
365.00	0 35	N 83 0 W	38.00	364.99	-1.43	1.43 S	2.11 W	0.45
394.00	0 25	S 56 0 W	29.00	393.99	-1.47	1.47 S	2.34 W	0.39
424.00	0 30	S 63 0 W	30.00	423.99	-1.59	1.59 S	2.55 W	0.10
451.00	0 31	S 24 30 W	27.00	450.99	-1.76	1.76 S	2.70 W	0.37
480.00	0 18	N 50 0 W	29.00	479.98	-1.83	1.83 S	2.81 W	0.68
507.00	0 24	N 54 24 E	27.00	506.98	-1.73	1.73 S	2.79 W	0.62
537.00	0 37	N 45 42 E	30.00	536.98	-1.55	1.55 S	2.59 W	0.23
565.00	0 51	N 35 0 E	28.00	564.98	-1.28	1.28 S	2.36 W	0.29
593.00	0 45	N 36 0 E	28.00	592.98	-0.96	0.96 S	2.14 W	0.11
622.00	0 48	N 27 48 E	29.00	621.98	-0.62	0.62 S	1.93 W	0.13
651.00	0 8	N 12 30 E	29.00	650.97	-0.41	0.41 S	1.83 W	0.69
679.00	0 52	N 10 0 W	28.00	678.97	-0.17	0.17 S	1.86 W	0.78
717.00	0 5	N 51 0 W	38.00	716.97	0.13	0.13 N	1.93 W	0.63
746.00	0 7	S 82 0 E	29.00	745.97	0.14	0.14 N	1.92 W	0.20
774.00	0 54	N 41 0 W	28.00	773.97	0.30	0.30 N	2.04 W	1.06
803.00	0 48	S 88 0 W	29.00	802.97	0.47	0.47 N	2.39 W	0.76
888.00	1 12	N 78 0 W	85.00	887.95	0.63	0.63 N	3.85 W	0.16
974.00	1 24	S 59 0 W	86.00	973.93	0.28	0.28 N	5.63 W	0.34
1060.00	1 42	S 31 0 W	86.00	1059.90	-1.36	1.36 S	7.19 W	0.28
1144.00	1 12	S 57 0 W	84.00	1143.88	-2.90	2.90 S	8.57 W	0.29
1230.00	1 6	S 5 0 W	86.00	1229.86	-4.22	4.22 S	9.40 W	0.35
1317.00	1 18	S 44 0 E	87.00	1316.85	-5.76	5.76 S	8.78 W	0.35

Continued on next page ...

WELL DEFLECTION SURVEY

STATOIL
34/10-18

Slot :
Well : 34/10-18
PBHL : N 0 0 E

Our ref : S04769.OST
Date printed : 23-NOV-83

Measured Depth	Drift Angle D M	Drift Direction D M	Course Length	Vertical Depth	Vertical Section	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Severity
1402.00	0 42	N 68 0 E	85.00	1401.84	-6.26	6.26 S	7.63 W	0.43
1488.00	1 36	N 22 0 W	86.00	1487.82	-4.95	4.95 S	7.60 W	0.61
1582.00	0 45	N 4 0 W	94.00	1581.80	-3.12	3.12 S	8.13 W	0.29
1669.00	0 15	N 47 0 W	87.00	1668.80	-2.42	2.42 S	8.31 W	0.20
1755.00	0 39	N 82 0 E	86.00	1754.80	-2.22	2.22 S	7.96 W	0.29
1840.00	0 30	N 35 0 E	85.00	1839,79	-1.85	1.85 S	7.27 W	0.17
1890.00	0 30	S 33 0 W	50.00	1889.79	-1.86	1.86 S	7.27 W	0.60
1927.00	0 52	N 25 0 E	37.00	1926.79	-1.74	1.74 S	7.24 W	1.10
1984.00	2 26	S 43 0 W	57.00	1983.78	-2.24	2.24 S	7.88 W	1.72
2015.00	3 3	N 73 30 W	31.00	2014.75	-2.48	2.48 S	9.12 W	2.84
2335.00	0 41	N 29 0 E	320.00	2334.60	1.62	1.62 N	16.35 W	0.31
2373.00	0 39	N 19 0 E	38.00	2372.59	2.02	2.02 N	16.17 W	0.10
2458.00	1 0	N 50 0 E	85.00	2457.59	2.96	2.96 N	15.44 W	0.20
2519.00	0 59	N 30 54 E	61.00	2518.58	3.75	3.75 N	14.77 W	0.16
2605.00	1 21	N 39 42 E	86.00	2604.56	5.16	5.16 N	13.74 W	0.14

Calculation Method : Minimum curvature
Report Units : Metres
Slot Coordinates : 0.00 N 0.00 E
Bottom hole Location : Referenced to Centre
Distance : 14.68
Direction : N 69 26 W

SURVEY RUN INFORMATION

D.L.W.D. TOOL SURVEY 244-2605 MT.MD.

WELL DEFLECTION SURVEY　　　　Page : 2

STATOIL
34/10-18

Slot :
Well : 34/10-18
PBHL : N 0 0 E

Our ref : S04655.4ST
Date printed : 23-NOV-83

Measured Depth	Drift Angle D	Drift Angle M	Drift Direction		Drift Direction D M		Course Length	Vertical Depth	Vertical Section	RECTANGULAR COORDINATES				Dogleg Severity
747.00	0	0	N	0	0	E	0.00	747.00	0.00	0.00	N	0.00	E	0.00
763.30	0	24	N	38	0	W	16.30	763.30	0.04	0.04	N	0.04	W	0.74
791.90	0	42	N	50	0	W	28.60	791.90	0.24	0.24	N	0.23	W	0.34
820.50	0	54	N	57	0	W	28.60	820.50	0.47	0.47	N	0.55	W	0.23
849.00	1	12	N	62	0	W	28.50	848.99	0.73	0.73	N	1.00	W	0.33
877.60	1	24	N	65	0	W	28.60	877.58	1.02	1.02	N	1.58	W	0.22
906.10	1	39	N	79	0	W	28.50	906.07	1.25	1.25	N	2.30	W	0.47
934.70	1	42	N	85	0	W	28.60	934.66	1.36	1.36	N	3.13	W	0.19
963.30	1	42	S	79	0	W	28.60	963.25	1.32	1.32	N	3.97	W	0.50
991.80	1	42	S	63	0	W	28.50	991.74	1.05	1.05	N	4.76	W	0.50
1020.40	1	36	S	57	0	W	28.60	1020.32	0.64	0.64	N	5.47	W	0.21
1048.90	1	36	S	49	0	W	28.50	1048.81	0.16	0.16	N	6.11	W	0.23
1077.50	1	30	S	51	0	W	28.60	1077.40	-0.34	0.34	S	6.70	W	0.12
1106.00	1	21	S	49	0	W	28.50	1105.89	-0.80	0.80	S	7.24	W	0.17
1134.60	1	15	S	41	0	W	28.60	1134.49	-1.25	1.25	S	7.70	W	0.22
1163.20	1	0	S	36	0	W	28.60	1163.08	-1.69	1.69	S	8.05	W	0.28
1191.70	0	42	S	22	0	W	28.50	1191.58	-2.05	2.05	S	8.26	W	0.38
1220.20	0	42	S	3	0	E	28.50	1220.08	-2.39	2.39	S	8.32	W	0.32
1248.90	0	48	S	38	0	E	28.70	1248.77	-2.72	2.72	S	8.19	W	0.48
1277.40	1	0	S	35	0	E	28.50	1277.27	-3.08	3.08	S	7.92	W	0.22
1306.00	1	6	S	35	0	E	28.60	1305.87	-3.51	3.51	S	7.62	W	0.10
1334.50	1	6	S	37	0	E	28.50	1334.36	-3.95	3.95	S	7.30	W	0.04
1363.10	1	0	S	49	0	E	28.60	1362.96	-4.34	4.34	S	6.95	W	0.25
1391.70	0	54	S	56	0	E	28.60	1391.55	-4.62	4.62	S	6.57	W	0.16
1420.20	0	18	N	43	0	E	28.50	1420.05	-4.70	4.70	S	6.34	W	0.95
1448.80	1	0	N	4	0	W	28.60	1448.65	-4.39	4.39	S	6.30	W	0.87

Continued on next page ...

STATOIL
34/10-18

Slot :
Well : 34/10-18
PBHL : N 0 0 E

Our ref : S04655.4ST
Date printed : 23-NOV-83

Measured Depth	Drift Angle D M	Drift Direction D M	Course Length	Vertical Depth	Vertical Section	RECTANGULAR COORDINATES		Dogleg Severity
1477.30	1 30	N 7 0 W	28.50	1477.14	-3.77	3.77 S	6.37 W	0.53
1505.90	1 36	N 10 0 W	28.60	1505.73	-3.01	3.01 S	6.48 W	0.14
1534.40	1 18	N 13 0 W	28.50	1534.22	-2.30	2.30 S	6.62 W	0.33
1563.00	0 51	N 28 0 W	28.60	1562.82	-1.80	1.80 S	6.79 W	0.55
1591.60	0 48	N 22 0 W	28.60	1591.41	-1.43	1.43 S	6.97 W	0.10
1620.10	0 30	N 15 0 W	28.50	1619.91	-1.12	1.12 S	7.08 W	0.33
1648.70	0 36	N 55 0 W	28.60	1648.51	-0.91	0.91 S	7.23 W	0.41
1677.20	0 36	N 67 0 W	28.50	1677.01	-0.77	0.77 S	7.49 W	0.13
1705.80	0 12	S 86 0 W	28.60	1705.61	-0.72	0.72 S	7.68 W	0.45
1734.40	0 6	S 39 0 W	28.60	1734.21	-0.74	0.74 S	7.74 W	0.16
1762.90	0 12	S 61 0 E	28.50	1762.71	-0.78	0.78 S	7.72 W	0.25
1791.50	0 21	S 27 0 E	28.60	1791.31	-0.88	0.88 S	7.63 W	0.23
1820.00	0 18	N 75 0 E	28.50	1819.81	-0.94	0.94 S	7.52 W	0.43
1848.60	0 18	S 37 0 E	28.60	1848.41	-0.98	0.98 S	7.40 W	0.35
1877.20	0 18	S 77 0 E	28.60	1877.01	-1.06	1.06 S	7.29 W	0.22
1905.70	0 21	S 88 0 E	28.50	1905.51	-1.08	1.08 S	7.13 W	0.08
1934.20	0 18	N 86 0 E	28.50	1934.01	-1.08	1.08 S	6.96 W	0.06
1962.80	1 12	S 85 0 W	28.60	1962.60	-1.10	1.10 S	7.19 W	1.57
1991.40	2 24	S 83 0 W	28.60	1991.19	-1.20	1.20 S	8.08 W	1.26
2000.40	2 42	N 81 0 W	9.00	2000.18	-1.19	1.19 S	8.48 W	2.56
2015.00	3 3	N 73 30 W	14.60	2014.76	-1.02	1.02 S	9.19 W	1.05
2114.00	1 6	N 90 0 W	99.00	2113.69	-0.27	0.27 S	12.67 W	0.61
2218.00	1 0	N 21 42 W	104.00	2217.68	0.57	0.57 N	14.00 W	0.34
2311.00	0 15	N 23 0 E	93.00	2310.67	1.51	1.51 N	14.22 W	0.27
2335.00	0 41	N 29 0 E	24.00	2334.67	1.68	1.68 N	14.13 W	0.55
2373.00	0 39	N 19 0 E	38.00	2372.67	2.09	2.09 N	13.95 W	0.10

Continued on next page ...

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                              WELL DEFLECTION SURVEY                Page :   4

STATOIL                       Slot :                              Our ref : S04655.4ST
34/10-18                      Well : 34/10-18                Date printed : 23-NOV-83
                              PBHL : N  0  0 E

Measured  Drift    Drift    Course  Vertical   Vertical  R E C T A N G U L A R  Dogleg
 Depth    Angle  Direction  Length   Depth     Section   C O O R D I N A T E S  Severity
           D  M     D  M

 2458.00   1  0  N 50  0 E   85.00  2457.66      3.02      3.02 N    13.22 W    0.20
 2519.00   0 59  N 30 54 E   61.00  2518.65      3.81      3.81 N    12.55 W    0.16
 2605.00   1 21  N 39 42 E   86.00  2604.63      5.22      5.22 N    11.52 W    0.14

 2727.00   2 30  N 40  0 E  122.00  2726.56      8.37      8.37 N     8.89 W    0.28
 2863.00   4 30  N 77 42 E  136.00  2862.32     11.77     11.77 N     1.77 W    0.65
 2948.00   5 45  N 72 42 E   85.00  2946.98     13.75     13.75 N     5.55 E    0.47
 3017.00   5  0  N 63 42 E   69.00  3015.68     16.11     16.11 N    11.55 E    0.49

  Calculation Method : Minimum curvature           Report Units : Metres
     Slot Coordinates :      0.00 N      0.00 E
Bottom hole Location : Referenced to Centre
            Distance :     19.82
           Direction : N 35 38 E


                                    SURVEY RUN INFORMATION
                                    ======================
            ASSUMED VERTICAL TO 747 M.
            763.3 - 2000.4 M. MAGNETIC MULTISHOT O.HEIMARK 6-AUG-83
            DEPTHS: 2015,2335,2373,2458,2519,2605 ARE DLWD SURVEYS
            DEPTHS: 2114,2218,2311,2727,2863,2948,3017
                    ARE MAGNETIC SINGLE SHOTS.
            FINAL SURVEY.
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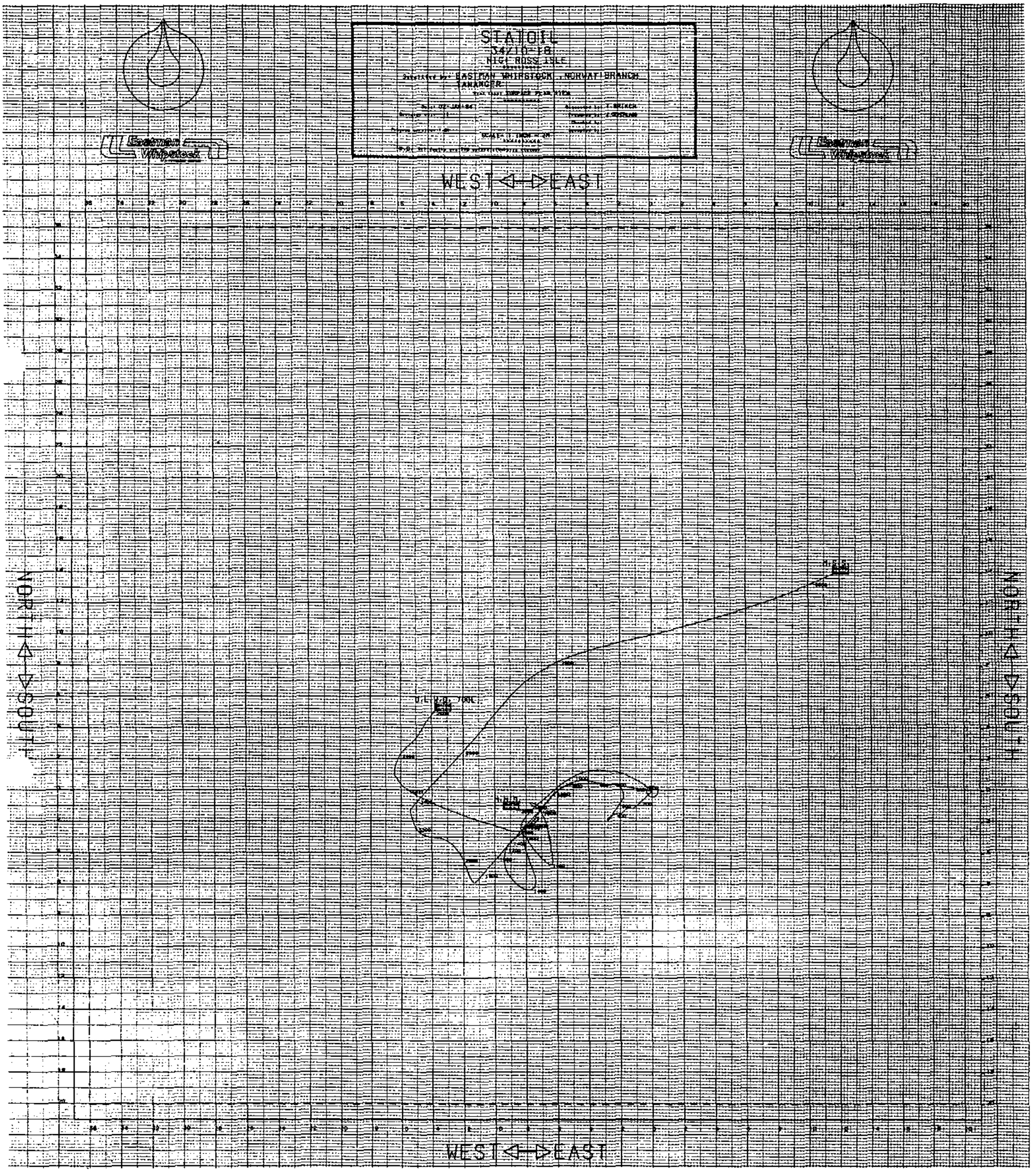
STATOIL
34/10-18
RIG: ROSS ISLE
Surveyed by: EASTMAN WHIPSTOCK, NORWAY BRANCH
STAVANGER
SURFACE PLAN VIEW
SCALE: 1 INCH =
Eastman Whipstock
WEST ◁—▷ EAST
NORTH ◁—▷ SOUTH
D.L.V.D. TOOL
M.S.S.
M.W.D.

III 10. DRILLING FLUID SUMMARY

GENERAL SUMMARY

OPERATOR DEN NORSKE STATS OLJESELSKAP

WELL NO. 34/10-18

OPERATOR'S REPRESENTATIVES
STOVER, BOGRE, MOSTYN, TELLE, SÆTERVIK, SANDBU

CONTRACTOR ROSS DRILLING Co.

RIG ROSS ISLE

CONTRACTOR'S REPRESENTATIVES
JONASSEN, SÆTRE, SKINNES, PEDERSEN, MELAND, TIME

ANCHOR ENGINEERS
M. CHAVEZ, H. WIIK, E. KORSVOLD, E. LAURITZEN

WATER DEPTH	141 m
SEABED to RKB	163 m
36" HOLE DRILLED TO	227.5 m
30" CASING SET AT	226.5 m
12 1/4" PILOT HOLE TO	765 m
26" HOLE DRILLED TO	763 m
20" CASING SET AT	747 m
17½" HOLE DRILLED TO	2024 m
13⅜" CASING SET AT	2008 m
12¼" HOLE DRILLED TO	3025 m TD
9⅝" CASING SET AT	
8½" HOLE DRILLED TO	
7" LINER SET AT	
6" HOLE DRILLED TO	

SUMMARY OF EVENTS

OPERATOR: STATOIL

WELL NO. 34/10-18

36" **HOLE/** 30" **CASING INTERVAL**

On drilling this section some boulders were encountered but casing depth was reached without any major problems. High viscosity pills of gel were pumped on connections and the hole was filled with high viscosity mud prior to run and cement casing.

RECOMMENDATIONS

36" HOLE/30" CASING INTERVAL

This section was drilled according to program with no major problems.

SUMMARY OF EVENTS

OPERATOR: STATOIL

WELL NO. 34/10-18

26" **HOLE/** 20" **CASING INTERVAL**

This section was started with a 12 1/4" pilot hole to casing depth - 765 m. The hole was then logged and opened up to 26". Large quantities at pre-hydrated gel and seawater was used to maintain a good yield point and to keep the weight down below 1.10 SG.

About 80 m^3 of 1.45 SG mud was mixed to fill the hole when pulling the riser but on displacing this circulation was lost. LCM pills were spotted and finaly a cement plug was set. While waiting on cement, 1.25 SG mud was mixed. The cement was drilled out, the hole was displaced to 1.25 SG mud and riser was pulled out.

The 20" casing was then run and cemented without any further problems.

RECOMMENDATIONS

26" HOLE/20" CASING INTERVAL

Apart from lost circulation when displacing to weighted mud this section was drilled according to program. The costs for this section turned out to be about US$ 34,000.00 higher than programmed, but this was mainly because of mixing much extra volume of 1.45 SG mud and lost circulation.

SUMMARY OF EVENTS

OPERATOR: STATOIL

WELL NO. 34/10-18

17 1/2" **HOLE/** 13 3/8" **CASING INTERVAL**

The 17 1/2" section was started with a mud weight of 1.05 SG and the mud weight was kept below 1.10 SG as long as possible.

While drilling some sand stringers, problems with blinding of the shaker screens occured and different mesh screens were tried. 30/60 turned out to be the best choice, but still some mud was lost over the shaker on bottoms up etc. Once the sand stringers were passed there were no further shaker problems. Addition of seawater was necessary to keep the MBT down, and this in addition to weight increase resulted in a high Barite usage.

The mud weight at the end of this section was up to 1.32 SG and the 13 3/8" casing was run and cemented as programmed.

RECOMMENDATIONS

17 1/2" HOLE/13 3/8" CASING INTERVAL

This section was drilled according to program without any major drilling problems, apparent from a few tight spots on trips.

When running casing two joints were lost in the hole. After a misrun to latch on the fish, a cement plug was set and the hole was sidetracked.

Due to the extra cement plug at the end of this section there were used more Sodium Bicarbonate than estimated.

SUMMARY OF EVENTS

OPERATOR: STATOIL

WELL NO. 34/10-18

12 1/4" **HOLE/** ____________ **CASING INTERVAL** (NO CASING SET)

When drilling out the 13 3/8" casing shoe, some mud was lost due to cement contamination. Leak off test was performed - equivalent to 1.83 SG mud weight.

The screen stock onboard the rig were insufficient and this caused some problems also in this section. Due to tight hole restrictions very little information was available, but the rest of this section was cored/drilled intermittantly with no major problems.

On average about 30 M/T of Barite were used daily to maintain the system. The mud weight was increased to 1.65 SG and then decreased to 1.58 SG where it remained the rest of this section.

The 12 1/4" hole was drilled to TD and then the hole was plugged back and abandoned.

RECOMMENDATIONS

12 1/4" SECTION, NO CASING SET

This section was programmed to be drilled to 2700 m, but this depth was extended to 3025 m - total depth of the well.

This resulted in a higher section cost than esimated, but the total cost for the well turned out to be US$6,000.00 less than programmed.

OPERATOR STATOIL

WELL NO. 34/10-18

MATERIAL CONSUMPTION & COST ANALYSIS

36" HOLE DRILLED TO 228 Meters ~~Feet~~ 30" CASING SET AT 226 Meters ~~Feet~~

ACTUAL AMOUNT OF HOLE DRILLED 65 Meters ~~Feet~~ DAYS ON INTERVAL 2

DRILLING FLUID SYSTEM SPUD MUD

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BENTONITE	M/T	25	16	- 9	6,080.00
CAUSTIC	25 KG	25	6	-19	120.00
SPERCELL C	25 KG	-	4	+ 4	78.00
SODA ASH	50 KG	4	-	- 4	-

COST/DAY	US$3,139.00	TOTAL COST FOR INTERVAL	US$ 6,278.00
COST/Mt. ~~Ft.~~	US$ 96.58	PROG. COST FOR INTERVAL	US$ 10,084.00
ENGR. COST	US$ 1,650.00	COST VARIANCE FOR INTERVAL	US$ -3,806.00

OPERATOR STATOIL

WELL NO. 34/10-18

MATERIAL CONSUMPTION & COST ANALYSIS

26" HOLE DRILLED TO 765 Meters

20 CASING SET AT 747 Meters

ACTUAL AMOUNT OF HOLE DRILLED 538 Meters

DAYS ON INTERVAL 8

DRILLING FLUID SYSTEM SPUD MUD

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BARITE	M/T	175	283	+ 108	41,884.00
BENTONITE	M/T	70	107	+ 37	40,660.00
CAUSTIC SODA	25 KG	40	70	+ 30	1,400.00
SODA ASH	50 KG	8	3	- 5	61.00
DRILLING DETERGENT	200 L DRUM	3	0	- 3	-
SPERCELL C	25 KG	20	12	- 8	234.00
CMC HIVIS	25 KG	0	17	+ 17	1,139.00
MICA F	25 KG	0	100	+ 100	2,200.00
MICA C	25 KG	0	25	+ 25	550.00
NUT PLUG F	25 KG	0	40	+ 40	880.00
NUT PLUG C	25 KG	0	20	+ 20	440.00
DESCO	25 LBS	0	4	+ 4	152.00
SOD. BICARBONATE	50 KG	0	3	+ 3	72.00

NB: LOST CIRCULATION IN THIS SECTION

COST/DAY US$11,209.00

TOTAL COST FOR INTERVAL US$ 89,672.00

COST/Mt. ~~or Ft.~~ US$ 166.68

PROG. COST FOR INTERVAL US$ 55,343.00

ENGR. COST US$6,600.00

COST VARIANCE FOR INTERVAL US$+34,329.00

OPERATOR STATOIL

WELL NO. 34/10-18

MATERIAL CONSUMPTION & COST ANALYSIS

17 1/2" HOLE DRILLED TO 2024 Meters ~~Feet~~

13 3/8" CASING SET AT 2008 Meters ~~Feet~~

ACTUAL AMOUNT OF HOLE DRILLED 1259 Meters ~~Feet~~

DAYS ON INTERVAL 13

DRILLING FLUID SYSTEM GEL/ SPERCELL C

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BARITE	M/T	465	308	- 157	45,584.00
BENTONITE	M/T	40	61	- 21	23,180.00
SPERCELL C	25 KG	512	433	- 79	8,443.50
CAUSTIC SODA	25 KG	90	243	+ 153	4,860.00
SODA ASH	50 KG	10	13	+ 16	273.00
CMC LOVIS	25 KG	128	173	+ 45	11,245.00
DRILLING DETERGENT	200 LIT	25	0	- 25	0
DESCO	25 LBS	0	36	+ 36	1,368.00
BENTONITE SXS	50 KG	0	115	+ 115	2,070.00
SODIUM BICARB.	50 KG	0	76	+ 76	1,824.00
CMC HIVIS	25 KG	0	43	+ 43	2,881.00
DEFOAMER	25 LTR	0	2	+ 2	236.00

COST/DAY US$ 7,843,42

COST/Mt. ~~Ft.~~ US$ 80.98

ENGR. COST US$ 10,725.00

TOTAL COST FOR INTERVAL US$101,964.50

PROG. COST FOR INTERVAL US$116,709.00

COST VARIANCE FOR INTERVAL US$-14,744.05

OPERATOR STATOIL

WELL NO. 34/10-18

MATERIAL CONSUMPTION & COST ANALYSIS

NO CASING SET

12 1/4" HOLE DRILLED TO 3025 Meters ~~Feet~~ CASING SET AT Meters Feet

ACTUAL AMOUNT OF HOLE DRILLED 1001 Meters ~~Feet~~ DAYS ON INTERVAL 22

DRILLING FLUID SYSTEM GEL/SPERCELL C

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BARITE	M/T	270	584	+ 314	86,432.00
BULK BENTONITE	M/T	13	19	+ 6	7,220.00
SPERCELL C (LIGNO)	25 KG	250	379	+ 129	7,390.50
CAUSTIC SODA	25 KG	90	194	+ 104	5,880.00
CMC LOVIS	25 KG	140	90	- 50	5,850.00
SODA ASH	50 KG	20	29	+ 9	609.00
BICARBONATE	50 KG	20	44	+ 24	1,056.00
DESCO	25 LBS	0	85	+ 67	3,230.00
CMC HIVIS	25 KG	0	22	+ 22	1,474.00
DEFOAMER	25 LTR	0	1	+ 1	118.00

COST/DAY US$5,329.98

TOTAL COST FOR INTERVAL US$ 117,259.50

COST/Mt. ~~or Ft.~~ US$ 117.14

PROG. COST FOR INTERVAL US$ 61,575.00

ENGR. COST US$ 17,050.00

COST VARIANCE FOR INTERVAL US$ +55,684.50

OPERATOR STATOIL

WELL NO. 34/10-18

TOTAL CONSUMPTION & COST ANALYSIS

TOTAL DEPTH 3025 Meters ~~Feet~~

TOTAL HOLE DRILLED 2862 Meters ~~Feet~~

TOTAL DAYS 45

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BARITE	M/T	1210	1175	- 35	173,900.00
BENTONITE	M/T	168	203	+ 35	77,140.00
BENTONITE	50 KG	-	115	+115	2,070.00
SPERCELL C	25 KG	1062	828	-234	16,146.00
DESCO	25 LBS	-	125	+125	4,750.00
CMC HIVIS	25 KG	20	82	+ 62	5,494.00
CMC LOVIS	25 KG	368	263	-105	17,095.00
CAUSTIC SODA	25 KG	350	513	+163	10,260.00
SOD. BICARBONATE	50 KG	45	123	+ 78	2,952.00
SODA ASH	50 KG	67	45	- 22	945.00
MICA F/C	25 KG	-	100/25	+100/25	2,750.00
NUT PLUG F/C	25 KG	-	40/20	+ 40/20	1,320.00
DEFOAMER	25 LTR	-	3	+ 3	354.00
ANCO DETERGENT	200 LTR	28	-	- 28	-

COST/DAY US$ 7,003.91

TOTAL COST FOR INTERVAL US$ 315,176.00

COST/Mt. ~~or Ft.~~ US$ 110.12

PROG. COST FOR INTERVAL US$ 321.196.00

ENGR. COST US$ 36,025.00

COST VARIANCE FOR INTERVAL US$- 6,020.00

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

WELL NAME 34/10-18 AREA NORTH SEA
OPERATOR STATOIL RIG. ROSS ISLE
ENGINEERS CHAVEZ/LAURITZEN/KORSVOLD/WIIK

Drilling Fluid & Material Consumption Report

MUD SYSTEM SPUD MUD - SPERCELL C/CMC

Day No.	DATE 1983	ESTIMATED DAILY MUD VOLUMES			BULK MATERIALS		SACK MATERIALS		MATERIALS ADDED TO CONTROL PROPERTIES																		
											THINNERS		POLYMERS									OTHERS					
		LOSSES SUB SURFACE	LOSSES SURFACE	VOLUME MUD BUILT	BARITE	BENTONITE	BENTONITE SXS		SPERCELL C		DESCO		CMC HV		CMC LOVIS			CAUSTIC SODA	BICARB.	SODA ASH	DRILLING DETERGENT	MICA	NUT PLUG	DEFOAMER lit			
1	16.07			2240	0	16													4								
2	17.07	170		200					4										2								
3	18.07		210	899		8					4							5	3								
4	19.07	0	275	811	1	9			4									11		1							
5	20.07		754	945	22	7			2				4					5									
6	21.07		973	1300	54	11							10					15		2							
7	22.07	643	120	700	116	7			6				3					17				100 25	40 20				
8	23.07	75	2314	1800		5												3									
9	24.07	4735		3750	15	23												8									
10	25.07	0	200	854	75	37												6									
11	26.07	10	687	716	0	8			80		4		23		21			14	8								
12	27.07		918	1467	17	18	55		47				5		32			41	3					25			
13	28.07			1506	0	18			38				8		12			59	1					25			
FORWARD																											
ESTIMATED TOTALS		5633	4935	17188	300	167	55		181		8		53		65			190	15	3		100 25	40 25	50			

REMARKS:

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM GEL/SPERCELL C/CMC

WELL NAME 34/10-18 AREA NORTH SEA
OPERATOR STATOIL RIG. ROSS ISLE
ENGINEERS LAURITZEN/WIIK/KORSVOLD/CHAVEZ

Day No.	DATE 1983	ESTIMATED DAILY MUD VOLUMES			BULK MATERIALS			SACK MATERIALS		MATERIALS ADDED TO CONTROL PROPERTIES																	
										THINNERS			POLYMERS								OTHERS						
		LOSSES SUB SURFACE	LOSSES SURFACE	VOLUME MUD BUILT	BARITE	BENTONITE	BENTONITE SKS		SPERCELL C		DESCO		CMC HV		CMC LOVIS			CAUSTIC SODA	BICARB.	SODA ASH	DRILLING DETERGENT	MICA	NUT PLUG	DEFOAMER lit			
14	29.07		254	390	2	5	60		59						10			19									
15	30.07		748	650	13				9				7		32			50									
16	31.07		50	524	93	7			60						3			17									
17	01.08		648	230	71	2			38		1							13									
18	02.08		38	160					8		1							3	4								
19	03.08		170	262	16				12		9							8	3								
20	04.08		211	340	12				25		13				8			15	17								
21	05.08		783	750	31				19		8				39				40								
22	06.08		336	290	22				23						15					9							
23	07.08		280	440	31	3			15						1			4		4							
24	08.08		169	63					8		5		2						7								
25	09.08		322	360	43				26		13		17		17				18	3							
26	10.08		451	645	190				68		64				10			22	2	26							
27	11.08		475	343	24				12		3				4			9	6								
FORWARD		5633	4935	17188	300	167	55		181		8		53		65			190	15	3		100 25 100	40 20 40	50			
ESTIMATED TOTALS		5653	9870	22635	848	184	115		563		125		79		204			350	112	45		25	20	50			

REMARKS:

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

WELL NAME 34/10-18 AREA NORTH SEA
OPERATOR STATOIL RIG. ROSS ISLE
ENGINEERS CHAVEZ/KORSVOLD/LAURITZEN/WIIK

Drilling Fluid & Material Consumption Report

MUD SYSTEM GEL/SPERCELL C/CMC

Day No.	DATE 1983	ESTIMATED DAILY MUD VOLUMES			BULK MATERIALS		SACK MATERIALS		MATERIALS ADDED TO CONTROL PROPERTIES		THINNERS		POLYMERS								OTHERS				
		LOSSES SUB SURFACE	LOSSES SURFACE	VOLUME MUD BUILT	BARITE	BENTONITE	BENTONITE SXS		SPERCELL C		DESCO		CMC HV		CMC LOVIS			CAUSTIC SODA	BICARB.	SODA ASH	DRILLING DETERGENT	MICA	NUT PLUG	DEFOAMER lit			
28	12.08	0	272	385	11	2			12						4			16									
29	13.08	0	167	119	30				28						4			14									
30	14.08	80	84	255	62	2			23						7			15						25			
31	15.08	26	746	309	48				13				1		7			21									
32	16.08		250	39	6	6			5				2		1			3									
33	17.08		383	400	21	2			16				0		5			19									
34	18.08		369	208	11	2			30				0		24			9									
35	19.08		366	466	74	2			16						3			7									
36	20.08		85	220	30				35									16									
37	21.08		234	223	19	2			46						4			18									
38	22.08		239	145	6				10									13									
39	23.08		537	124	2				10									12									
40	24.08				NONE USED LOGGING																						
41	25.08				PLUB AND ABANDON																						
FORWARD		5653	9870	22635	848	184	115		563		125		79		204			350	112	45		100 25	40 25	75			
ESTIMATED TOTALS		5687	13602	25528	11168	202	115		807		125		82		263			513	112	45		100 25	40 25	100			

REMARKS:

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM SPECELL C/GEL

WELL NAME 34/10-18
AREA ~~NORTH SEA~~
OPERATOR STATOIL
RIG. ROSS ISLE
ENGINEERS LAURITZEN/ WIIK

Day No.	DATE	ESTIMATED DAILY MUD VOLUMES			BULK MATERIALS		SACK MATERIALS		MATERIALS ADDED TO CONTROL PROPERTIES	THINNERS			POLYMERS									OTHERS					
	1983	LOSSES SUB SURFACE	LOSSES SURFACE	VOLUME MUD BUILT	BARITE	BENTONITE	BENTONITE SKS		SPERCELL C		DESCO		CMC HV		CMC LOVIS			CAUSTIC SODA	BICARB.	SODA ASH	DRILLING DETERGENT	MICA	NUT PLUG	DEFOAMER lit			
42	26.08		260						21										11								
43	27.08		333		7	1																					
44	28.08			114																							
45	29.08		dump 926																								
FORWARD		5687	13602	25528	11168	202	115		807		125		82		263			513	112	45		100 25	40 20	75			
ESTIMATED TOTALS		5687	15121	25642	11175	203	115		828		125		82		263			513	123	45		100 25	40 20	75			

REMARKS:

ANCHOR DRILLING FLUIDS AS
OSLO – STAVANGER

Drilling Mud Properties Record

MUD SYSTEM SPERCELL C/SPUD MUD

WELL NAME 34/10-18 AREA NORTH SEA
OPERATOR STATOIL RIG. ROSS ISLE
ENGINEERS CHAVEZ/LAURITZEN

Day No.	DATE	DEPTH	MUD PROPERTIES	VISCOSITY				GELS					Filtrate Analysis			RETORT								OPERATION REMARKS
	1983	FEET ☐ METERS ☐ METER	DENSITY PPG ☐ SG ☐ SG	sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	0 / 10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl^- ppm X 1000	Ca. ++ ppm T.H.	Pf	% OIL	% SOLIDS CORR.	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	
1	16/ 7		1.04	100																				
2	17/ 7		1.05	61	29.0	9.0	40.0	2/8	17.0	2		10.0	4	240	.10		5.00		25.00			.24	12.24	
3	18/ 7	610	1.11	43	22.0	8.0	28.0	19/23				9.0										.29	6.91	
4	19/ 7	765	1.09	45	22.0	7.0	30.0	20/28				9.5	9		.10							.25	8.90	
5	20/ 7	420	1.12	38	21.0	9.0	24.0	14/18				9.5	8		.10							.35	4.54	
6	21/ 7	647	1.13	47	27.0	9.0	36.0	22/27				9.0										.26	10.05	
7	22/ 7	765	1.12	42	22.0	8.0	28.0	19/31				9.0										.29	6.91	
8	23/ 7	765	1.10	40	22.0	8.0	28.0	15/31				9.0										.29	6.91	
9	24/ 7		1.25	45	19.0	10.0	18.0	2/20				9.0										.44	2.27	
10	25/ 7		1.05	72	29.5	9.0	4.0	12/19	16.0	1		10.5	2	200	.30		4.00		27.00			.76	.17	
11	26/ 7	770	1.08	44	24.0	9.0	10.0	2/16	14.0	1		10.8	12	480	.70		5.00		22.50			.56	.78	
12	27/ 7	1111	1.09	53	22.5	15.0	15.0	6/36	14.0	2		10.8	12	240	.30		6.00	.25	20.00			.58	1.07	
13	28/ 7	1495	1.09	54	23.0	15.0	15.0	/	10.0	1		10.0	13	300	.10		5.00	.25	25.00			.58	1.07	
14	29/ 7	1772	1.11	62	22.0	13.0	18.0	16/42	18.0	2		8.5	14	920	.05		6.00	.25	25.00			.50	1.74	

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM CMC/GEL/ SPERCELL C

WELL NAME 34/10-18 AREA NORTH SEA
OPERATOR STATOIL RIG. ROSS ISLE
ENGINEERS LAURITZEN/WIIK/KORSVOLD

Day No.	DATE 1983	DEPTH FEET ☐ METERS ☐ METER	DENSITY PPG ☐ SG ☐ SG	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	GELS 0/10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl⁻ ppm X 1000	Ca ++ ppm T.H.	Pf	% OIL	% SOLIDS CORR.	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
15	30/ 7	1932	1.18	68	25.5	15.0	21.0	18/48	16.0	2		10.4	15	360	.15		6.00		29.00			.50	2.05	
16	31/ 7	2000	1.32	70	28.0	17.0	22.0	20/54	16.0	2		9.8	16	400	.10		12.00		99.00			.52	1.99	
17	1/ 8		1.32	64	26.0	21.0	10.0	18/54	17.0	2		10.1	17	500	.10		12.00		25.00			.75	.44	
18	2/ 8	2000	1.32	60	31.5	18.0	27.0	18/60	17.0	2		9.6	16	500	.10				27.00			.49	2.83	
19	3/ 8	1903	1.32	54	17.5	12.0	11.0	7/32	19.0	2		10.3	16	380	.15		12.00	.25	27.00			.61	.73	
20	4/ 8	1912	1.32	58	24.0	14.0	20.0	15/50	19.0	2		11.0	17	400	.20		12.00	.25	28.00			.50	1.99	
21	5/ 8	1944	1.32	43	19.0	12.0	14.0	22/52	19.5	2		11.5	18	260	.25		12.00		27.00			.55	1.15	
22	6/ 8	2024	1.32	52	22.0	14.0	16.0	16/80	15.0	2		11.0	19	400	.20		12.00		27.00			.55	1.29	
23	7/ 8	2008	1.32	59	26.0	15.0	22.0	30/80	16.0	2		11.0	19	500	.20		12.00		26.00			.49	2.25	
24	8/ 8	2027	1.32	48	19.0	14.0	10.0	4/31	13.0	2		10.7	19	180	.20		11.00					.66	.55	
25	9/ 8	2196	1.45	54	27.5	19.0	17.0	7/46	8.4	2		9.9	20	320	.15		16.00					.61	1.10	
26	10/ 8		1.65	50	26.5	19.0	15.0	5/37	8.8	1		10.3	21	140	.50		22.00	.25	27.00			.64	.88	
27	11/ 8		1.65	63	31.0	23.0	16.0	13/50	8.8			10.2	20	100	.40		22.00	.25	27.50			.67	.86	
28	12/ 8		1.65	58	29.0	21.0	16.0	5/40	7.8	2		10.4	18	120	.45		22.50		27.50			.65	.92	

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM CMC/GEL/SPERCELL C

WELL NAME 34/10-18
AREA NORTH SEA
OPERATOR STATOIL
RIG. ROSS ISLE
ENGINEERS CHAVEZ/KORSVOLD

Day No.	DATE	DEPTH	MUD PROPERTIES	VISCOSITY				GELS						Filtrate Analysis			RETORT								OPERATION REMARKS
	1983	FEET ☐ METERS ☐ METER	DENSITY PPG ☐ SG ☐ SG	sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	0	10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl- ppm X 1000	Ca ++ ppm T.H.	Pf	% OIL	% SOLIDS CORR.	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	
29	13/ 8		1.65	55	27.0	19.0	15.0	4	40	8.8	1		10.5	18	80	.60		22.00	.25	27.50			.64	.88	
30	14/ 8		1.65	53	27.0	19.0	16.0	3	40	9.5	2		10.5	20	60	.55		22.00		25.00			.63	.99	
31	15/ 8		1.65	52	26.0	19.0	14.0	4	32	10.0	2		10.7	19		.60		22.00	.25				.66	.78	
32	16/ 8		1.65	52	23.5	17.0	13.0	3	25	10.0	2		10.5	17		.45		21.00		22.50			.65	.75	
33	17/ 8		1.58	48	28.0	17.0	12.0	3	34				10.8	17	80	.52		20.00		25.00			.67	.65	
34	18/ 8		1.58	53	29.5	21.0	17.0	3	37	8.5	2		10.8	17	100	.55		19.00	.25	2.50			.63	1.02	
35	19/ 8		1.58	49	30.5	21.0	19.0	3	30	8.8	2		10.8	18	80	.30		19.00		20.00			.61	1.24	
36	20/ 8		1.58	47	31.5	22.0	19.0	3	35	9.0	1		10.8	18	100	.40		19.00		20.00			.62	1.20	
37	21/ 8		1.58	47	27.0	20.0	14.0	3	32	9.0	1	16.0	10.8	175	80	.40		19.00		22.50			.67	.76	
38	22/ 8		1.58	47	27.0	20.0	14.0	2	28	9.6	1	15.0	10.5	18	80	.40		20.00		20.00			.67	.76	
39	23/ 8		1.58	47	27.5	20.0	15.0	3	29	9.0	1	15.8	10.9	17	80	.45		20.00		20.00			.65	.85	
40	24/ 8		1.58	59	26.5	19.0	15.0	3	28	9.0	1	15.0	10.4	18	80	.30		20.00		20.00			.64	.88	
41	25/ 8		1.58	57	33.5	23.0	19.0	7	37	9.8	1		9.8	18	80	.40		20.00		20.00			.63	1.16	
42	26/ 8		1.58	60	38.0	25.0	16.0	6	56	11.8	2		11.4	18	150	1.20		20.00		20.00			.69	.82	

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM CMC/GEL/SPERCELL C

WELL NAME 34/10-18
AREA NORTH SEA
OPERATOR STATOIL
RIG. ROSS ISLE
ENGINEERS CHAVEZ/KORSVOLD

Day No.	DATE	DEPTH FEET ☐ METERS ☐	MUD PROPERTIES DENSITY PPG ☐ SG ☐	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	GELS 0 / 10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Filtrate Analysis Cl⁻ ppm	Ca. ++ ppm	Pf	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
	1983	METER	SG										X 1000	T.H.			CORR.							
43	27/ 8					PLUG AND ABANDON																		
44	28/ 8					PLUG AND ABANDON																		
45	29/8					PLUG AND ABANDON																		

REMARKS

III 11. DRILLING EQUIPMENT FAILURES

Drilling equipment failure on "Ross Isle" 34/10-18

30.07	Rotary gear	Breakdown on the greasepump for the rotary gear.
29.08	20" and 30" casing cutter	The pin end on the spacer sub between the cutting tool and the marine swivel broke off.

IV MARINE REPORT

WEATHER AND ANCHOR TENSION 34/10-18

The well 34/10-18 was drilled in a meteorological calm and stable period of the year, and only 4,5 hours, or 0.4% of the rig time, were lost due to bad weather.

The main wind and wave direction was from W.
Maximum windspeed reported was 23 m/s and the direction was from SW.
Maximum wave height reported was 5 m and the direction was from WNW.

The rig "Ross Isle" was anchored up with 8 anchors when drilling the well. All anchors, except for anchor no. 2, were pretensioned to 170 metric tons prior to spudding in the well. The anchor tension readings on anchor no. 4, no. 5, no. 7 and no. 8 were out of order in periods.

Rig heading was 314°.
Maximum anchor tension during the period were:
120 metric tons on anchor no. 1.
90 " " " " no. 2.
75 " " " " no. 3.
120 " " " " no. 4.
175 " " " " no. 5.
155 " " " " no. 6.
112 " " " " no. 7
160 " " " " no. 8.

LOCATION WEATHER DATA SUMMARY

statoil
Den norske stats oljeselskap a.s

WELL: 34/10-18 RIG: "Ross Isle"

TIME PERIOD: FROM 15/7 TO 30/8 -1983

READINGS PR. MONTH: 30

WIND

m/sec. dir.	0 – 5	5 – 10	10 – 15	15 – 20	20 – 25	25 – 30	> 30	total
N	1		1					2
NNE		1	1					2
NE								
ENE								
E								
ESE								
SE	1	2						3
SSE	1	1						2
S		2		1				3
SSW		1		2				3
SW		3	4		1			8
WSW		1	3					4
W	1	6	3					10
WNW			1	1	1			3
NW		1	3	1				5
NNW			1					1
total	4	18	17	5	2			46

WAVE

height (m) dir.	0 – 1	1 – 2	2 – 3	3 – 5	5 – 7	7 – 10	> 10	total
N				1				1
NNE		1	1					2
NE								
ENE								
E	1							1
ESE								
SE	2	1						3
SSE	1							1
S		2	1	1				4
SSW			1	1				2
SW		1	6	3				10
WSW				1				1
W	1	8	2	2				13
WNW					1			1
NW	1	1	1	3				6
NNW				1				1
total	6	14	12	13	1			46

4.00.23

RIG MOVE OF "ROSS ISLE" TO WELL 34/10-18

1. Final position (ED 1950)

61° 14' 22.48"N, 02° 03' 18,83"E

Accuracy : 5 meters (Translocation)

Rig heading : 314°

Deviation from intended position: 16 m - 068°

2. Observed Decca Main Chain readings

Chain	:	Vestlandet 0E
Red	:	I 22.0
Green	:	E 39.4
Purple	:	B 66.5

3. Navigation/positioning method

a) **Navigation:**

Pulse/8 navigation system with HP computer and plotter. (Q-6 package).

Contractor: Racal-Decca Survey Norway A/S, Bergen

Personnel : Svein Ove Rundhovde

b) **Positioning:**

JMR-4 satellite positioning system.

Contractor: A/S Geoteam, Oslo

Personnel : Erling B. Johannesen

4. Duration of the rig move

Equipment and personnel onboard	:	14 July 1983 at 08.55 hours
Rig left 34/10-7 location	:	15 July 1983 at 03.35 hours
Turning point (10 km from loc.)	:	15 July 1983 at 04.00 hours
Dropped first anchor (no. 4)	:	15 July 1983 at 05.55 hours
Dropped last anchor (no. 6)	:	15 July 1983 at 16.50 hours
All anchors pretensioned to more than 130 t. Ready for drilling	:	15 July 1983 at 19.30 hours

5. Techniques/problems

The operation was performed according to Statoil's procedures without navigational problems.

Discreapency between Pulse/8 position and Satnav. position was 12 m - 222° (Pulse/8 position SW of Sat. nav. position).

V PETROPHYSICAL SUMMARY

A series of logs were run in all intervals of the well. See chapter I (General information) for details.

Detailed log analysis is made for the Lower Cretaceous and the Brent Group.

A graphical presentation of the log analysis for the Cromer Knoll Group and the total Brent Group is enclosed.

12105

EXLOG

COMPANY STATOIL DEN NORSKE STATS OLJESELSKAP A.S.
WELL 34/10-18
FIELD WILDCAT
REGION NORWEGIAN NORTH SEA
COORDINATES 61 DEG 14' 22.0" N
02 DEG 03' 17.3" E
API WELL INDEX NO.
SPUD DATE 16 JULY 1983
ELEVATION RKB 22 M ABOVE MSL
WATER DEPTH 141 M
TOTAL DEPTH 3025 M
CONTRACTOR ROSS DRILLING
RIG / TYPE ROSS ISLE

LOG INTERVAL
DEPTH FROM 230 M TO 3025 M
DATE FROM 17 JULY TO 23 AUG 1983
SCALE 1:500 UNIT 256
LOG PREPARED BY TAYLOR, KANE, BEADLE, HORNSBY

HOLE SIZE

36" TO 227.5 M	12.25" TO 3025 M		
26" TO 765 M	TO		
17.5" TO 2024 M	TO		

CASING RECORD
30" AT 226.5 M
20" AT 747 M
13.375" AT 2008 M

MUD TYPES
SEAWATER GEL TO 765 M
GEL LIGNOSULPHONATE TO 2024 M
LIGNOSULPHONATE TO 3025 M

LITHOLOGY SYMBOLS
LIMESTONE, DOLOMITE, ANHYDRITE AND GYPSUM, HALITE, COAL AND LIGNITE, CLAY CLAYSTONE, SHALE, SILT AND SILTSTONE, SILTY SANDSTONE, SAND AND SANDSTONE, CONGLOMERATE, CHERT, IGNEOUS UNDIFFERENTIATED, TUFF, MARL, GLAUCONITE

EXLOG SUITE
☒ FORMATION EVALUATION LOG
☐ PRESSURE EVALUATION LOG
☐ DRILLING DATA PRESSURE LOG
☐ WIRELINE DATA PRESSURE LOG
☐ TEMPERATURE DATA LOG
☐ GEMDAS COMPUTER LOGS
☐

ABBREVIATIONS

NB	NEW BIT	SVG	SURVEY GAS
RRB	RERUN BIT	C	CARBIDE TEST
CB	CORE BIT	W	MUD DENSITY SG
WOB	WEIGHT ON BIT	V	FUNNEL VISCOSITY
RPM	REVS PER MINUTE	F	FILTRATE – API
FLC	FLOW CHECK	FC	FILTER CAKE
CR	CIRCULATE RETURNS	PV	PLASTIC VISCOSITY
PR	POOR RETURNS	YP	YIELD POINT
NR	NO RETURNS	SOL	SOLIDS — %
LAT	LOGGED AFTER TRIP	SD	SAND — %
BG	BACKGROUND GAS	S	SALINITY — PPM Cl
TG	TRIP GAS	RM	MUD RESISTIVITY
STG	SHORT TRIP GAS	RMF	FILTRATE RESISTIVITY
CG	CONNECTION GAS		
SWG	SWAB GAS		

CASING SEAT — WIRELINE LOG RUN
CORED INTERVAL — TEST INTERVAL
NO RECOVERY — + WIRELINE TEST
▶ SIDEWALL CORE

GAS — 100 Total gas units is equivalent to 2% methane-in-air.
OIL — Based on live oil in unwashed cuttings and percentage staining of washed cuttings.

FORMATION EVALUATION LOG

BIT 30" AT 226.5M
18/7/83
12 1/4" BIT

CLY; LT-M GRY, OCC DK GRY, SFT, STKY, AMOR, MOD CALC, ABDT SHELL FRAGS, TR LITH FRAGS

SD; CLR, LS QTZ, F-C, SUBRNDD, PR SRTD,

DEV AT 253M
0.60° N 80° W

W	V	F	Fc	PV
1.05	47	N/C	-	8
YP	Sd	PH	CL	Sol
31	-	9.0	-	-

FLC AT 295M

CLY; LT-M GRY, SFT, STKY, AMOR, MOD-V CALC, ABDT SHELL FRAGS, TR LITH FRAGS

SD; CLR, LS QTZ GRNS, VF-F, OCC M-C, SUBRND-SUBANG

CLY; LT-M GRY, SFT, STKY, AMOR, MOD CALC, W/ ABDT FOSS FRAGS

SD; CLR, LS, DOM F-VF QTZ GRNS, OCC M-C, SUBRNDD, PR SRTD

DEV AT 360M
0.58° N 83° W

W	V	F	Fc	PV
1.09	45	-	-	8
YP	Sd	PH	CL	Sol
25	-	9.5	-	-

FLC AT 397M

CLY; LT-M GRY, SFT, STKY, AMOR, MOD CALC W/ FOSS FRAGS

SD; CLR QTZ GRNS, DOM F-M, OCC M-C, SUBANG-SUBRNDD, OCC RNDD PR SRTD

CLY; L-M GRY, SFT, AMOR, SL MOD CALC, W/ FOSS FRAGS

SD; CLR, F-VF, OCC, SUBRNDD-SUBANG, PR SRTD

DEV AT 451M
0.51° N 35° E

CLY; L-M GRY, SFT, SOL STKY, AMOR, MOD CALC

SD; CLR, LS, VF-F, SUBANG SUBRNDD, PR SRTD

SD; CLR, WH, TRANSL, F-VF, OCC C, SUBANG-SUBRNDD, PR SRTD

CLY; M-L GRY, SFT, AMOR, MOD CALC

CLY; M GRY, SFT, STKY, AMOR, MOD CALC

SD; CLR, TRANSL, VF-F SUBRNDD-SUBANG, PR SRTD

DEV AT 565M
0.85° N 35° E

CLY; M-LT GRY, SFT, AMOR, SL CALC

SD; TRANSL, CLR, F OCC C, SUBRNDD, PR SRTD

W	V	F	Fc	PV
1.11	44	-	-	8
YP	Sd	PH	CL	Sol
30	-	9	-	-

CLY; M GRY, SFT, STKY, AMOR, NON CALC W/ FOSS FRAGS, PYR

SD; CLR, TRANSL, F, SUBRNDD, MOD SRTD

CLY; M GRY, SFT, AMOR, NON CALC, SL SLTY, W/ FOSS FRAGS, TR PYR

SD; TRANSL, F, SUBRNDD LS, MOD SRTD

DEV AT 679M
0.65° N 10° W

CLY; M GRY, SFT, STKY, AMOR, NON CALC

CLY; M GRY, AMOR, NON CALC

SD; CLR, LS QTZ GRNS, M-C, SUBRNDD SUBANG, ABDT GLAUC, SHELL FRAGS, MIC FOSS

FLC AT 714M

CLY; M GRY, SFT, STKY, AMOR, NON CALC

FR SD; CLR, M-C, SUBANG-SUBRNDD W/ YR, GLD, V LG ABS, F GLAU

RUN E-LOGS
ISF/LSS-MSFL-GR
CDT/CNL-GR

W	V	F	Fc	PV
1.09	50	-	-	6
YP	Sd	PH	CL	Sol
21	-	9.5	-	-

CETAM BLDR IN HOLE

CLY; M GRY, SFT, STKY, AMOR, SL-NON CALC, TR SHELL FRAGS

SD; CLR, VF-F, LS, SUBANG-SUBRND

DEV AT 774M
0.90° N 51° E

W	V	F	Fc	V
1.08	44	14	2	12
YP	Sd	PH	CL	
15	-	10.8	12000	

CLY; M GRY, SFT, STKY, AMOR, SL-NON CALC, TR SHELL FRAGS

SD; CLR-TRANSL, F-VF, LS, SUBRND-RND, MOD SORT

SD; CLR-TRANSL, F-VF, OCC M, LS, SUBRND, MOD SORT

CLY; M GRY, SFT, STKY, AMOR, SL-NON CALC, TR SHELL FRAGS

DEV AT 880M
1.20° N 7 E

FLC AT 930M

W	V	F	Fc
1.10	55	14	2
PV	YP	Sd	PH
12	17	-	10.8
CL		Sol	
12000		6	

CLY; M GRY, SFT, STKY, AMOR, SL CALC, TR SHELL FRAGS, TR PYR

SD; CLR, F-VF, LS, OCC M, SUBRND

CLY; LT-M GRY, SFT, STKY, AMOR, SL CALC, TR SHELL FRAGS,

FLC AT [illegible]

DEV AT [illegible]

SD; CLR, F-M, OCC C, LS, SUBANG-SUBRND, PR SRT, ABDT GLAUC

[illegible]

[illegible]

FLC AT 1970M
INC MD WT TO 1.25SG AT 1970M

[illegible]

INC MD WT TO 1.32SG AT 2000M

V FRM, BLKY, ANG, NON CALC, ALSO LT GRY, V SFT, STKY, AMOR, HYDTD, NON CALC

RUN E-LOGS AT 2000M
ISF/LSS/GR
LDT/GR

CLYST; M GRY/BRN, SFT, STKY, AMOR, HYDTD, NON CALC, OCC SLTY

V	V	F	Fc
1.32	54	10	2
PV	YP	Sd	PH
17	15	TR	10.8
CL		Sol	
19000		11	

DEV AT 2115M
1.0° N 85° W

CLYST; M GRY, SFT, STKY, AMOR, NON CALC, ALSO, LT GRN, RED, SFT, STKY, AMOR, SLI CALC

V	V	F	Fc
1.45	55	10	3
PV	YP	Sd	PH
20	18	TR	10
CL		Sol	
19000		16	

CLYST; M GRY, SFT, VF, BLKY, W/CLYST MTX, NON CALC

FLC AT 2200M

CLYST; LT GRY, SFT, AMOR, HYDTD, SLI CALC OCC SLTY

V	V	F	Fc
1.65	45	9	1
PV	YP	Sd	PH
21	10	.25	11
CL		Sol	
20000		22	

CLYST; M GRY, SFT, VF, W/CLYST MTX, NON CALC

SST; CLR-TRANSL, VF, WELL SRTD, ANG, SLTY, CALC CMT, YEL FLUOR, FAST MLKY WH CUT

SD; CLR, VF OCC C, LS, SUBRND-SUBANG, V WELL SRTD

MRL; M-DK GRY, FRM-MOD HD, BLKY, V CALC

FLC AT 2308M

DOL; LT BRN, BUFF, HD, BLKY, BRIT,

CLYST; LT-M GRY, SFT, STKY, AMOR, HYDTD, NON-SL CALC

DEV AT 2335M
0.69° N 29°E

CLYST; PRED RED/BRN, SFT, OCC FRM, AMOR, HYDTD, NON CALC, W/ ABDT CA FRAGS

CORE #1, CUT 18M
2343M-2361M
REC 78%

CORE #2, CUT 7M
2361M-2368M
REC 100%

SD; CLR, LS, F-M, OCC C, SUBANG-SUBRND, WELL SRTD, ABDT PYR

CORE #3, CUT 18.5M
2378.5M-2395M
REC 100%

SD; M-GRY, VF-F, SUBANG-SUBRND, PR SRT, TR MICA

V	V	F	Fc
1.65	51	9.6	1
PV	YP	Sd	PH
21	14		10.5
CL		Sol	
19000		22	

COAL; BLK, HD, BRIT, BLKY-SPL

SD; F-M, LS, WELL SRTD, SUBRND, TR MUSC MICA

CLYST; LT-M GRY, SFT OCC FRM, AMOR OCC BLKY, HYDTD, NON CALC TR PYR, V OCC SLTY

SD; CLR, LS, F-M, SUBANG-SUBRND, MOD WELL SRTD, TR PYR, TR MUSC MICA

V	V	F	Fc
1.65	51	9.4	2
PV	YP	Sd	PH
18	12	.25	10.4
CL		Sol	
19000		22	

SD; CLR, LS, F-M, OCC C, SUBANG-SUBRND, MOD SRTD, TR PYR, TR MUSC MICA, W/ OCC WH, NON CALC, ARG MTX

COAL; BLK, HD, BRIT, BLKY-SPL

CLYST; LT-M GRY, SFT, AMOR, STKY, HYDTD, NON CALC

DEC MD WT TO 1.58SG AT 2602M

DEV AT 2605M
1.35° N 39.7°E

RUN BIT AT 2622M

CLYST; M GRY, GRY/BRN, SFT, OCC FRM, STKY, AMOR, HYDTD, NON-SL CALC, MICROMIC, CARB, OCC SLTY, TR PYR

V	V	F	Fc
1.58	48	11.2	2
PV	YP	Sd	PH
17	12	TR	10.5
CL		Sol	
17500		20	

FLC AT 2680M AND 2691M

SD; CLR, PRED VF-F, M, OCC C, LS, SUBANG-SUBRND, WELL SRTD, OCC PR SRTD, ABDT PYR, ABDT MUSC MICA, W/ OCC OFF WH ARG, CALC MTX

DEV AT 2737M
2.50° N 35°E

CLYST; LT GRY, SFT, AMOR, HYDTD, MOD-SL CALC, V SDY, VF-F, GD TR PYR

SST; OFF WH, VF, FRM, FRI, SUBANG-SUBRND, WELL SRTD, CALC CMT, MICROMIC

CLYST; LT-M GRY, SFT, STKY, AMOR, HYDTD, NON CALC, SDY, VF, TR PYR

CLYST; M-DK BRN, FRM, BLKY-SPL, SLTY, CARB FRAGS, NON CALC, SUBFISS, MICROMIC, TR PYR, TR MICFOSS

LST; TAN-BUFF, FRM, BLKY, FRI, OCC ARG, OCC XLN

DEV AT 2863M
4.50° N 76°E

V	V	F	Fc
1.58	49	8.8	2
PV	YP	Sd	PH
21	19	TR	10.8
CL		Sol	
18000		19	

CLYST; LT GRY/BRN, SFT, AMOR, HYDTD, NON-SL CALC, SLTY, V SDY, VF, TR PYR

SD; CLR, LS, F-VF, SUBRNDD, WELL SRTD

LST; ~~TAN-BUFF, FRM,~~ BLKY, FRI, ARG

DEV AT 2948M
5.75° N 73°E

CLYST; M-DK BRN, FRM, BLKY, NON CALC, SLTY, CARB FRAGS, MICROMIC

SLTST; M-DK BRN, FRM-V FRM, NON CALC, BLKY

COAL; DK BRN-BLK, FRM-HD, OCC BRIT, BLKY, OCC CONCH FRAC,

SD; CLR-MLKY, VF-C, OCC VC, LS, ANG-SUBRNDD, PR SRTD, MICROMIC, OCC SIL CMT, TR PYR

V	V	F	Fc
1.58	48	9.0	1
PV	YP	Sd	PH
20	15	-	10.9
CL		Sol	
18000		20	

DEV AT 3017M
5.0° N 63° E

RUN E-LOGS
ISF/LSS/MSFL/GR
LDL/CNL/GR
SHDT
VSP
CST
CBL/VDL/GR

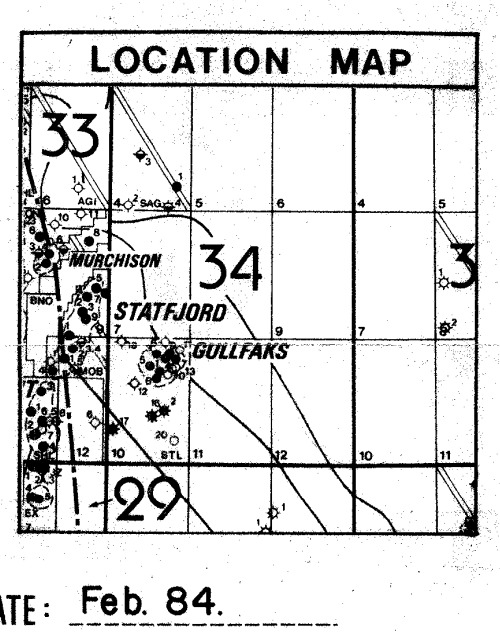
EL P/N 18447 MAY 1980

statoil /NORSK HYDRO / SAGA PETROLEUM

34/10-18
COMPLETION LOG
Scale 1:500

COORDINATES: 61° 14' 22,48"N
03°18' 18,83"E
K.B.: 22,0m above M.S.L.
WATER DEPTH: 141,0m
TOTAL DEPTH: 3025m (MD)
DEEPEST FORM. PEN.: STATFJORD
SPUD DATE: 16 JULY 1983
RIG RELEASE DATE: 31 August 1983
WELL STATUS: P&A - dry well
RIG: ROSS ISLE
CONTRACTOR: ROSS DRILLING Co.A/S
GEOLOGISTS: E.UNDERSRUD, D.G.PATTRICK, M.GRACE, K.RUUD
PREPARED BY: O.BEYER, E.UNDERSRUD

LOCATION MAP



DATE: Feb. 84.

CASING DATA:	LOT(SG)
30" at 226,5 (RKB)	
20" at 747,0 (RKB)	1.57
13,375" at 2008,0 (RKB)	1.83

VELOCITY SURVEY: VSP-49 recordings by Schlumberger at levels 822.5 to 3024m.

LOGS RUN (SCHLUMBERGER)

ISF/LSS/MSFL/GR	LDL/CNL/GR CAL	CBL/ VDL	SHDT	RFT	CST	
RUN1 : 155 - 7645 GR to SEA BED RUN2 : 747-1999 RUN3 :2007-3024	RUN1 : 227 - 765 RUN2 : 747 - 1999 RUN 3:2007-3025	RUN 1 : 162 - 2007	RUN 1:2007-3025	RUN 1: 2330-2543	30 SAMPLES 29 RECOVERED FROM 2108-3008	

LITHOLOGIC SYMBOLS

SAND SANDSTONE	LIMESTONE	ANHYDRITE	FORAMS	PYRITE	MICA
SILT SILTSTONE	CHALK	COAL LIGNITE	WOOD FRAGS	GLAUCONITE	STYLOLITES
CLAY CLAYSTONE	DOLOMITE	TUFF	FOSSILS, GEN'L	CHERT	BURROWS
SHALE	MARL	SALT	SHELL FRAGS	SIDERITE	FRACTURES

SHOW OR STAIN　HYDROCARBON CUT　FLUORESCENCE　GAS SHOW

SIDEWALL CORES
○→ REC.
●→ REC. W/SHOW
→ NO REC.

CORES
CORE NO.

RFT
1

CASING SHOE/LINER

EQUIPMENT DATA

Run Nº	CSU equipment Module	GEU		Program Name	Version	

REMARKS JOBREF: 820405
MSFL WAS NOT RUN 2007 - 750 m. (RUN 2 ISF, LSS, GR)
LOGS ENVIRONMENTALLY CORRECTED FOR BOREHOLE CONDITIONS, USING 'PRESS' PROGRAM.

3,0,3,2,A 00851

EXLOG

HOLE SIZE
36" TO 227·5m 12.25" TO 3025m
26" TO 767 m TO
17·5" TO 2024m TO

EXLOG SUITE
FORMATION EVALUATION LOG ☒ WIRELINE DATA PRESSURE LOG ☒
PRESSURE EVALUATION LOG ☒ TEMPERATURE DATA LOG ☒
DRILLING DATA PRESSURE LOG ☒ GEMDAS COMPUTER LOGS ☒
☐ MUD RESISTIVITY LOG ☒

CASING RECORD
30" AT 226·5 m AT
20" AT 747 m AT
13·375" AT 2008m AT

MUD TYPES
SEAWATER GEL TO 767m
GEL LIGNOSULPHONATE TO 2024m
LIGNOSULPHONATE TO 3025m

COMPANY STATOIL DEN NORSKE STATS OLJESELSKAP A.S.
WELL 34/10 – 18
FIELD WILDCAT
REGION NORWEGIAN NORTH SEA
COORDINATES 61° 14' 22·0"N 02° 3' 17·3"E
API WELL INDEX NO.
SPUD DATE 16 JULY 1983
ELEVATION RKB 22m ABOVE MSL WATER DEPTH 141m
TOTAL DEPTH 3025m
CONTRACTOR ROSS DRILLING
RIG / TYPE ROSS ISLE

LOG INTERVAL
DEPTH FROM 230m TO 3025 m
DATE FROM 17 JULY TO 23 AUG 1983
SCALE 1:5000 UNIT 256
LOG PREPARED BY AIREY EVANS GOOD HILL KUBY SAINT

LITHOLOGY SYMBOLS
LIMESTONE, DOLOMITE, ANHYDRITE AND GYPSUM, HALITE, COAL AND LIGNITE, CLAY, SHALE, SILT AND SILTSTONE, SILTY SANDSTONE, SAND AND SANDSTONE, CONGLOMERATE, CHERT, IGNEOUS UNDIFFERENTIATED

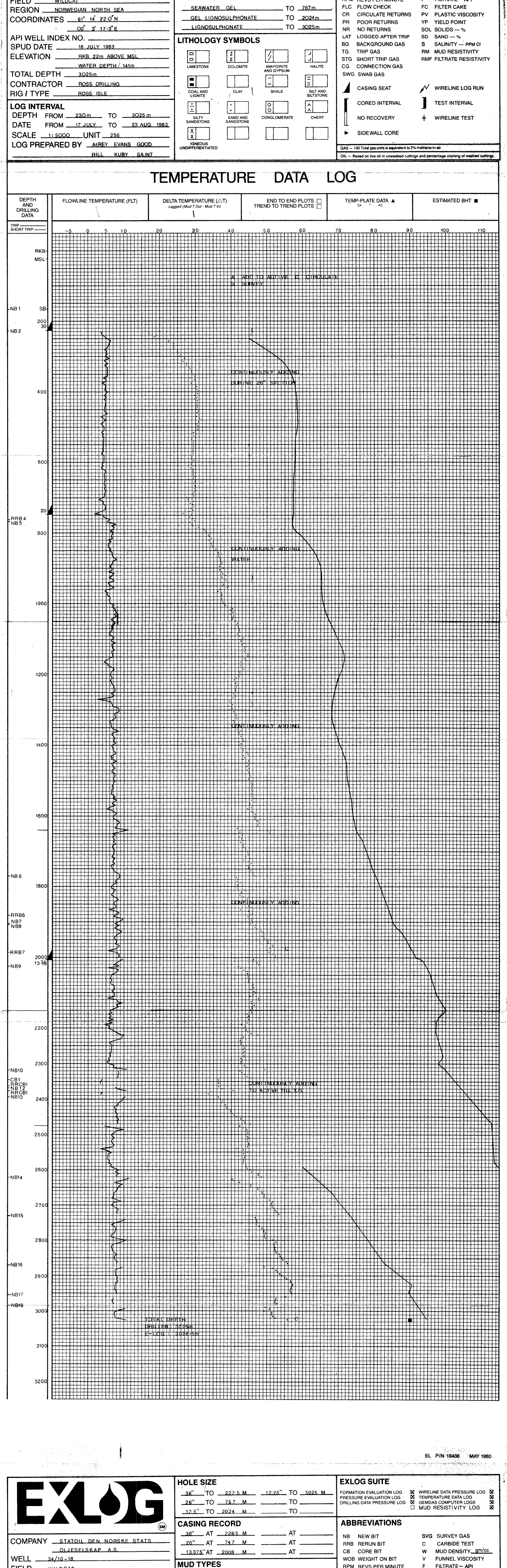
ABBREVIATIONS

NB	NEW BIT	SVG	SURVEY GAS
RRB	RERUN BIT	C	CARBIDE TEST
CB	CORE BIT	W	MUD DENSITY gm/cc
WOB	WEIGHT ON BIT	V	FUNNEL VISCOSITY
RPM	REVS PER MINUTE	F	FILTRATE– API
FLC	FLOW CHECK	FC	FILTER CAKE
CR	CIRCULATE RETURNS	PV	PLASTIC VISCOSITY
PR	POOR RETURNS	YP	YIELD POINT
NR	NO RETURNS	SOL	SOLIDS — %
LAT	LOGGED AFTER TRIP	SD	SAND — %
BG	BACKGROUND GAS	S	SALINITY — PPM Cl
TG	TRIP GAS	RM	MUD RESISTIVITY
STG	SHORT TRIP GAS	RMF	FILTRATE RESISTIVITY
CG	CONNECTION GAS		
SWG	SWAB GAS		

CASING SEAT, WIRELINE LOG RUN, CORED INTERVAL, TEST INTERVAL, NO RECOVERY, WIRELINE TEST, SIDEWALL CORE

GAS — 100 Total gas units is equivalent to 2% methane-in-air.
OIL — Based on live oil in unwashed cuttings and percentage staining of washed cuttings.

TEMPERATURE DATA LOG



EL P/N 18438 MAY 1980

EXLOG

HOLE SIZE
36" TO 227·5 M 12·25" TO 3025 M
26" TO 767 M TO
17·5" TO 2024 M TO

EXLOG SUITE
FORMATION EVALUATION LOG ☒ WIRELINE DATA PRESSURE LOG ☒
PRESSURE EVALUATION LOG ☒ TEMPERATURE DATA LOG ☒
DRILLING DATA PRESSURE LOG ☒ GEMDAS COMPUTER LOGS ☒
☐ MUD RESISTIVITY LOG ☒

CASING RECORD
30" AT 226·5 M AT
20" AT 747 M AT
13·375" AT 2008 M AT

MUD TYPES
SEAWATER GEL TO 765 M
GEL LIGNOSULPHONATE TO 2024 M
LIGNOSULFONATE TO 3025 M

COMPANY STATOIL DEN NORSKE STATS OLJESELSKAP A.S.
WELL 34/10-18
FIELD WILDCAT
REGION NORWEGIAN NORTH SEA
COORDINATES 61 DEG 14' 22·0" N 02 DEG 03' 17·3" E
API WELL INDEX NO.
SPUD DATE 16 JULY 1983
ELEVATION RKB 22 M ABOVE MSL WATER DEPTH 141 M
TOTAL DEPTH 3025 M
CONTRACTOR ROSS DRILLING
RIG / TYPE ROSS ISLE

LOG INTERVAL
DEPTH FROM 230 M TO 3025 M
DATE FROM 17 JULY TO 23 AUG 1983
SCALE 1:5000 UNIT 256
LOG PREPARED BY AIBEY, EVANS, GOOD, HILL, KUBY, SAINT

LITHOLOGY SYMBOLS
LIMESTONE, DOLOMITE, ANHYDRITE AND GYPSUM, HALITE, COAL AND LIGNITE, CLAY, SHALE, SILT AND SILTSTONE, SILTY SANDSTONE, SAND AND SANDSTONE, CONGLOMERATE, CHERT, IGNEOUS UNDIFFERENTIATED

ABBREVIATIONS

NB	NEW BIT	SVG	SURVEY GAS
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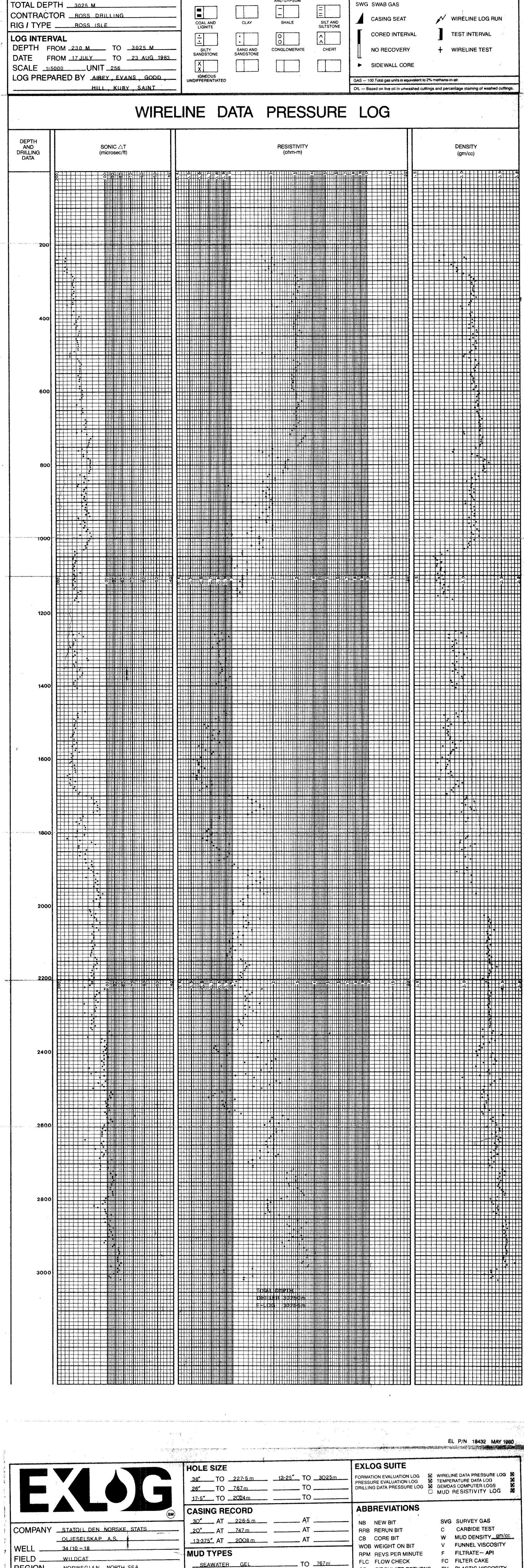
CB	CORE BIT	W	MUD DENSITY gm/cc
WOB	WEIGHT ON BIT	V	FUNNEL VISCOSITY
RPM	REVS PER MINUTE	F	FILTRATE– API
FLC	FLOW CHECK	FC	FILTER CAKE
CR	CIRCULATE RETURNS	PV	PLASTIC VISCOSITY
PR	POOR RETURNS	YP	YIELD POINT
NR	NO RETURNS	SOL	SOLIDS — %
LAT	LOGGED AFTER TRIP	SD	SAND — %
BG	BACKGROUND GAS	S	SALINITY — PPM Cl
TG	TRIP GAS	RM	MUD RESISTIVITY
STG	SHORT TRIP GAS	RMF	FILTRATE RESISTIVITY
CG	CONNECTION GAS		
SWG	SWAB GAS		

CASING SEAT, WIRELINE LOG RUN, CORED INTERVAL, TEST INTERVAL, NO RECOVERY, WIRELINE TEST, SIDEWALL CORE

GAS — 100 Total gas units is equivalent to 2% methane-in-air.
OIL — Based on live oil in unwashed cuttings and percentage staining of washed cuttings.

WIRELINE DATA PRESSURE LOG



EL P/N 18432 MAY 1980

EXLOG

HOLE SIZE
36" TO 227·5 m 12·25" TO 3025m
26" TO 767m TO
17·5" TO 2024m TO

EXLOG SUITE
FORMATION EVALUATION LOG ☒ WIRELINE DATA PRESSURE LOG ☒
PRESSURE EVALUATION LOG ☒ TEMPERATURE DATA LOG ☒
DRILLING DATA PRESSURE LOG ☒ GEMDAS COMPUTER LOGS ☒
☐ MUD RESISTIVITY LOG ☒

CASING RECORD
30" AT 226·5 m AT
20" AT 747m AT
13·375" AT 2008m AT

MUD TYPES
SEAWATER GEL TO 767m
GEL LIGNOSULPHONATE TO 2024m
LIGNOSULPHONATE TO 3025m

COMPANY STATOIL DEN NORSKE STATS OLJESELSKAP A.S.
WELL 34/10 – 18
FIELD WILDCAT
REGION NORWEGIAN NORTH SEA
COORDINATES 61° 14' 22·0"N 02° 3' 17·3"E
API WELL INDEX NO.
SPUD DATE 16 JULY 1983
ELEVATION RKB 22m ABOVE MSL WATER DEPTH 141m
TOTAL DEPTH 3025m
CONTRACTOR ROSS DRILLING
RIG / TYPE ROSS ISLE

LOG INTERVAL
DEPTH FROM 230m TO 3025m
DATE FROM 17 JULY TO 23 AUG 1983
SCALE 1:5000 UNIT 256
LOG PREPARED BY AIREY EVANS GOOD HILL KUBY SAINT

LITHOLOGY SYMBOLS
LIMESTONE, DOLOMITE, ANHYDRITE AND GYPSUM, HALITE, COAL AND LIGNITE, CLAY, SHALE, SILT AND SILTSTONE, SILTY SANDSTONE, SAND AND SANDSTONE, CONGLOMERATE, CHERT, IGNEOUS UNDIFFERENTIATED

ABBREVIATIONS

NB	NEW BIT	SVG	SURVEY GAS
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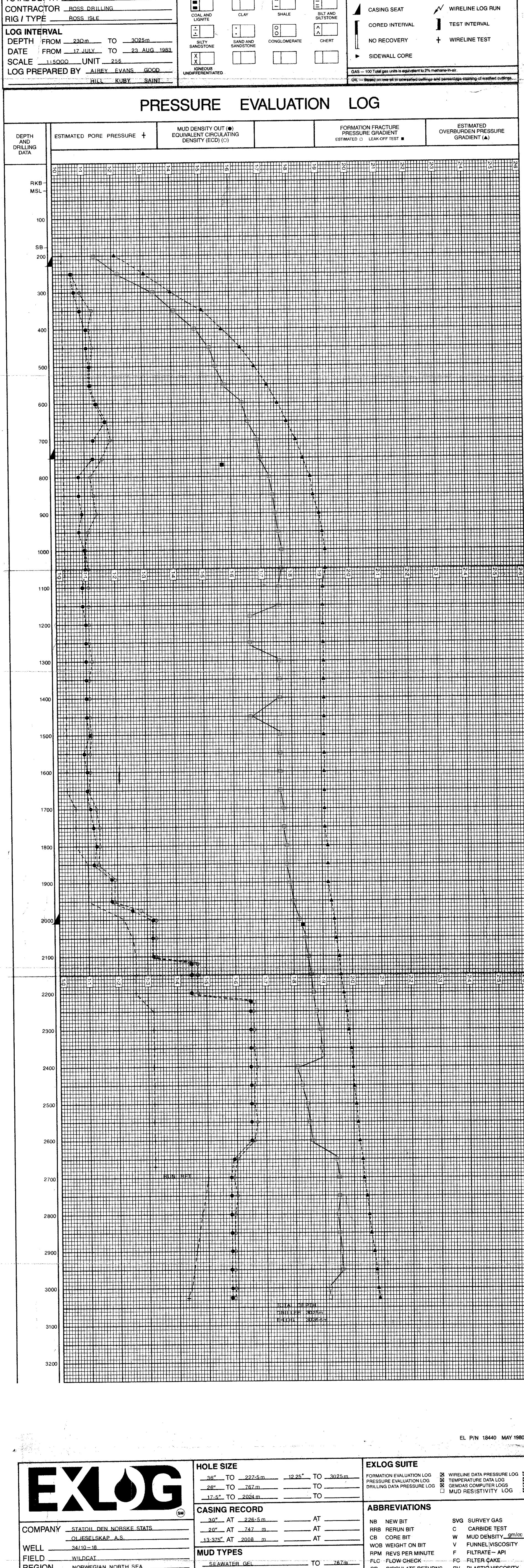
LAT	LOGGED AFTER TRIP	SD	SAND — %
BG	BACKGROUND GAS	S	SALINITY — PPM Cl
TG	TRIP GAS	RM	MUD RESISTIVITY
STG	SHORT TRIP GAS	RMF	FILTRATE RESISTIVITY
CG	CONNECTION GAS		
SWG	SWAB GAS		

CASING SEAT, WIRELINE LOG RUN, CORED INTERVAL, TEST INTERVAL, NO RECOVERY, WIRELINE TEST, SIDEWALL CORE

GAS — 100 Total gas units is equivalent to 2% methane-in-air.
OIL — Based on live oil in unwashed cuttings and percentage staining of washed cuttings.

PRESSURE EVALUATION LOG



EL P/N 18440 MAY 1980

EXLOG

HOLE SIZE
36" TO 227·5m 12 25" TO 3025m
26" TO 767m TO
17·5" TO 2024m TO

EXLOG SUITE
FORMATION EVALUATION LOG ☒ WIRELINE DATA PRESSURE LOG ☒
PRESSURE EVALUATION LOG ☒ TEMPERATURE DATA LOG ☒
DRILLING DATA PRESSURE LOG ☒ GEMDAS COMPUTER LOGS ☒
☐ MUD RESISTIVITY LOG ☒

CASING RECORD
30" AT 226·5 m AT
20" AT 747 m AT
13·375" AT 2008 m AT

MUD TYPES
SEAWATER GEL TO 767m
GEL LIGNOSULPHONATE TO 2024m
LIGNOSULPHONATE TO 3025m

COMPANY STATOIL DEN NORSKE STATS OLJESELSKAP A.S.
WELL 34/10 – 18
FIELD WILDCAT
REGION NORWEGIAN NORTH SEA
COORDINATES 61° 14' 22·0"N 02° 3' 17·3"E
API WELL INDEX NO.
SPUD DATE 16 JULY 1983
ELEVATION RKB 22m ABOVE MSL WATER DEPTH 141m
TOTAL DEPTH 3025m
CONTRACTOR ROSS DRILLING
RIG / TYPE ROSS ISLE

LOG INTERVAL
DEPTH FROM 230m TO 3025m
DATE FROM 17 JULY TO 23 AUG 1983
SCALE 1:5000 UNIT 256
LOG PREPARED BY AIREY EVANS GOOD HILL KUBY SAINT

LITHOLOGY SYMBOLS
LIMESTONE, DOLOMITE, ANHYDRITE AND GYPSUM, HALITE, COAL AND LIGNITE, CLAY, SHALE, SILT AND SILTSTONE, SILTY SANDSTONE, SAND AND SANDSTONE, CONGLOMERATE, CHERT, IGNEOUS UNDIFFERENTIATED

ABBREVIATIONS

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LAT	LOGGED AFTER TRIP	SD	SAND — %
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TG	TRIP GAS	RM	MUD RESISTIVITY
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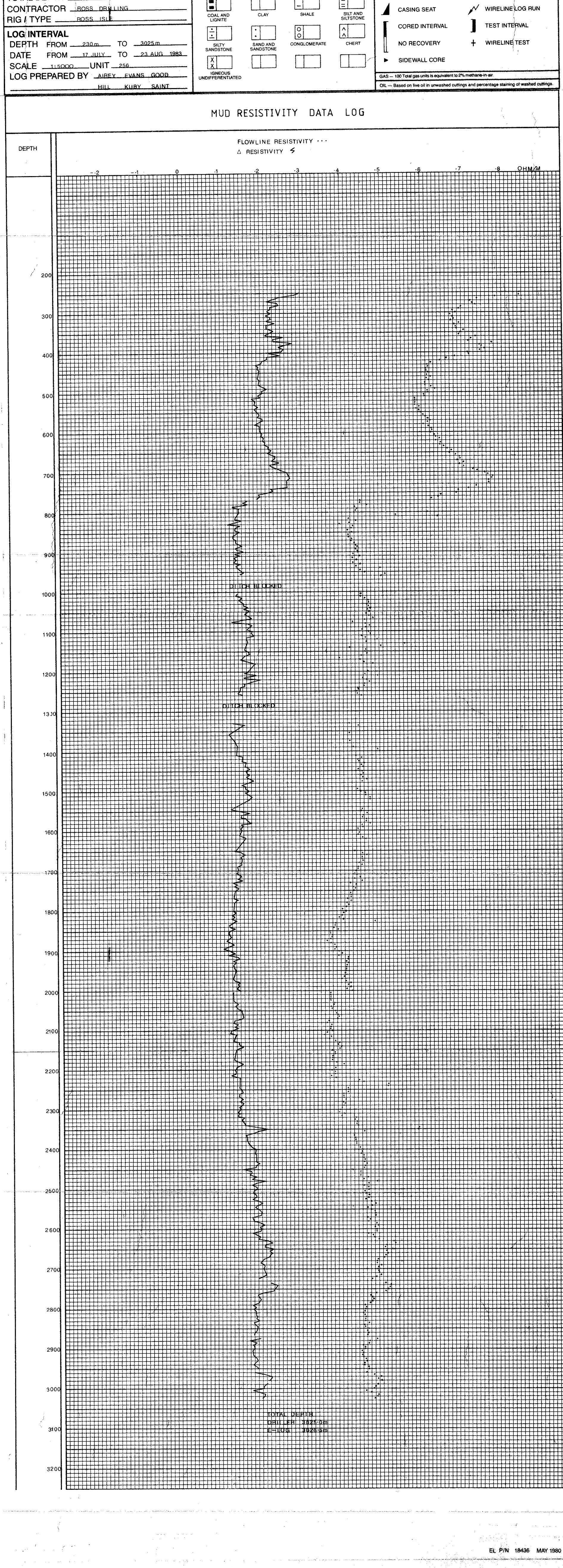
CG	CONNECTION GAS		
SWG	SWAB GAS		

CASING SEAT, WIRELINE LOG RUN, CORED INTERVAL, TEST INTERVAL, NO RECOVERY, WIRELINE TEST, SIDEWALL CORE

GAS — 100 Total gas units is equivalent to 2% methane-in-air.
OIL — Based on live oil in unwashed cuttings and percentage staining of washed cuttings.

MUD RESISTIVITY DATA LOG



EL P/N 18436 MAY 1980

EXLOG

HOLE SIZE
36" TO 227·5 m 12·25" TO 3025m
26" TO 767m TO
17·5" TO 2024m TO

EXLOG SUITE
FORMATION EVALUATION LOG ☒ WIRELINE DATA PRESSURE LOG ☒
PRESSURE EVALUATION LOG ☒ TEMPERATURE DATA LOG ☒
DRILLING DATA PRESSURE LOG ☒ GEMDAS COMPUTER LOGS ☒
☐ MUD RESISTIVITY LOG ☒

CASING RECORD
30" AT 226·5m AT
20" AT 747 m AT
13·375" AT 2008m AT

MUD TYPES
SEAWATER GEL TO 767 m
GEL LIGNOSULPHONATE TO 2024m
LIGNOSULPHONATE TO 3025m

COMPANY STATOIL DEN NORSKE STATS OLJESELSKAP A.S.
WELL 34 / 10 – 18
FIELD WILDCAT
REGION NORWEGIAN NORTH SEA
COORDINATES 61° 14' 22·0"N 02° 3' 17·3" E
API WELL INDEX NO.
SPUD DATE 16 JULY 1983
ELEVATION RKB 22m ABOVE MSL WATER DEPTH 141m
TOTAL DEPTH 3025m
CONTRACTOR ROSS DRILLING
RIG / TYPE ROSS ISLE

LOG INTERVAL
DEPTH FROM 230 m TO 3025 m
DATE FROM 17 JULY TO 23 AUG 1983
SCALE 1: 5000 UNIT 256
LOG PREPARED BY AIREY EVANS GOOD HILL KUBY SAINT

LITHOLOGY SYMBOLS
LIMESTONE, DOLOMITE, ANHYDRITE AND GYPSUM, HALITE, COAL AND LIGNITE, CLAY CLAYSTONE, SHALE, SILT AND SILTSTONE, SILTY SANDSTONE, SAND AND SANDSTONE, CONGLOMERATE, CHERT, IGNEOUS UNDIFFERENTIATED, TUFF, MARL, GLAUCONITE

ABBREVIATIONS

NB	NEW BIT	SVG	SURVEY GAS
RRB	RERUN BIT	C	CARBIDE TEST
CB	CORE BIT	W	MUD DENSITY gm/cc
WOB	WEIGHT ON BIT	V	FUNNEL VISCOSITY
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FLC	FLOW CHECK	FC	FILTER CAKE
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NR	NO RETURNS	SOL	SOLIDS — %
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SWG	SWAB GAS		

CASING SEAT, WIRELINE LOG RUN, CORED INTERVAL, TEST INTERVAL, NO RECOVERY, WIRELINE TEST, SIDEWALL CORE

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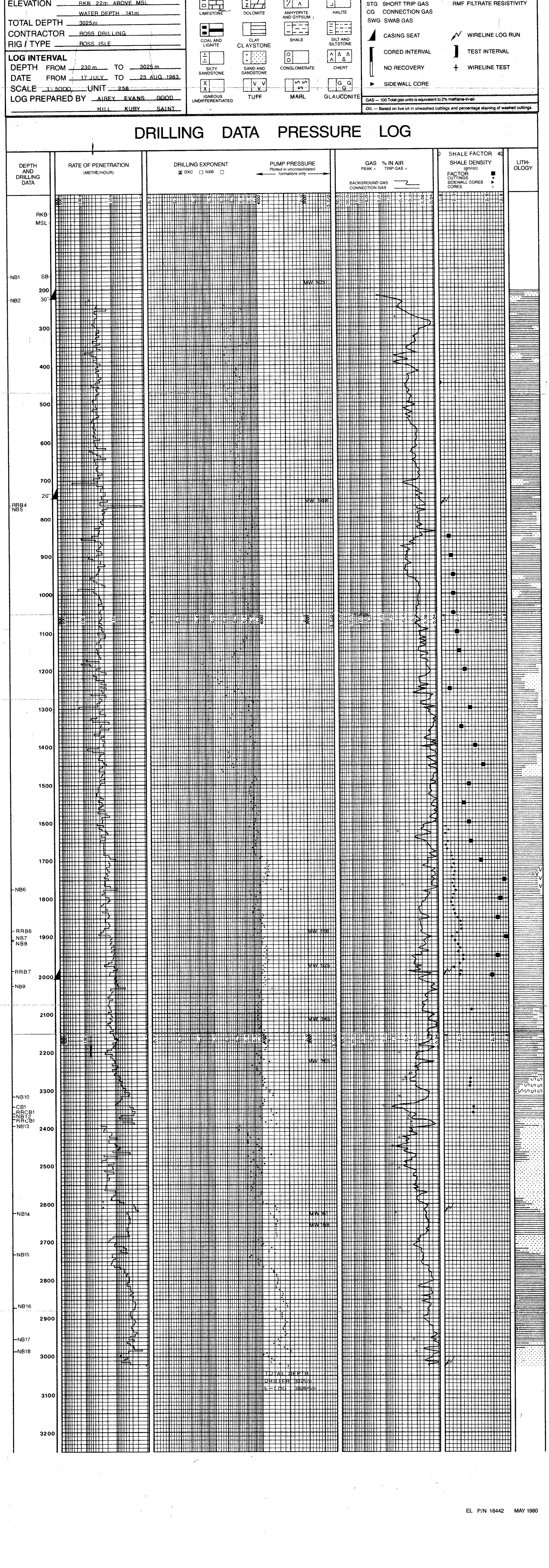
DRILLING DATA PRESSURE LOG



STATOIL DATA PROCESSING CENTER

PLOT MADE BY: 34-10-18 **DATE:** 09.05.50 28 FEBRUAR 1984

DEPARTMENT : LET/BER

ADDRESS/BOX : HER

OTHER INFO : -

GRAPHICAL LOG-PRESENTATION

WELL : 34-10-18 DEPTH INTERVALL :2325.00-2650.00 (METER)

ENGINEER :HB SCALE 1:1000

DATE: 09.05.58 28 FEBRUAR 1984

STATOIL

STRATIGRAPHY (REF. RKB=22M)

TOP CROMER KNOLL GROUP	2340.0M
TOP UPPER JURASSIC	2351.0M
TOP VIKING GROUP	2351.0M
TOP DRAUPNE FORMATION	2351.0M
TOP HEATHER FORMATION	2355.0M
TOP BRENT GROUP	2372.5M
TOP TARBERT FORMATION	2372.5M
TOP NESS FORMATION	2412.0M
TOP ETIVE FORMATION	2495.0M
TOP RANNOCH FORMATION	2524.0M
TOP BROOM FORMATION	2595.0M
TOP DUNLIN GROUP	2604.0M

PRELIMINARY PETROPHYSICAL EVALUATION

PREPARED BY HB.LET.BER.JAN-84