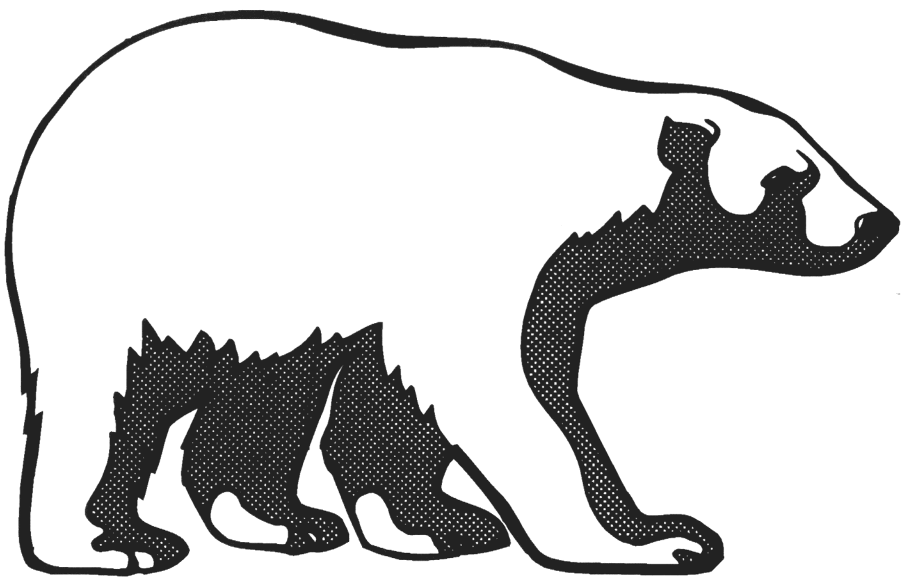
STATOIL

COMPLETION REPORT

WELL 6507/3-2

PL 159



Exploration and Development
Region North

HYDRO TOTAL saga

HARSTAD, NOVEMBER 1997

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EXPLORATION AND DEVELOPMENT NORWAY

REGION NORTH

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Key words

RESULTS FROM WELL 6507/3-2

Abstract

- General well information.
- Geological Report.
- Engineering Report.
- Drilling Report.
- Wellsite sample description.
- Sidewall core description.
- Conventional core description.

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PL 159

WELL 6507/3-2

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NORSK HYDRO
TOTAL MARINE
SAGA PETROLEUM

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Wellsite Sample Description

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Statoil Completion Log
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1 GENERAL INFORMATION

1 GENERAL INFORMATION

1.1 Well Data Record.

1.1.1 Well Designation

6507/3-2

1.1.2 Well Classification

Exploration well

1.1.3 Field

1.1.4 Well Location

Country	Norway
Area	Nordland III
License	PL 159 Statoil (Operator) (50 %) Norsk Hydro (20%) Total Marine (20% Saga Petroleum (10 %)
Geographic coordinates	Latitude : 65° 45' 25,29 N Longitude: 07° 55' 18,79" E Datum: ED-1950, Spheroid: Int. 1924
UTM coordinates	UTM Zone: 32, CM: 09°E North: 7 293 436, East: 450 602 E
Seismic location	Intersection between ST9601-407, (SP10697) and SG8710-201
Water depth	409.5 mMSL
Total depth of the well	2032 mMD RT Driller 2008.5 mTVD RT Driller
Formation at TD	Triassic "Red Beds"

1.2 Rig Data

Rig name	Transocean 8
Rig contractor	Transocean Drilling
KB elevation	23.5 m

1.3 Purpose of the Well

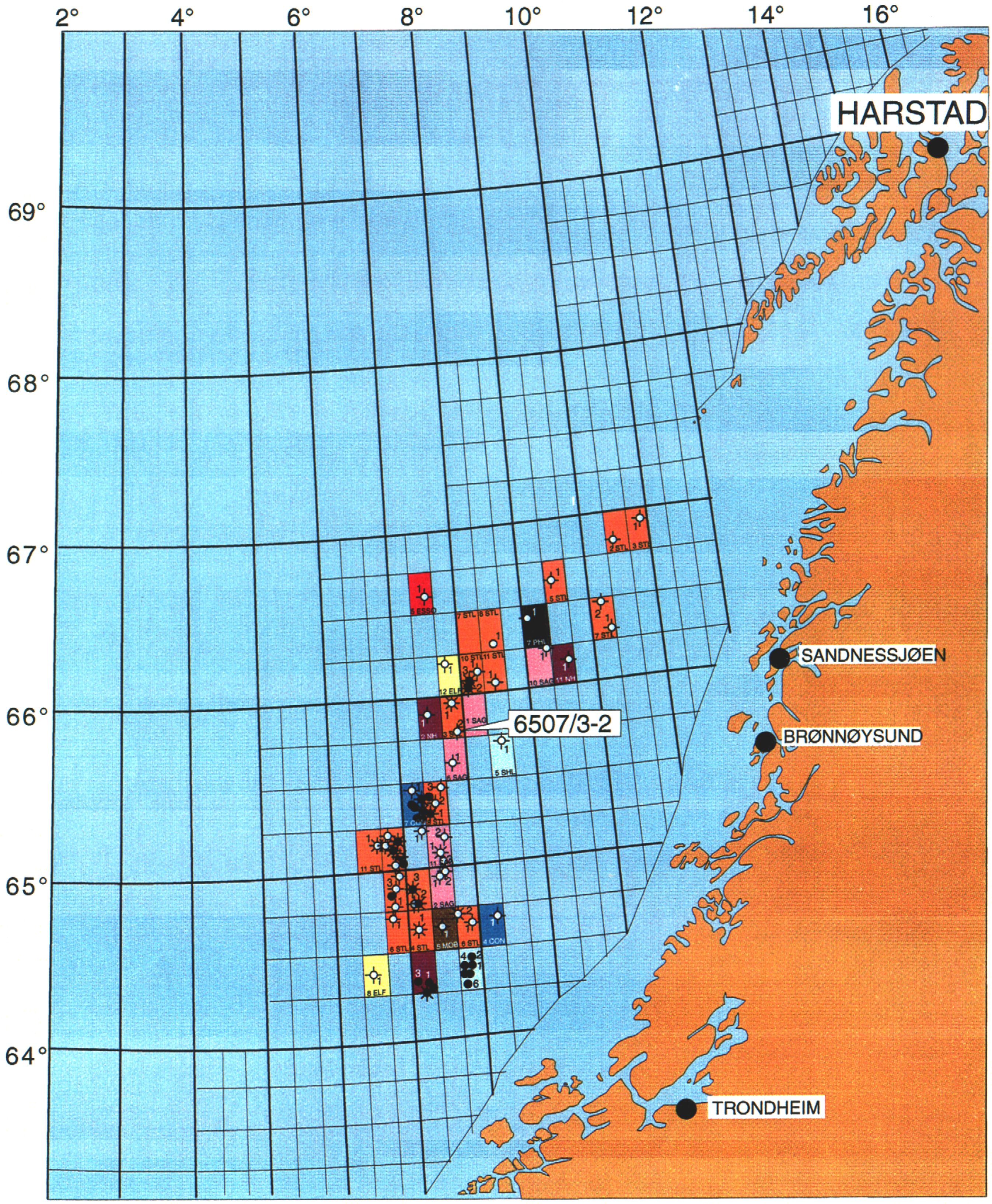
The main objective was to test the hydrocarbon potential in the Middle and Lower Jurassic Sandstones of the Fangst and Båt Groups.

1.4 Results of the Well

The well was drilled to a total depth of 2032 mMD RT / 2008.5 mTVD RT, into Red Beds of Triassic age. The well was plugged and abandoned as a dry well.

PL 159, Well 6507/3-2
INDEX MAP

STATOIL



HA GRS/970073/DALM/25.02.97/ila

Figure 1.1

1.5 Well History

1.5.1 General

On license	03. April 1997	18:30 hrs
On location	05. April 1997	05:30 hrs
Spud date	06. April 1997	16:30 hrs
Finished drilling and logging	22. April 1997	06:00 hrs
Rig release	27. April 1997	04:30 hrs
Status	Permanently plugged and abandoned.	

1.5.2 Contractors

Casing	Weatherford
Cementing	Halliburton
Core Analysis	Labnet Norge (Schlumberger)
Coring	Baker Hughes Inteq
Diving	Rovtech
Drilling contractor	Transocean
Electric logging	Atlas Wireline Services
Helicopters	Helikopter Service A.S.
Mud	Dowell Schlumberger
Mud logging	Baker Hughes Inteq
MWD	Baker Hughes Inteq
Paleodating	GeoStrat
Rig positioning	Geoteam
Sample handling	Labnet Norge (Schlumberger)
Site Survey	Guardline Surveys
VSP	Atlas Wireline Services

1.5.3 Casing

Casing size	Shoe depth	Leak off tests (eqv. mud weight)
30"	493	
13 3/8"	994	1.58

1.5.4 Conventional Cores

CORE no	CORED INTERVAL (m)	RECOVERED INTERVAL (m)	RECOV.		LOG CORRECTED INTERVAL (m)	COMMENTS
			m	%		
1	1230 - 1236	1230 - 1233.23	3.23	54	-0.2	Core jammed off
2	1402 - 1413	1402 - 1409.83	7.83	71	+1.1	Core jammed off

The Core Descriptions is attached in Appendix I.

1.5.5 Sidewall Cores

Reference log MLL/DLL/MAC/DSL/CHT Run no. 1A

Run no.	Interval (m MD RT)	Shots	Recov.	Lost	Misfire	Empty
1A	2019.1 - 1009	50	32	13	3	2

The Sidewall Core Descriptions are attached in Appendix II.

1.5.6 Mud Logging

Geoservices' mudlogging unit recorded, among others, the following parameters

i) Drilling rate (ROP)
ii) Lithology
iii) Cutting gas
iv) Mud gas
v) Chromatograph reading

For details see a separate report, Geoservices End of Well Report

1.5.7 Logging

1.5.7.1 Electric Logging

Type of log	Run no	Interval from-to (mRT MD)	Comments
MLL/DLL/MAC/DSL/CHT	1A	2031 - 760	Also recorded full wavetrain in csg.
ZDL/CDL/DSL/CHT	1A	2024 - 990	
VSP/GR	1A	2022 - 636	Performed 102 levels
HDIP/GR/CHT	1A	2022 - 993	
FMT/GR/CHT	1A	1976 -1122	Performed 15 good pressure points, 2 tight, 2 seal failure
SWC/GR (50)	1A	2019.1 - 1009	32 recovered, 3 misfire, 13 lost, 2 empty

1.5.7.2 MWD Logging

RUN no.	INTERVAL from - to (mRT MD)	COLLAR (inches)	TOOL	COMMENTS
1	433 - 497	9.5	DPR II	Run in survey mode only. TD for 36" section
2	498 - 1000	9.5	DPR-TF4	Worked OK
3	1000 - 1230	8	DPR - T4	No problems, good realtime and memory data
4	1236 - 1402	8	DPR - T4	No problems, good realtime and memory data
5	1413 - 1915	8	DPR - T4	No problems, good realtime and memory data
6	1915 - 2032	8	DPR - T4	No problems, good realtime and memory data

1.5.8 Velocity Survey

A Rig Source VSP survey was conducted by Western Atlas. The survey was completed in one run. The TD VSP survey were recorded from a depth range of 2022 to 636 mMD RT, using 20 meters sampling intervals from 2022 to 1800 mMD, 10 meters sampling intervals from 1800 to 1040 mMD, and 20 meters sampling intervals from 1040 to 636 mMD . The data was acquired using a Multi Level Receiver (MLR) assembly (5 toool string). Data for the Rig Source VSP Survey consisted of 225 files.

A four Gun Sled, with two 150 cu.in. sleeveguns active, was suspended at a depth of 4 meters below sea level. A reference hydrophone was positioned 4 meters below the source and was used for timing and monitoring purposes.

1.6 List of additional available Reports from the Well

Baker Hughes Inteq	- MWD End of Well Report - Mudlogging End of Well Report - Final Core Report
GeoStrat	- Biostratigraphic analysis
Halliburton	- Cementing Services Recap
Schlumberger	- Spectra Core Gamma Report and CT Scans - Core Photographs, Ordinary and UV light
Schlumberger Dowell	- Interval Recap (mud)
Statoil	- Well Program 6507/3-2
Statoil / Gardline Surveys	- Survey Report, Vol. I-II
Western Atlas	- Rig source VSP and Acoustic Log Calibration - Wireline Service Report

2 GEOLOGICAL REPORT

2 GEOLOGICAL REPORT

2.1 Stratigraphy.

2.1.1 Table of Chronostratigraphy:

The table is based on Geostrat's biostratigraphic report and Statoil's own interpretation. No samples were collected above 1000 mRKB.

Stratigraphic Succession 6507/3-2	From mMD RT	To mMD RT
(QUATERNARY)	433(Seabed)	656(log)
Late Pliocene (top not seen)	1009 (SWC)	1167 (SWC)
Early Pliocene	1174	1198
---Stratigraphic break---		
Bajocian? - ?Late Pliensbachian	1203(SWC)	1230.3 (Core)
Early Pliensbachian	1231.2 (Core)	1423
?Sinemurian	1435	1549
Early Sinemurian? - ?Hettangian	1557 (SWC)	1690
Hettangian	1696	1744
Rhaetian	1750	1891
Intra Rhaetian - ?Latest Norian (Base not seen)	1900	2032

2.1.2 Table of Lithostratigraphy:

Lithostratigraphic tops	Depth mMD RT	Depth mTVD MSL	Thickness mTVD	TWT sec
NORDLAND GROUP	433	409.5	688	0.546
"Quaternary"	433	409.5	223	
Naust Fm	656	632.5	465	0.796
Kai Fm	1121	1097.5	79	1.218
FANGST GROUP	1200	1176.5	10	1.293
Not Fm			5	
Ile Fm	1205	1181.5	5	1.298
BÅT GROUP	1210	1186.5	570	1.303
Ror Fm			15	
Tilje Fm	1225	1201.5	131	1.317
Åre Fm	1356	1332.5	129	1.438
Intra Åre Coal	1485	1461.5	295	1.553
(TRIASSIC)	1780	1756.5	(252)	1.792
"Grey Beds"			228	
"Red Beds"	2008	1984.5	(24) Base not seen	1.960
TD	2032	2008.5		1.977

Figure 2.1: Stratigraphy of well 6507/3-2.

PL 159	Statoil 50% Norsk Hydro 20% Total Marine 20% Saga Petroleum 10%	Stratigraphy Well 6507/3-2	STATOIL
RKB - Sea: 23 m			Made by: DA
Water Depth: 409,5 m MSL			Date:16.10.97

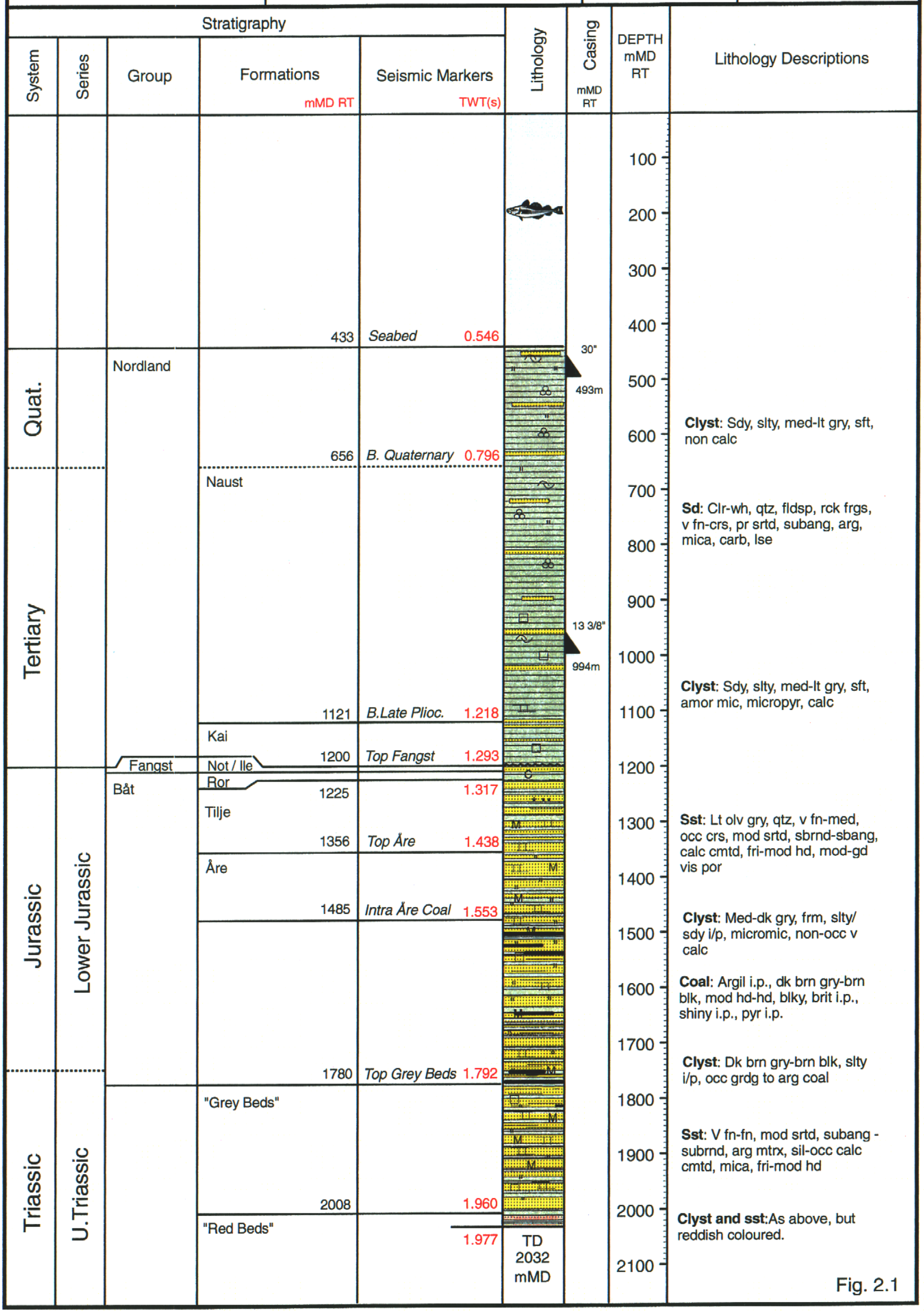


Fig. 2.1

2.2 Lithological Description

2.2.1 General information

System Partly based on log interpretation,
Series correlation and partly on the biostratigraphic
Stage report

Lithology: The description is based on the sample, core and swc descriptions from the wellsite geologists shown in Appendix I.

Depositional environment: Based on the biostratigraphic report, core analysis and Statoils interpretation.

The depths are in meters with drillfloor as datum.

2.2.2 Geological summary

NORDLAND GROUP 433 - 1200 mMD RT, (409,5 - 1176,5 mTVD MSL)

Quaternary 433 - 656 mMD RT, (409,5 - 632,5 mTVD MSL)

Series: Holocene - Pleistocene
Depositional environment: Glacial marine

The Nordland Group comprises the Quaternary, the Naust Formation and the Kai Formation. The Nordland Group was drilled with returns to sea floor above 1000m. Based on the obtained MWD log from below the 30" conductor, the interpretation suggests mostly clay with a few sandy layers in the Quaternary section.
No shallow gas were recorded.

Naust Formation **656 - 1121,0m MD, (632,5 - 1097,5m TVD MSL)**

Series: **Late Pliocene**

Depositional environment: marine, mid shelf, shallowing to inner shelf.

The Naust Formation was drilled with returns to sea floor down to 1000m. It is dominated by claystones with thin stringers and laminae of sand though no sandstone can be seen on the logs. The often relative high sand contents in the samples are probably caused by sand grains being washed out of the sandy clay/claystones.
The boundary between the Naust Formation and the underlying Kai Formation is marked by shift in the resistivity to lower readings and a more erratic pattern and a decrease in sonic velocity.

The claystones are medium dark grey to olive grey, with only locally dark greenish grey colours, soft to firm, amorphous to sub-blocky, micromicaceous, commonly very silty and sandy and slightly to occasionally moderately calcareous.
The sand comprises very fine to very coarse, occasionally granules, clear to translucent quartz grains and occasionally milky white quartz, which are poor to moderately sorted and subangular to subrounded.
Traces of mica, pyrite, rock fragments, shell fragments and foraminifera were logged throughout the section.

Kai Formation **1121,0 - 1200,0 m MD, (1097,5 - 1176,5m TVD MSL)**

Series: **Early - Late Pliocene**

Depositional environment: Marine, mid shelf.

The Kai Formation is dominated by sandy and silty claystones.

The claystones are olive grey to medium dark grey to rarely dark greenish grey, soft, slightly sticky, amorhous, micromicaceous, locally slightly glauconitic, silty, in part grading to siltstone, commonly sandy and predominantly slightly calcareous.

The sandstones are made up of clear to translucent quartz, occasionally milky white quartz, medium to coarse, occasionally very coarse, moderate sorted, subangular to subrounded and loose with only traces of pyritic cement.
Traces of mica, pyrite, glauconite, and fossil fragments were logged throughout section.

The boundary between the Kai Formation and the underlying Not Formation is marked by shift in the gamma ray to lower readings and a change in claystone lithology.

FANGST GROUP **1200,0 - 1210,0 m MD, (1176,5 - 1181,5 m TVD MSL)**

The Fangst Group comprises the Not and Ile Formations. Top of the Fangst Group is picked at 1200 mMD RT, based mainly on the biostratigraphy.

Not Formation **1200,0 - 1205,0 m MD (1176,5 - 1181,5 mTVD MSL)**

Series: **Early - Middle Jurassic**
Stage: **Bajocian? - ?Late Pliensbachian**
Depositional environment: Marginal marine to marine, inner shelf

The Not formation consists of claystone. The claystones are brownish grey to occasionally brownish black, soft, amorhous, very micromicaceous, silty and sandy, slightly carbonaceous, micropyritic to pyritic, locally very pyritic and non to slightly calcareous. The boundary between the Not Formation and the underlying Ile Formation is marked by a sharp increase in sonic velocity, and an increase in resistivity readings.

Ile Formation **1205,0 - 1210,0 mMD (1181,5 - 1186,5 mTVD MSL)**

Series: **Early - Middle Jurassic**
Stage: **Bajocian? - ?Late Pliensbachian**
Depositional environment: Marginal marine to marine, inner shel

The Ile formation consists of sandstone. The sandstone is made up of clear to translucent quartz, it is medium to coarse, occasionally very coarse grained, moderate sorted, with subangular to subrounded grains and loose.
The boundary between the Ile Formation and the underlying Ror Formation is marked by a sharp decrease in sonic velocity and resistivity readings.

BÅT GROUP **1210,0 - 1780,0 m MD (1186,5 - 1756,5 m TVD MSL)**

The Båt Group comprises the Ror, Tilje and Åre Formations.

Ror Formation **1210,0 - 1225,0 m MD (1186,5 - 1201,5 mTVD MSL)**

Series: **Early - Middle Jurassic**
Stage: **Bajocian? - ?Late Pliensbachian**
Depositional environment: Marginal marine to marine, inner shelf

The Ror formation consists of claystone. The claystones are brownish grey to occasionally brownish black, soft, amorhous, very micromicaceous, silty and sandy, slightly carbonaceous, micropyritic to pyritic, locally very pyritic and non to slightly calcareous.
The boundary between the Ror Formation and the underlying Tilje Formation is marked by a decrease in gamma ray and resistivity readings.

Tilje Formation **1225,0 - 1356 m MD (1201,5 - 1332,5 m TVD MSL**

Series: **Early Jurassic**
Stage: **?Late - Early Pliensbachian**
Depositional environment: Marginal marine to marine, inner shelf

The Tilje Formation is dominated by sandstones with interbeds of carbonaceous claystones grading to coals in part.

The sandstones are made up of fine to coarse clear to translucent quartz. They are poor to moderate sorted, subangular to subrounded, and loose with only traces of argillaceous material, coal fragments and locally kaolinitic matrix. They have good to excellent visible porosity.
The claystones are brownish grey to brownish black, soft to firm, amorphous to blocky, carbonaceous to very carbonaceous, locally grading to coal, micromicaceous, slty to very silty, sandy in part, commonly pyritic and generally non calcareous.
The coals are brownish black to black, moderate hard, brittle in part, occasionally with fibrious texture, commonly pyritic and in part argillaceous.
Mica and pyrite were logged as traces throughout the section.
The boundary to the underlying Åre Formation is picked at the top of a more interbedded sequence as opposed to the Tilje Formation which is dominated by sandstones.

Åre Formation **1356,0 - 1780,0 m MD, (1332,5 - 1756,5 m TVD MSL)**

Series: **Upper Triassic - Lower Jurassic**
Stage: **Rhaetian - Early Pliensbachian**
Depositional environment: Marginal marine to marine, inner shelf

The Åre Formation consists of interbedded sandstones, siltstones and claystones with stringers of coal.
The sandstones are light grey and consists of predominantly clear to translucent quartz with occasionally milky to light grey quartz. They are fine to coarse, moderate to poor sorted, subangular to subrounded and loose with apparently excellent to good visible porosity.
The brownish grey siltstones are soft and amorphous, argillaceous, micromicaceous, sandy to very sandy grading into sandstones in part, slightly carbonaceous to carbonaceous, pyritic in part and non calcareous.
The claystones vary in colour from light brownish grey to brownish black, the colour mainly reflecting the varying amount of carbonaceous material. They are soft to firm, amorphous to sub-blocky, locally blocky to subfissile, carbonaceous to very carbonaceous locally grading into coals, sandy in part, silty, locally very silty grading siltstone, micromicaceous, pyritic in part and generally non calcareous.
The coals are black to brownish black, moderate hard, brittle in part, locally with fibrous texture, argillaceous in part and occasionally grading to very carbonaceous claystones.
Traces of pyrite and mica occures throughout the section.
The boundary to the underlying Triassic Grey Beds are picked below the last coal bed.

TRIASSIC **1780,0 - 2032,0 m MD, (1756,5 - 2008,5 m TVD MSL)**

"Grey Beds" **1780,0 - 2008,0 m MD, (1756,5 - 1984,5 m TVD MSL)**

Series: **Upper Triassic**
Stage: **?Latest Norian - Rhaetian**
Depositional environment:

The Triassic Grey Beds consists of interbedded claystones and sandstones with minor limestones in the lower part. The main difference from the overlying Åre Formation is the absence of abundant organic material.
The claystones are light brownish grey to brownish grey with traces of dusky yellow and dusky red colours. They are soft to firm, amorphous to sub-blocky, and non calcareous.
The sandstones are light grey to light brownish grey, clear to translucent quartz, fine to coarse, occasionally very coarse, poor to well sorted and angular to subrounded. They are soft to loose in part with common argillaceous matrix, locally kaolinitic and poor to good visible porosity. In part they are hard with calcareous cement and have no visible porosity.
The limestones are very light grey, soft to firm, micritic, slily argillaceous and commonly sandy. Locally they are grading to calcareous sandstones.

The boundary to the underlying Triassic Red Beds are picked where the varicoloured claystones appears.

"Red Beds" **2008,0 - 2032,0 m MD, (1984,5 - 2008,5 m TVD MSL)**

Series: **Upper Triassic**
Stage: **?Latest Norian - Intra Rhaetian**
Depositional environment:

The Triassic Red Beds consists of claystones with interbedded sandstones and minor limestones.
The claystones are multicoloured, medium light grey to medium dark grey, red brown to greyish red to dark red brown, brownish grey, purple grey, red yellow to dusky yellow, soft to firm, amorphous to sub-blocky, slightly silty to silty, occasionally very silty, occasionally sandy, micromicaceous, with trace pyrite and non calcareous.
The sandstones are light grey, clear to translucent quartz, fine to medium, occasionally coarse, moderate sorted, subangular to subrounded, loose to hard, calcareous and dolomitic cemented in part, argillaceous matrix in part, trace pyrite and visible porosity varying from good to non.
The limestones are light grey to red white, light yellow grey to pale red grey, predominantly soft, amorphous and micritic, occasionally hard, microcrystalline and dolomitic. The well was terminated 24 meters into the Triassic Red Beds.

2.3 Shows summary

Figure 2.2 gives a summary of the shows in well 6507/3-2.

Lisence: PL 159

RT - MSL : 23.5 m

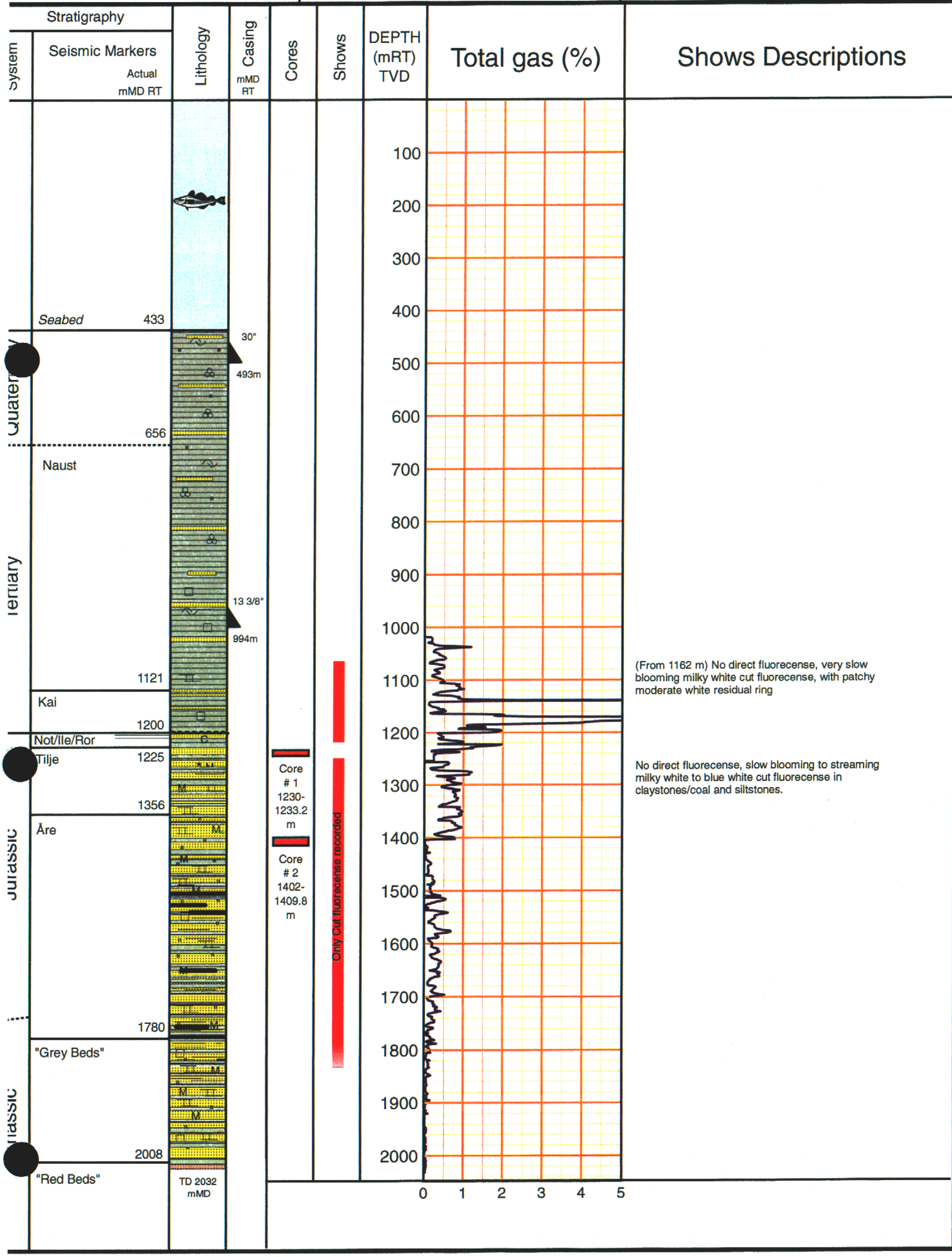
Water Depth: 409.5 m

SHOWS SUMMARY
Well 6507/3-2

STATOIL

Made by: DA

Date:31.10.97



3 ENGINEERING REPORT

3 ENGINEERING REPORT

3.1 Pressure Plot

The pressure plot for well 6507/3-2 is shown in figure 3.1. The plot is presented in mMD RT.

3.2 Pore pressure

A normal pore pressure gradient of 1.03 g/cm^3 is estimated down to approximately 1050 mMD RT where a small increase starts. Maksimum formation pressure gradient is estimated to 1.10 g/cm^3 at 1150 m RT. From here a decline start, and the pressure at the top of the Ile sandstone at 1205 mMD RT is estimated to 1.03 g/cm^3.
To calculate the gradient, data from sonic log, resistivty log, drilling parameters and gas reading is used.

3.3 Fracture gradient

One LOT were performed in the well and the result correspond well with data obtained from other wells in the area.

PL 159	Statoil 50% Norsk Hydro 20% Total Marine 20% Saga Petroleum 10%	Pressure Profile Well 6507/3-2	STATOIL	
RKB - Sea: 23.5 m			Made by: TM/DA	Date29.10.97
Water Depth: 409.5 m				

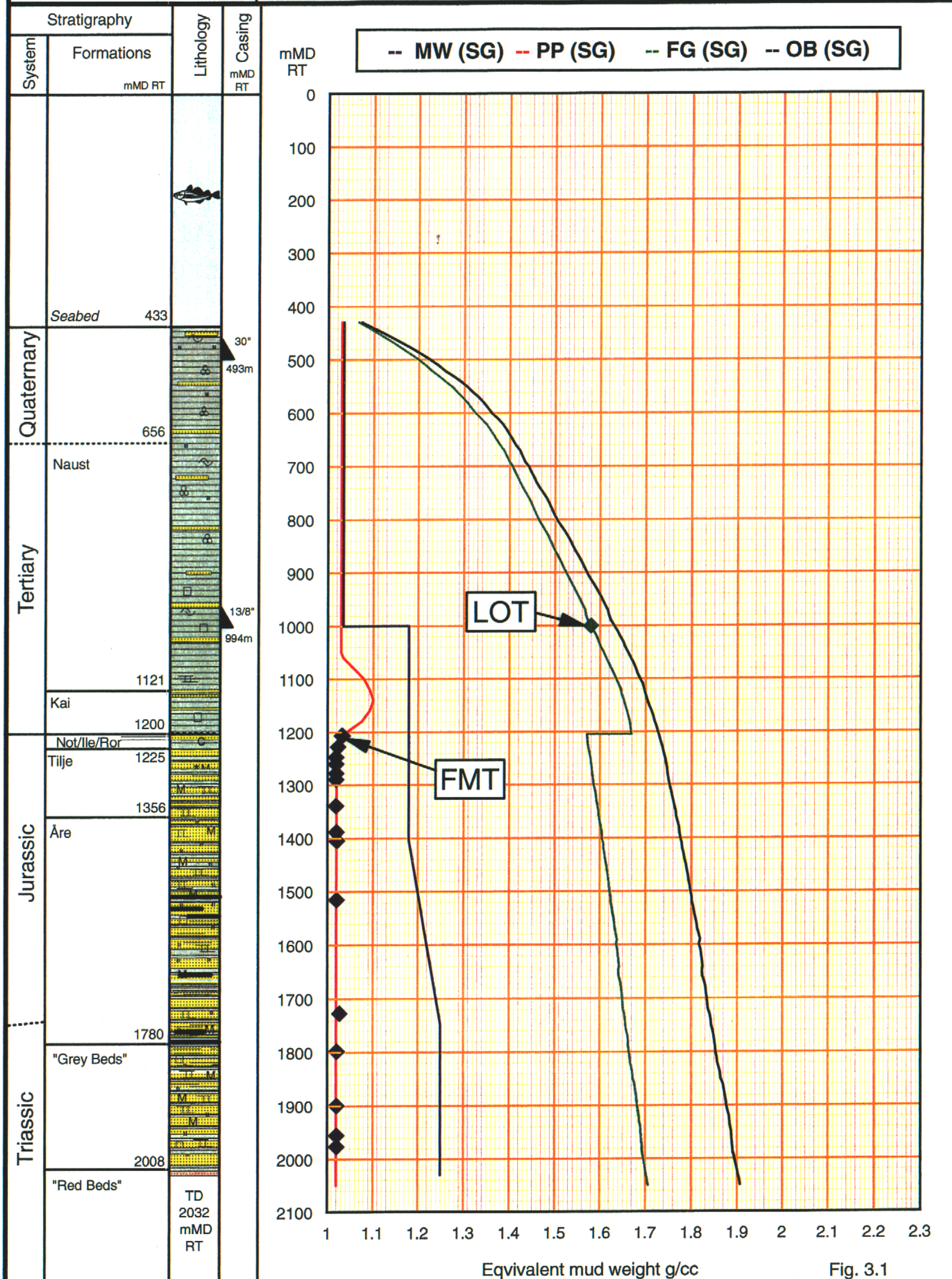


Fig. 3.1

3.4 FMT results

One run with the Western Atlas FMT tool were performed. One sample containing gas was collected in the Kai sandstone. The 10 litre chamber was emptied offshore cromatograph analysis showed a dry gas containing mainly C_1 (97.3%), some C_2 (2.3%) and traces of C_3 (0.4%). The 4 litre chamber was send onshore for analysis but the content was lost in laboratory.

The pore pressure in the water zone is 1.03 g/cm^3, with a water gradient of 1.03 g/cm^3 .

The table below shows the FMT pressure measurements.

No.	Depth, m MD RKB	Hydrost. pressure kPa before	Hydrost. pressure kPa after	Formation pressure kPa	Seal	Perm. mD	Remarks
1	1122	13709	13705	-	Y	0	Tight
2	1163.2	14207	14202	-	Y	0	Tight
3	1206.5	14734	14732	12232	Y	1.6	Good Test
4	1227.5	14991	14989	-	N	-	Lost seal
5	1228	14998	14996	12332	Y	31.1	Good Test
6	1247.4	15231	15232	12472	Y	41	Good Test
7	1260	15385	15386	12597	Y	49.3	Good Test
8	1277.5	15600	15603	12778	Y	47.9	Good Test
9	1289	15741	15741	12893	Y	504.6	Good Test
10	1339	16343	16342	13390	Y	603.2	Good Test
11	1388	16938	16940	13896	Y	74.6	Good Test
12	1404	17138	17138	14068	Y	60.2	Good Test
13	1515	18482	18481	15173	Y	502.1	Good Test
14	1596	19463	19471	-	Y	0	Tight
15	1727	21065	21067	17408	Y	7.3	Good Test
16	1797.5	21921	21912	18017	Y	7.1	Good Test
17	1899	23154	23158	19026	Y	186.6	Good Test
18	1955	23843	23842	19585	Y	6.3	Good Test
19	1976	24102	24102	19797	Y	97.2	Good Test
20	1206.5	14791	14713	12209	Y	31.3	Sample

3.5 Temperature Data

Temperature measurement were performed in connection with the wireline logging run in the well.

Log combination	Run	Depth m RT TVD	Temperature °C	Time since circ hrs	Last circ hrs	Estimated Temp. °C
MLL/DLL/MAC/GR	1	2023	43	13:20	1:45	58.5 at 2000 m
ZDL/CN/DSL	1	2029	47	23:10		
HDIP/GR	1	2023	55	42:40		
FMT/GR	1	1976	48.9	52:00		

Calculated formation temperatures from run 1 is based on the Horner plot technique.

It has to be emphasized that calculation of temperature from wireline logs is uncertain and that the calculated temperature often is too low. In this well temperature measurements were only performed at the TD logging and this adds an extra uncertainty to the calculated formation temperature.

In the area, good temperature measurements were performed at the Norne field in connection with well testing and showed an average temperature gradient of 4.1 °C/100 meters. For this well this temperature gradient would represent a formation temperature of 69 °C at TD. The section from 1205 mMD RT to TD is a mixture of sand and shale and a lower temperature gradient must be expected here.

The calculated temperature is based on a temperature gradient of 4.1°C/100 meters down to 1205 mMD RT and 2.7°C/100 meters below this depth and this represent a TD temperature of 58.5 °C.

Figure 3.2 shows the temperature profile for the well.

PL 159	Statoil 50% Norsk Hydro 20% Total Marine 20% Saga Petroleum 10%	Temperature Profile Well 6507/3-2	STATOIL
RKB - Sea: 23 m			
Water Depth: 409.5 m			Made by: DA/TM — Date24.02.97

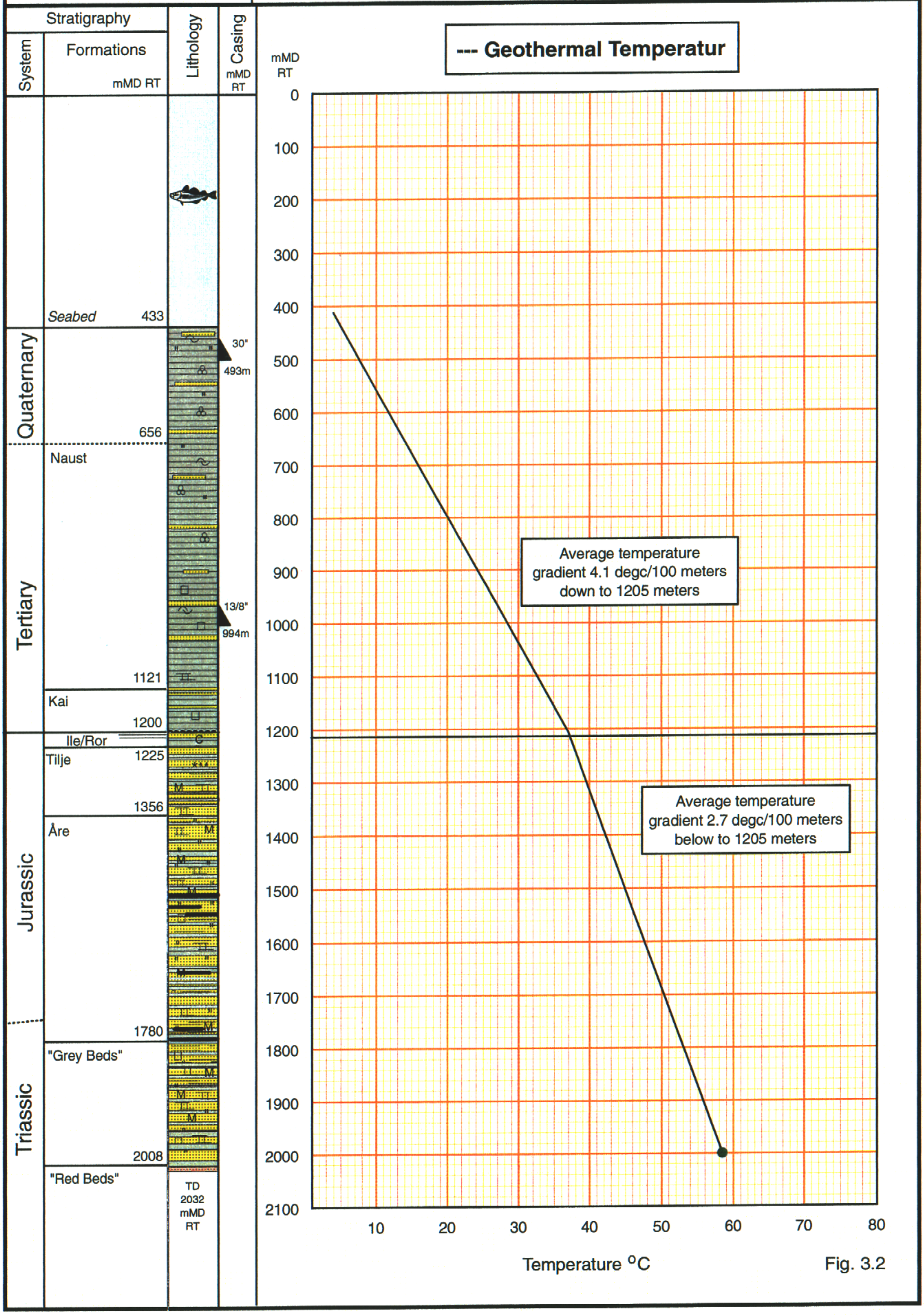


Fig. 3.2

4 DRILLING REPORT

4.1 Summary

Well number	:	6507/3-2
License	:	PL 159
Area	:	Nordland II
Well classification	:	Wildcat
Water depth	:	409,5
RT-MSL	:	23.5 m
RT-Seabed	:	433 m
Drilling rig	:	Transocean 8
Project start	:	April 3, 1997 at 18:30 hours
Project end	:	April 27, 1997 at 04:30 hours
Total days	:	23.42 days
Drilling phase	:	13.02 days
No. of cores	:	2 in 12 ¼" section
Total problem time	:	16 hrs (0.67 days)
Total waiting time	:	58 hrs (2.42 days)
TD of well	:	2032 m MD

No holeproblems were experienced while drilling.
Jurassic sandstones was cored. No DST was performed.

The well was permanently plugged.

4.2 Drilling operations in intervals

4.2.1 Rigmove and anchorhandling

Activity start	:	April 3, 1997 at 18:30 hours
Actual duration	:	2.92 days Transit 0.13 days, WOW 1.33 days, Anchorhandling 1.25 days, M/U BHA and RIH 0.21 days
Planned duration	:	1.4 days Transit 0.4 days, Anchorhandling 1.0 days,

Transocean 8 was on contract for well 6507/3-2 when leaving location 6608/8-1. Due to very bad weather condition at the new location the rig move speed was limited awaiting the weather condition to improve at the new location. The rig moved the 37 nm to new location with an approximately speed of 6 knots the first 20 nm, then drifted 17 nm to location while waiting on weather. The anchor handling was delayed by 32 hours due to the weather conditions.

Supply vessels involved in anchor handling were "Maersk Tackler" and "Maersk Pacer". The anchors were set and pre tested to 160 t. After letting the anchors soak for 12 hrs the anchors were tension tested to 210 t. One anchor (anchor no.5) slipped 5 m at 180 t tension and "Far Grip" was mobilised to piggyback the anchor. Anchor no. 5 was re-tested but slipped again at 205 t. It was decided that 195 ton was acceptable on anchor no. 5 and a test was performed to confirm 195 t with success.

The seafloor conditions can be characterised as very soft muds. Experienced problems with determining the depth at seabed due to poor visibility. Tagged bottom at 433 m, 2 m above expected depth.

No lost time during moving rig and anchorhandling.
Waiting on weather: 32 hrs.

4.2.2 36" hole section: 433 - 497 m

Activity start	:	April 6, 1997 at 16:30 hours
Actual duration	:	1.88 days
Planned duration	:	2.5 days

Drilled from seabed to section TD with 17 1/2" bit and 26"x36" holeopener. The hole opener was premade onshore, which saved rig time. The BHA included MWD (DPR). The hole was drilled with 4300 l/min, 40-60 rpm, 4-6 t wob and rop 5,8 m/hr. Pumped 5 m^3 hi-vis sweeps twice each stand. No boulders were experienced.

Swept hole with 20 m3 hi-vis pill and displaced to 1.2 s.g. mud before running of casing. No wiper trip was performed. Waited on cement for 7 hrs with 30" conductor in tension. Final wellhead inclination was measured to 0.75 deg. Cement was observed on the seabed.

No lost time while drilling 36" hole and running 30" conductor.

4.2.3 17 ½" hole section: 497 - 1000 m

Activity start	:	April 8, 1997 at 13:30 hours
Actual duration	:	4.88 days
Planned duration	:	5.0 days
13 3/8" shoe @	:	994 m
LOT @ 994 m	:	1.58 g/cm^3 EMW.

30" casing was drilled out with a 17 ½" bit directly. Shoe and rathole was wiped several times. The 17 ½" hole was drilled with seawater, pumping 5 m^3 hi-vis sweeps at each connection. Drilled carefully with limited RPM while 17 ½" stabiliser was inside the 30" casing shoe. Took weight and had high torque readings at connection at 593 m while reaming down with 17 ½" stabiliser inside the casing shoe. Racked back one stand and worked 17 ½" bit into casing. Cleaned out restriction (remaining cement?) in shoe and washed/reamed down to 593 m.
Continued drilling with 4000 l/min, 88-120 rpm, 3-5 t wob, and rop of 43.4 m/hr. Drilled carefully through anomaly reflector intervals at 623-629 m, 812-819 m and 957-969 m. Drilled with limited rop from 900-1000 m. No shallow gas was observed. Pumped 25 m3 hi-vis pill at TD and displaced hole to 1.2 s.g. mud.

The 13 3/8" casing was ran. Returns was monitored at seabed during cementing. Bumped the plug with 1980 strokes (eq. 96-97 % eff.), 70 strokes earlier than expected (95 % eff.). (Due to erratic internal volume calculations of casing joints caused by corrosive wear during storage onshore ?). Backflow indicated float valves were leaking, had to hold 50 bar pressure on casing with rig pumps for 6 hours while waiting on cement. The time was spent picking up drill pipe. The leakage could be due to the rusty casing damaging the plug while pumping down. These casing joints should have been scrapped and not send out to the rig, or at least cleaned properly and drifted onshore.

Ran BOP and riser, and tested BOP to 345 bar and casing to 100 bar.

Several attempts were made to set the 18 3/8" seat protector. After first attempt the running tool was found to be incorrectly dressed and the seat protector was set without problems on the second run.

Found leakage in standpipe pressure manifold during pressure testing, and traced 3 leaking valves. No spare parts onboard, temporarily re-dressed leaking valves with gates and seats from other valves having double isolation further down the system.

Laid down old and made up new BHA and ran in hole. Drilled shoetrack and cleaned rathole. Started displacing well to 1.18 s.g. mud. Drilled 3 m new formation and circulated to condition mud. Performed LOT equal to 1.58 g/cm^3 MW (prognosed 1.47 g/cm^3 EMW).

*Lost time : Cleaning out restriction in 30" Csg. shoe (**2.5** hrs).*
Waiting for Transocean handling equipment for 13 3/8" csg. while picking up 5" drill pipe (1.5 hrs).
*Negative pressure test due to valve on cmt head partly open (**0.5** hrs)*
Holding back pressure after cement job due to leaking float, while picking up 5" drill pipe (5.5 hrs.).
Hydraulic failure causing problem latching BOP to wellhead (1 hr).
Negative attempt to set wearbushing and re-dressing 18 3/8" seat protector (3 hrs).
Sorting out leakage in stand pipe pressure manifold (1 hr).
Lost time: 8 hrs. in total this section.

4.2.4 12 ¼" hole section: 1000 - 2032 m

Activity start	:	April 13, 1997 at 10:30 hours
Actual duration	:	8.81 days
Planned duration	:	11,7 days
Mud system	:	Quadrill WBM
Mud weight	:	1.18 - 1.25 g/cm^3

Drilled down to corepoint in one rockbit run. Drilled from 1003 m to 1138 m, experiencing a drilling break at 1121 m followed by 20 % gas. Flowchecked well, first time static, then gaining 600 l /15 min second time, after circulating bottoms up with the highest gas peak. Closed in well, no shut in pressures observed. Opened well and circulated bottoms up. Flowchecked gaining steady 600 l /15 min. Closed in well again, no shut in pressures observed. Opened well and flowchecked / circulated several times, well being static with normal chloride content in mud. Drilled on from 1138 m to 1200 m keeping RPM and WOB readings constant. Had indication of increasing pore pressure (through the 'D'-exp). Circulated bottoms up and flowchecked, well being static. Pulled back into 13 3/8" casing due to rough weather conditions. Added tritium tracer to active mud system at 1100 m.

Circulated gas out and conditioned mud at 1200 m before continuing drilling. Drilled from 1220 m to 1209 m. MWD indicated gas at 1206 m, flowchecked well static. Circulated gas out and drilled from 1209 m to 1227 m. Drillbreak at 1226 m, with an increase in rop from 30 to 80 m/hr. Flowchecked well static. Drilled from 1227 m to corepoint at 1230 m, circulated bottoms up and logged and reamed the section from 1212 m to 1230 m. Flowchecked and pulled out of hole. Ran in hole with 12 ¼" core assembly. Washed down last 2 stands and tagged bottom at 1228 m (2 m fill). Cored the section from 1230 m to 1236 m with 1520 l/min, 120 rpm and max. 10 t on the bit. Core jammed and attempt to restart coring failed. Retrieved core number 1 and redressed core assembly. Made up and ran in hole with 12 ¼" rotary assembly. Reamed cored section and drilled from 1236 m to 1402 m with 3800 l/min, 120-150 rpm, 2-6 t wob and average 38 m/hr. Cut core number 2 from 1402 m to 1413 m with 1570 l/min, 2-7 t wob and 100 rpm. Core jammed, negative attempt to restart coring. Corebit was plugged with sticky shale. Decided to stop coring and pulled out. Made up and ran in with a 12 ¼" (Hycalog DS88HGZ) motor assembly. Reamed/washed down from 1380 m to 1413 m. Drilled from 1413 m to 1915 m with 3200 l/min, 120-240 rpm, 1-9 t wob, 27 m/hr. Problems with stabilisers hanging up on stringers. Topdrive stalling out, no increase in pump pressure. Used max. 40 t to pull string free. Pulled out and had tight spots from 1915 m to 1700 m. Expected undergauge bit but found bit and stabilisers in gauge. BHA was too stiff with near bit stabiliser and 3 full gauge stabilisers (not in accordance with the drilling recommendations). Ran in hole with rotary assembly and reamed tight hole at 1790 m. Drilled from 1915 m to TD at 2032 m. Drilled with 3200 l/min, 100-150 rpm, 6-11 t wob and 13.3 m/hr. Circulated hole clean and pulled out of hole. Logged 12 1/4" hole.

The mud weight drifted from 1.18-1.25 s.g. towards the end of the section, due to increasing fines content in the mud. Frequent trips, torn shaker screens and repairs on the centrifuge all contributed to a density increase in the active system.

Lost time: Sorting out problem with diverter control system (1 hr).
Repaired hydraulic cylinder on iron roughneck (0.5 hr)
Failure in WL computer control panel (4.5 hrs)
Communication failure between VSP unit and logging unit (2 hrs).
Lost time: 8 hrs. in total this section.
Waiting on weather: 26 hrs.

4.2.5 Plug and abandonment:

Activity start	:	April 22, 1997 at 06:00 hours
Actual duration	:	4.94 days
Planned duration	:	3.0 days

Two gastight cement plugs was set, one in 12 1/4" open hole and one in the transition between open hole and casing. This plug was load and pressure tested. A bridgeplug was run and set on wireline in 13 3/8" casing before setting the surface cement plug.

The BOP, riser and diverter assembly was pulled before cutting/pulling 20"/30" casing, wellhead and PGB. The 20" wellhead came loose from 30" wellhead housing while pulling with 170 mt overpull. Pulled out with 20" casing and ran in hole with 30" cutting assembly. Several attempts to cut and free the 30" casing failed (160 to 210 mt overpull). Pulled out to inspect the cutters, knives showed indications of casing being cut. Ran in with jars and two 8" drill collars and freed the casing by jarring.

No lost time reported.

4.2.6 Anchorhandling

Activity start	:	April 26, 1997 at 17:00 hours
Actual duration	:	0.48 days
Planned duration	:	1.0 days

Supply vessels involved in anchor handling were "Far Grip" and "Maersk Puncher". No problems were experienced.

No lost time during anchorhandling operations.

4.3 Extract of daily activities

LIST OF OPERATIONS DATA (0000 - 2400)

Well: 6507/03-002

Date	From hrs	To hrs	Dura tion	Depth mMD	Act. code	Main mode	Sub mode	Description
970403	1830	2130	3		MNMU	OK	OK	RIG TOWED TO LOCATION. 17 NM TO GO.
	2130	2400	2,5		MNWW	OK	OK	WOW. BALLASTED RIG DOWN FROM TRANSIT DRAFT TO STORM DRAFT. RIG DRIFTED TOWARDS LOCATION.
970404	0	600	6		MNWW	OK	OK	CONT. WOW. DISTANCE FROM LOCATION AT 0600 HRS: 14 NM.
	600	2400	18		MNWW	FAIL	OK	WOW TO RUN ANCHORS. RIG DRIFTING TWARDS LOCATION.
970405	0	530	5,5		MNWW	FAIL	OK	CONT. WOW.
	530	600	0,5		MARU	OK	OK	STARTED ANCHOR-HANDLING. ANCHOR NO. 5 OFF BOLSTER AT 0530 HRS.
	600	2400	18		MARU	OK	OK	CONTINUED ANCHORHANDLING. ANCHORS ON BTM: NO 5 AT 06:07 HRS, NO 1 AT 08:33 HRS, NO 3 AT 11:55 HRS, NO 7 AT 13:30 HRS, NO 4 AT 17:12 HRS, NO 2 AT 19:12 HRS, NO 8 AT 22:52 HRS AND NO 6 AT 23:01 HRS.
970406	0	100	1		MARU	OK	OK	BACKLOADED ANCHORHANDLING GEAR FROM ANCHORHANDLING BOAT MAERSK TACKLER
	100	600	5		MNBU	OK	OK	BALLASTED RIG TO DRILLINGDRAFT. BUILDT 5" DP STD.S AND MIXED MUD WHILE BALLASTING RIG.
	600	630	0,5		MNBU	OK	OK	CONTINUED BALLASTING RIG TO DRILLINGDRAFT.
	630	1130	5		MARU	OK	OK	FINAL POSITIONED RIG. PRETESTED ALL ANCHORS TO 160 T. MADE UP 5" DP AND 36" BHA.
	1130	1500	3,5		DTPU	OK	OK	MADE UP 36" BHA AND RIH WITH SAME.
	1500	1600	1	433	DDOU	OK	OK	RIH ON 5" DP AND TAGGED SEABED AT 433 M.
	1600	1630	0,5	432,8	DUSU	OK	OK	POSITIONED TRANSPONDER AND BUOYS BY ROV.
	1630	2400	7,5	487	DDRU	OK	OK	DRILLED 17 1/2"/36" HOLE FROM 433 M TO 487 M. 36" HO AT 485 M.
970407	0	330	3,5	497	DDRU	OK	OK	CONTINUED DRILLING 17 1/2"/36" HOLE FROM 487 M TO 497 M BITDEPTH. 36" HOLEDEPTH AT 495 M.
	330	430	1	497	DCAU	OK	OK	SWEPT HOLE WITH 20 M3 HI.VI. PILL AND DISPLACED HOLE TO 1.20 SG MUD.
	430	600	1,5	30	DTCU	OK	OK	POOH WITH 17 1/2"/36" BHA AND RACKED SAME BACK IN DERRICK.
	600	700	1		DTCU	OK	OK	CONTINUED TO POOH AND RACK BACK 17 1/2"/36" BHA.
	700	800	1		CARU	OK	OK	RIGGED UP TO RUN 30" CONDUCTER. HELD PREJOB MEETING WITH INVOLVED PERSONNEL.
	800	930	1,5		CARU	OK	OK	PICKED UP 30" SHOE AND CHECKED SAME. RIH WITH SHOEJNT., 3 EA. INTERMEDIATE JNT.S AND HOUSINGJNT.
	930	1100	1,5		CARU	OK	OK	RIGGED DOWN 30" HANDLINGEQUIPMENT. INSTALLED R/T AND LATCHED 30" COND. INTO PGB. RELEASED R/T AND RACKED SAME BACK IN DERRICK.
	1100	1200	1		CARU	OK	OK	MADE UP AND RIH WITH CMT. STINGER.
	1200	1500	3	489	CARU	OK	OK	MADE UP R/T TO HOUSINGJNT. AND RIH TO SEALEVEL. CLOSED R/T VALVE. CONTINUED TO RIH TO 489 M ON LANDINGSTRING. FILLED EVERY STD. WITH SEAWATER.
	1500	1600	1	493	CCCU	OK	OK	CIRCULATED 15 M3 SEAWATER. CHECKED BULLSEYE READING TO 0,75 DEG. P/AFT RIGGED UP CMT. HOSE AND TESTED SAME TO 100 BAR.
	1600	1700	1	493	CSSU	OK	OK	MIXED AND PUMPED 17 M3 1,56 SG LEADSLURRY AND 15 M3 1,95 SG TAILSLURRY DISPLACED SAME WITH 7,4 M3 SEAWATER. CHECKED FOR BACKFLOW.
	1700	2400	7	493	CSCW	OK	OK	WAITED ON CMT. WITH 30" CSG. IN TENSION. P/U AND MADE UP 5" DP STD.S WHILE WAITING ON CMT. OBSERVED BULLSEYE TO 0,75 DEG. AND CEMENT AT SEABED.
970408	0	230	2,5		CSCW	OK	OK	RELEASED R/T AND POOH WITH LANDINGSTRING AND CMT. STINGER. L/D SAME.
	230	530	3		CSOU	OK	OK	MADE UP AND DRESSED CMT. STD FOR 13 3/8" CMT. JOB. RACKED SAME BACK. LAID DOWN 26"/36" HOLEOPENER.
	530	600	0,5		CERU	OK	OK	P/U AND M/U 18 3/4" R/T AND DRESSED SAME WITH CMT. PLUGS.
	600	700	1		CERU	OK	OK	CONTINUED TO M/U 18 3/4" WELLHEAD HOUSING.
	700	1030	3,5	470	DTAK	OK	OK	MADE UP 17 1/2" BHA AND RIH TO 470 M.
	1030	1100	0,5	489	DCAU	OK	OK	WASHED DOWN FROM 470 M AND TAGGED FIRM CEMENT AT 489 M.
	1100	1330	2,5	489	CDDU	OK	OK	DRILLED FIRM CEMENT/SHOE AND CLEANED RATHOLE TO 497 M.
	1330	1600	2,5	593	DDRU	OK	O FAIL	DRILLED 17 1/2" HOLE FROM 497 M TO 593 M.
	1600	1830	2,5	593	DDOD	FAIL	OK	TOOK WEIGHT/HAD INCREASED TORQUE WHILE REAMING DOWN WITH 17 1/2" STB. INSIDE 30" SHOE. R/B ONE STD. AND WORKED 17 1/2" BIT INTO 30" CSG. CLEANED OUT RESTRICTION IN 30" SHOE AND WASHED/REAMED DOWN TO 593 M.
	1830	2400	5,5	689	DDRU	OK	OK	DRILLED 17 1/2" HOLE FROM 593 M TO 689 M.
970409	0	600	6	934	DDRU	OK	OK	CONTINUED DRILLING 17 1/2" HOLE FROM 689 M TO 934 M. LIMITED ROP TO 25 M/HR FROM 900 M.
	600	1000	4	1000	DDRU	OK	OK	CONTINUED DRILLING 17 1/2" HOLE FROM 934 M TO 1000 M WITH LIMITED ROP.
	1000	1100	1	1000	DCAU	OK	OK	PUMPED 25 M3 HI.VI. PILL AND DISPLACED WELL TO 1,20 SG MUD. PUMPED 1,5 HOLEVOLUME.
	1100	1330	2,5	495	DTCU	OK	OK	POOH WITH 5" DP.
970409	1330	1400	0,5	493	DCAU	OK	OK	DISPLACED 30" CONDUCTOR TO 1.20 SG MUD.
	1400	1500	1		DTCU	OK	OK	POOH WITH 17 1/2" BHA AND DOWNLOADED MWD TOOL. RACKED BHA BACK IN DERRICK.
	1500	1600	1		CARU	OK	OK	RIGGED UP TO RUN 13 /8" CSG. HELD PREJOB MEETING PRIOR RUN CASING.
	1600	1730	1,5		DTPU	OK	OK	P/U AND M/U 5" DP WHILE WAITING ON TRANSOCEAN HANDLINGEQUIPMENT FOR 13 3/8" CASING.
	1730	1800	0,5		CARU	OK	OK	CONTINUED TO RIGG UP TO RUN 13 3/8" CASING.
	1800	2330	5,5	554	CARU	OK	OK	P/U 13 3/8" CSG. SHOE, BL.JNT AND COLLARJNT. CHECKED AND TUBELOCKED SAME. RIH WITH 13 3/8" CSG.
	2330	2400	0,5	554	CARU	OK	OK	P/U 13 3/8" X 20" XO, 18 3/4" WH. HOUSING AND INSTALLED WIPERPLUGS.
970410	0	100	1	554	CARU	OK	OK	CONTINUED TO M/U 18 3/4" WH. HOUSING. TOPPED UP WITH SW ABOVE WIPER-PLUGS.
	100	200	1	994	CARU	OK	OK	RIH WITH 13 3/8" CSG ON 5" DP LANDINGSTRING.
	200	230	0,5	994	CARU	OK	OK	LANDED 18 3/4" WH HOUSING IN 30" LP HOUSING AND PULLTESTED TO 25 T. (13-3/8" CSG SHOE AT 994 M).
	230	300	0,5	994	CCCU	OK	OK	CIRC. CSG VOLUM (45 M3) SW PRIOR CMT JOB. OBSERVED (ROV) RETURNS OUT WASH-PORTS.
	300	330	0,5	994	CSOD	FAIL	OK	L/U TO CMT UNIT. FLUSHED LINE. ATTEMPTED TO PRESS. TEST LINE TO 200 BAR. NEG. FOUND LOW-TRQ. VLV ON CMT HEAD PARTLY OPEN.
	330	600	2,5	994	CSSU	OK	OK	PRESS. TESTED CMT LINE TO 200 BAR. DROPPED BALL. MIXED AND PUMPED 67 M3 1,56 SG CMT SLURRY FOLLOWED BY 15 M3 1,90 SG TAIL SLURRY.

Date	From hrs	To hrs	Duration	Depth mMD	Act. code	Main mode	Sub mode	Description
								DROPPED DART. DISPL. SAME W/ FW. SHEARED PLUG W/ 280 BAR. L/U TO RIG PUMPS. DISPL. CMT W/SW.
	600	630	0,5	994	CSSU	OK	OK	CONTINUED TO DISPLACE CMT WITH SEAWATER. BUMPED PLUG AFTER 1980 STR (95 % PUMPEFFIENCY). FLOATVALVES NOT HOLDING BACKPRESSURE FROM CMT WHEN CHECKED FOR BACKFLOW.
	630	1200	5,5	994	CSCW	OK	OK	HELD 50 BAR ON CSG WHILE WAITING ON CMT. P/U AND M/U 5" DP.
	1200	1400	2		CTTU	OK	OK	BLED OFF PRESSURE ON CSG AND RELEASED R/T. CLEANED PGB AND WELLHEAD BY PUMPING SEAWATER. BULLSEYE READING 3/4 DEG.
	1400	1530	1,5		CTTU	OK	OK	POOH WITH LANDINGSTRING AND L/D STINGER AND R/T.
	1530	1830	3		BBOU	OK	OK	R/U TO RUN BOP AND RISER. INSTALLED HANDLINGEQUIPMENT AND MOVED RIG OFF LOCATION.
	1830	2230	4		BBRU	OK	OK	HELD PREJOB MEETING WITH INVOLVED PERSONNEL. P/U BOOSTERJNT AND 50' RISER JNT AND SKIDDED BOP BELOW ROTARY. M/U BOP TO RISER AND INSTALLED GUIDELINES. SKIDDED CARRIER CLEAR.
	2230	2400	1,5		BBRU	OK	OK	RAN BOP/RISER.
970411	0	600	6		BBRU	OK	OK	CONTINUED TO RUN BOP/RISER.
	600	1800	12		BBRU	OK	OK	CONTINUED TO RUN BOP/RISER.
	1800	2100	3		BBRU	OK	OK	INSTALLED KILL/CHOKE/BOOSTER LINES AND CRADDLES FOR PODHOSES.
	2100	2230	1,5		BBRU	OK	OK	MOVED RIG ON LOCATION AND LANDED BOP AT 22:37 HRS.
	2230	2330	1		DERD	FAIL	E FAIL	HAD PROBLEM TO LATCH BOP TO WELLHEAD DUE TO HYDRAULIC FAILURE. SORTED OUT SAME.
	2330	2400	0,5		BBRU	OK	OK	LATCHED BOP TO WELLHEAD AND PULLTESTED SAME TO 25 T.
970412	0	230	2,5		BBRU	OK	OK	STROKED OUT INNERBARREL AND L/D LANDINGJNT. INSTALLED DIVERTER AND PRESSURETESTED KILL/CHOKE LINES TO 345 BAR.
	230	300	0,5		CATU	OK	OK	PRESSURETESTED 13 3/8" CASING TO 100 BAR.
	300	430	1,5		BBOU	OK	OK	RIGGED DOWN RISER HANDLINGEQUIPMENT AND CLEARED RIGFLOOR.
	430	600	1,5		BBDU	OK	OK	MADE UP BOP TESTPLUG AND RIH.
	600	730	1,5		BBDU	OK	OK	SEATED TESTPLUG AND TESTED WELLHEAD/BOP CONNECTOR TO 345 BAR. FUNCTIONTESTED BOP ON YELLOW/BLUE PODLINES.
	730	900	1,5		BBDU	OK	OK	POOH WITH TESTPLUG AND L/D SAME.
	900	1200	3		BHRD	FAIL	E FAIL	M/U R/T AND WEARBUSHING AND RIH WITH SAME. ATTEMPT TO SET WEARBUSHING SEVERAL TIMES WITHOUT POSITIVE INDICATION. PULLED FREE WITH 8 T O/P AND POOH.
	1200	1400	2		BBOU	OK	OK	PRESSURETESTED TODRIVE IBOP/KELLYHOSE AND SURFACEEQUIPMENT TO 345 BAR WHILE SERVICED ABB VETCO WEAEBUSHING RUNNINGTOOL.
	1400	1600	2		BHRU	OK	OK	RIH AND SET WEARBUSHING. POOH AND L/D RUNNINGTOOL.
	1600	1900	3		DTPU	OK	OK	LAID DOWN 17 1/2" BHA FROM DERRICK.
	1900	1930	0,5		CSOU	OK	OK	LAID DOWN CEMENTING HEAD FROM DERRICK.
	1930	2000	0,5		BBOU	OK	OK	FUNCTIONTESTED DIVERTERSYSTEM.
	2000	2300	3		DTPU	OK	OK	MADE UP 12 1/4" BHA AND RIH.
	2300	2400	1		DTAK	OK	OK	RIH WITH 12 1/4" BHA ON 5" DP.
970413	0	200	2	960	DTAK	OK	OK	CONTINUED TO RIH ON 5" DP AND TAGGED FIRM CEMENT AT 960 M.
	200	300	1	960	DERD	FAIL	E FAIL	FOUND LEAKAGE IN STANDPIPEMANIFOLD DURING PRESSURETESTING. SORTED OUT SAME.
	300	600	3	967	CDCK	OK	OK	DRILLED FIRM CEMENT ABOVE FLOAT FROM 960 M TO 967 M.
970413	600	800	2	1000	CDDU	OK	OK	DRILLED 13 3/8" CSG SHOETRACK AND CLEANED RATHOLE TO 1000 M. STARTED DIPLACING WELL TO 1.18 SG MUD.
	800	830	0,5	1003	DDRU	OK	OK	DRILLED 12 1/4" HOLE FROM 1000 M TO 1003 M.
	830	930	1	1003	ECFU	OK	OK	CIRC/COND MUD PRIOR LOT.
	930	1030	1	1003	EXLU	OK	OK	PERFORMED LOT TO EQUIVALENT TO 1.58 SG MW.
	1030	1130	1	1003	DDOU	OK	OK	HELD KICKDRILL WITH CREW AND RECORDED SCR UP RISER AND KILL/CHOKE LINES.
	1130	1230	1	1003	DERD	FAIL	E FAIL	SORTED OUT PROBLEM WITH DIVERTER CONTROLSYSTEM.
	1230	1300	0,5	1003	DCAU	OK	OK	CIRC/COND MUD PRIOR DRILLING 12 1/4" HOLE.
	1300	1900	6	1138	DDRU	OK	OK	DRILLED 12 1/4" HOLE FROM 1003 M TO 1138 M. DRILLINGBREAK AT 1121 M AND FLOWCHECKED SAME. WELL STATIC.
	1900	2000	1	1138	ECFU	OK	OK	HAD 20 % GAS AT B/U FROM 1121 M. FLOWCHECKED AND GAINED 600 L. CLOSED IN WELL. NO SICP OR SIDDP OBSERVED. BOOSTED RISER CLEAN FOR GAS WHILE MONITORING WELL ON TT.
	2000	2100	1	1138	ECSU	OK	OK	OPENED WELL AND CIRCULATED BOTTOMS UP. MAX GASREADING 1.8 %.
	2100	2200	1	1138	ECFU	OK	OK	FLOWCHECKED WELL. GAINED 600 L/15 MIN STEADY. CLOSED IN WELL. NO SICP OR SIDDP OBSERVED. FLOWCHECKED WELL TRHOUGH CHOKELINE. WELL STATIC. OPENED WELL AND FLOWCHECKED. WELL STATIC.
	2200	2300	1	1138	ECSU	OK	OK	CIRCULATED BOTTOMS UP. MAX GASREADING 0,7 %. CHLORIDE CONTENT IN MUD NORMAL.
	2300	2330	0,5	1138	ECFU	OK	OK	FLOWCHECKED. WELL STATIC.
	2330	2400	0,5	1147	DDRU	OK	OK	DRILLED 12 1/4" HOLE FROM 1138 M TO 1147 M.
970414	0	300	3	1200	DDRU	OK	OK	DRILLED 12 1/4" HOLE FROM 1147 M TO 1200 M. HAD INDICATION OF INCREASING POREPRESSURE ("D" - EXP.).
	300	400	1	1200	ECSU	OK	OK	CIRCULATED HOLE CLEAN. MAX GASREADING AT B/U 2,2 %.
	400	430	0,5	2000	ECFU	OK	OK	FLOWCHECKED. WELL STABLE.
	430	500	0,5	1200	ECFU	OK	OK	CIRCULATED BOTTOMS UP. MAX GASREADING 0,3 %.
	500	600	1	1200	DDWW	FAIL	OK	FLOWCHECKED. WELL STATIC. POOH TO 13 3/8" CSG DUE TO ROUGH WEATHERCONDITIONS.
	600	630	0,5	994	DDWW	FAIL	OK	CONTINUED TO POOH INTO 13 3/8" CSG DUE TO ROUGH WEATHERCONDITIONS.
	630	2400	17,5	994	DDWW	FAIL	OK	WAITED ON WEATHER. HAD TO DEBALLAST RIG TO SURVIVALDRAFT.
970415	0	430	4,5	993	DDWW	FAIL	OK	WAITED ON WEATHER.
	430	530	1	1200	DDWW	FAIL	OK	WASHED DOWN TO 1200 M.
	530	600	0,5	1200	DDWW	FAIL	OK	CIRCULATED BOTTOMS UP.
	600	700	1	1200	DDWW	FAIL	OK	CIRC. BU FROM 1200 M. MAX. GAS: 2.9 %. CONT. CIRC. TO CONDITION MUD.
	700	730	0,5	1209	DDRU	OK	OK	DRILLED 12-1/4" HOLE FROM 1200 M TO 1209 M. FC MWD-INDIC.(1206 M). OK.
	730	830	1	1209	ECSU	OK	OK	CIRC. BU FROM 1209 M. MAX GAS: 8.7 %. CONT. CIRC. UNTIL GAS DOWN.
	830	1000	1,5	1230	DDRU	OK	OK	DRILLED 12-1/4" HOLE FROM 1209 M TO 1227 M. HAD DRILLING BREAK AT 1226 M (F/ 30 M/HR TO 80 M/HR). FLOWCHECKED WELL. OK. DRILLED 12-2/4" HOLE FROM 1227 M TO 1230 M (HIGH ROP).
	1000	1100	1	1230	ECSU	OK	OK	CIRC. BU FROM 1230 M. MAX GAS: 9.8 %. REAMED SECTION 1212 M TO 1230 M (MWD LOG). CONT. CIRC. WHILE EVALUATING DATA.

Date	From hrs	To hrs	Duration	Depth mMD	Act. code	Main mode	Sub mode	Description
	1200	1600	4		DTRU	OK	OK	FLOWCHECKED WELL. POOH FOR CORING. RACKED BHA IN DERRICK. BROKE BIT.
	1600	1800	2		ETCU	OK	OK	MADE UP 12 1/4" COREASSYMBLY.
	1800	2030	2,5		ETCU	OK	OK	RIH WITH 12 1/4" COREASSYMBLY. WASHED DOWN LAST TWO STANDS.
	2030	2130	1	1120	ECFU	OK	OK	CIRCULATED BOTTOMS UP PRIOR CUTTING CORE. MAX GASREADING 0,73 %.
	2130	2200	0,5	1120	ECFU	OK	OK	DROPPED BALL AND CHASED SAME. PERFORMED SCR.
	2200	2230	0,5	1236	ERCU	OK	OK	TAGGED BOTTOM AT 1228 M (2 M FILL). CUT CORE NO 1 FROM 1230 M TO 1236 M. CORE JAMMED. ATTEMPTED TO RESTART CORING. NEGATIVE.
	2230	2400	1,5		ETCU	OK	OK	FLOWCHECKED. WELL STATIC. POOH.
970416	0	230	2,5		ETCU	OK	OK	POOW W/ CORE NO. 1.
	230	400	1,5		ERCU	OK	OK	RETRIEVED CORE. REC. 3,2 M (54 %). REDRESSED CORE ASSY. WHILE EVALUATING CORE.
	400	600	2	1150	DTAK	OK	OK	M/U AND RIH W/ 12 1/4" ROTARY DRILLING BHA TO 1150 M.
	600	730	1,5	1236	ECFU	OK	OK	REAMED CORED SECTION W/MWD WHILE CIRC. BU. MAX GAS: 3.3 %.
	730	1430	7	1402	DDRU	OK	OK	DRILLED 12-1/4" HOLE FROM 1236 M TO 1402 M.
	1430	1530	1	1402	ECFU	OK	OK	CIRC. BU F/1402 M. MAX GAS: 0.6 %.
	1530	1800	2,5		DTRU	OK	OK	FLOWCHECKED. WELL STATIC. POOH AND RACKED BACK 12 1/4" BHA.
	1800	2000	2	400	ETCU	OK	OK	MADE UP 12 1/4" CORE BHA AND RIH.
	2000	2030	0,5	400	DERD	FAIL	E FAIL	REPAIRED HYDRAULIC CYLINDER ON IRON ROUGHNECK.
	2030	2200	1,5	1400	ETCU	OK	OK	CONTINUED TO RIH.
	2200	2300	1	1400	ECFU	OK	OK	CIRCULATED BOTTOMS UP PRIOR CUTTING CORE NO 2. MAX GAS 0,1 %.
	2300	2330	0,5	1400	ECFU	OK	OK	DROPPED BALL AND CHASED SAME. RECORDED SCR.
	2330	2400	0,5	1409	ERCU	OK	OK	CUT CORE NO 2 FROM 1402 M TO 1403 M.
970417	0	100	1	1413	ERCU	OK	OK	CUT CORE NO 2 FROM 1403 M TO 1413 M. CORE JAMMED. ATTEMPTED TO RESTART CORE. NEGATIVE.
970417	100	500	4		ETCU	OK	OK	FLOWCHECKED. WELL STATIC. POOH. RECOVERED 7,8 M CORE (71 % RECOVERY). RACKED BACK CORE BHA.
	500	600	1		DTAK	OK	OK	MADE UP 12 1/4" MOTOR BHA.
	600	930	3,5	1380	DTAK	OK	OK	CONTINUED MAKING UP 12 1/4" MOTOR BHA AND RIH.
	930	1030	1	1413	DCBK	OK	OK	REAMED/WASHED FROM 1380 M AND TAGGED TD AT 1413 M.
	1030	2400	13,5	1766	DDNU	OK	OK	DRILLED 12 1/4" HOLE FROM 1413 M TO 1766 M.
970418	0	600	6	1852	DDNU	OK	OK	DRILLED 12 1/4" HOLE FROM 1766 M TO 1852 M.
	600	1230	6,5	1915	DDNU	OK	OK	DRILLED 12 1/4" HOLE FROM 1852 M TO 1915 M. HUNG UP ON STABILIZER. HAD MAXIMUM OP OF 40 MT TO PULL STRING FREE. MAXIMUM HEAVE 4.5 M.
	1230	1400	1,5	1915	DCAU	OK	OK	CIRCULATED HOLE CLEAN.
	1400	1930	5,5		DTAK	OK	OK	FLOW CHECKED. NEG. POOH FROM 1915 M. FLOW CHECKED IN THE SHOE. OK. HAD TIGHT SPOTS FROM 1915 M TO 1700 M, MAXIMUM 40 MT OVER PULL. DUMPED MEMORY IN MWD, LAID OUT MUD MOTOR, NEAR BIT STABILIZER AND BIT.
	1930	2330	4	1915	DTAK	OK	OK	MADE UP NEW BIT. RIH WITH ROTARY ASSEMBLY TO 1915 M. REAMED TIGHT HOLE AT 1790 M.
	2330	2400	0,5	1917	DDRU	OK	OK	DRILLED 12 1/4" HOLE FROM 1915 M TO 1917 M.
970419	0	600	6	1983	DDRU	OK	OK	CONTINUED DRILLING 12 1/4" HOLE FROM 1917 M TO 1983 M.
	600	1000	4	2032	DDRU	OK	OK	DRILLED 12 1/4" HOLE FROM 1983 M TO 2032 M.
	1000	1200	2	2032	DCAU	OK	OK	CIRCULATED THE HOLE CLEAN.
	1200	1700	5		DTLU	OK	OK	FLOW CHECKED FOR 30 MIN. WELL WAS STABLE. POOH FROM 2032 M. FLOW CHECKED IN 13 3/8" CASING SHOE. WELL WAS STABLE. DUMPED MEMORY IN MWD.
	1700	1830	1,5		ELWU	OK	OK	RIGGED UP WIRE LINE EQUIPMENT.
	1830	2300	4,5		ELOD	FAIL	E FAIL	FAILURE ON WIRE LINE UNIT. TROUBLE SHOOTING. FOUND FAILURE IN COMPUTER CONTROL PANEL. RECTIFIED THE SAME.
	2300	2400	1		ELWU	OK	OK	MADE UP AND RAN IN WITH LOGGING TOOL STRING NO. 1 MLL/DLL/MAC/GR/TTRM.
970420	0	600	6		ELWU	OK	OK	RAN LOG NO. 1.
	600	700	1		ELWU	OK	OK	CONTINUED RUNNING LOG NO. 1 MLL/DLL/MAC/GR/CHT.
	700	900	2		ELWU	OK	OK	POOH. LAID DOWN TOOL STRING NO. 1.
	900	1030	1,5		ELWU	OK	OK	MADE UP TOOL STRING NO. 2 ZDL/CDN/DSL/CHT.
	1030	1400	3,5		ELWU	OK	OK	RAN LOG NO. 2 ZDL/CDN/DSL/CHT.
	1400	1500	1		ELWU	OK	OK	LAID DOWN LOGGING STRING NO. 2.
	1500	1630	1,5		ELWU	OK	OK	MADE UP VSP LOGGING STRING.
	1630	1830	2		ELOD	FAIL	E FAIL	HAD COMMUNICATION FAILURE. TROUBLE SHOOTED AND FOUND PROBLEM BETWEEN VSP UNIT AND LOGGING UNIT. RECTIFYED THE SAME.
	1830	2400	5,5		ELWU	OK	OK	RAN LOG NO. 3 VSP/GR.
970421	0	300	3		ELWU	OK	OK	CONTINUED RUNNING VSP/GR.
	300	430	1,5		ELWU	OK	OK	RIGGED DOWN VSP EQUIPMENT.
	430	500	0,5		ELWU	OK	OK	MADE UP LOGGING STRING NO. 4 HDIP/GR/CHT
	500	600	1		ELWU	OK	OK	RAN LOG NO. 4 HDIP/GR/CHT.
	600	1030	4,5		ELWU	OK	OK	CONTINUED RUNNING HDIP/GR/CHT.
	1030	1130	1		ELWU	OK	OK	LAID DOWN DIPMENTER LOG.
	1130	1230	1		ELWU	OK	OK	MADE UP TOOL STRING NO. 5 FMT/GR.
	1230	1900	6,5		ELWU	OK	OK	RAN LOG NO. 5 FMT/GR.
	1900	2200	3		ELWU	OK	OK	RIGGED DOWN FMT TOOL.
	2200	2330	1,5		ELCU	OK	OK	RIGGED UP STRING NO. 6 SWC/GR.
	2330	2400	0,5		ELCU	OK	OK	RAN LOGGONG STRING NO. 6 SWT/GR.
970422	0	500	5		ELCU	OK	OK	CONTINUED RUNNING SWC/GR.
	500	530	0,5		ELCU	OK	OK	LAID OUT SWC/GR.
	530	600	0,5		ELWU	OK	OK	RIGGED DOWN WIRE LINE EQUIPMENT.
	600	800	2	1280	PTTU	OK	OK	RIH TO 1380 M WITH OE 5" DP. PUMPED A 7 M3 HI-VIS PILL AND DISPLACED THE SAME WITH 11.7 M3 MUD. POOH FROM 1380 M TO 1280 M.
	800	1000	2	1280	PSSU	OK	OK	RIGGED UP CEMENT HOSE. PRESSURE TESTED SURFACE EQUIPMENT TO 100 BAR FOR 10 MIN. OK. PUMPED 5 M3 DW. MIXED AND PUMPED 16 M3 1.92 SG CEMENT SLURRY. PUMPED 550 L DW BEHIND. DISPLACED THE CEMENT WITH 7.7 M3 MUD.
	1000	1100	1		PCCU	OK	OK	POOH FROM 1280 M TO 1080 M. REVERCE CIRCULATED OUT EXCESS CEMENT, GOT 4 M3 CEMENT/SPACER IN RETURN. CIRCULATED THE LONG WAY TO CLEAN THE PIPE.
	1100	1200	1	1080	PSSU	OK	OK	PRESSURE TESTED CEMENT HOSE TO 100 BAR FOR 5 MIN. OK. PUMPED 5 M3 DW. MIXED AND PUMPED 16 M3 1.92 SG CEMENT SLURRY. PUMPED 600 L DW BEHIND. DISPLACED THE CEMENT WITH 6.1 M3 MUD.
	1200	1300	1	850	PSSU	OK	OK	POOH FROM 1080 M TO 850 M. CIRCULATED TO CLEAN PIPE.
	1300	1400	1	650	PTTU	OK	OK	LAID DOWN 5" DP WHILE PULLING OUT OF THE HOLE FROM 850 M TO 650 M.

Date	From hrs	To hrs	Duration	Depth mMD	Act. code	Main mode	Sub mode	Description
	1500	1800	3		PTPU	OK	OK	CONTINUED PULLING OUT OF THE HOLE WHILE LAYING DOWN 5" DP.
	1800	2000	2		PTPU	OK	OK	LAID DOWN MWD, CORE BARREL AND 5" DP FROM DERRRICK.
	2000	2200	2	931	PTTU	OK	OK	RIH WITH 12 1/4" BIT TO TOP OF CEMENT AT 931 M. LOAD TESTED CEMENT TO
970422	2000	2200	2	931	PTTU	OK	OK	10 MT. OK.
	2200	2400	2	400	PTPU	OK	OK	PULLED OUT OF THE HOLE WHILE LAYING DOWN 5" DP.
970423	0	300	3		PTPU	OK	OK	CONTINUED PULLING OUT OF THE HOLE WHILE LAYING DOWN 5" DP, JAR AND 2 STANDS OF 8" DC. PRESSURE TESTED CEMENT PLUG TO 102 BAR FOR 10 MIN WHILE PULLING OUT. OK.
	300	600	3		PSMU	OK	OK	RIGGED UP WIRE LINE EQUIPMENT. RAN IN AND SET 13 3/8" BRIDGE PLUG AT 915 M. POOH WITH SETTING TOOL. RIGGED DOWN WIRE LINE EQUIPMENT.
	600	700	1	783	PTTU	OK	OK	RIH W/OPEN END 5" DP TO 783 M.
	700	730	0,5	683	PCCU	OK	OK	PUMPED 8 M3 HI-VIS MUD. DISPLACED SAME W/ 7.5 M3 MUD. POOH FROM 783 M TO 683 M.
	730	900	1,5	683	PSSU	OK	OK	R/U CMT HOSE. PRESSURE TESTED SAME TO 100 BAR FOR 5 MIN. PUMPED 5 M3 SW. MIXED AND PUMPED 15.7 M3 1.92 SG CEMENT SLURRY. PUMPED 550 L SW BEHIND. DISPLACED THE CEMENT W/ 1.97 M3 MUD.
	900	930	0,5	483	PCCU	OK	OK	POOH FROM 683 M TO 483 M. REVERSE CIRCULATED OUT EXCESS CMT. GOT 3 M3 CMT CONTAMINATED MUD/SPACER IN RETURN.
	930	1030	1	483	PCCU	OK	OK	CIRCULATED LONG WAY. DISPLACED RISER, KILL, CHOKE, AND BOOSTER LINE TO SW.
	1030	1200	1,5		PTPU	OK	OK	POOH WHILE L/D 5" DP.
	1200	1330	1,5		PTPU	OK	OK	L/D BOP TEST STAND, HANG OFF STAND AND CEMENT STAND.
	1330	1630	3		BHRU	OK	OK	M/U WEAR BUSHING RETRIEVING TOOL AND JET SUB. RIH AND JETTED BOP AND WELL HEAD AREA. RETRIEVED WEAR BUSHING. L/D RETR. TOOL.
	1630	1700	0,5		PTPU	OK	OK	L/D 3 1/2" DP FROM DERRICK.
	1700	2400	7		BBRU	OK	OK	PREPARED TO AND PULLED BOP AND RISER. DISCONNECTED BOP AT 2150 HRS.
970424	0	600	6		BBRU	OK	OK	PULLED BOP AND RISER.
	600	1830	12,5		BBRU	OK	OK	CONTINUED PULLING BOP AND RISER. SECURED BOP. RIGGED DOWN RISER HANDLING EQUIPMENT. CHANGED BAILS AND ELEVATOR.
	1830	2000	1,5		PACU	OK	OK	MADE UP 20" X 30" CUTTING ASSEMBLY.
	2000	2230	2,5	437	PACU	OK	OK	RAN IN WITH 30" X 20" CUTTING ASSEMBLY. ATTACHED AND RAN IN WITH TWO ARMED GUIDE. STABBED INTO 20" WELLHEAD AND ENGAGED THE SPEAR. TOOK 30 MT OP TEST. OK. SLACKED OFF TO 5 MT OP. RETRIEVED GUIDE.
	2230	2400	1,5	437	PACU	OK	OK	CUT 20" X 30" CASING.
970425	0	400	4	437	PACU	OK	OK	CONTINUED CUTTING 20" X 30" CASING. TRIED TO PULL CASINGS FREE WITH 170 MT OP. 20" WELLHEAD CAME LOOSE FROM 30" WELLHEAD HOUSING.
	400	530	1,5		PACU	OK	OK	PULLED OUT WITH 20" WELLHEAD. LAID DOWN THE SAME.
	530	600	0,5		PACD	OK	OK	LAID DOWN 20" X 30" CASING CUTTING ASSEMBLY. MADE UP 30" CASING CUTTING ASSEMBLY.
	600	830	2,5	436	PACD	OK	OK	MADE UP 30" CUTTING ASSEMBLY AND RAN IN AND ENGAGED THE SAME. CUTTERS AT 436.5 M. ATTEMPTED TO PULL THE CASING FREE WITH 170 MT OP. NEG.
	830	1700	8,5	436	PACD	OK	OK	CUT 30" CASING AT 436 M. ATTEMPTED TO PULL THE CASING FREE WITH 180 MT OVERPULL FOUR TIMES WITHOUT SUCCESS. THE PUMP PRESSURE DROPPED FROM 200 BAR TO 140 BAR. TORQUE DECREASED AT THE SAME TIME.
	1700	1800	1	436	PACD	OK	OK	KEPT 160 - 210 MT OVERPULL TO WORK THE CASING FREE. NEG.
	1800	1900	1	436	PACD	OK	OK	CONTINUED TO CUT 30" CASING.
	1900	1930	0,5	436	PACD	OK	OK	ATTEMPTED TO PULL THE CASING FREE WITH 180 MT OP. NEG.
	1930	2230	3	436	PACD	OK	OK	ATTEMPTED TO RELEASE THE 30" GRAPPLE. THE GRAPPLE WAS STUCK. WORKED TO FREE THE GRAPPLE.
	2230	2330	1		PACD	OK	OK	PULLED OUT OF THE HOLE. THE KNIVES SHOWED INDICATIONS OF 30" CASING CUTTED OK.
	2330	2400	0,5	300	PACD	OK	OK	RAN IN WITH 5" OPEN ENDED DRILL PIPE.
970426	0	130	1,5		PACD	OK	OK	CONTINUED RUNNING IN WITH OPEN ENDED 5" DP. STABBED INTO 30" WELLHEAD HOUSING AND FLUSHED INSIDE OF HOUSING. PULLED OUT.
	130	400	2,5	431	PACD	OK	OK	LAID OUT CASING CUTTER. PICKED UP JARS AND 2 X 8" DC. RAN IN AND ENGAGED THE SAME.
	400	600	2	431	PACD	OK	OK	ATTEMPTED TO JAR 30" CASING FREE.
	600	900	3	431	PACD	OK	OK	CONTINUED JARRING AND PULLING ON 30" CASING. FREED THE CASING WHILE JARRING.
	900	1200	3		PACD	OK	OK	PULLED OUT WITH 30" CASING AND GUIDE BASE. SECURED GUIDE BASE IN MOON POOL. REMOVED AND LAID OUT CASING SPEAR. DISCONNECTED 30" WELLHEAD HOUSING AND LAID OUT CASING CUT. STARTED ANCHOR HANDLING. PULLED TWO ANCHORS.
	1200	1530	3,5		PTPU	OK	OK	LAID DOWN ALL TUBULARS FROM DERRICK. CONTINUED ANCHOR HANDLING. PULLED TWO ANCHORS.
	1530	1700	1,5		PXXU	OK	OK	BACKLOAD BOAT.
	1700	2200	5		MNBU	OK	OK	DEBALLASTED RIG.
	2200	2400	2		MARU	OK	OK	PULLING ANCHORS
970427	0	430	4,5		MARU	OK	OK	CONTINUED ANCHOR HANDLING. RELEASED FROM 6507/3-2 AT 0430 HRS 27/04/97

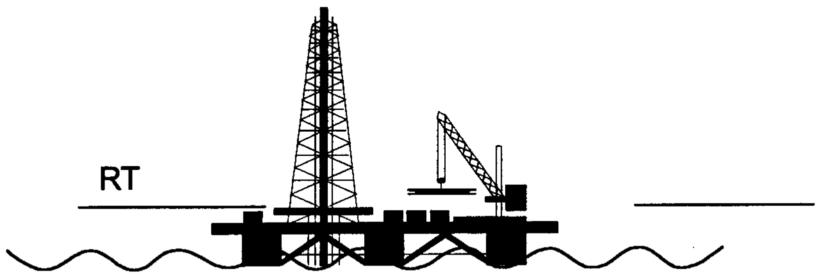
4.4 Well and Subsea Schematic

P&A Well schematic

Well no: 6507/3-2

PL 159

STATOIL



Ref level 0 m

Sea level 23,5 m

Wellhead: 431,5 m

Seabed: 433 m

30" conductor:
- Grade: X-52
- Pipe: 1 jnt x 1.5" wt, 4 jnt 1" wt
- Shoe @ 493 m

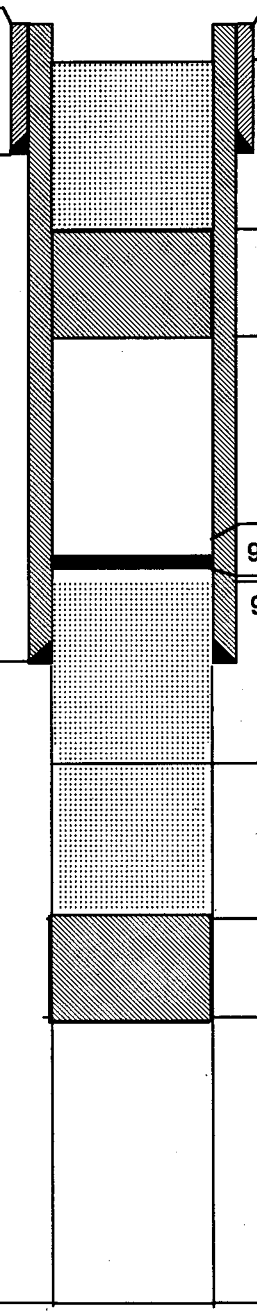
20" x 13 3/8" Casing:

20" casing:
- Grade: X-56
- Weight:133 lbs/ft
- Connection: RL-4S
- X-over 13 3/8 @ 438 m

13 3/8" casing:
- Grade: L 80, N-80, P110
- Weight: 72 lbs/ft, 68 lbs/ft
- Connection: BTC
- TOC: Seabed
- Shoe @ 994 m

12 1/4" open hole

TD 12 1/4" hole @ 2032 m.



Depth	Description	Test	Comments
436 m.	20" and 30" csg. cut.	-	
483 m. – 683 m.	Surface cement plug.	-	
783 m.	Hivis pill.	-	
	1,24 sg mud.		KCl /Polymer Glycol mud.
915 m.	Bridge Plug.		
931 m. – 1080 m.	Gastight cement plug between open and cased hole.	Pressure: 102 bar. Load: 10 ton	
1280 m.	Gastight cement plug.		
1380 m.	Hivis pill.		
	1,24 sg mud.		

NOTE:
Fig not to scale
All depths are MD

4.5 Formation Integrity Test

PL 159, Well 6507/3-2
Formation Strength Test

STATOIL

Rig:	Byford	Dolphin	
RT Elev.	23.5 m	Well Depth	1003 m
RT-SB	433 m	Csg. depth	994 m

Casing			
Diameter	13 3/8"	Grading	P-110
Weight	72#	Max press.	

Mud			
Density	1.03	Visc.	
P.V		Y.P.	
Filt.		Gel	

Pump			
Type	CMT	Capasity	
Vol./T.U.	60 l/m	Back flow	217 l

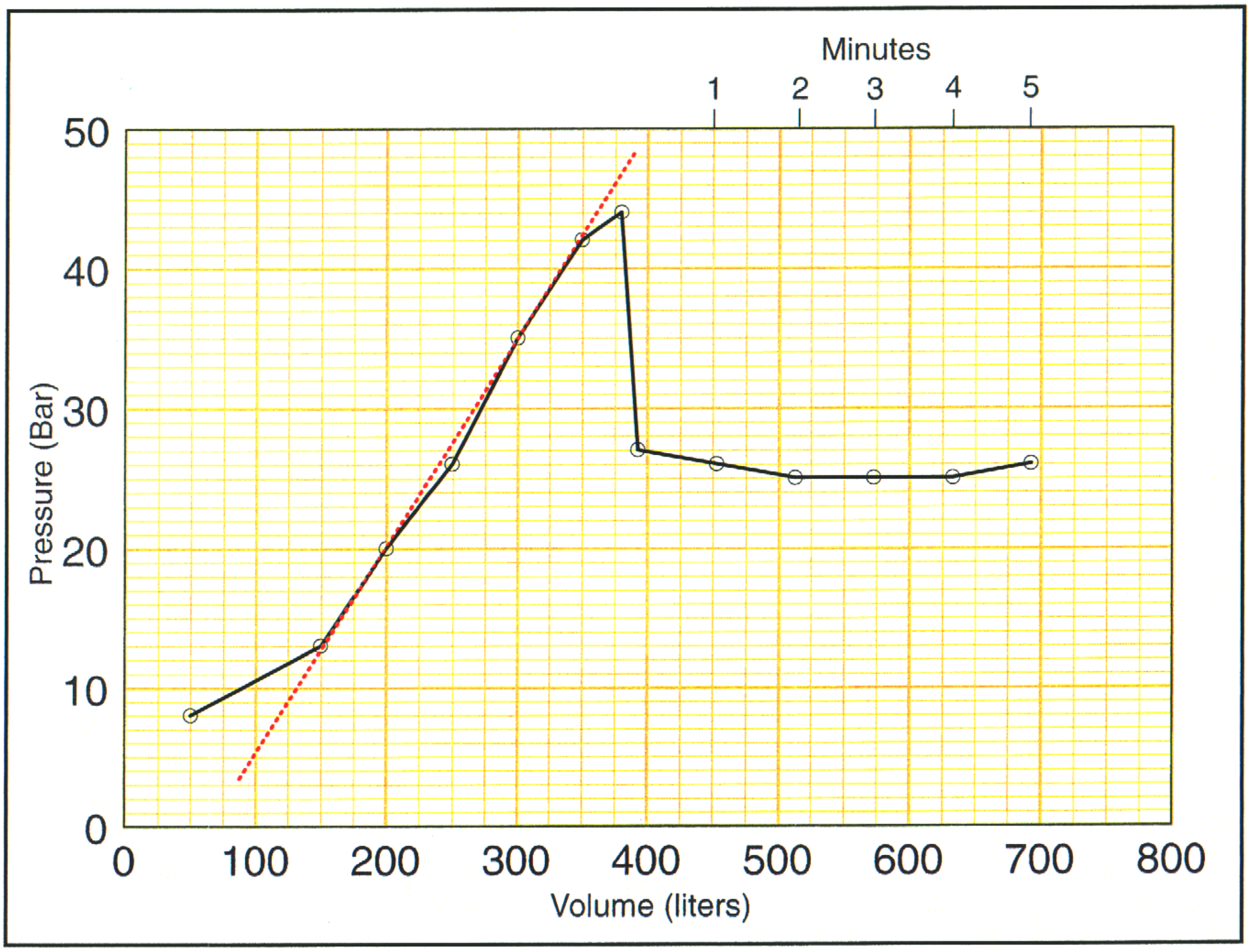
Formation	Strength				
Prognosed	1.47 g/cc	Observed	39 bar	Equiv. Form. Strength	1.58 g/cc

Test	data
Volume	Press.
50	8
150	13
200	20
250	26
300	35
350	42

Test	data
Time	Press.
0	27
1	26
2	25
3	25
4	25
5	26

Comments: Pumped: 393 l.
Bleed back: 217 l.

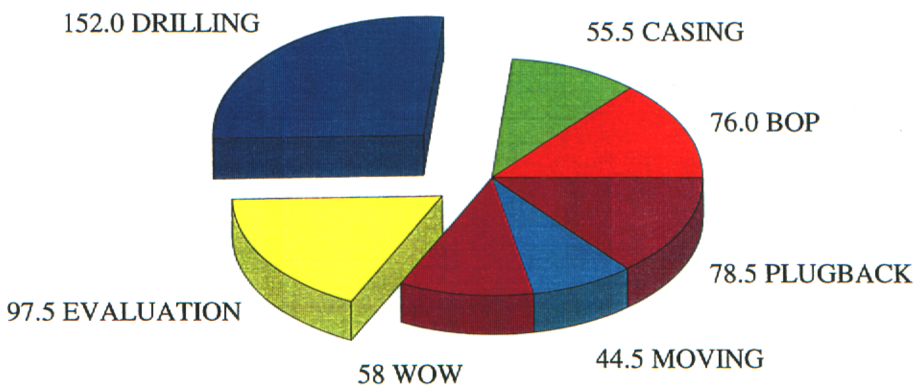
Correction Cmt unit: 3 bar.
Leak of pressure: 42 - 3 bar = 39 bar



4.6 Rig time distribution
Drilling time versus depth

Rig time distribution 6507/3-2

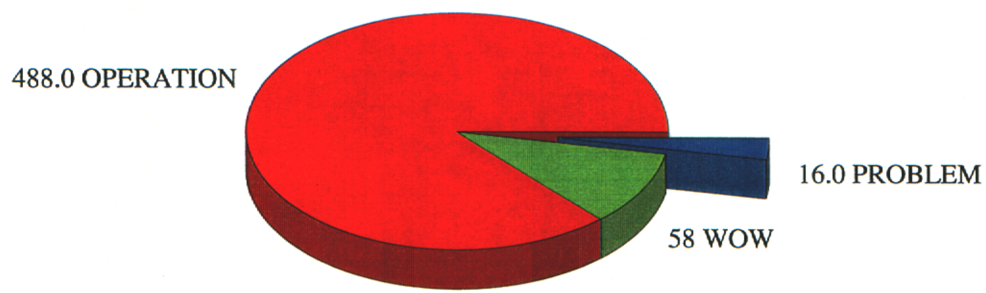
in hours



Total time used: 562 hrs.

Rig time distribution 6507/3-2

Problem time vs total time



Total time used: 562 hrs.

RIG TIME DISTRIBUTION

Well: 6507/03-002

Main Operation	Sub operation	Time used	Prosent
BOP	BOP	68,00	12,10
	WELLHEAD	8,00	1,42
		76,00	13,52
CASING	CEMENT	23,00	4,09
	CSG/LINER	18,50	3,29
	DRILLING	7,50	1,33
	TRIP	3,50	,62
	CIRC/COND	1,50	,27
	EQUIPMENT	1,50	,27
		55,50	9,88
DRILLING	DRILLING	115,00	20,46
	TRIP	51,00	9,07
	CIRC/COND	8,00	1,42
	EQUIPMENT	3,50	,62
	SURVEY	,50	,09
		178,00	31,67
EVALUATION	LOGGING	61,00	10,85
	CIRC/COND	16,00	2,85
	TRIP	16,00	2,85
	CORING	3,50	,62
	TEST	1,00	,18
		97,50	17,35
MOVING	TRANSIT	45,50	8,10
	ANCHOR	31,00	5,52
		76,50	13,61
PLUGBACK	CASING	41,50	7,38
	TRIP	23,00	4,09
	CEMENT	8,50	1,51
	CIRC/COND	3,00	,53
	OTHER	2,50	,44
		78,50	13,97
TOTAL		562,00	100,00

Oppdater 06.05 10:45

TIDSPLANLEGGER

Brønn 6507/3-2 (PL159, Jura prospekt)

START DATO	TID	Aktuelle timer	Akt.+ plan akk- um. dager	Plan timer	Plan Akk- um. dager	Aktivitet	Selskap	Nede tid (t)	Akk- um. Nede time	Vente tid (t)	Akk- um. vente tid (t)	Avvik og årsak til vente-/nede-tid
03.04.97	18:30	35,0	1,5	9,6	0,4	Sailing. Transit from 6608/8-1 to location.		0	0	32	32	Incl. 32 hrs. WOW
05.04.97	05:30	19,5	2,3	24,0	1,4	Anchorhandling.		0	0	0	32	
06.04.97	01:00	10,5	2,7	0,0	1,4	Ballasting rig to drilling draft, P/U DP and DC.		0	0	0	32	Final position of rig 5 hrs.
06.04.97	11:30	5,0	2,9	0,0	1,4	M/U BHA incl. MWD, RIH.		0	0	0	32	Tagged seabottom at 433 m
06.04.97	16:30	12,0	3,4	24,0	2,4	Drill 36" hole 435 - 497m. Displace to 1.2 G/cm3 mud.		0	0	0	32	
07.04.97	04:30	2,5	3,5	0,0	2,4	POOH. Rack in derrick.		0	0	0	32	
07.04.97	07:00	17,0	4,2	12,0	2,9	RU and RIH w/ 30" casing. Cement same.		0	0	0	32	Incl. 7 hrs. p/u DP while WOC
08.04.97	00:00	6,0	4,5	12,0	3,4	POOH w/ cement stinger. MU 18 3/4" WH Hsg.		0	0	0	32	
08.04.97	06:00	4,5	4,7	8,0	3,7	LD 36" BHA. M/U 17 1/2" BHA, PU 5" DP.		0	0	0	32	
08.04.97	10:30	3,0	4,8	4,0	3,9	RIH w/ 17 1/2" BHA, drill out 30" shoe.		0	0	0	32	
08.04.97	13:30	20,5	5,6	18,0	4,7	Drill 17 1/2" hole 497 - 1000m (30m/hr).		2,5	2,5	0	32	Incl. 2.5 hrs. cleaning out 30" shoe
09.04.97	10:00	5,0	5,9	6,0	4,9	CBU. Displace to 1.2 g/cm3 mud. POOH.		0	2,5	0	32	
09.04.97	15:00	11,5	6,3	14,0	5,5	RU and RIH w/ 13 3/8" casing.		0	2,5	0	32	Incl. 1.5 hrs. p/u DP (wait on TO equipm
10.04.97	02:30	11,5	6,8	16,0	6,2	Circ. Cement 13 3/8" csg. POOH w/ Land. string.		0,5	3	0	32	Incl. 0.5 hrs. probl. w/ cement head valv
[illegible]97	14:00	1,5	6,9	6,0	6,4	RD csg equipment and LD 17 1/2" BHA.		0	3	0	32	
[illegible]97	15:30	37,0	8,4	30,0	7,7	Prepare to and run BOP/riser.		1	4	0	32	Incl. 1 hr. probl. w/ WH Conn.
12.04.97	04:30	4,5	8,6	6,0	7,9	Test WH Conn. and surface equipment.		0	4	0	32	
12.04.97	09:00	14,0	9,2	12,0	8,4	Set WB, L/D 17 1/2" BHA, M/U 12 1/4" BHA.		3	7	0	32	Incl. 3 hrs. probl. setting WB
12.04.97	23:00	10,5	9,6	11,0	8,9	RIH w/ 12 1/4" BHA. Drill cmt, shoe and 3m new formation		1	8	0	32	Incl. 1 hr. probl. w/ STD-pipe valve
13.04.97	09:30	1,0	9,7	1,0	8,9	Perform LOT.		1	9	0	32	Incl.1 hr. probl. w/ Diverter valves
13.04.97	10:30	21,5	10,6	12,0	9,4	Drill 12 1/4" hole from 1000-1230m .		0	9	26	58	(Incl. 26 hrs. WOW)
14.04.97	08:00	26,0	11,6	0,0	9,4	WOW.		0	9	0	58	
15.04.97	10:00	18,0	12,4	24,0	10,4	CBU. POOH. MU/RIH w/ 12 1/4" core assy. Core. POOH		0	9	0	58	
16.04.97	04:00	3,5	12,5	6,0	10,7	RIH w/12 1/4" BHA. Open cored section.		0	9	0	58	
16.04.97	07:30	53,0	14,8	89,0	14,4	Drill 12 1/4" hole to 1915 m. POOH to change bit/BHA.		0	9	0	58	Incl. 14.5 hrs. non-prog. coring time
18.04.97	12:30	21,5	15,6	0,0	14,4	Drill 12 1/4" hole to TD (2032m). (30 m/hr).		0	9	0	58	
19.04.97	10:00	7,0	15,9	6,0	14,6	CBU. POOH w/ 12 1/4" BHA.		0,5	9,5	0	58	Incl. 0.5 hrs. probl. w/ Iron R. Neck
19.04.97	17:00	6,0	16,2	4,0	14,8	RU Western Atlas logging equipment.		4,5	14	0	58	Incl. 4.5 hrs. probl. w/ WL control unit
19.04.97	23:00	10,0	16,6	12,0	15,3	Log#1: DLL/MLL/MAC/DSL/CHT.		0	14	0	58	
20.04.97	09:00	6,0	16,9	10,0	15,7	Log#2: ZDL/CNL/DSL/CHT.		0	14	0	58	
20.04.97	15:00	13,5	17,4	12,0	16,2	Log#3: VSP/GR.		2	16	0	58	Incl. 2 hrs. probl. w/ WL communication
21.04.97	04:30	7,0	17,7	10,0	16,6	Log#4: HDIP/GR/CHT.		0	16	0	58	
21.04.97	11:30	10,5	18,1	12,0	17,1	Log#5: FMT/GR/CHT.		0	16	0	58	
21.04.97	22:00	7,5	18,5	10,0	17,5	Log#6: SWC/GR.		0	16	0	58	
22.04.97	05:30	0,5	18,5	2,0	17,6	RD Western Atlas logging equipment.		0	16	0	58	
22.04.97	06:00	0,0	18,5	0,0	17,6	Only if Test.		0	16	0	58	
[illegible]97	06:00	1,0	18,5	2,0	17,7	RIH w/ cement stinger.		0	16	0	58	
[illegible].97	07:00	20,0	19,4	15,0	18,3	Circ. Displace to Hi-vis pill. Set cement plugs.		0	16	0	58	
23.04.97	03:00	3,0	19,5	8,0	18,7	Set a retainer.		0	16	0	58	
23.04.97	06:00	6,0	19,7	8,0	19,0	RIH w/ cement stinger set cement plug.		0	16	0	58	
23.04.97	12:00	5,0	19,9	13,0	19,5	L/D DP.						
23.04.97	17:00	25,5	21,0	18,0	20,3	Pull riser and BOP.		0	16	0	58	
24.04.97	18:30	46,5	22,9	8,0	20,6	Cut 20" x 30" csg. POOH w/ same.		0	16	0	58	
26.04.97	17:00	11,5	23,4	24,0	21,6	Anchorhandling. Ballasting Rig to sailing draft.		0	16	0	58	
27.04.97	04:30	0,0	23,4		21,6	Ready for tow to next location.		0	16	0	58	

PL 159

Statoil	50%
Norsk Hydro	20%
Total Marine	20%
Saga Petroleum	10%

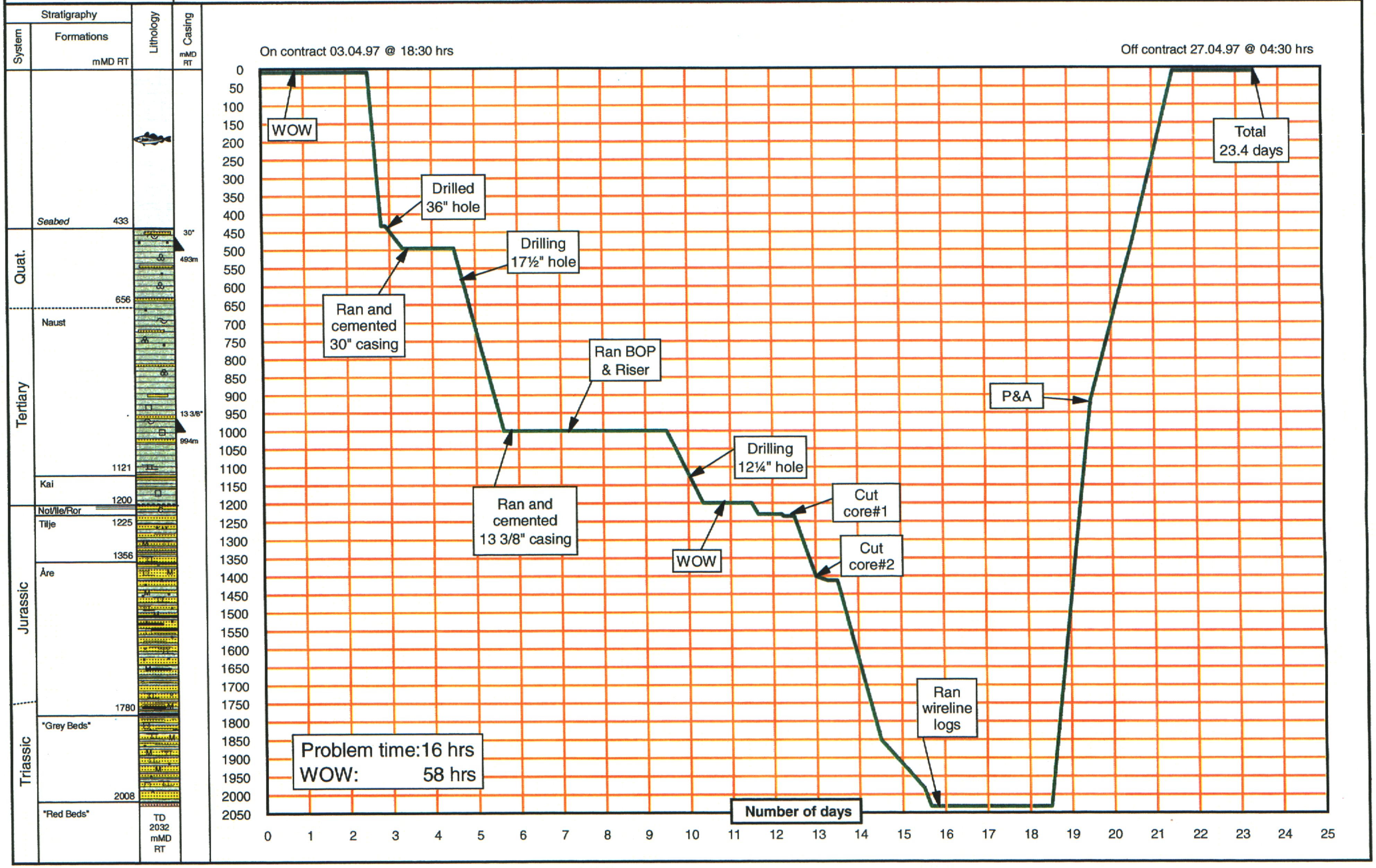
RKB - Sea: 23,5 m

Water Depth: 409,5 m MSL

TIME - DEPTH PLOT
WELL 6507/3-2

STATOIL

Made by: DALM | Date:15.10.97



4.7 Bit Records

DBR Print date: 97/04/23

B I T   R E C O R D Page: 1

Well: 6507/03-002

Run no.	Bit Size	Bit no.	BHA no.	Bit type	IADC code	Manufacturer	Serial no.	Nozzles no x n	(n/32") no x n	no x n	no x n	Flow area in2
0								x	x	x	x	
1	36"	HO	1	HO	114	DARRON	13466	6 x 09	x	x	x	,373
	26"	HO	1	HO	114	DARRON	13466	6 x 09	x	x	x	,373
	17 1/2"	1RR	1	MSDGHODQC	135	SMITH	L94089	3 x 20	1 x 16	x	x	1,117
2	17 1/2"	2	2	MAXGTPT03	415	HUGHES	K21CP	2 x 20	1 x 16	1 x 14	x	,960
3	12 1/4"	3	3	MAXGTCP18D	135	HUGHES	E69CM	2 x 22	1 x 20	x	x	1,049
4	12 1/4"	4	4	ARC427C3	517	EASTMAN CHRIST	1209912	x	x	x	x	1,100
5	12 1/4"	3RR1	3	MAXGTCP18D	135	HUGHES	E69CM	2 x 22	1 x 20	x	x	1,049
6	12 1/4"	4RR1	4	ARC427C3	517	EASTMAN CHRIST	1209912	x	x	x	x	1,100
7	12 1/4"	5	5	DS88HGZ	M332	HYCALOG	41916	6 x 12	x	x	x	,663
8	12 1/4"	3RR2	6	MAXGTCP18D	135	HUGHES	E69CM	2 x 22	1 x 20	x		1,049

Run no.	Flow-rate l/min	Pump pres bar	Depth In mMD	Depth Out mMD	Made m.	HR. Drlg.	ROP m/hr	WOB Min ton	WOB Max ton	RPM Min	RPM Max	I	O	DC	L	B	G	OC	RP	Remarks
0					,0		,0													
1	4300	180	439,0	495,0	56,0	9,6	5,8	4	6	40	60	1	1	NO	A	E	I	NO	TD	
	4300	180	433,0	495,0	62,0	9,6	6,5	4	6	40	60	1	1	NO	A	E	I	NO	TD	
	4300	180	433,0	497,0	64,0	9,6	6,7	4	4	40	60	1	1	NO	A	E	1/16"	NO	TD	
2	4000	220	497,0	1000,0	503,0	13,0	38,7	3	5	88	120	1	3	NO	A	E	I	NO	TD	
3	3800	210	1000,0	1230,0	230,0	7,8	29,5	2	8	75	150	1	2	BT	H	E	I	CT	CP	2 EA TEETH BROKEN, 1 EA TEETH CHIPPED, OTHERWISE OK.
4	1520	95	1230,0	1236,0	6,0	,3	20,0		10	120	120	1	1	NO	A	X	I	NO	PR	RE-RUNABLE . CORE JAMMMED.
5	3800	250	1236,0	1402,0	166,0	4,4	37,7	2	6	120	150	1	2	BT	H	E	I	NO	CP	2 EA BROKEN TEETH AND 1 EA CHIPPED TEETH.
6	1570	98	1402,0	1413,0	11,0	1,0	11,0	2	7	100		1	1	NO	A	X	I	NO	PR	RE-RUNABLE . CORE JAMMMED.
7	3250	221	1413,0	1915,0	502,0	18,7	26,8	1	9	120	240	3	3	WT	A	X	I	BT	PR	
8	3200	225	1915,0	2032,0	117,0	8,8	13,3	6	11	120	140	2	2	BT	G	E	I	CT	TD	

PL 159

RT Elevation: 23.5 m

Water Depth: 409.5 m

BIT SUMMARY WELL 6507/3-2

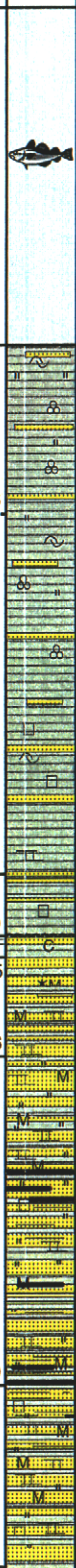
STATOIL

Made by: HS/DA | Date:07.11.97

Stratigraphy

System	Formations (mMD RT)
	Seabed 433
Quat.	656
Tertiary	Naust 1121
Tertiary	Kai 1200
Jurassic	Not/Ile/Ror
Jurassic	Tilje 1225
Jurassic	1356
Jurassic	Åre 1780
Triassic	"Grey Beds" 2008
Triassic	"Red Beds"

Lithology



TD 2032 mMD RT

Casing (mMD RT): 30" 493m; 13 3/8" 994m

DEPTH (mRT) MD: 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000

Bit No	Bit Type	Depth out (m)	Made (m)	On bottom (hours)	ROP (m/hour)
1	26" x 36" HO 17 1/2" MSDGHODQC	497	64	9,6	6,7
2	17 1/2" MAXGTPT03	1000	503	13	38,7
3	12 1/4" MAXGTCP18D	1230	230	7,8	29,5
4	12 1/4" ARC427C3	1236	6	0,3	20,0
5	12 1/4" MAXGTCP18D (3RR1)	1402	166	4,4	37,7
6	12 1/4" ARC427C3 (4RR1)	1413	11	1,0	11,0
7	12 1/4" DS88HGZ	1915	502	18,7	26,8
8	12 1/4" MAXGTCP18D (3RR2)	2032	117	8,8	13,3

4.8 Bottom Hole Assemblies

Well: 6507/03-002

Date	BHA no	BHA component	O.D. (inch)	I.D. (inch)	Length (m)	Akk. length (m)
970407	1	BIT, TRI CONE	17,500		,43	,43
		HOLE OPENER	26,000	3,000	1,43	1,86
		HOLE OPENER	36,000	3,000	3,82	5,68
		XO SUB	9,500	3,000	1,02	6,70
		FLOAT SUB	9,500	2,875	,92	7,62
		XO SUB	9,500	3,000	1,06	8,68
		MWD DIRECTIONAL	9,500		12,15	20,83
		SAVER SUB	9,500	3,000	,86	21,69
		DRILL COLLAR	9,500	3,000	4,42	26,11
		STABILIZER	17,500	3,000	1,83	27,94
		DRILL COLLAR	9,125	3,000	8,83	36,77
		STABILIZER	17,500	3,000	2,00	38,77
		DRILL COLLAR	9,500	3,000	18,32	57,09
		XO SUB	9,500	2,750	,98	58,07
		DRILL COLLAR	8,250	2,813	55,88	113,95
		JAR	8,000	3,000	9,75	123,70
		DRILL COLLAR	8,250	2,813	18,63	142,33
		XO SUB	8,250	3,000	1,08	143,41
		HW DRILL PIPE	5,000	3,000	135,01	278,42
970409	2	BIT, TRI CONE	17,500		,42	,42
		FLOAT SUB	9,500	2,875	,92	1,34
		XO SUB	9,500	3,000	1,06	2,40
		MWD DIRECTIONAL	9,500		12,15	14,55
		SAVER SUB	9,500	3,000	,86	15,41
		DRILL COLLAR	9,500	3,000	4,42	19,83
		STABILIZER	17,500	3,000	1,83	21,66
		DRILL COLLAR	9,250	3,000	8,83	30,49
		STABILIZER	17,500	3,000	2,00	32,49
		DRILL COLLAR	9,500	3,000	18,32	50,81
		XO SUB	9,500	2,750	,98	51,79
		DRILL COLLAR	8,250	2,813	55,88	107,67
		JAR	8,000	3,000	9,75	117,42
		DRILL COLLAR	8,250	2,813	18,63	136,05
		XO SUB	8,250	3,000	1,08	137,13
		HW DRILL PIPE	5,000	3,000	135,01	272,14
970413	3	BIT, TRI CONE	12,250		,29	,29
		FLOAT SUB	8,000	2,750	,92	1,21
		XO SUB	8,250	3,000	,80	2,01
		MWD DIRECTIONAL	8,250		12,13	14,14
		SAVER SUB	8,000	3,000	,89	15,03
		DRILL COLLAR	8,000	3,000	4,20	19,23
		STABILIZER	12,250	3,000	1,59	20,82
		DRILL COLLAR	8,250	2,813	9,42	30,24
		STABILIZER	12,250	3,000	1,75	31,99
		DRILL COLLAR	8,250	2,813	46,46	78,45
		JAR	7,875	3,000	9,75	88,20
		DRILL COLLAR	8,250	2,813	18,63	106,83
		XO SUB	8,250	3,000	1,08	107,91
		HW DRILL PIPE	5,000	3,000	108,02	215,93
970416	4	BIT, CORE	12,250		,40	,40
		CORE BARREL	12,250	5,250	19,36	19,76
		EXTENSION SUB	8,000	5,250	1,15	20,91
		EXTENSION SUB	8,000	5,250	,60	21,51
		TOP SUB	8,000		,44	21,95
		DRILL COLLAR	8,250	2,813	9,42	31,37
		STABILIZER	12,250	3,000	1,75	33,12
		DRILL COLLAR	8,250	2,813	46,46	79,58
		JAR	7,875	3,000	9,75	89,33
		DRILL COLLAR	8,250	3,000	18,63	107,96
		XO SUB	8,250	3,000	1,08	109,04
		HW DRILL PIPE	5,000	3,000	108,02	217,06

Well: 6507/03-002

Date	BHA no	BHA component	O.D. (inch)	I.D. (inch)	Length (m)	Akk. length (m)
970418	5	BIT, PDC	12,250		,41	,41
		NAVIDR. AKO MKI XL	9,500		10,93	11,34
		SUB PIN X PIN	8,000	2,875	,82	12,16
		STABILIZER	12,250	3,000	1,77	13,93
		SUB PIN X PIN	8,375	2,875	,80	14,73
		MWD, DPR	8,250		12,13	26,86
		SAVER SUB	8,000	3,000	,89	27,75
		DRILL COLLAR	8,000	3,000	4,20	31,95
		STABILIZER	12,250	3,000	1,59	33,54
		DRILL COLLAR	8,250	2,813	9,42	42,96
		STABILIZER	12,250	3,000	1,75	44,71
		DRILL COLLAR	8,250	2,813	46,46	91,17
		JAR	7,875	3,000	9,75	100,92
		DRILL COLLAR	8,250	2,813	18,63	119,55
		XO SUB	8,250	3,000	1,08	120,63
		HW DRILL PIPE	5,000	3,000	108,02	228,65

Remarks: MOTOR BHA, NO OFFSET, LOCKED BHA, FLOAT IN STAB.

Date	BHA no	BHA component	O.D. (inch)	I.D. (inch)	Length (m)	Akk. length (m)
970419	6	BIT, TRI CONE	12,250		,29	,29
		FLOAT SUB	8,000	2,750	,92	1,21
		XO SUB	8,250	3,000	,80	2,01
		MWD, DPR	8,250		12,13	14,14
		SAVER SUB	8,000	3,000	,89	15,03
		DRILL COLLAR	8,000	3,000	4,20	19,23
		STABILIZER	12,250	3,000	1,59	20,82
		DRILL COLLAR	8,250	2,813	9,42	30,24
		STABILIZER	12,250	3,000	1,75	31,99
		DRILL COLLAR	8,250	2,813	46,46	78,45
		JAR	7,875	3,000	9,75	88,20
		DRILL COLLAR	8,250	2,813	18,63	106,83
		XO SUB	8,250	3,000	1,08	107,91
		HW DRILL PIPE	5,000	3,000	108,02	215,93

4.9 Directional Surveys

DBR

Print date: 97/04/23

DIRECTIONAL DATA

Page: 1

Well: 6507/03-002

Dato	MD m	Inkl. deg.	Azimuth deg.	TVD m	H.Displ. m	N/S m	E/W m	Dogleg degr./30m	Survey instrument
970404	.	.	.	.	.	.	.	.	.
970405	.	.	.	.	.	.	.	.	.
970406	.	.	.	.	.	.	.	.	.
970407	443,00	,50	303,30	443,00		,02	-,03	1,88	MWD
	473,00	,30	270,70	473,00		,09	-,22	,30	MWD
	484,00	,20	187,60	484,00		,07	-,25	,93	MWD
970408	.	.	.	.	.	.	.	.	.
970409	443,00	,50	303,30	443,00		,02	-,03	1,88	MWD
	484,00	,20	187,60	484,00		,07	-,25	,93	MWD
	590,00	,50	70,30	590,00		,17	,05	,28	MWD
	697,00	,40	8,60	697,00		,63	,45	,14	MWD
	797,00	,40	8,00	826,99		1,57	,50	,33	MWD
	886,00	,00	112,20	885,99		1,60	,54	,05	MWD
970410	.	.	.	.	.	.	.	.	.
970411	.	.	.	.	.	.	.	.	.
970412	.	.	.	.	.	.	.	.	.
970413	.	.	.	.	.	.	.	.	.
970414	1037,00	,10	327,40	1036,99		1,93	,26	,20	MWD
	1067,00	,10	282,70	1066,99		1,96	,22	,08	MWD
	1097,00	,00	225,50	1096,99		1,96	,19	,10	MWD
	1126,00	,10	352,30	1125,99		1,99	,19	,10	MWD
	1155,00	,11	23,50	1154,99		2,04	,20	,06	MWD
	1183,00	,30	323,80	1182,99		2,12	,16	,28	MWD
970415	.	.	.	.	.	.	.	.	.
970416	1214,00	,30	351,90	1213,99		2,26	,10	,14	MWD
970417	.	.	.	.	.	.	.	.	.
970418	1273,00	,40	332,70	1272,99		2,62	-,04	,03	MWD
	1333,00	,30	49,40	1332,99		2,90	-,10	,38	MWD
	1391,00	,00	260,60	1361,99		2,96	-,02	,24	MWD
	1479,00	,50	74,00	1478,99		3,16	,34	,19	MWD
	1539,00	,30	52,10	1538,99		3,29	,73	,17	MWD
	1597,00	,50	32,80	1596,98		3,55	,97	,24	MWD
	1658,00	,60	14,60	1657,98		4,12	1,19	,05	MWD
	1716,00	1,00	12,90	1715,98		4,90	1,41	,22	MWD
	1805,00	,90	22,00	1804,97		6,08	1,84	,20	MWD
970419	1834,00	,80	12,20						MWD
	1863,00	,70	20,70						MWD
	1890,00	,80	30,90						MWD
	1923,00	,60	359,10						MWD
	1952,00	,60	349,50						MWD
970420	1982,00	,60	352,30						MWD
	2011,00	,50	21,10						MWD
	2024,00	,40	21,20						MWD
970421	.	.	.	.	.	.	.	.	.
970422	.	.	.	.	.	.	.	.	.
970423	.	.	.	.	.	.	.	.	.

4.10 Drilling Fluid Summary

Schlumberger
Dowell

MudCADE*

Client : Statoil **Well : 6507/03-2**

Client Representatives		Contractor Representatives	
1	S. Loland	1	K. Walderhaug

Dowell Engineers			
1	C. McLennan	3	R. Nagel
2	S. Seglem		

Engineering Package
3 Engineers and/or technicians charged for 38 man days = Nkr160341.00

Well Footage Summary

Interval	Interval TD MD	Footage Drilled	Casing Size	Depth Set	Max. Angle	Max. B.H.S.T.	Drilling Days	Total Days
in	m	m	in	m	deg	degC	d	d
36.	497.	87.	30.	493.	0.		1.	4.3
17.5	1000.	503.	13.375	994.			1.9	4.9
12.25	2032.	1032.	13.375	994.			7.	9.

Sea level depth	m	23.5	Sea bed depth	m	433.

Dates & Drilling Fluids Summary

Interval	Date TD	Fluid Type	Max. Density	Fluid Cost	Cost / Volume	Cost / Footage
in				Nkr	Nkr/m3	Nkr/m
36.	07-Apr-1997	SPUD MUD	1.2	145389.00	472.5	1671.40
17.5	09-Apr-1997	SPUD MUD	1.2	12820.00	27.77	25.49
12.25	19-Apr-1997	KCL POLYMER	1.24	599833.95	1153.52	581.23

Client : Statoil **Well : 6507/03-2**

Executive Summary

Drilling Fluid Service Cost Indicators													
Definition		Interval											
		36.		17.5		12.25							
	Unit	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Total Drilling Fluids Service Cost Efficiency *(Total drilling fluid interval cost / Total footage drilled)*	Nkr/m	2267.70	2156.14	250.6	92.60	629.64	663.00						
Mud Footage Cost Efficiency *(Drilling fluid materials cost / Total footage drilled)*	Nkr/m	1575.93	1671.40	183.62	25.49	552.14	581.23						
Mud Volume Cost Efficiency *(Drilling fluid materials cost / Mud consumption)*	Nkr/m3	739.72	472.50	171.38	27.77	1026.13	1153.52						

Drilling Fluid Service Performance Indicators													
Definition		Interval											
		36.		17.5		12.25							
	Unit	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Mud Consumption Efficiency *(Mud Consumption / Total footage drilled)*	m3/m	3.06	4.56	1.07	0.92	0.54	0.50						
Drilling Efficiency *(Drilling days / Total footage drilled) x 1000*	days/1000m	65	49	9.94	9.74	5.37	5.37						
% Non Productive Time *(Total non productive time / Total time) x 100*	%						12.96						
Discharge coefficient *(Total Surface Losses / Theoretical Hole Volume)*													
Loss Coefficient *(Wellbore loss to formation / Theor. hole capacity)*			0.		0.		0.						
Wash Out Factor	%		0.		0.		0.						

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* Mark of Schlumberger

Client : Statoil **Well : 6507/03-2**

WELL COST BREAKDOWN

Description	% Cost	Unit Size	Unit Cost	Used	Cost
	%		Nkr		Nkr
Drilling Fluid Materials					
Aquapac Reg C329	8.2	kg	29.88	2100.	**62748.00**
Aquapac SL C330	19.9	kg	29.88	5115.	**152836.20**
Barite API C100	17.1	MT	752.00	175.	**131600.00**
Bentonite Hi Yield C350	2.4	MT	2054.00	9.	**18486.00**
Drill water	0.	m3	0.00	1059.	**0.00**
Potassium Chloride C296	1.9	1000 kg BB	1600.00	9.	**14400.00**
RHODAPOL 23P C720	15.2	25 kg sk	1602.50	65	**104162.50**
Soda Ash C109	0.1	25 kg sk	68.25	57	**3890.25**
STAPLEX 500 Shale Stabilizer C850	23.4	L	10.68	16800.	**179424.00**
KCl Brine	11.8	m3	404.00	224.	**90496.00**
	100%			**Sub Total**	**758042.95**

Corrected Drilling Fluid Materials Cost

Description	Unit Size	Unit Cost	Used	Cost
Mud b/f from previous interval	m3	0.00	0.	**0.00**
Mud c/f to next well	m3	0.00	370.8	**0.00**
			Sub Total	**758042.95**
			Plan	754073.00

Engineering Costs

Description	Unit Size	Unit Cost	Used	Cost
C. McLennan		4559.00	19	**86621.00**
S. Seglem		3880.00	7	**27160.00**
R. Nagel		3880.00	12	**46560.00**
			Sub Total	**160341.00**
			Plan	

Total Drilling Fluid Cost	**918383.95**
Plan	

Ancillary materials

Description	Unit Size	Unit Cost	Used	Cost
Bentonite Hi Yield C350	MT	2054.00	22.	45188.00
			Sub Total:	**45188.00**

Total Well Cost	**972979.45**
Plan	

4.11 Cementing Summary

Halliburton cementing material discharge and usage well summary

Rig: Transocean 8 **Year:** 1997
Well name: 6507/3-2 **Month well completed:** April

Product	SG	Unit	Parcom class	Total usage	Reinjected in well	Discharged to sea	Returned on-shore	To burner/ destruction	Left in well
Bentonite	2.650	kg	2						
CaCl2 liquid	1.318	ltr	1	954					954
Cement cl. "G"	3.220	MT	1	176		5.5			170.5
CFR-3L	1.178	ltr	13	1083		242			841
Econolite	1.363	ltr	2	2487		103			2384
Gascon	1.100	ltr	1	1874		403			1471
Halad-344	1.600	kg	5						
Halad-344L	1.020	ltr	5						
Halad-413L	1.067	ltr	5						
Halad-600LE+	1.097	ltr	5	1872		401			1471
HR-15	1.940	kg	4						
HR-15L	1.106	ltr	4						
HR-25L	1.040	ltr	2						
HR-4L	1.182	ltr	4	636		5			631
HR-6L	1.165	ltr	4						
Latex 2000	0.982	ltr	5						
Microblock	1.390	ltr	1						
Micromax	4.800	kg	1						
Musol E	0.950	ltr	16						
NF-5	0.940	ltr	7	177		17			160
SCR-100L	1.078	ltr	2	288		78			210
Sem-7	1.000	ltr	16						
Spacer 500E+	2.300	kg	5						
SSA-1	2.630	kg	1						
Stabiliser 434C	1.040	ltr	5						

Date done	List of cement jobs done on this well:
07.04.97	30" conductor
10.04.97	20"x13 3/8" casing
22.04.97	PTA-1
22.04.97	PTA-2
23.04.97	PTA-3

Rev. 2 21.04.97

Halliburton cementer signature: ____________________ **Halliburton field engineer signature:** ____________________

Date: 02.05.97

File reference: 6507-3-2.XLS

Halliburton cementing material cost breakdown

Rig: Transocean 8 **Year:** 1997
Well name: 6507/3-2 **Month well completed:** April

Product	Unit	Product cost, NOK												Sum product	Unit cost
		30" condu	20"x13 3/	PTA-1	PTA-2	PTA-3									
Bentonite	kg														
CaCl2 liquid	ltr	6722												6722	7.05
Cement cl. "G"	MT	44577	97259	31069	31069	33770								237744	1350.82
CFR-3L	ltr			19306	21772									41078	37.93
Econolite	ltr	4707	23166											27873	11.21
Gascon	ltr			14768	16328									31096	16.59
Halad-344	kg														
Halad-344L	ltr														21.98
Halad-413L	ltr														90.52
Halad-600LE+	ltr			87371	96403									183774	98.17
HR-15	kg														
HR-15L	ltr														
HR-25L	ltr														41.74
HR-4L	ltr		11925											11925	18.75
HR-6L	ltr														
Latex 2000	ltr														
Microblock	ltr														16.59
Micromax	kg														10.40
Musol E	ltr														21.89
NF-5	ltr	4047	7690	4587	4992	2563								23879	134.91
SCR-100L	ltr			23586										23586	81.90
Sem-7	ltr														57.24
Spacer 500E+	kg														83.20
SSA-1	kg														
Stabiliser 434C	ltr														
Section total:		60054	140041	180687	170563	36334								**587678**	**= sum**

Field related discount: 14.38 %

Double check:	**587678**	**= sum**

Date: 02.05.97

File reference: 6507-3-2.XLSCost

4.12 Equipment Failure

4.12 Equipment failures

Date	Section	Equipment involved	Failure Problem	Lost time hrs
11.04.97	17 1/2"	BOP	Hydraulic failure causing problem latching BOP to wellhead.	1
12.04.97	17 1/2"	Wearbushing	Negative attempt to set wearbushing and redress seat protector.	3
13.04.97	17 1/2"	Stand pipe	Sorted out leakage in stand pipe pressure manifold.	1
13.04.97	12 1/4"	Diverter	Sorted out problem with diverter control system.	1
16.04.97	12 1/4"	Iron roughneck	Repaired hydraulic cylinder on iron rougneck	0.5
19.04.97	12 1/4"	WL unit	Failure in WL computer control panel	4.5
20.04.97	12 1/4"	WL unit	Communication failure between VSP unit and logging unit	2

APPENDIX I

STATOIL

WELLSITE SAMPLE DESCRIPTION

Country: Norway		Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2				
R.T.: 23.5 metres		Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "		Geologist: Tor Finn Kristensen / Dave Phillips		Date: 13.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1003	30	Clst:	med dk gry - olv gry, sft - frm, amor, sdy, mic, non calc	No shows
	70	Rk frags, Qtz frags, m - gran, pr srt, ang, lse, cvgs trapped below csg shoe		
1006	50	Clst:	a.a.	No shows
	50	Sst:	clr - trnsl qtz, rk frags, f - crs, pr srt, ang - sbrndd, lse	Crs clastics probably brought down when running casing
	Tr	Pyr, Mic		
1009	100	Clst:	med dk gry - olv gry, sft - frm, amor, sdy, mic, non calc	No shows
	Tr		Lse qtz grns, Rk frags, Mic, Shl frags	
1015	100	Clst:	a.a.	No shows
		Tr	qtz grns, Rk frags, Shl frags, Foram, Mic	
1018	90	Clst:	med dk gry - olv gry, sft - frm, amor, sdy, mic, non - slily calc	No shows
	10	Sst:	clr - trnsl qtz, f - med, mod srt, sbang - sbrndd, lse, mainly washed out from Clst	
	Tr		Shl frags, Rk frags	
1024	100	Clst:	a.a.	No shows
	Tr		Shl frags	
1027	100	Clst:	med dk gry - olv gry, sft - frm, amor, sdy, slty, micromic, loc micropyr, non calc	No shows
	Tr	Sst:	clr - trnsl qtz, v f - f, sbrndd, lse, (washed out from Clst)	
	Sl Tr		Shl frags	
1033	100	Clst:	a.a.	a.a.
	Sl Tr		Shl frags, Rk frags(cvg)	
1039	100	Clst:	a.a.	a.a.
	Sl Tr		Microfos, Rk frags(cvg)	
1045	100	Clst:	a.a.	a.a.
	Sl Tr		Shl frags	
1051	100	Clst:	a.a.	a.a.
1057	100	Clst:	a.a.	a.a.
	Tr	Sst:	clr - trnsl qtz, f - m, mod srt, sbrndd, app lse, washed from Clst)	
1066	100	Clst:	a.a.	a.a.
	Tr	Sst:	v f - m, else a.a.	
	Tr		Shl frags, Microfos, Foram	
1072	100	Clst:	a.a.	a.a.
	Tr		Sst, Shl frags, Microfos, Foram, Mic	

WELLSITE SAMPLE DESCRIPTION

Country: Norway		Area: Nordland II		Field: Wildcat - D-Fangst	
Well no: 6507/3-2					
R.T.: 23.5 metres		Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum			
Hole size: 12 1/4 "		Geologist: Tor Finn Kristensen / Dave Phillips		Date: 13.04.97	

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1078	90	Clst:	med dk gry - olv gry, sft - frm, amor, sdy, slty, micromic, loc micropyr, non calc - occ slily calc	No shows
	10	Sst:	clr - trnsl qtz, f - m, mod srt, sbrndd, lse, (washed out from Clst?)	
	Sl Tr		Shl frags, Microfos, Rk frags(crs - gran)	
1087	90	Clst:	a.a.	a.a.
	10	Sst:	a.a.	
	Tr		a.a.	
1096	95	Clst:	a.a.	a.a.
	5	Sst:	a.a.	
	Gd Tr		Rk frags (crs - gran)	
	Tr		Shl frags, Microfos, Pyr	
1099	A.A.			a.a.
1102	100	Clst:	a.a.	a.a.
	Tr	Sst:	a.a.	
	Tr		Rk frags, Shl frags, Microfos	
1105	95	Clst:	pred med dk gry, tr olv gry, sft - frm, slty, sdy, tr micromica, non calc, occ slily calc	a.a.
	5	Sst:	sbrndd - sbang, else a.a.	
	Tr		Rk frags, Shl frags, Microfos	
1108	A.A.			a.a.
1111	100	Clst:	med dk gry, occ olv gry, dk gn gry, sft - frm, amor, non - mod calc, sdy, slty, tr micromica	a.a.
	Tr	Sst:	a.a.	
	Tr	Rk frags, Shl Frags, Pyr		
1117	60	Clst:	a.a.	a.a.
	40	Sst:	clr - trnsl qtz grns, lse, f - m, mod srt, sbang	
	Tr	Rk frags, Shl Frags, Pyr		
1120	100	Clst:	med dk gry, occ olv gry, sft - frm, amor, occ sbblky, slty, sdy, non - slily calc, tr micromica	a.a.
	Tr	Sst:	a.a.	
	Tr	Rk frags, Shl Frags		
1126	100	Clst:	incr olv gry, else a.a.	a.a.
	Tr	Sst:	a.a.	
	Tr	Rk frags, Shl Frags, Pyr		

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II	Field: Wildcat - D-Fangst
Well no: 6507/3-2		
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum	
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips	Date: 13.04.97

Depth (m KB)	Lith (%)	Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks Shows, cavings, mud additives, etc.
1129	100	Clst:	pred olv gry, occ med gry, sft - frm, amor - sbblky, slily calc, tr sdy, occ slty, tr glauc	No Shows
	Tr	Rk frags		
1132	A.A.			a.a.
1135	100	Clst:	a.a.	a.a.
	Tr	Sst:	clr - trnsl qtz grns, lse, f - m, mod srt, sbang	
	Tr	Rk frags, Shl Frags, Pyr		
1138	95	Clst:	inc in med dk gry, else a.a.	a.a.
	5	Sst:	a.a.	
	Tr	Rk frags, Shl Frags, Pyr		
1141	70	Clst.	a.a.	a.a.
	30	Sst:	clr - trnsl qtz grns, lse, f - m, mod srt, pred sbrndd, occ sbang (washed out from Clst)	
	Tr	Pyr		
1147	100	Clst:	med dk gry - olv gry, sft - frm, amor, stky, slily calc, tr micromica occ sdy, occ slty	a.a.
	Tr	Sst	a.a.	
1150	A.A.			a.a.
1153	100	Clst:	bcmng more slty and sdy, else a.a	a.a.
	Tr	Sst:	a.a.	
1156	100	Clst:	med dk gry - olv gry, sft - frm, amor, non - slily calc, sdy, slty, micromica, tr glauc	a.a.
	Gd tr	Sst:	clr - trnsl qtz grns, fn - med, tr crs, mod srt, sbrndd - sbang, lse	
1162	100	Clst:	pred olv gry, occ med gry, sft - frm, amor, non - slily calc, tr sdy, tr slty	No dir flu, v slw blmng mkly wh cut flu
1165	A.A.			a.a.
1168	100	Clst:	pred slily calc, occ non calc, else a.a.	a.a.
1171	100	Clst:	a.a.	a.a.
	Tr	Sst:	lse, clr - trnsl qtz grns, f - m, mod srt, sbrndd - sbang	
1174	100	Clst:	a.a., bcmng more sdy and slty, else a.a.	No dir flu, v slw blmng mlky wh cut flu, with ptchy mod wh residual ring

STATOIL

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II	Field: Wildcat - D-Fangst	
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips	Date: 14.04.97	

Depth (m KB)	Lith (%)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, etc.
1177	100	Clst:	olv gry - med dk gry - dk grnsh gry, , sft - frm, amor - sbbblky, non - slily calc, occ slty, occ sdy	No dir flu, v slw blmng mlky wh cut flu, with ptchy mod wh residual ring
1180	A.A.	Poor sample		a.a.
1183	100	Clst:	pred olv gry, occ med dk gry, sft - frm, stky, amor, slily calc, bcmng more slty and sdy	a.a.
	Gd tr	Sst:	lse, clr - trnsl qtz grns, f - m, tr crs, mod srt, sbrndd - sbang	
	Gd Tr	Pyr		
	Tr	Rk Frags		
1186	A.A.			a.a.
1189	100	Clst:	olv gry - med dk gry - occ dk grn gry, sft - frm, amor, occ sdy, slty, loc v slty, micromica, pred slily calc, occ non calc, tr glauc	a.a.
	Tr	Sst:	a.a.	
	Tr	Pyr		
1192	100	Clst:	pred olv gry, else a.a	a.a.
1195	A.A.			a.a.
1198	100	Clst:	a.a., bcmng more slty	a.a.
	Tr	Sst:	a.a.	
1204	100	Clst:	olv gry - med dk gry, sft - frm, amor, slty, sdy, micromic, micropyr i.p., non - slily calc	a.a.
	Tr	Sst:	clr - trnsl qtz, pred m, occ crs, wl srt, sbrndd, lse	
	Tr		Forams	
1207	60	Sst:	clr - trnsl qtz, occ mlky qtz, m - crs, occ v crs, mod srt, sbang - sbrndd, app lse, tr pyr cmt	No oil shows, 8.72% gas
	40	Clst:	glauc i.p., else a.a.	
	Tr		Glauc, Pyr, Shl frags	
1210	100	Clst:	glauc i.p. a.a.	No shows
	Tr	Sst:	a.a.	
	Tr		Glauc, Pyr, Shl frags	
1213	100	Clst:	olv gry - med dk gry, dk gn gry i.p., sft - frm, amor, slty, sdy, micromic, micropyr i.p., non - slily calc	a.a.
	Gd Tr	Sst:	a.a.	
	Gd Tr	Ls:	lt gry, frm, micr, arg	
	Tr		Pyr, Glauc, Rk frags	

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II	Field: Wildcat - D-Fangst
Well no: 6507/3-2		
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum	
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips	Date: 15.04.97

Depth (m KB)	Lith (%)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, etc.
1216	100	Clst:	brn gry - occ brn blk, sft, amor, v micromic, slty, sdy, slily carb, micropyr - pyr, loc v pyr, non - slily calc	a.a.
	Tr	Ls:	lt gry - brn wh, sft - frm, micr, arg	
	Tr		Pyr	
1219	90	Clst:	a.a.	a.a.
	5	Ls:	a.a.	
	5	Sst:	clr - trnsl qtz, occ mlky qtz, m - crs, mod srt, sbang - sbrndd, lse	
	Tr		Pyr	
1222	90	Clst:	a.a.	a.a.
	5	Ls:	a.a.	
	5	Sst:	occ v crs - gran, else a.a.	
	Tr	Pyr		
1225	100	Clst:	brn gry - brn blk, sft, amor, v micromic, micropyr - pyr, slty, sdy, non calc	a.a.
	Sl Tr	Ls:	a.a.	
1228	60	Sst:	clr - trnsl qtz, f - m, mod - wl srt, sbang - sbrndd, app lse, abd mic	No shows
	40	Clst:	a.a.	
	Tr	Ls:	a.a.	
	Tr		Mic, Pyr	
1231	60	Clst:	a.a.	No shows poor sample
	40	Sst:	a.a.	
	Tr		Mic, Pyr	
			Cut core # 1, 1230m - 1236m	
1237	80	Sst:	clr - trnsl qtz, f - m, occ crs, mod srt, sbang - sbrndd, app lse, abd mic, app gd vis por	First sample after trip No shows
	10	Clst:	brn gry, sft, amor micromic, slty, sdy, slily carb, non calc	
	10	Clst:	olv gry - med dk gry, cvg from Kai Fm	
	Tr	Coal:	blk, mod hd, brit i.p., occ fibr tex, com pyr	
	Tr		Pyr, Mic, Rk frags, Shl frags	
1240	80	Sst:	pred m, occ crs, else a.a.	Clst: No fluor, blooming - slow stream bl wh cut fluor
	20	Clst:	brn gry - brn blk, med dk gry, sft - frm, amor, v micromic, slty - v slty, loc grdg Sltst, carb, occ pyr, non calc	
	Tr	Coal:	brn blk - blk, mod hd, brit i.p., occ fibr tex, com w/pyr	
	Tr		Mic, Pyr	
1243	100	Sst:	a.a.	a.a.
	Tr	Clst:	a.a.	
	Tr	Coal:	a.a.	
	Tr		Mic(abd), Pyr	

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 16.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1246	70	Sst:	clr - trnsl qtz, m, f i.p., crs i.p., pr - mod srt, sbang - sbrndd, app lse, tr pyr cmt, gd vis por	Clst: No fluor, blooming - slow stream bl wh cut fluor
	30	Clst:	brn gry - brn blk, sft - frm, amor - blky, micromic, slty - v slty, occ grdg Sltst, carb, com pyr, non calc	
	Tr	Coal:	brn blk - blk, mod hd, brit i.p., occ fibr tex, com w/pyr, arg i.p.	
	Tr		Mic, Pyr	
1249	80	Sst:	f - crs, pr srt, else a.a.	a.a.
	15	Clst:	brn gry - brn blk, sft - frm, amor - blky, micromic, slty - v slty, slily carb - v carb, loc grdg arg Coal, com pyr, non calc	
	5	Coal:	brn blk - blk, mod hd, brit i.p., occ fibr tex, com pyr, arg i.p.	
	Tr		Mic, Pyr	
1252	90	Sst:	a.a.	a.a.
	10	Clst:	carb i.p., else a.a.	
	Tr	Coal:	a.a.	
	Tr		Mic, Pyr	
1258	70	Sst:	clr - trnsl qtz, m - crs, occ f, mod srt, sbang - sbrndd, app lse, gd vis por	a.a.
	20	Clst:	brn gry - brn blk, sft - frm, amor - blky, micromic, v slty, grdg Sltsti.p., sdy i.p., carb - occ v carb, pyr i.p., non calc	
	10	Coal:	blk, mod hd, brit, occ arg, occ pyr	
	Tr		Mic	
1264	80	Sst:	a.a.	a.a.
	10	Clst:	a.a.	
	10	Coal:	arg grdg v carb Clst i.p., else a.a.	
	Tr		Mic	
1270	100	Sst:	clr - trnsl qtz, occ mlky qtz, m - crs, occ v crs, mod srt, ang - sbrndd, app lse, tr pyr cmt, gd vis por	a.a.
	Gd Tr	Clst:	a.a.	
	Gd Tr	Coal:	a.a.	
	Tr		Mic, Pyr	
1276	70	Sst:	f i.p., else a.a.	a.a.
	30	Clst:	i.p. v carb, grdg Coal i.p., else a.a.	
	Gd Tr	Coal:	a.a.	
	Tr		Pyr, Mic	
1282	A/A			a.a.
1288	70	Sst:	clr - trnsl qtz, m - crs, occ v crs, mod srt, ang - sbrndd (high ang due to breaking up sil cmt?), app lse, gd vis por	a.a.
	30	Clst:	brn gry - brn blk, sft - frm, amor - blky, carb - occ v carb, occ grdg arg Coal, micromic, slty - v slty, occ sdy, com pyr, non calc	
	Tr	Coal:	blk, mod hd, brit i.p., fibr tex i.p., arg i.p., com pyr	
	Tr		Pyr Mic	

WELLSITE SAMPLE DESCRIPTION			Page 7 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 16.04.97

Depth (m KB)	Lith (%)		Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks: Shows, cavings, mud additives, etc.
1294	60	Sst:	clr - trnsl qtz, m - crs, mod srt, sbang - sbrndd, app lse, ex vis por	Clst: No fluor, blooming - slow stream bl wh cut fluor
	40	Clst:	brn gry - brn blk, sft, amor, micromic, slty - v slty, grdg Sltst i.p., sdy i.p., carb, com pyr, non calc	
	Tr	Coal:	blk, mod hd, brit i.p., fibr tex i.p., arg i.p., com pyr	
	Tr		Pyr, Mic	
1300	90	Sst:	pred m, occ crs, occ f, mod - wl srt, else a.a.	a.a.
	10	Clst:	a.a.	
	Tr		Coal, Pyr, Mic	
1306	50	Sst:	a.a.	a.a.
	40	Clst:	com Coal frags, else a.a.	
	10	Coal:	brn blk - blk, mod hd, brit i.p., fibr tex i.p., arg i.p., com pyr	
	Tr		Pyr, Mic	
1312	60	Sst:	f - m, else a.a.	a.a.
	40	Clst:	brn gry - brn blk, sft, amor, micromic, slty - v slty, grdg Sltst i.p., sdy i.p., carb, com pyr, non calc	
	Tr	Coal:	blk, mod hd, brit, pyr i.p.	
	Tr		Pyr, Mic	
1318	80	Sst:	clr - trnsl qtz, f - m, occ crs, mod srt, sbang - sbrndd, app lse, gd vis por	a.a.
	20	Clst:	brn gry - brn blk, sft, amor, micromic, slty - v slty grdg Sltst i.p., sdy i.p., slily carb - carb, com Coal frags, pyr i.p., non calc	
	Gd Tr	Coal:	brn blk - blk, mod hd, brit i.p., fibr tex i.p., occ arg, com pyr	
	Tr		Pyr, Mic	
1324			Samples lost/washed away on shakers	
1330			a.a.	
1333	100	Sst:	clr - trnsl qtz, m - crs, mod srt, sbang - sbrndd, lse, ex vis por	No shows
	Tr	Clst:	a.a.	
	Sl Tr		Coal, Mic, Pyr	
1339	A.A.			a.a.
1345	A.A.			a.a.
1351	100	Sst:	clr - trnsl qtz, m - crs, occ f, occ crs, mod srt, sbang - sbrndd, app lse, gd vis por	a.a.
	Tr		Clst, Coal, Mic	
1357	60	Sst:	f - m, occ crs, else a.a.	Sltst: v wk blooming bl wh cut fluor
	30	Sltst:	brn gry, sft, amor, arg, micromic, sdy, carb, pyr i.p., non calc	
	10	Coal:	brn blk - blk, mod hd, brit i.p., fibr tex i.p., occ arg, com pyr	
	Tr		Mic	

STATOIL

WELLSITE SAMPLE DESCRIPTION			Page 8 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 16.04.97

Depth (m KB)	Lith (%)		Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks: Shows, cavings, mud additives, etc.
1363	70	Sltst:	brn gry, sft, amor, arg, micromic, sdy, slily carb - carb, pyr i.p., non calc	Sltst: v wk blooming
	20	Sst:	clr - trnsl qtz, f - m, occ crs, mod srt, sbang - sbrndd, app lse, gd vis por	bl wh cut fluor
	10	Clst:	brn blk, frm, blky, v carb grdg arg Coal i.p., pyr i.p., non calc	Clst: blooming - slow
	Tr	Coal:	blk, mod hd, brit, pyr i.p.	stream bl wh cut fluor
	Tr		Pyr, Mic	
1369	60	Sst:	clr - trnsl qtz, pred m, occ crs, wl srt, sbrndd, app lse, ex vis por	a.a.
	30	Sltst:	a.a.	
	10	Coal:	a.a.	
	Tr	Clst:	v carb a.a.	
	Tr		Pyr, Mic	
1375	90	Sst:	a.a.	a.a.
	10	Sltst:	a.a.	
	Tr		Clst, Coal, Pyr, Mic	
1381	90	Sltst:	brn gry, sft, amor, arg, micromic, sdy - v sdy, grdg Sst i.p., slily carb - carb, pyr i.p., non calc	a.a.
	10	Sst:	clr - trnsl qtz, f - m, mod srt, sbang - sbrndd, lse, gd vis por	
	Tr		Coal, Clst, Mic, Pyr	
1387	50	Sltst:	a.a.	a.a.
	50	Sst:	a.a.	
	Tr		Coal, Clst, Mic, Pyr	
1393	100	Sst:	clr - trnsl qtz, pred m, wl srt, sbang - sbrndd, lse, ex vis por	a.a.
1396	80	Sst:	a.a.	a.a.
	15	Sltst:	a.a.	
	5	Clst:	brn blk, frm, amor - blky, micromic, v carb grdg arg Coal i.p., pyr i.p., non calc	
	Tr		Coal, Pyr, Mic	
1402	80	Sst:	a.a.	a.a.
	20	Sltst:	a.a.	
	Tr		Coal, Clst, Mic, Pyr	
			Cut core no. 2: 1402m - 1413m	
1414	80	Sst:	clr - trnsl qtz, f - crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	10	Sltst:	brn gry, sft, amor, arg, micromic, sdy - v sdy, grdg Sst i.p., slily carb - carb, pyr i.p., non calc	
	10	Clst:	dk brn gry, frm, amor - blky, carb - v carb grdg Coal i.p., pyr i.p., non calc	
	Tr		Mic, Pyr	

WELLSITE SAMPLE DESCRIPTION			Page 9 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 17.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1417	80	Sst:	clr - trnsl qtz, pred med - crs, mod srt, sbang - sbrndd, lse, ex vis por	No fluor
	10	Sltst:	brn gry, sft, amor, arg, micromic, sdy - v sdy, grdg Sst i.p., slily carb - carb, pyr i.p., non calc	Sltst: v wk blooming bl wh cut fluor
	10	Clst:	dk brn gry, frm, amor - blky, carb - v carb grdg Coal i.p., pyr i.p., non calc	Clst&Coal: blooming-slow stream
	Gd Tr	Coal:	blk, mod hd, brit	bl wh cut fluor
	Tr		Mic	
1423	90	Sst:	clr -trnsl qtz, med - crs, occ f, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	5	Sltst:	a.a.	
	5	Clst:	a.a.	
	Tr		Coal, Mic	
1429	60	Sst:	a.a.	a.a.
	30	Sltst:	lt brn gry - brn gry, sft, amor, micromic, arg, sdy - v sdy, grdg Sst i.p., slily carb - carb, pyr i.p., non calc	
	10	Clst:	v carb grdg Coal a.a.	
	Tr		Coal, Mic, Pyr	
1435	90	Sst:	a.a.	a.a.
	10	Sltst:	a.a.	
	Tr		Clst, Coal, Mic, Pyr	
1441	70	Sst:	clr - trnsl qtz, pred m, wl srt, sbang - sbrndd, lse, ex vis por	a.a.
	20	Sltst:	lt brn gry - brn gry a.a.	
	10	Clst:	v carb a.a.	
	Tr		Mic, Coal	
1447	90	Sst:	med - crs, else a.a.	a.a.
	10	Sltst:	a.a.	
	Tr	Clst:	v carb a.a.	
	Tr		Mic	
1453	A.A.			a.a.
1459	90	Sst:	clr - trnsl qtz, f - crs, occ v crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	5	Sltst:	a.a.	
	5	Coal:	blk - occ brn blk, mod hd, brit, occ arg grdg v carb Clst, pyr i.p.	
	Tr		Mic	
1465	70	Sst:	clr - trnsl qtz, pred m, occ crs - v crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	25	Sltst:	a.a.	
	5	Coal:	a.a.	
	Tr		Mic	
1471	100	Sst:	f - v crs, pr srt, tr sil cmt, else a.a.	a.a.
	Tr		Sltst, Clst, Coal, Mic, Pyr	

WELLSITE SAMPLE DESCRIPTION			Page 10 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 17.04.97

Depth (m KB)	Lith (%)		Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks: Shows, cavings, mud additives, etc.
1477	100	Sst:	clr - trnsl qtz, f - v crs, pr srt, sbang - sbrndd, lse, tr si cmt, ex vis por	No fluor
	Tr		Sltst, Clst, Coal, Mic, Pyr	Sltst: v wk blooming bl wh cut fluor
1483	100	Sst:	a.a.	Clst&Coal:
	Gd Tr	Clst:	brn blk - blk, frm - mod hd, blky, v carb grdg Coal, pyr i.p., non calc	blooming-slow stream
	Tr		Sltst, Mic	bl wh cut fluor
1489	70	Sst:	clr - trnsl qtz, m - v crs, occ gran, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	20	Clst:	a.a.	
	10	Sltst:	lt brn gry - brn gry, sft, amor, micromic, arg, sdy - v sdy, grdg v f - f Sst i.p., slily carb, occ pyr, non calc	
	Tr	Coal:	blk, mod hd, brit	
	Tr	Mic		
1495	50	Clst:	brn blk - blk, frm - mod hd, blky - sbfis, v carb grdg Coal i.p., pyr i.p., non calc	a.a.
	40	Sst:	occ f, else a.a.	
	10	Coal:	blk, mod hd, brit, com pyr lam	
	Tr		Mic	
1501	50	Sst:	f - crs, occ v crs, pr srt, else a.a.	a.a.
	30	Sltst:	lt brn gry - dk brn gry, sft, amor, micromic, arg, sdy - v sdy, grdg v f - f Sst i.p., slily carb - carb, occ pyr, non calc	
	20	Clst:	v carb a.a.	
	Gd Tr	Coal:	a.a.	
	Tr		Mic	
1507	100	Sst:	clr - trnsl qtz, pred m, occ crs, occ f, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	Gd Tr	Clst:	a.a.	
	Tr		Mic	
1513			Washed away on shakers	
1519	70	Sst:	f - med, occ crs, else a.a.	a.a.
	20	Clst:	v carb a.a.	
	10	Coal:	blk, mod hd, brit, occ pyr lam	
	Gd Tr	Sltst:	lt brn gry - brn gry, sft, amor, micromic, arg, sdy - v sdy, grdg v f - f Sst i.p., slily carb - carb, occ pyr, non calc	
	Tr		Mic	
1525	A.A.			a.a.
1531	90	Sst:	clr - trnsl qtz, m - crs, wl srt, sbang - sbrndd, lse, ex vis por	a.a.
	5	Sltst:	a.a.	
	5	Clst:	a.a.	
	Tr		Coal, Mic	

WELLSITE SAMPLE DESCRIPTION			Page 11 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 17.04.97

Depth (m KB)	Lith (%)		Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks: Shows, cavings, mud additives, etc.
1537	90	Sst:	clr - trnsl qtz, pred m, wl srt, sbang - sbrndd, lse, ex vis por	No fluor, Sltst: v wk blooming bl wh cut fl, Clst/Coal: blooming - slow stream bl wh cut fluor
	10	Sltst:	lt brn gry - brn gry, sft, amor, micromic, arg, sdy - v sdy, grdg v f - f Sst i.p., slily carb - carb, occ pyr, non calc	
	Tr		Clst, Coal, Mic, Pyr	
1543	50	Sst:	f - crs, pr - mod srt, else a.a.	a.a.
	30	Clst:	brn blk - blk, frm - mod hd, blky - sbfis, v carb grdg Coal i.p., pyr i.p., non calc	
	20	Sltst:	a.a.	
	Tr		Coal, Mic, Pyr	
1549	50	Sst:	clr - trnsl qtz, f - m, occ crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	40	Sltst:	grdg v f - f Sst a.a.	
	10	Clst:	v carb a.a.	
	Tr		Mic	
1555	40	Sst:	a.a.	a.a.
	40	Sltst:	slily carb, else a.a.	
	20	Clst:	v carb a.a., com pyr lam	
	Gd Tr	Coal:	blk, mod hd, brit	
	Tr		Mic	
1561	50	Sst:	a.a.	a.a.
	50	Sltst:	a.a.	
	Tr	Clst:	v carb a.a.	
	Tr		Coal, Mic	
1570	90	Sst:	clr - trnsl qtz, f - med, occ crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	5	Sltst:	a.a.	
	5	Clst:	a.a.	
	Gd Tr	Coal:	blk, mod hd, brit	
	Tr		Mic	
1576	100	Sst:	clr - trnsl qtz, f - crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	Tr	Sltst:	a.a.	
	Tr		Clst, Coal, Mic	
1585	90	Sst:	pred m - crs, occ f, occ crs, else a.a.	a.a.
	10	Clst:	brn blk - blk, frm - mod hd, blky - sbfis, v carb grdg Coal i.p., com pyr lam, non calc	
	Tr		Sltst, Coal, Mic	
1591	90	Sst:	clr - trnsl qtz, f - crs, occ v crs - gran, pr - mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	5	Clst:	a.a.	
	5	Sltst:	a.a.	
	Tr		Coal, Mic	

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 17.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1597	90	Sst:	clr - trnsl qtz, pred m, occ f, occ crs - v crs, mod srt, sbang - sbrndd, lse, ex vis por	No shows, Sltst: v wk blooming bl wh cut fl, Clst/Coal: blooming - slow stream bl wh cut fluor
	5	Clst:	brn blk - blk, frm, blky - sbfis, v carb grdg Coal i.p., com pyr lam, non calc	
	5	Sltst:	lt brn gry - brn gry, lt gry, sft, amor, micromic, arg, sdy - v sdy, grdg v f - f Sst i.p., slily carb, occ pyr, non calc	
	Tr	Coal:	blk, frm - mod hd, brit i.p., fibr tex i.p.	
	Tr		Mic	
1603	100	Sst:	clr - trnsl qtz, occ mlky qtz, f - gran, pr srt, sbang - sbrndd, lse ex vis por	a.a.
	Tr		Clst, Sltst, Coal, Mic	
1612	100	Sst:	m - v crs, occ f, mod srt, else a.a.	a.a.
	Tr		Clst, Sltst, Coal, Mic	
1618	90	Sst:	lt gry, clr - trnsl qtz, f - crs, pr srt, sbang - sbrndd, lse - sft, arg/kaol mtx i.p., occ micromic, pr - gd vis por	a.a.
	10	Sltst:	grdg Sst a.a.	
	Tr		Clst, Mic	
1624	100	Sst:	clr - trnsl qtz, f - m, occ crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
	Tr		Sltst, Clst, Coal, Mic, Pyr	
1630	100	Sst:	pred m, occ crs, occ f, mod - wl srt, else a.a.	a.a.
	Tr		Sltst, Clst, Coal, Mic	
1636	95	Sst:	a.a.	a.a.
	5	Clst:	brn blk - blk, frm, blky - sbfis, v carb grdg Coal i.p., non calc	
1642	A.A.			a.a.
1648	100	Sst:	clr - trnsl qtz, pred m, occ f, occ crs, mod - wl srt, sbang - sbrndd, lse, mica, tr pyr, tr arg/kao mtx, ex vis por	a.a.
	Tr		Clst, Coal	
1654	80	Sst:	clr - trnsl qtz grns, v f - m, occ crs, pr - mod srt, sbang - sbrndd, loc v arg mtx, lse, v gd vis por	a.a.
	20	Clst.	brnsh gry - brn blk, amor, sft, v sol, non calc v sdy, carb, occ grdg to v f arg Sst	
	Tr		Coal	
1660	80	Sst:	pred m, also v f and crs, else a.a.	a.a.
	20	Clst:	pred brnsh gry, v sol, else a.a.	
	Tr	Coal		
1670	60	Clst:	brnsh gry, sft, amor, sol, non calc, v sdy, micromica, carb	a.a.
	40	Sst:	a.a.	
	Gd Tr	Coal		
	Tr	Pyr		

STATOIL

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II	Field: Wildcat - D-Fangst	
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips	Date: 17.04.97	

Depth (m KB)	Lith (%)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, etc.
1672	90	Sst:	clr - trnsl qtz, fn - crs crs, pr srt, sbang - sbrndd, lse, mica, tr pyr, tr arg/kao mtx, ex vis por	No Shows Clst/Coal: slw blmng - strmng blu wh cut
	10	Clst:	brnsh gry, sft, amor, sol, non calc, v sdy, micromica, carb	
	Tr	Coal		
1678	60	Sst.	crs - m, occ f, pr - mod srt, else a.a.	a.a.
	30	Clst:	v sol, washing out of sample else a.a.	
	10	Clst:	brn blk - blk, frm, blky - sbfis, v carb grdg Coal i.p., non calc	
	Tr	Coal		
1684	60	Clst:	pred brnsh gry, occ lt brnsh gry, sft, amor, v sol, non calc, micromica, sdy, slty, loc grad to v f argil Sst	a.a.
	40	Sst.	clr - trnsl qtz grns, f - m, mod srt, sbang - sbrnd, lse, loc argil mtx, v gd vis por	
	Tr	Coal, Pyr		
1690	70	Clst:	a.a.	a.a.
	20	Sst:	a.a.	
	10	Coal:	blk, brit, mod hd, v pyr, grad loc carb clst	
	Tr	Pyr		
1696	70	Sst:	pred f - m, occ crs, mod srt, else a.a.	a.a.
	30	Clst.	a.a.	
	Tr	Pyr, Coal		
1702	90	Sst:	clr - trnsl qtz, pred f - m, occ crs, mod srt, sbang - sbrnd, loc argil mtx, lse	a.a.
	10	Clst:	a.a.	
	Gd Tr	Mica		
	Tr	Coal		
1708	50	Sst:	a.a.	a.a.
	50	Clst:	Brnsh gry, sft, amor, v sol, slty, sdy, non calc, carb, micropyr, micromica	
	Tr	Coal, Mica		
1714	70	Sst.	pred f, occ m - crs, mod - wl srt, else a.a.	a.a.
	30	Clst:	a.a.	
	Tr	Coal, Pyr; Mica		
1720	80	Sst:	pred m- f, tr crs, else a.a.	a.a.
	20	Clst:	a.a.	
	Tr	Coal, Mica, Pyr		
1726	90	Sst:	clr - trnsl, tr mlky wh qtz grns, f - crs, pr srt, sbrnd - sbang, lse	a.a.
	10	Clst:	a.a.	
	Tr	Coal, Mica		

WELLSITE SAMPLE DESCRIPTION			Page 14 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 18.04.97

Depth (m KB)	Lith (%)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, etc.
1732	90	Sst:	clr - trnsl, tr mlky wh qtz grns, f - crs, tr v crs, sbrndd - sbang, lse, ex vis por	No shows, Clst/Coal: v slw blmng - strmng blu wh cutflu
	10	Clst:	Brnsh gry, sft, amor, v sol, slty, sdy, non calc, carb, micropyr, micromica, occ grad to v f argil Sst	
	Tr	Coal, Pyr, Mica		
1738	95	Sst:	f - v crs, pr srt, rnd - sbang, else a.a.	No show
	5	Ls:	off wh - lt gry, sft - frm, amor - blky, micr, arg i.p., occ pyr	
	Tr	Pyr, Coal		
1744	100	Sst:	pred m, occ f and crs, mod srt, sbrndd - sbang	a.a.
	Gd Tr	Pyr		
	Tr	Coal		
1750	85	Sst.	a.a.	
	10	Clst:	brnsh blk - blk, frm, blky, non calc, v carb, grad to coal, slty i.p. micropyr	Clst/Coal: v slw - mod blmng - strmng blu wh cut flu
	5	Coal:	blk, mod hd, brit, occ pyr	
	Tr	Pyr		
1756	95	Sst:	clr - trnsl qtz grns, pred m , tr f, tr crs, mod srt, sbrndd - sbang, lse	a.a.
	5	Clst:	a.a.	
	Tr	Coal, Pyr		
1762	70	Sst:	f - m, mod srt, else a.a.	a.a.
	30	Clst.	lt brnsh gry, sft, amor, v sol, non calc, sdy, slty, micromica, tr carb frags clst v sol and washed out of sample	
	Tr	Coal, Mica, Pyr		
1768	70	Sst:	crs - f, pr srt, else a.a.	a.a.
	25	Clst:	a.a.	
	5	Clst:	brnsh blk - blk, frm, blky, non calc, v carb, grad to coal, slty i.p. micropyr	
	Tr	Coal, Pyr; Mica		
1774	70	Sst:	a.a.	a.a.
	30	Clst:	lt brnsh gry, a.a.	
	Tr	Coal		
1780	100	Sst:	clr - trnsl qtz grns, pred f, occ m, occ v f, mod - w srt, pred sbrndd, occ sbang, lse	No Show
	Tr	Mica		
1786	90	Sst:	pred crs - m, occ f, pr srt, sbrnd - sbang, else a.a.	a.a.
	10	Clst:	lt brnsh gry, occ brnsh blk, a.a.	
	Tr	Mica, Coal, Pyr		
1792	100	Sst:	pred f - v f, occ m, mod srt, else a.a.	a.a.
	Tr	Clst:	a.a.	

WELLSITE SAMPLE DESCRIPTION			Page 15 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 18.04.97

Depth (m KB)	Lith (%)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, etc.
1798	60	Sst:	clr - trnsl qtz grns, m - v crs, tr fn, pr srt, sbang - sbrndd, lse, ex vis por	No Shows
	20	Clst:	lt brn gry, sft, amor, v sol, non calc, slty, sdy, micropyr	Clst/Coal, slw - mod
	20	Clst:	dsky yel brn, frm, amor - blky, non calc, carb frags and lams, slty, micromica	strmng blu wh cut flu
	Gd Tr	Coal:	blk, brit, mod hd	
1804	100	Sst.	v f - m, tr crs, pr srt, else a.a.	No shows
	Tr	Coal, Pyr		
1810	80	Sst:	crs - m, tr v crs, else a.a.	No shows
	20	Clst:	lt brnsh gry a.a., tr dsky yel brn a.a., tr gnsh gry, sft, amor - blky slily calc, sdy, carb	Clst/Coal, slw - mod strmng blu wh cut flu
1813	100	Sst:	f - crs, pr srt, else a.a.	No Shows
	Tr	Pyr		
1816	80	Sst:	clr - trnsl qtz grns, f - crs, pr srt, sbrndd - sbang, lse, ex vis por	Clst/Coal, slw strmng
	20	Clst:	lt brnsh gry, sft, amor, v sol, non calc, slty, sdy	- blmng blu wh cut
	Tr	Coal		flu
1819	90	Sst:	clr - trnsl qtz, occ mlky wh - lt gry qtz, f - v crs, occ gran, pr srt, sbang - sbrndd, lse, ex vis por	No shows
	10	Clst:	a.a.	
	Sl Tr		Mic, Coal	
1822	80	Sst:	clr - trnsl qtz, occ mlky wh - lt gry qtz, f - gran, pr srt, sb ang - sbrndd, arg i.p., loc kaol, lse - sft, ex - pr vis por	a.a.
	20	Clst:	lt brn gry, sft amor, sol, slty, sdy, non calc	
1825	90	Sst:	occ pk qtz, else a.a.	No shows
	10	Clst:	a.a.	
1828	60	Sst:	a.a.	a.a.
	40	Clst.	lt brn gry - brn gry, sft - frm, amor, sol i.p., slty i.p., sdy i.p., micromic, non calc	
1831	80	Sst:	a.a.	a.a.
	20	Clst:	a.a.	
1834	100	Sst:	clr - trnsl qtz, f - m, occ crs - v crs, mod srt, sbang - sbrndd, lse, ex vis por	a.a.
1837	70	Sst:	clr - trnsl qtz, occ mlky wh - lt gry qtz, f - gran, pr srt, sb ang - sbrndd, arg i.p., loc kaol, lse - sft, ex - pr vis por	a.a.
	30	Clst:	lt bvrn gry - brn gry, lt gry, sft, amor, sol, micromic, slty, sdy - v sdy, grdg Sst i.p., non - occ slily calc	
1840	90	Sst:	f - v crs, occ gran, else a.a.	a.a.
	10	Clst:	a.a.	

STATOIL

WELLSITE SAMPLE DESCRIPTION			Page 16 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 18.04.97

Depth (m KB)	Lith (%)		Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks: Shows, cavings, mud additives, etc.
1843	60	Clst:	lt brn gry - brn gry, med gry - med dk gry, tr dsky yel gry, sft, amor, sol i.p., micromic, slty, sdy - v sdy, i.p. grdg Sst, non - occ slily calc	No shows
	40	Sst:	lt gry - lt brn gry, clr - trnsl qtz, occ lt gry qtz, f - crs, pr srt, ang - sbrndd, lse -sft, arg i.p., loc kaol, app pr - gd vis por	
1846	90	Sst:	pred lse grns, else a.a.	a.a.
	10	Clst:	a.a.	
1849	80	Clst:	slily slty, occ slily sdy, non calc, else a.a.	a.a.
	20	Sst:	a.a.	
1852	70	Sst:	lt gry - med gry, clr - trnsl qtz, occ lt gry - med gry qtz, f - crs, pr srt, ang - sbrndd, sft - lse, arg i.p., mic, loc kaol, app pr - gd vis por	a.a.
	30	Clst:	lt brn gry - brn gry, med lt gry - med gry, tr dsky yel, tr dsky rd, tr rd brn, sft - occ frm, amor - blky, slily slty, non - occ slily calc	
	Tr		Mic	
1855	90	Sst:	occ v crs - gran, else a.a.	a.a.
	10	Clst:	a.a.	
	Tr		Mic	
1858	80	Sst:	a.a.	a.a.
	20	Clst:	a.a.	
	Tr	Clst:	brn blk, mod hd, blky, v carb, com Coal frags, CAVINGS?	
	Tr		Mic	
1861	90	Sst:	pred f - crs, else a.a.	a.a.
	10	Clst:	a.a.	
1864	80	Sst:	a.a.	a.a.
	20	Clst:	lt brn gry - brn gry, tr mod olv brn, else a.a.	
	Tr		Mic, Coal frags(cvg?)	
1867	A.A.			a.a.
1870	80	Sst:	a.a.	a.a.
	20	Clst:	carb i.p., else a.a.	
	Tr		Mic	
1873	90	Clst:	lt brn gry - brn gry, lt gry - med gry, tr dsky yel, tr rd brn, tr dsky rd, sft - frm, amor - blky, non calc	No shows
	10	Sst:	a.a.	
1876	70	Sst:	lt brn gry, clr - trnsl qtz, f - crs, pr srt, ang - sbrndd, lse - sft, arg i.p., loc kaol, app pr - gd vis por	a.a.
	20	Clst:	varic a.a.	
	10	Ls:	v lt gry, sft - frm, micr, slily arg, occ sdy	

WELLSITE SAMPLE DESCRIPTION			Page 17 of 21
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Dave Phillips		Date: 18.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1879	70	Clst:	lt brn gry - brn gry, tr dsky yel, tr rd brn, tr dsky rd, sft - frm, amor - blky, non calc	No shows
	20	Sst:	lt brn gry, clr - trnsl qtz, f - crs, pr srt, ang - sbrndd, lse - sft, arg i.p., loc kaol, app pr - gd vis por	
	10	Sst:	lt gry, clr - trnsl qtz, f, mod srt, sbang - sbrndd, mod hd - hd, calc cmt, no vis por	
1882	70	Sst:	med lt gry, clr - trnsl qtz, f - crs, pr srt, ang - sbrndd, lse - hd, calc cmt i.p.,	a.a.
	30	Clst:	varic, lt brn gry - brn gry, gn gry i.p., tr dsky yel, tr dsky rd, tr rd brn, sft - frm, amor - blky, non calc	
1885	80	Sst:	clr - trnsl qtz, pred f - m, mod srt, sbang - sbrndd, lse gd vis por	a.a.
	20	Clst:	pred lt brn gry - brn gry, tr varic, else a.a.	
1888	80	Sst:	lt brn gry, clr - trnsl qtz, f - crs, occ v crs, pr srt, ang - sbrndd, lse - sft, arg i.p., loc kaol, app pr - gd vis por	a.a.
	20	Clst:	a.a.	
1891	90	Sst:	pred clr - trnsl qtz, pred med, occ crs, occ f, mod - wl srt, lse, app gd vis por	a.a.
	10	Clst:	a.a.	
1894	80	Sst:	a.a.	a.a.
	10	Clst:	a.a.	
	10	Sltst:	dk brn gry, sft - frm, amor, arg sdy i.p., carb, non calc (Cavings)	
1897	100	Sst:	a.a.	a.a.
	Tr	Clst:	a.a.	
	Tr	Sltst:	a.a. (Cavings)	
	Tr	Mic		
1900	100	Sst:	clr - trnsl qtz, pred m, occ crs, occ f, mod - wl srt, sbang - sbrndd, pred lse, occ arg mtx, app gd - occ pr vis por	a.a.
	Tr	Clst:	a.a.	
1903	90	Sst:	a.a.	a.a.
	10	Clst:	a.a.	
1906	50	Sst:	a.a.	Sltst: no fluor, blooming - slow stream bl wh cut fluor
	50	Sltst:	brn gry - brn blk, sft, amor, arg, sdy - occ v sdy, carb, micromic, non calc (Cavings due to string movement when stalling)	
	Tr		Mic, Coal(cvg)	
1909	90	Sst:	clr - trnsl qtz, f - crs, pr srt, ang - sbrndd, pred lse, occ sft, occ arg mtx, app gd - occ pr vis por	a.a.
	10	Sltst:	a.a.	
	Gd Tr	Ls:	v lt gry, sft - frm, micr, slily arg	
	Tr		Clst, Mic	

WELLSITE SAMPLE DESCRIPTION				Page 18 of 21
Country: Norway		Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2				
R.T.: 23.5 metres		Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "		Geologist: Tor Finn Kristensen / Dave Phillips / Olav Beyer		Date: 18.04.97

Depth (m KB)	Lith (%)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, etc.
1912	80	Sst:	clr - trnsl qtz, f - m, occ crs, mod srt, ang - sbrndd, lse - occ fri, tr sil cmt, occ arg mtx, app gd - occ pr vis por	No show
	10	Clst:	lt brn gry - brn gry, m lt gry - m gry, sft - frm, amor - blky, slily slty, non calc	
	10	Ls:	lt gry, sft, micr, amor, arg	
	Tr	Mic		
1915	80	Sst:	f - v crs, pr srt, occ sil cmt, tr calc cmt, else a.a.	a.a.
	20	Clst:	a.a.	
	Sltr	Pyr nods		
1918	70	Sst:	dom a.a.	a.a.
	20	Clst:	a.a.	
	10	Ls:	a.a.	
	Tr	Pyr nods		
1921	a.a.	+ tr Coal: blk, frm, brit		
1924	60	Sst:	dom f- vcrs, tr gran, also vf- slt, sil cmt, tight, frm-mod hd	a.a.
	20	Clst:	a.a.	
	20	Ls:	a.a.	
	Gdtr	Coal		
	Tr	Pyr nods, mica		
1927	a.a.			
1930	70	Sst:	dom a.a., also min vf-slt, sil cmt, frm, tight	a.a.
	20	Clst:	a.a.	
	10	Ls:	a.a.	
	Gdtr	Coal		
	Sltr	Pyr nods		
1933	a.a.			
1936	80	Sst:	dom f - crs, wll srt, lse, sbrnd - sbang, dom lse	a.a.
	10	Clst:	incr lt gry shades, sft, sl stky, else a.a.	
	10	Ls:	a.a.	
	Gdtr	Coal		
	Sltr	Pyr nods		
1939	50	Sst:	dom a.a.	a.a.
	40	Clst:	dom lt gry, sft - amor, sl stky, a.a.	
	10	Ls:	a.a.	
	Gdtr	Coal		
	Sltr	Pyr nods		
1942	a.a.			a.a.

Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Olav Beyer		Date: 19.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1945	30	Sst:	dom clr-transl qtz, f - crs, mod - wll srt, lse, sbrnd - sbang, arg mtx	No shows
	60	Clst:	dom lt gry, amor - sbblky, sft, sl stky, sl- v.slty, non calc	
	10	Ls:	wh - off wh, amor- sbblky, frm, micr	
	Tr	Pyr nods		
1948	gen a.a.,		Clst bec also dsky yel, Gdtr pyr nods	
1951	a.a.			
1954	45	Sst:	a.a.	a.a.
	40	Clst/Slst:	bec incr med dk gry-dk gry, slty-v.slty, pred grdg Slst, non calc	
	15	Ls:	a.a.	
	Tr		Pyr nods, Mic	
1957	50	Sst:	a.a.	
	30	Clst:	dom med dk gry, v.slty	
	20	Ls:	a.a.	
	Gdtr		Pyr nods	
1960	80	Sst:	lt gry, clr - trnsl qtz, f - crs, mod srt, sbang - sbrndd, lse - hd, dol cmt i.p., arg mtx i.p., gd - pr vis por	No shows
	20	Clst:	m gry - m dk gry, brn gry - lt brn gry, sft - frm, amor - sbblky, slily slty - occ v slty, non calc	
	Tr	Ls:	a.a.	
	Tr		Mic, Pyr	
1963	60	Sst:	clr - trnsl qtz, pred m - v crs, occ f, occ gran, mod srt, sbang - sbrndd, lse - hd, occ dol cmt, arg mtx i.p., occ kaol, tr pyr, gd - pr vis por	a.a.
	40	Clst:	lt gry - m dk gry, brn gry, tr dsky yel, sft - frm, amor - sbblky, slty - v slty, loc grdg Sltst, occ sdy, micromic, tr pyr, non calc	
	Tr	Ls:	a.a.	
1966	70	Sst:	f - crs, pr srt, pred lse, occ calc/dol cmt, pred gd vis por, else a.a.	a.a.
	30	Clst:	a.a.	
	Tr	Ls:	lt gry, sft amor, micr, arg, com sdy - v sdy	
	Tr		Mic	
1969	60	Sst:	hd - lse, com calc/dol cmtelse a.a.	a.a.
	40	Clst:	a.a.	
1972	50	Sst:	lt gry, clr - trnsl qtz, f -m, occ crs, mod - wl srt, sbang - sbrndd, lse -hd, com calc/dol cmt, arg mtrx i.p., tr pyr, none - ap gd vis por	a.a.
	50	Clst:	a.a.	
	Gd Tr	Ls:	a.a.	
1975	90	Sst:	pred lse, occ calc/dol cmt, pred gd vis por, else a.a.	a.a.
	10	Clst:	pred m lt gry - m gry, else a.a.	
	Tr	Ls:	a.a.	

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Olav Beyer		Date: 19.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
1978	60	Sst:	lt gry, clr - trnsl qtz, f -m, occ crs, mod - wl srt, sbang - sbrndd, lse -hd, com calc/dol cmt, arg mtrx i.p., tr pyr, none - ap gd vis por	No shows
	40	Clst:	m lt gry - m gry, lt brn gry - brn gry, tr dsky yel, sft - frm, amor - sbblky, slty - v slty, occ sdy, loc grdg Sltst, micromic, occ pyr, non calc	
	Tr	Ls:	lt gry, sft amor, micr, arg, sdy - v sdy grdg calc Sst i.p.	
	Tr		Pyr	
1981	80	Sst:	a.a.	a.a.
	20	Clst:	a.a.	
	Tr	Ls:	a.a.	
	Tr		Pyr	
1984	90	Sst:	a.a.	a.a.
	10	Clst:	a.a.	
	Tr		Ls	
1987	90	Sst:	a.a.	a.a.
	10	Clst:	pred m lt gry - lt brn gry, else a.a.	
	Tr		Ls, Pyr, Mic	
1990	100	Sst:	f - m, mod - wl srt, pred lse, occ calc/dol cmt, else a.a.	a.a.
	Tr		Ls, Clst, Mic, Pyr	
1993	90	Sst:	lt gry, clr - trnsl qtz, f - m, mod - wl srt, sbang - sbrndd, lse - hd, calc/dol cmt i.p., arg mtrx i.p., tr pyr, none - ap gd vis por	a.a.
	5	Clst:	a.a.	
	5	Ls:	lt gry, sft amor, micr, arg, sdy - v sdy grdg calc Sst i.p.	
	Tr		Mic, Pyr	
1996	90	Sst:	pred lse, occ calc/dol cmt, else a.a.	a.a.
	5	Ls:	v sdy grdg calc Sst a.a.	
	5	Clst:	a.a.	
	Tr		Pyr, Mic	
1999	90	Sst:	a.a.	a.a.
	10	Clst:	m lt gry - m gry, sft, amor - occ sbblky, slty - v slty, occ grdg Sltst, occ sdy, micromic, tr pyr, non calc	
	Gd Tr	Ls:	grdg calc Sst a.a.	
2002	85	Sst:	com calc/dol cmt, else a.a.	a.a.
	10	Clst:	tr dsky yel, else a.a.	
	5	Ls:	grdg calc Sst a.a.	
	Tr		Pyr, Mic	
2005	70	Sst:	a.a.	a.a.
	25	Clst:	occ m dk gry, else a.a.	
	5	Ls:	a.a.	
	Tr		Mic, Pyr	

WELLSITE SAMPLE DESCRIPTION

Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2			
R.T.: 23.5 metres	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Olav Beyer		Date: 19.04.97

Depth (m KB)	Lith (%)		Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination	Remarks Shows, cavings, mud additives, etc.
2008	70	Clst:	m lt gry - m gry, occ m dk gry, sft - occ frm, amor - sbblky, slty - v slty, loc grdg Sltst, sdy i.p., micromic, occ pyr, non calc	No shows
	20	Sst:	lt gry, clr - trnsl qtz, f - m, mod - wl srt, sbang - sbrndd, lse - hd, com calc/dol cmt, arg mtrx i.p., tr pyr, non - ap gd vis por	
	10	Ls:	lt gry, sft, amor - occ frm, micr, arg, v sdy grdg calc Sst i.p.	
	Tr		Pyr Mic	
2011	50	Clst:	m lt gry - m gry, rd brn i.p., tr dsky yel, else a.a.	a.a.
	50	Sst:	f - crs, pr srt, else a.a.	
	Tr	Ls:	a.a.	
	Tr		Mic, Pyr	
2014	70	Sst:	pred f - m, occ crs, mod - wl srt, else a.a.	a.a.
	30	Clst:	m lt gry - m gry, rd brn - gry rd - dk rd brn, dsky yel, sft - frm, amor - sbblky, slty - v slty, occ grdg Sltst, occ sdy, micromic, occ pyr, non calc	
	Sl Tr	Ls:	a.a.	
	Tr		Mic	
2017	80	Sst:	lt gry, clr - trnsl qtz, f - m, mod - wl srt, sbang - sbrndd, hd - lse, com calc/dol cmt, occ arg mtrx, tr pyr, non - ap gd vis por	a.a.
	20	Clst:	m lt gry - m dk gry, rd brn - gry rd - dk rd brn, brn gry, purp gry, rd yel - dsky yel, sft - frm, amor - sbblky, slily slty - slty, occ v slty, occ sdy, micromic, tr pyr, non calc	
	Tr	Ls:	lt gry - rd wh, sft, amor, micr, arg, sdy i.p.	
	Tr		Mic, Pyr	
2020	60	Clst:	varic a.a.	a.a.
	40	Sst:	occ crs, lse - hd, calc/dol cmt i.p., else a.a.	
	Tr		Mic, Pyr	
2023	50	Clst:	varic a.a.	a.a.
	50	Sst:	a.a.	
	Sl Tr	Ls:	lt gry -rd wh, hd, microxln, dol	
	Tr		Mic, Pyr	
2026	60	Sst:	a.a.	a.a.
	40	Clst:	varic a.a.	
	Tr		Mic	
2029	50	Sst:	a.a.	a.a.
	50	Clst:	a.a.	
	Gd Tr	Ls:	lt gry, sft - frm, amor - sbblky, micr, arg, sdy - v sdy grdg calc Sst i.p.	
	Tr		Mic	
2032	90	Clst:	varic a.a., com sdy, else a.a.	a.a.
	10	Sst:	fri - hd, calc/dol cmt, pr vis por, else a.a.	
	Tr	Ls:	lt yel gry - pa rd gry, dk gry, hd, microxln, slily arg, dol	

2032m is TD of well in Triassic Red Beds

APPENDIX II

STATOIL

SIDEWALL CORE DESCRIPTION

Country: Norway	Area: Nordland II	Field: Wildcat - D-Fangst
Well no: 6507/3-2	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum	
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Olav Beyer	R.T.: 23.5 metre
Run no.: 1A	Reference log: Run 1A : ZDL-CND-DSL-CHT	Date: 23.4.97

Shot no.	Depth (m RT)	Rec. (mm)	Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks Shows, cavings, mud additives, weight, etc.
50	1009	30	**Cly/Slt:**	med dk gnsh gry, sft, amor, unif, slty-vf sdy, grdg Slt, sl calc, mod micromic	no shows 24gr.
49	1035	38	**Cly:**	med dk gnsh gry, sft, amor, unif, sl slty-vf sdy, sl-mod calc, sl micromic	no shows 33gr.
48	1072	8	**Cly:**	med dk gnsh gry, sft, amor, unif, sl slty-vf sdy, sl-mod calc, sl micromic	no shows 8gr.
47	1091	35	**Cly:**	med dk gnsh gry-olv gry, sft, amor, unif, sl slty, sl calc, microfoss	no shows 36gr.
46	1122	29	**Cly:**	med dk gry, lt gry, sft- sl frm, microlam slt, sl - mod calc, microfoss	no shows 28gr.
45	1152	39	**Cly:**	med dk gn, sft, amor-mass, non slty, non calc, no-sl micromic, microfoss	no shows 37gr.
44	1167	36	**Cly:**	med dk gn, sft, sl stky, amor-mass, non slty, non calc, no-sl micromic, microfoss	no shows 35gr.
43	1185	37	**Cly:**	med dk gn, sft, mod stky, amor-mass, non slty, non calc, no-sl micromic, microfoss	no shows 36gr.
42	1203	37	**Cly:**	dk brn gry-olv gry, sft, non stky, non calc,abun micromic lam	no shows 35gr.
41	1207	misfired			
40	1211	37	**Ls:**	dk gry, v.arg, aren, mass, mod hd-hd, carb microspks micropyr, also ptchy off wh micr, cryptoxln, sft-frm	ptchy wk yel fluor on micr
39	1215	35	**Cly:**	dk brn gry-olv gry, sft - sl frm, non stky, non calc,abun micromic lam	no shows 33gr.
38	1222	39	**Cly:**	dk brn gry, sft - sl frm, non stky, non calc,abun micromic lam	no shows 37gr.
37	1230	lost barrel in hole			
36	1236	lost barrel in hole			

STATOIL

SIDEWALL CORE DESCRIPTION			Page 2 of 4
Country: Norway	Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2	Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "	Geologist: Tor Finn Kristensen / Olav Beyer		R.T.: 23.5 metre
Run no.: 1A	Reference log: Run 1A : ZDL-CND-DSL-CHT		Date: 23.4.97

Shot no.	Depth (m RT)	Rec. (mm)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, weight, etc.
35	1243	25	**Slt:**	med brn gry, sft/lse, amor, cln, non calc, sl micromic, fair-good vis por	no shows 22gr.
34	1250	29	**Slt/Cly:**	gryish brn-lt brn gry, sft, fn -microlam slt/cly, non calc, sl micromic	no shows 27gr.
33	1264	lost barrel in hole			
32	1274	lost barrel in hole			
31	1286	32	**Sd:**	predom clr qtz, slt-m, dom vf, wll srt, sbang-ang, lse, cln, tr rock frags/ glau, tr micromic, good vis por	no shows 30gr.
30	1295	26	**Sd:**	predom clr qtz, vf-m, dom f, wll srt, sbang-ang, lse, arg mtx, tr carb/coal lam, sl micromic, pr vis por	no shows 24gr.
29	1307	misfired			
28	1323	26	**Sd:**	med brn gry arg mtx, predom clr - transl wh qtz, f-slt, wll srt, sbang-ang, lse, arg mtx, mod micromic, pr - fair vis por	no shows 28gr.
27	1337	21	**Sd/Cly:**	med brn gry arg mtx, predom clr - transl wh qtz, f-slt, mod srt, sbang-ang, lse, abun arg mtx, mod micromic, non calc, pred grdg sdy Cly, pr vis por	no shows 23gr
26	1358	36	**Slt:**	pa brn -lt brn gry, sft, amor, v.arg (kaol) mtx, non calc, mod micromic, pr vis por	no shows 39gr
25	1367	lost barrel in hole			
24	1380	lost barrel in hole			
23	1395	36	**Slt/Cly:**	pa brn -lt brn gry, sft, amor, v.arg mtx, non calc, mod micromic, grdg Cly, lam pr vis por	no shows 37gr
22	1417	lost barrel in hole			
21	1450	lost barrel in hole			

STATOIL

SIDEWALL CORE DESCRIPTION				Page 3 of 4
Country: Norway		Area: Nordland II		Field: Wildcat - D-Fangst
Well no: 6507/3-2		Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum		
Hole size: 12 1/4 "		Geologist: Tor Finn Kristensen / Olav Beyer		R.T.: 23.5 metre
Run no.: 1A		Reference log: Run 1A : ZDL-CND-DSL-CHT		Date: 23.4.97

Shot no.	Depth (m RT)	Rec. (mm)	Lithological Description: Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks: Shows, cavings, mud additives, weight, etc.
20	1467	34	**Cly:**	dk brn, tr yel brn, sft, flky, com blk coal clsts, mod slty, non calc, v.abun micromic	no shows 30gr
19	1489	42	**Cly:**	med brn gry, pa yel brn, sft, flky, nocoal, sl slty, non calc, v.abun micromic	no shows 41gr
18	1505	misfired			
17	1537	lost barrel in hole			
16	1557	38	**Cly:**	med olv gry, sft, amor, non slty, non calc, sl micromic	no shows 40gr
15	1587	37	**Cly:**	lt olv- med brn, sft, amor, non slty, non calc, sl micromic	no shows 38gr
14	1613	lost barrel in hole			
13	1627	lost barrel in hole			
12	1677	lost barrel in hole			
11	1756	36	**Cly:**	lt olv- med brn, sft, amor, non slty, non calc, sl micromic	no shows 37gr
10	1782	33	**Cly:**	lt olv- med brn, sft, amor, non slty, non calc, sl micromic	no shows 34gr
9	1803	38	**Cly:**	lt olv- med brn, sft, amor, non slty, non calc, sl micromic	no shows 39gr
8	1846	20	**Slt/Cly:**	med gry, lt gry lam, sft, amor, carb spks, non calc, sl-mod micromic, I/P pr vis por	no shows 21gr
7	1873	37	**Cly/Slt:**	pa brn, sft-sl frm, amor, non calc, sl micromic, lam w/pr vis por	no shows 43gr
6	1905	20	**Sd:**	predom clr qtz, vf- f, v. wll srt, sbang-ang, lse, sl arg mtx & micromic lam, non calc fair vis por	no shows 17gr.

SIDEWALL CORE DESCRIPTION

Country: Norway		Area: Nordland II		Field: Wildcat - D-Fangst	
Well no: 6507/3-2		Company: Statoil, Norsk Hydro, Total Norge, Saga Petroleum			
Hole size: 12 1/4 "		Geologist: Tor Finn Kristensen / Olav Beyer		R.T.: 23.5 metre	
Run no.: 1A		Reference log: Run 1A : ZDL-CND-DSL-CHT		Date: 23.4.97	

Shot no.	Depth (m RT)	Rec. (mm)	Lithological Description Rock name, mod.lith, colour, grain size, sorting, roundness, matrix, cementation, hardness, sed.structures, accessories, fossils, porosity, contamination		Remarks Shows, cavings, mud additives, weight, etc.
5	1922	14	**Slt/Cly:**	med brn (slt), med dk gry arg lam, sft, fn lam, carb spks, non calc, micromic/microcarb, no - pr vis por	no shows 15gr.
4	1949.5	17	**Cly/Slt:**	meddk gry/pa brn lam, sft-sl frm, amor, non calc, sl micromic	no shows 16gr
3	1981	20	**Sd:**	predom clr qtz, vf-m, dom f, wll srt, sbang-ang, lse, arg mtx, tr carb/coal lam, sl micromic, pr vis por	no shows 17gr.
2	2007	lost barrel in hole			
1	2019.5	40	**Cly:**	med grn gry, sft-sl frm, amor, non calc, micromic, sl slty	no shows 40 gr.

APPENDIX III

CONVENTIONAL CORE DESCRIPTION

Country: Norway	**Area:** Nordland II	**Field:** Wildcat - D-Fangst
Well no: 6507/3-2	**Formation:** Tilje Formation	
Core no: 1	**Interval:** 1230.0 - 1236.0m	**Cored:** 6.0m **Rec:** 3.23m 54%
Core size: 5 1/4"	**Geologists:** PHILLIPS / KRISTENSEN	**Date:** 15.04.97

Depth (mRKB)	Lithology/Grain size (cly slt vf f m c vc)	APPARENT DIP	Shows (STAIN, FLUOR, CUT)	Φ (POOR, FAIR, GOOD)	Lithological Description (Rock name, mod. lith., colour, grain size, sorting, roundness, matrix, cementation, hardness, sed. struct., accessories, fossils, porosity, contamination)	Remarks (Shows, etc)
	Top of core 1230.00m					
1230	c m				**CLST WITH THIN SST LAMS:** brnsh blk - brnsh gry, grysh blk, sft - frm, sbfiss, non calc, v mica, slty, grdng to SLTST i.p., carb frags and lams, SST lams, lt brnsh gry, v f, sbang, fri, mica, argil, slty	No Flu, v slw, mlky wh, blmng, cut flu, wk dull wh resid ring
1231	c m				**CLST:** brnsh blk - brnsh gry, grysh blk, sft - frm, sbfiss, non calc, v mica, slty	As Above
1232	m			GOOD	**SST:** lt brnsh gry - med lt gry, clr - trnsl qtz grns, lse - v fri, v f grad to slt, w srt, sbang, v mica, argil, sft, grad to SLTST i.p., gd vis por	No shows
1232,9	m			GOOD	**SST:** lt brnsh gry - med lt gry, tr carb mat, else a.a.	No shows
1233.23	m			GOOD	**SST:** lt brnsh gry - med lt gry, clr - trnsl qtz grns, lse - v fri, v f - f, w srt, sbang, mica, argil, sft, tr carb mat, v gd vis por	No shows
	Bottom of core 1233.23m					
1234						
1235						
1236						

cly slt vf f m c vc

CONVENTIONAL CORE DESCRIPTION

Country: Norway	**Area:** Nordland II	**Field:** Wildcat - D-Fangst
Well no: 6507/3-2	**Formation:** Åre Formation	
Core no: 2	**Interval:** 1402 - 1413.0m	**Cored:** 11.0m **Rec:** 7.83m 71%
Core size: 5 1/4"	**Geologists:** PHILLIPS / KRISTENSEN	**Date:** 16.04.971

Depth (mRKB)	Lithology/Grain size (cly slt vf f m c vc)	Lithological Description (Rock name, mod. lith., colour, grain size, sorting, roundness, matrix, cementation, hardness, sed. struct., accessories, fossils, porosity, contamination)	Remarks (Shows, etc)
	Top of core 1402.00m		
1402	c m	**CLST:** brnsh gry, sft - frm, blky - sbfiss, non calc, sdy, with thin v f sd lams, v slty occ grdng to sltst, v mica, carb, occ fibr carb frags	No Flu, v slw, blmng- strmng, blu wh cut flu, mod wh resid ring
1403	c m	**SST:** lt brnsh gry, clr - trnsl qtz grns, pred m, occ f, w srt, sbang - sbrndd, lse, mica, tr carb frags, v gd vis por	No shows
1404	c m c	**SST:** lt brnsh gry, clr - trnsl qtz grns, pred m, occ f, occ crs, mod srt, sbang - sbrndd, lse, tr mica, v gd vis por, Tr coal frags (10mm) blk, brit, mod hd	No Flu, v slw, blmng- strmng, blu wh cut flu, mod wh resid ring, from coal frags?
1405	c m	**SST:** lt brnsh gry, clr - trnsl qtz grns, pred m, occ f, w srt, sbang - sbrndd, lse, tr mica, tr carb/coal frags, v gd vis por	No shows
1406	c m	**SST:** brnsh blk, clr - trnsl qtz grns, pred f, also v f and m, mod srt, sbang - sbrndd, v argil, fri, carb frags, mica, occ **CLST lams:** gry blk, frm, blky, carb, non calc, mod vis por	No Flu, v slw, blmng- strmng, blu wh cut flu, mod wh resid ring
1407	c m	**CLST:** brnsh gry, frm, sbfiss, non calc, carb frags and lams, tr pyr and tr micromica	No Flu, mod strmng, blu wh cut flu, mod - bri wh resid ring
1408	c m	**CLST:** lt brnsh gry - brnsh gry, frm, blky, non calc, micromica, sdy, loc v sdy, tr carb frags	No Flu, tr v slw strmng - blmng, blu wh cut flu, mod wh resid ring
1409	c m	**CLST:** brnsh blk, sft, blky - sbfiss, non calc, tr micromica, tr carb	As above
1409.83	c m	**SST:** lt brnsh gry, clr - trnsl qtz grns, pred f, also v f and m, mod srt, sbang - sbrndd, lse, tr mica, tr coal frags, v gd vis por	No shows
1410	Bottom of core 1409.83m		
1411			

Shows: STAIN, FLUOR, CUT; Φ: POOR, FAIR, GOOD; APPARENT DIP

cly slt vf f m c vc

APPENDIX IV

BOREHULL: 6507/3-2 PL: 159 OPERATØR: STATOIL AVSLUTNINGSDATO: 29.04.97

BOREHULLSDATA:

1. Avstand fra boredekk til havnivå: 23.5 m.

2. Vanndyp: 409.5 m.

3a. Settedyp for lederør (mRT): 493 mRT.
3b. Evt. formasjonsstyrketest (g/cc): ----

4a. Settedyp for foringsrør hvorpå BOP monteres (mRT): 994 mRT.
4b. Formasjonsstyrketest (g/cc): 1.58 g/cc.

5. Dyp (m RT og toveis gangtid) til formasjons-/ledd-/lag-topper:

Sjøbunn	433 mRT / 0.546 s.
Topp Naust Formasjonen på:.	656 mRT / 0.796 s.
Topp Kai Formasjonen på:	1121 mRT / 1.218 s.

6. Dybdeintervall (m RT og TVG) og alder for sandlag grunnere enn 1000 m under havbunnen. Oppgi hvilke lag som evt. inneholder gass:
   Ingen opplagte sandlag påvist ned til 1000 mRT
   Ingen grunn gass påvist

7. På hvilken måte er gassen påvist? ----

8. Sammensetning av og opprinnelse til gassen: ----

9. Beskriv alle målinger foretatt i gassførende lag: ----

SEISMISKE DATA:

10. Angi dyp (m RT og TVG) til inkonformiteter i borehullsposisjonen: ----

11. Angi utbredelse av sandlagene (kommunikasjon, kontinuitet, trunkering etc.): ----

12. Angi utbredelse av evt. gass-skygging ("gas blanking"): ----

13. Angi evt. seismiske indikasjoner på at gassen stammer fra dypere nivå. Beskrivelse dersom gassen stammer fra dypere nivå: ----

14. Hvordan samsvarer tolkningen av borestedsundersøkelsen med borehullsdata m.h.t. :

- grunn gass: God overenstemmelse - ingen grunn gass prognosert og ingen grunn gass påvist
- sandlag: Mulige sandlag var prognosert på 628, 813, 950 og 1020 mRT. Ingen opplagte sandlag be observert.
- inkonformiteter: Bra samsvar
- korrelasjon til nærliggende borehull: Dårlig korrelasjon

ENCLOSURES

pierre0007152024 d52272 7-Nov-1997 15:23

Norsk Hydro, Total Marine, Saga Petroleum

PARTNERS **6507/3-2**

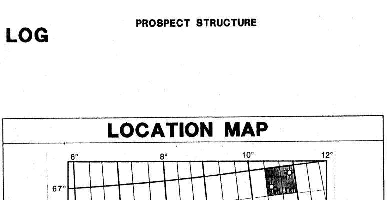
WELL

COMPOSITE LOG
1 : 500

PROSPECT STRUCTURE

AREA:	Nordland II
LICENCE:	PL 159
COORDINATES:	65° 45' 25.29" N 07° 55' 18.79" E
K.B.:	23.5 m
WATER DEPTH:	409.5 m
TOTAL DEPTH:	2032 mMD RT / 2008.5 mTVD RT
FM. AT T.D.:	Triassic "Red Beds"
SPUD DATE:	6th April 1997
RIG RELEASE:	29th April 1997
WELL STATUS:	Perm. plugged and abandoned
RIG:	Transocean 8
CONTRACTOR:	Transocean A/S
GEOLOGIST:	Kristensen, Beyer, Phillips
PREPARED BY:	D. Alm DATE: 20.10.97

LOCATION MAP



CASING DATA

30" 493 mMD
13 3/8" 994 mMD

LEAK OFF TESTS

1.58 g/cc

VELOCITY SURVEY

Performed 102 levels from 2024 to 636 mMD RT

LOGS RUN — **CONTRACTOR: ATLAS WIRELINE SERVICES**

MLL-DLL-MAC-DSL-CHT	ZDL-CDL-DSL-CHT	VSP-GR	HDIP-GR-CHT	FMT-GR-CHT	SWC-GR	MWD-BHI
1A: 2031 - 760	1A: 2024 - 990	1A: 2024 - 636	1A: 2022 - 993	1A: 1976 - 1122	1A: 2019 - 1009	RUN 1 - 2 (9.5") 433 mMD - 1000 mMD RUN 3 - 6 (8") 1000 mMD - 2032 mMD

COMMENTS:

LITHOLOGICAL SYMBOLS

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

CUTTINGS/FLUORESCENCE, OIL SHOW, OIL/GAS SHOW, GAS SHOW

AZIMUTH & INCLINATION; SIDEWALL CORES: 1.6 SIDEWALL CORE, 2.8 NO RECOVERY, R 1.2 ROTARY SIDEWALL CORE; CORES: CORE NO; DST; RFT/FMT: SAMPLE; CASING SHOE / LINER; CHRONO STRAT UNCERTAINTY

FMT pressure measurements

No.	Depth, m MD RKB	Hydrost. pressure kPa before	Hydrost. pressure kPa after	Formation pressure kPa	Seal	Perm. mD	Remarks
1	1122	13709	13705	-	Y	0	Tight
2	1163.2	14207	14202	-	Y	0	Tight
3	1206.5	14734	14732	12232	Y	1.6	Good Test
4	1227.5	14991	14989	-	N	-	Lost seal
5	1228	14998	14996	12332	Y	31.1	Good Test
6	1247.4	15231	15232	12472	Y	41	Good Test
7	1260	15385	15386	12597	Y	49.3	Good Test
8	1277.5	15600	15603	12778	Y	47.9	Good Test
9	1289	15741	15741	12893	Y	504.6	Good Test
10	1339	16343	16342	13390	Y	603.2	Good Test
11	1388	16938	16940	13896	Y	74.6	Good Test
12	1404	17138	17138	14068	Y	60.2	Good Test
13	1515	18482	18481	15173	Y	502.1	Good Test
14	1596	19463	19471	-	Y	0	Tight
15	1727	21065	21067	17408	Y	7.3	Good Test
16	1797.5	21921	21912	18017	Y	7.1	Good Test
17	1899	23154	23158	19026	Y	186.6	Good Test
18	1955	23843	23842	19585	Y	6.3	Good Test
19	1976	24102	24102	19797	Y	97.2	Good Test
20	1206.5	14791	14713	12209	Y	31.3	Sample

Conventional Cores

CORE no	CORED INTERVAL (m)	RECOVERED INTERVAL (m)	RECOV. m	RECOV. %	LOG CORRECTED INTERVAL (m)	COMMENTS
1	1230 - 1236	1230 - 1233.23	3.23	54	-0.2	Core jammed off
2	1402 - 1413	1402 - 1409.83	7.83	71	+1.1	Core jammed off

STATOIL

6507/3-2

FORMATION EVALUATION LOG

Company:	STATOIL
Well:	6507/3-2
Field:	Nordland II
Region:	NORWAY
UTM Coordinates:	7 293 436 N 450 602 E
API Index:	
Spud Date:	6. April 1997
RKB - SEA LEVEL:	23.5m
RKB - SEABED:	433m
Contractor:	TRANSOCEAN
Rig:	TRANSOCEAN 8
Type:	SEMI-SUB
Total Measured Depth:	2032m
Total Vertical Depth:	2031.9m
Completion Status:	PLUGGED BACK

Hole Size

36"	to	495m
17 1/2"	to	1000m
12 1/4"	to	2032m (2031.9m TVD)

Casing Size

30"	to	493m
13 3/8"	to	994m (994.0m TVD)

Mud Types

Seawater/HiVis	to	1000m
KCL/Polymer	to	2032m

INTEQ Plot Suite

Formation Eval. Log X
Pressure Evaluation Plot

LOG INTERVAL

Depth:	433m	to	2032m
Date:	6 April	to	20 April 1997
Scale:	1 : 500		

INTEQ CREW

Data Operators: M. James, M. Crone, R.S. Meyer

Logging Geologists: E. Skarsholdt, V. Ørn, J.A.Beck

LITHOLOGY SYMBOLS

Limestone, Dolomite, Tuff, Marl, Anhydrite, Claystone, Siltstone, Sandstone, Coal, Halite

LITHOLOGY QUALIFIERS

Dolomitic, Calcareous, Mica, Pyrite, Kaolinitic, Glauconitic, Carbon, Shell Debris, Chert, Conglomerate

ABBREVIATIONS

NB New Bit	SWG Swab Gas
RRB Rerun Bit	SVG Survey Gas
CB Core Bit	C Carbide Test
WOB Weight On Bit	W Mud Density
RPM Revs Per Minute	V Funnel Viscosity
FLC Flow Check	F Filtrate API
PR Poor Returns	FC Filter Cake
NR No Returns	PV Plastic Viscosity
LAT Logged After Trip	YP Yield Point
BG Background Gas	SOL Solids %
TG Trip Gas	SD Sand %
STG Short Trip Gas	S Salinity ppm Cl
CG Connection Gas	RM Mud Resistivity
	RMF Mud Filtrate Res

SYMBOLS

Casing Shoe, Wireline Logs, Cored Interval, Wireline Test, Unrecovered, SideWall Core, Test Interval, SideWall Core No Recovery

FORMATION EVALUATION LOG

STATOIL

6507/3-2

Scale 1:500

STATOIL

6507/3-2
PRESSURE EVALUATION PLOT

Company:	STATOIL
Well:	6507/3-2
Field:	Nordland II
Region:	NORWAY
UTM Coordinates:	7 293 436 N 450 602 E
API Index:	
Spud Date:	6. April 1997
RKB - SEA LEVEL:	23.5m
RKB - SEABED:	433m
Contractor:	TRANSOCEAN
Rig:	TRANSOCEAN 8
Type:	SEMI-SUB
Total Measured Depth:	2032m
Total Vertical Depth:	2031.9m
Completion Status:	PLUGGED BACK

LOG INTERVAL

Depth:	433m	to	2032m
Date:	6 April	to	20 April 1997
Scale:	1:2500		

INTEQ CREW

Data Operators: M. James, M. Crone, R.S. Meyer

Hole Size

36"	to	495m
17 1/2"	to	1000m
12 1/4"	to	2032m (2031.9m TVD)

Casing Size

30"	to	493m
13 3/8"	to	994m (994.0m TVD)

Mud Types

Seawater/HiVis	to	1000m
KCL/Polymer	to	2032m

LITHOLOGY SYMBOLS

Limestone, Dolomite, Tuff, Marl, Anhydrite, Claystone, Siltstone, Sandstone, Coal, Halite

LITHOLOGY QUALIFIERS

Dolomitic, Calcareous, Mica, Pyrite, Kaolinitic, Glauconitic, Carbon, Shell Debris, Chert, Conglomerate

INTEQ Plot Suite

Formation Eval. Log
Pressure Evaluation Plot X

ABBREVIATIONS

NB New Bit	SWG Swab Gas
RRB Rerun Bit	SVG Survey Gas
CB Core Bit	C Carbide Test
WOB Weight On Bit	W Mud Density
RPM Revs Per Minute	V Funnel Viscosity
FLC Flow Check	F Filtrate API
PR Poor Returns	FC Filter Cake
NR No Returns	PV Plastic Viscosity
LAT Logged After Trip	YP Yield Point
BG Background Gas	SOL Solids %
TG Trip Gas	SD Sand %
STG Short Trip Gas	S Salinity ppm Cl
CG Connection Gas	RM Mud Resistivity
	RMF Mud Filtrate Res

SYMBOLS

Casing Shoe, Wireline Logs, Cored Interval, Wireline Test, Unrecovered, SideWall Core, Test Interval, SideWall Core No Recovery

PRESSURE EVALUATION PLOT

STATOIL : 6507/3-2

SCALE: 1 to 2500.0