Title: WELL 7216/11-1S
FINAL WELL REPORT

No. :
Rev. :
Page : 1 of 58
Date : 2000-09-07

Prepared by :
Verified by :
Approved by :

Sign. :
Sign. :
Sign. :

LIST OF CONTENTS, WELL 7216/11-1

PREFACE

License PL 221 was awarded to the Norsk Hydro, Statoil and Total/Fina/Elf group in 2000 with Hydro as the operator.

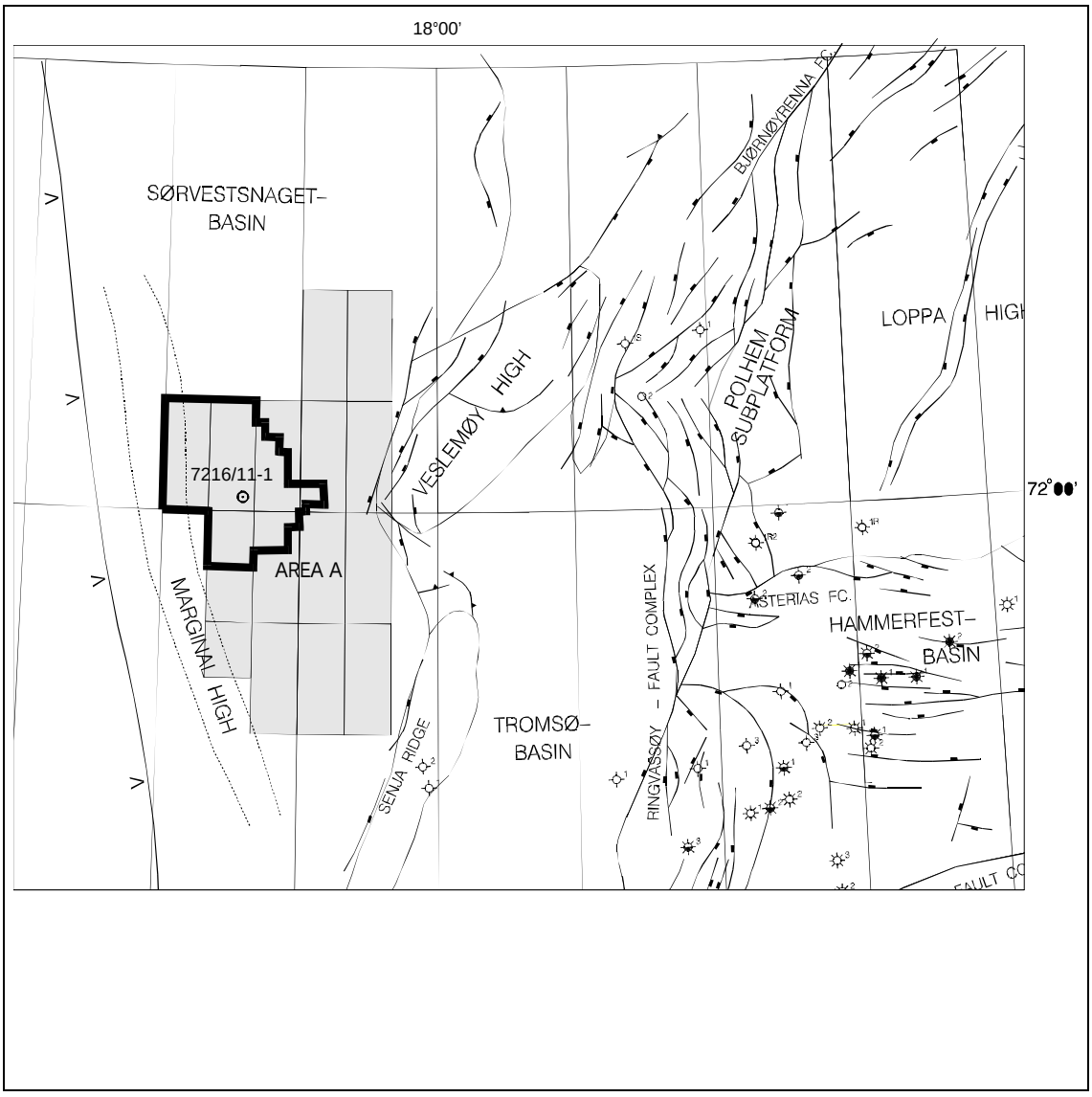
The licensees' percentage share of the block is as follows:

Den Norske Stats Oljeselskap a.s. (Statoil)	35%
Norsk Hydro a.s. (operator)	53%
Total/Fina/Elf	12%

The well was drilled by Norsk Hydro ASA, on behalf of the group, during July 20-September 14, 2000 (see Location Map, page 3).

All depths in this report are in mMD RKB (RKB elevation is 24m) unless otherwise stated.

Location map:



SUMMARY OF WELL DATA	
LOCATION:	72°00'56.72" N 16°36'22.00" E 7991645,5 m N 555345,6 m E ED-50, UTM Zone 331, SM 15°E
OPERATOR: RIG: CONTRACTOR:	Norsk Hydro ASA Transocean Arctic Transocean
KB ELEVATION (to MSL): WATER DEPTH (MSL):	24 m 361 m
START OF OPERATIONS: WELL SPUDDED: REACHED TD ON: COMPLETED: STATUS: FORMATION AT TD:	20.07.00 23.07.00 09.09.00 14.09.00 Plugged and abandoned Lower Torsk Fm
TD DRILLER (mRKB): TD LOGGER (mRKB):	4239m MD, 3733m TVD N/A
DRILLING DEPTHS:	36" to 507.0 m 26" to 1000.0 m 17 1/2" to 1437.0m 12 1/4" to 2758,0m 8 1/2" to 4239,0m
CASING DEPTHS:	30" at 507.0 m 20" at 999.0 m 13 3/8" at 1390.0 m 9 5/8" at 2750.0 m

SECTION A

GEOLOGY

LIST OF CONTENTS SECTION A:

SECTION A: LIST OF FIGURES, TABLES AND APPENDICES

FIGURES

TABLES

APPENDICES

I	Core descriptions
II	Sidewall core descriptions
III	Well Summary
	Geological Well Summary
	MDT Results

1 Objectives

The objective for well 7216/11-1 was to test the hydrocarbon potential of the A-structure in PL221. Three target horizons were defined in the Paleogene Lower Torsk Formation (Sotbakken Group).

- The primary target was to test the hydrocarbon potential of the A1 prospect, defined as a closure along the flanks of the A horst block at Early Eocene - Late Paleocene level.

- The secondary and tertiary targets were to test the reservoir and hydrocarbon potential of the A2 and A3 prospects in the horst block further to the west.

The well was originally planned as a straight vertical well east of the horst. The volumes which would be left updip were, however, considerable. Early in the planning stage the licence therefore decided to drill the well as a directional borehole.

.

2 Results

A total of 30 m gross Upper Peleocene reservoir sequence was penetrated in well 7216/11-1 on the A Structure.

No shows were observed while drilling the well. After the cores were slabbed onshore weak shows were seen in cracks/faults in core no. 1. The cuttings gas log indicated an increase in wetness through the claystones above the A1 reservoir, with a maximum wetnes in the top of A1. The MWD logs indicated, however, that this sequence was waterbearing.

FORMATIONS/ GR:	Depth mRKB	Depth mMSL	TWT
Nordland Gp	385m	361m	534ms
Base Pliocene	2270m	2246m	2219ms
Torsk Fm	2396m	2386m	2311ms
Base Miocene	2410m	2386m	2321ms
Base Oligocene	2500m	2476m	2381ms
Prospect A1	2912m	2804m	2642ms (from seismic)
Prospect A2	not present		
Prospect A3	not present		

Table 2.1: Formation Tops 7216/11-1

3 Biostratigraphy

The biostratigraphical evaluation of Well 7216/11-1 was carried out by Stratlab. The analyses were based on studies of lithology, micropaleontology, palynology, which were made on ditch cutting samples (DCS), sidewall cores (SWC) covering the interval 1000 to 4239 m RKB.

Table 3.1 on the next page shows a summarised chronostratigraphic and lithostratigraphic subdivision of the well. Further details may be found in the Stratlab Report; "Norsk Hydro 7216/11-1 Biostratigraphy of the Interval 1000m - 4239m."

CHRONO- AND LITHOSTRATIGRAPHICAL BREAKDOWN, WELL 7216/11-1S

GROUP	FORMATION	DEPTH mMDRKB	Dating
Nordland	Undifferentiated	361	
	- Returns to surface	1010	Pleistocene - pliocene
		2270	Late Miocene
		2310	
		----- ?unconf.------	
		2320	?Early - Middle Miocene
		2410	
Sotbakken	Torsk	----- ?unconf.------	
		2420	Early Oligocene
		2500	
		2510	?Late Eocene
		2530	
		2550	Middle Eocene
		3180	
		3190	Early Eocene
		3250	
		3260	Early Eocene - Late Paleocene
		3370	
		3380	Late Paleocene
		3390	
		4040	Late Paleocene
		4238	
		4239	TD: 4239 m MD, 3733 m TVD

Table 3.1: Chrono- and lithostratigraphy

4 Litostratigraphy

The depths are in m MD RKB and m TVD RKB (RKB-MSL is 24 m). This summary is compiled predominantly from ditch cuttings descriptions. 54 sidewall cores were obtained from the 12 1/4" section of the well, see Table 6.1. Wireline and MWD logs were used to aid lithological interpretation and placement of formation boundaries.

The well was drilled with returns to seabed from the seafloor at 361 m MSL (385 m RKB) to 1000 m RKB, where 20" casing was set at 999 m. Lithology interpretation through this interval is based on MWD logs and drilling parameters. The first drill cuttings samples were taken at 1010 m.

The litostratigraphy of the southwestern margin of the Barents Shelf is scarcely discussed in published material. In NPD bulletin no 4, January 1988, the Tertiary interval is divided into two groups; the Nordland and the Sotbakken Groups. The Nordland Group is not subdivided into formations, while the Sotbakken Group only consists of the Torsk Formation. The Torsk Formation comprises all of Paleogene, which has been proposed divided into the informal Oksvik (Paleocene marine claystones), Ingøy (Eocene marine claystones deposited in restricted basins) and Loppa Formations (Oligocene to Miocene? claystones) in wells in the Snøhvit area.

Well 7316/5-1 is the only well that penetrated a similar Tertiary thichness to well 7216/11-1S. The Tertiary sequence was in this well divided into two formations; the informal "A" and informal "B" Formations. The "A" Formation was further subdivided into two members of Late Paleocene to Early Eocene age, while the "B" Formation was subdivided into three members, all of Middle to Late Eocene age.

Based on the well 7216/11-1S Norsk Hydro will suggest to update the Tertiary (and Quaternary) stratigraphy in the Barents Sea. In the Completion Log and litostratigraphic breakdown below, the units have been correlated to litostratigraphic units in Mid-Norway.

4.1 Nordland Group 385 - 2410 m MD RKB (385 - 2399m TVD RKB)

"Havsule fm": 385 - 1030 m MD RKB (385 - 1030 RKB)

This interval was drilled with returns to seabed, and based on MWD log and drilling parameters, is interpreted to consist of clay with minor sand beds.

Naust Fm equivalent: 1030 - 2275 m MD RKB (1030 - 2268 m TVD RKB)

This interval comprises Clay and Claystones with minor Sandstones, Dolomite and traces of Siltstones.

Clays: olive grey - dark grey, soft, sticky, trace firm to hard, minor sub blocky, trace silty, locally very fine sandy.

Claystones: olive grey - medium dark grey - dark green grey, locally olive black, soft to firm, moderate hard with depth, blocky to subblocky, locally amorphus, generally blocky, slight sticky, locally slight calcareous, very fine sandy, trace glauconitic, trace pyrite, rare micropyritic, rare micromicaceous, trace shell fragments, locally trace foraminifers.

Sands: clear - transluscent quarts grains, locally milky white, fine to very coarse, generally fine to medium, loose, subrounded to subangular, moderate to oor sorted, locally moderate hard calcite cemented, rare galuconitic, good trace shell fragments.

Sandstones: clear to milky white, very rare rose quarts, generally loose, locally light grey, moderate hard calcite cemented aggregates, very fine to coarse, predominately fine to medium, glauconitic.

Dolomites: light brown to pale yellow brown, blocky, moderate hard to hard, micro to cryptocrystalline, locally grading limestone.

Age: Pleistocene to Pliocene

Kai Fm equivalent: 2275 - 2396 m MD RKB (2268 - 2386 m TVD RKB)

This interval comprises Siltstones with minor Sandstones. The lower 5-6 m of the section consisted of a tight (low porosity) Limestone/calsite cemented Claystone; hardground?

Siltstones: medium grey to dark brownish grey and brown grey, occasionally greenish grey, soft to firm, micromicaceous, trace to good trace glauconite, non calcareous, grading to very fine sandstone.

Sandstones: medium grey, clear to milky white quarts, loose, argillaceous, silty, subangular to subrounded, moderate sorted, trace micaceous.

Claystones: olive grey,moderate hard to hard, very calcitic, sl ight silty, cromicaceous, rare glauconitic.

Limestones: off white, light grey to light brownish grey, subblocky, argillaceous to silty, dolomitic, very hard.

Age: Middle to Late Miocene

4.2 Sotbakken Group 2396 - 4239 m MD RKB (2386 - 3733m TVD RKB)

Torsk fm: 2396 - 4239 m MD RKB (2386 - 3733 m TVD RKB)

Brygge Fm equivalent: 2396 - 3205 m MD RKB (2386 - 2986m TVD RKB)

"Unit 4 Member": 2396 - 2567 m MD RKB (2386 - 2544 m TVD RKB)

This interval comprises Claystones with minor Limestones.

Claystones: brownish grey, olive grey to olive black, firm to moderate hard, slight silty in parts, non calcareous, rare micropyritic, rare Dolomite

Limestones: medium light grey to light olive grey, angular to subangular, firm, slight argillaceous, rare glauconitic.

Age: Middle Eocene - Early Oligocene

"Unit 3 Member": 2567 - 2912 m MD RKB (2544 - 2804m TVD RKB)

This interval comprises Claystones with minor Limestones, and traces of Sandstones and Dolomites.

Claystones: olive grey to dark olive grey, green grey, traces of grey black, blocky to subblocky, partly subfissile to fissile, firm to moderate hard, generally non calcareous, rare micromicaceous, partly silty - grading to Siltstone, locally black specklets, rare trace Pyrite, rare trace mica.

Limestones: white to light grey, dark olive grey, locally yellow, angular to subangular, micro to cryptocrystalline, firm to hard, locally argillaceous, rare micromicaceous, locally rare Pyrite nodules, locally very fine sandy.

Sandstones: light grey to medium grey to olive grey, clear to milky white quarts, very fine to fine, subangular to subrounded, locallu rounded, moderate to well sorted, friable to loose, partly weak silika cemented, locally

slight calcareous, locally very argillaceous, locally silty - grading to siltstone.

Dolomites: light brown, hard to very hard, angular, blocky, splintry, micro - cryptocrystalline, locally argillaceous.

Age: Middle Eocene

"Unit 2 Member", "Polartorsk" Mb: 2912 - 3126 m MD RKB (2804 - 2936 m TVD RKB)

This interval comprises Claystones and Sandstones, with traces of Limestone and Dolomite.

Sandstones: light grey, predominately clear to milky white quarts, very fine to coarse, predominately fine to medium, subangular to subrounded, moderate to well sorted, friable to moderate hard, partly loose, partly silika cemented, locally calcite cement, trace Glauconite, trace mica, trace black specklets, no to poor visible porosity.

Claystones: olive grey to medium dark grey, olive black to dusky yellow brown, subfissile to fissile, occasionally blocky, moderate hard, generally non calcareous, micromicaceous, silty, locally grading siltstone, rare trace Glauconite, trace pyrite, locally black specklets, rare carbonaceous.

Limestones: white to yellow grey, microcrystalline, locally argillaceous laminae, moderate hard, trace Glauconite.

Dolomites: light brown-brown, brown grey, cryptocrystalline, blocky, very hard.

Age: Middle Eocene

"Unit 1 Member": 3126 - 3205 m MD RKB (2936 - 2986 m TVD RKB)

This interval comprises Claystones with stringers of Limestones and rare laminae of Sandstones and Dolomite.

Claystones: dusky yellow brown to light brown, olive grey, medium dark grey to olive black and brown black, blocky, partly fissile to platy, locally sticky, non to slight calcareous, locally dolomitic cement, micromicaceous, silty, trace Pyrite and micropyrite, locally carbonaceous material.

Limestones: white, light grey to light olive grey, blocky, locally micro to cryptocrystalline, moderate hard, locally grading Marl.

Sandstones: light grey, predominately clear to milky white quarts, very fine to medium, subangular to subrounded, moderate sorted, loose, trace silica cement, rare Mica, trace Pyrite.

Dolomites: light brown-brown, brown grey, cryptocrystalline, blocky, very hard.

Age: Early to Middle Eocene

Rogaland Group Equivalent 3205 - 4239 m MD RKB (2986 - 3733 m TVD RKB)

Tare Fm Equivalent: 3205 - 3460 m MD RKB (2986 - 3152 m TVD RKB)

This interval comprises Claystones with traces of Limestones

Claystones: olive grey to medium dark grey, brown grey, trace grey black, subfissile to blocky, generally amorphus, pasty, sticky, soft to firm, trace hard, non to slight calcareous, micromicaceous, very silty - grading to Siltstone, trace Pyrite, partly very fine sandy.

Limestones: grey white to olive grey, blocky, cryptocrystalline, generally argillaceous - grading Marl.

Age: Late Paleocene to Early Eocene

Tang Fm Equivalent: 3460 - 4239 m MD RKB (3152 - 3733 m TVD RKB)

"Unit 3 Member": 3460 - 3555 m MD RKB (3152 - 3216 m TVD RKB)

This interval comprises Claystones with traces of Limestones

Claystones: brown black, varicolored olive grey, medium dark grey, light olive grey, green grey and brown grey, subfissile to fissile, partly blocky, amorphus, soft to firm, non calcareous, micromicaceous, silty, trace Pyrite, trace very fine sandy.

Limestones: grey white to light grey, blocky, firm, micro- to cryptocrystalline, locally black specklets, generally argillaceous - grading Marl.

Age: Late Paleocene

"Unit 2 Member": 3555 - 3725 m MD RKB (3216 - 3335 mTVD RKB)

This interval comprises Tuffs, tuffaceous Claystones and Claystones with traces of Limestones and Dolomites.

Tuffs: light grey to medium grey, olive grey, blocky to subfissile, dissembled, soft to firm, generally non calcareous, partly calcareous, generally silty, grading siltstone, trace sandstone, trace black specklets; generally black, occ angular, volcanic glass fragments?

Tuffaceous Claystones: olive grey to medium dark grey, trace green grey, fissile to blocky, firm to moderate hard, generally non calcareous, trace black specklets, trace micropyrite, silty.

Claystones: light brown grey to grey brown, blocky, soft to firm, non calcareous, locally black specklet tuff, generally silty, locally grading siltstone, micropyritic, locally Pyrite, trace very fine sandy, locally sucrosic.

Dolomites: pale yellow brown to grey brown, blocky to splintry, hard to moderate hard, trace black specklets, micro- to cryptocrystalline.

Age: Late Paleocene

"Unit 1 Member": 3725 - 4239 m MD RKB (3335 - 3733 m TVD RKB)

This interval comprised Claystones with traces of Sandstones, Shale, Limestones and Dolomites.

Claystones : light brown to grey brown, dark brown grey, blocky, soft to firm, non to slight calcareous, locally black specklets tuff, generally silty, locally grading Siltstone, micropyritic, locally Pyrite, trace very fine sand, locally sucrosic.

Sandstone: light grey, clear to milky white quarts, very fine to fine, subangular to subrounded, hard, well sorted, silica cemented, trace black specklets, no visible porosity.

Shale: dark grey to grey black, hard, slickensides, slight micromicaceous, slight silty, non calcareous.

Limestones: grey white to white, light olive grey, blocky, soft to firm, locally hard, generally argillaceous, micro- to cryptocrystalline, trace black specklets, locally grading Dolomite.

Dolomites: pale yellow brown to brown grey, yellow brown, firm, blocky to platy, trace splintry, hard, locally grading Limestone, micro- to cryptocrystalline.

Siderite: black to brown black, blocky to splintry, hard to very hard, brittle, magnetic when heated.

Age: Late Paleocene

5 Hydrocarbon Shows

The evaluation of hydrocarbon shows at the wellsite was carried out in a conventional manner. A detector measuring the total gas by volume (Geoservices) and a separate cromatograph detector recording the volume of C1 through nC5, were operational below 1000m down to the TD of the well at 4239m.

Hydrocarbon shows on ditch cuttings and sidewall cores were evaluated according to procedures described in Norsk Hydro's "Wellsite Geologist's Manual".

5.1 Gas Record

A plot of total gas by volume is presented in figure 5.1 next page.

5.2 Oil stain and Fluorescence

No shows were recorded at wellsite. After core no 1 was brought onshore and slabbed a bright blue yellow fluorescence was observed in the interval 2991 - 2991.5 m:

INTERVAL (mRKB)	SOURCE	LITHOLOGY	SHOWS DESCRIPTION
2991-2991,5	Core	Sandstone	no o stn, no pet od, bri yel dir flu in cracks, wk inst strmg bl wh cut flu, no vis cut, no res fluor, no vis res

Table 5.1 Shows summary 7216/11-1

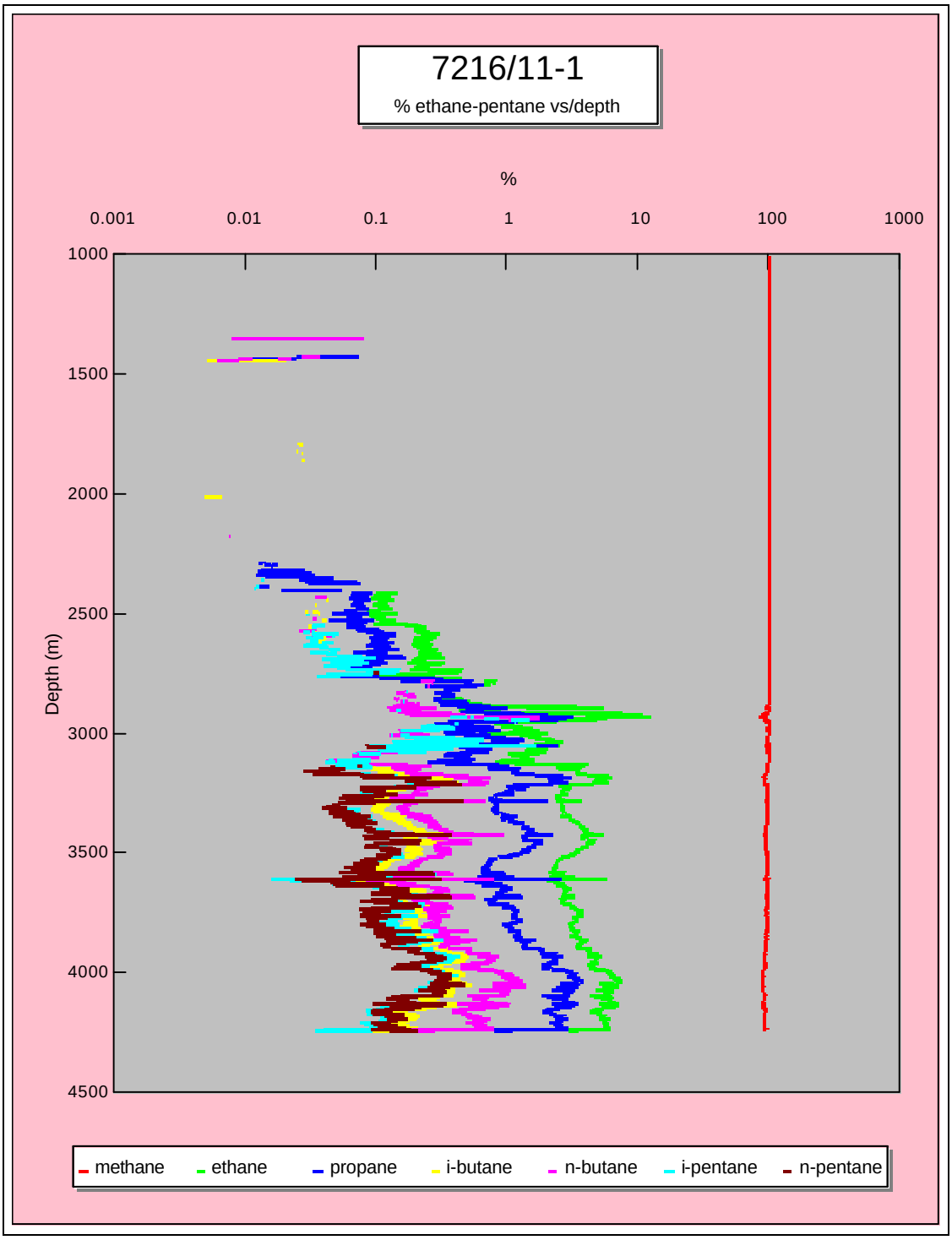


Figure 5.1: Plot of total gas by volume

6 Coring

6.1 Conventional Cores

A total of 2 cores were cut. The cores are presented in the Table 6.1 below and the core descriptions can be found in Appendix I.

No	C: Cut(m) R: Recovery(m)	Rec. %	Lithology	Formations
1	C: 2988,0-2998,0 R: 2988,0-2996,4	84	Claystone/Sandstone	Torsk
2	C: 4230,0-4239,0 R: 4230,0-4238,0	89	Claystone/Shale	Torsk

Table 6.1: Conventional Cores 7216/11-1

6.2 Sidewall Cores

Sidewall cores were sampled in the 12 1/4" section from 1390 - 2750 m. The first attempt went stuck after 6 shots. 5 SWC's were recovered from this run. The second run was logged on TLC, where 60 cores were shot, of which 48 cores were recovered. No sidewall cores were taken in the 8 1/2" hole section due to problems getting through the build up section below the 9 5/8" casing shoe

Run no	Interval (m)	Asked	Shot	Misfired	Lost	Empty	Recovered
1A	2750-1390	60	6	0	1	0	5
1B	2750-1390	60	60	6	5	1	48

Table 6.2: Sidewall Cores 7216/11-1

.

7 Logging

7.1 MWD Logs

A MWD service (Baker Hughes Directional Drilling and MWD; MPR Lite) yielding gamma ray, resistivity and survey measurements was run from seabed to TD (386 - 4239 m MD)

In the 8 1/2" section from 2758 - 4239 m a ORD/CNN yielding sonic, density and porosity was run.

Detailed MWD results can be found in the report "End of Well Report, Directional drilling and MWD, for Norsk Hydro, Well 7216/11-1S."

7.2 Wireline Logs

Wireline logs were run only in the 12 1/4" interval of the well. Several attempts were made to log the 8 1/2" section, but due to doglegs in the build up section below the 9 5/8" casing at 2750 m MD it was not possible to get any wireline or TLC tool below 2800 m.

The following table is a summary of wireline logs run in the well and shows log type, date run, logged intervals and run number for each log.

Logs	Date	Logged interval (mRKB)	Run
MDT	12.08.00	1586 - 1435 m RKB	1A
PEX-DSI-SP	17.08.00	2751.5 - 999 m RKB	2A
VSP	17-18.08.00	2750 - 1100 m RKB	2A
CST (on wireline)	18.08.00	2750 - 2570 m RKB	2A
CST (on TLC)	20-21.08.00	2686 - 1440 m RKB	2B

Table 7.1: Wireline logs 7216/11-1S

7.3 MDT Sampling

No MDT sampling was performed in the well.

7.4 Velocity Surveys

Type of log	Run No.	Interval m MD	Operational Comments
VSP	2A	2750 - 1100	

Table 7.2: VSP Runs 7216/11-1

7.5 Bottom Hole Temperatures From Wireline Logs

The table below gives a summary of the bottom hole temperatures measured from wireline logs.

Log suite	Run	Depth (mRKB)	Temp ° C	Time since circ. (hrs)
PEX/DSI/SP	2A	2 750	70.0, 70.0,	3 hrs 20 min
VSP/GR/AMS	2A	2 750	77.2,77.2, 77.2	16 hrs 10 min

Table 7.5: Bottom Hole Temperatures 7216/11-1

8 Petrophysical Results

8.1 Summary

Well 7216/11-1 S penetrated one of three potential reservoir targets; Turbidite sandstones of good to excellent quality were encountered in the A1 Formations. The reservoir of the prognosed A2 and A3 prospects were not developed. No HC was encountered in the A1 Formations.

The reservoirs were evaluated with respect to average effective porosity, average effective water saturation and net sand. The petrophysical evaluation was based on log analysis.

8.2 Log Data Acquisition

Tables 7.1 and 7.2 summarise the logs acquired in well 7216/11-1 S.

The well was drilled with KCl mud. Inteq's MWD/LWD tools was run throughout the well, and the overall log quality was fair to good, see Ref./8.1/. The ORD tool, acquiring density/neutron logs, was run over the reservoir section in the 8 1/2" hole.

For pore pressure estimates, Pathfinder's sonic tool was run in memory behind the Inteq MWD/LWD suite in top section (36" hole) and in 8.5" hole, see Ref./8.2/. Due to technological limitations and soft formations, the quality of the sonic data (compressional) in the 36" hole are poor. In the 8 1/2" hole, the sonic quality (compressional) is good.

In the 8.5" section, depth shifts of approximately 1 meter were observed between the gamma log and the density and neutron logs. Furthermore, a 1 meter thick shale bed (at 2990 m MD RKB) was observed from core photos in the cored section. This bed was confirmed by the gamma tool, but was not registered by Bakers ORD density/neutron tool. The high angle dip (deviation well) combined with the limited vertical resolution of the tools, could possibly explain these observations.

There were severe operational problems associated with the wireline logging of the 12 1/4" and 8 1/2" sections.

Due to an obstruction in hole at 2806 m MD RKB, neither logging on wire nor TLC was performed in the 8 1/2 " section. Thus, only MWD/LWD logs exists from this section.

In the 12 1/4" section, the CST went stuck, which resulted in cut and tread operation. The CST was later run successfully on TLC. The DSI in casing was of poor quality, and there is little to gain by performing relabeling and/or processing. In addition, the DTSM (shear wave) detection is poor in the interval 1400 - 1740 m MD RKB.

All data were subjected to quality control. A continuos composite log was generated by editing, depth shifting and merging the individual MWD and wireline runs.

8.3 Core Data

Two cores were cut in this well, see Table 6.1. A total of X core plugs were subjected to conventional core analysis, see Ref./8-3/. The program included measurements of horisontal porosity, Klinkenberg corrected horisontal and vertical air permeabilities and grain density.

Using the Review software, the core gamma log was depth shifted to match the reference wireline gamma log. For cored interval, recovery factor and applied depth shifts see section 6.

An crossplot of the horizontal Klinkenberg corrected permeability vs. the horizontal porosity is shown in Figure 8.1, while Figure 8.2 shows a crossplot of the horizontal Klinkenberg corrected permeability vs. the vertical Klinkenberg corrected permeability.

CST was run to collect sidewall cores, see Table 6.2.

8.4 MDT Pressure and sampling

One MDT (Modular formation Dynamics Tester) was carried out in well 7216/11-1 S. A large diameter probe was used. The tests were performed for drilling purposes to monitor pore pressure in the upper sand in the 12 1/4" hole. Four pressure points were attempted and all were successful. Due to an obstruction at 2806 m MD RKB, no pressure points were taken in the A1 reservoir unit (8.5" hole).

The formation pressure quality control is summarised in Table 8.1.

No fluid contacts or fluid gradients was identified from the log and pressure data. A thin gas bearing sand was however observed from density/neutron log at 2012 m MD RKB.

8.5 Petrophysical Evaluation Procedure

The reservoirs consists of interbedded sandstones, shales and cemented sandstones. Log analysis was conducted using an effective porosity approach with shale volume determined from the gamma ray log and the neutron-density log, porosity from the density and sonic log and water saturation from the Indonesia equation. An overburden factor of 0.97 was applied to the core porosity. The initial log derived porosity was calibrated to overburden corrected core porosity to yield a final log porosity. The final water saturation was then computed using the final log derived porosity.
For input parameters, see Table 8.2.

A thin sideritt bed was observed from core photographs at 2992 m MD RKB. This bed was obviously too thin (20 cm) to be detected by the density tool. However, the sonic compressional picked it up, and the porosity was thus calculated from Wyllie's equation in the interval 2991 - 2993 m MD RKB.

Net reservoir cutoff criteria were defined using effective porosity as discriminator. Likewise, net pay criteria were defined using net reservoir and effective water saturation. The following cutoff criterias were applied to evaluate the reservoirs with respect to average effective porosity, average effective water saturation, net reservoir and net pay:

A1 Formation cutoff criteria:
net sand $>$ 12% ϕ_e and $<$ 50% V_{sh}
net pay $>$ 12% ϕ_e and $<$ 50% V_{sh} and $<$ 60 % S_{we}

8.6 Petrophysical Results

The results are reported as averages according to the zonation and graphically displayed as a computer processed interpretation (CPI), see Tables 8.3 and Figures 8.3.

The resistivity logs confirmed that the reservoirs were water wet. Hydrocarbon-water contacts were not encountered in this well.

8.7 Tables

Run 1A Test #	Depth (m MD RKB)	Drawdown mobility (mD/cp)	Initial mud Pressure CQG (bar)	Final mud Pressure CQG (bar)	Formation Pressure CQG (bar)	Draw-down Pretest Type
1	1585.97	81.8	222.898	222.873	199.214	Good
2	1585.98	90.7	222.822	222.809	199.144	Good
3	1434.96	74.6	201.760	201.760	194.170	Good
4	1434.96	70.1	201.695	201.726	194.168	Good

Table 8.1: Formation pressure data in well 7216/11-1 S.

A1 Input Parameters	Interval 2912-2945 m MD RKB	Interval 2945-2975 m MD RKB	Interval 2975-3035 m MD RKB	Interval 3035-3126 m MD RKB
GR sand (GAPI)	40	42	30	25
GR shale (GAPI)	105	90	100	100
$\rho_{formation\ water}$	1.0 g/cc	1.0 g/cc	1.0 g/cc	1.0 g/cc
Rshale	2 Ohmm	2 Ohmm	2 Ohmm	2 Ohmm
Shale density	2.5 g/cc	2.4 g/cc	2.45 g/cc	2.45 g/cc
Matrix density	2.67	2.67	from core else 2.65	2.65
Neutron shale porosity	0.45	0.45	0.4	0.36
a	1	1	1	1
m	2	2	2	2
n	2	2	2	2
Sonic transit time, matrix (2991-2993m MD RKB)	-------	-------	52	-------
Sonic transit time, shale (2991-2993 m MD RKB)	-------	-------	100	-------
Formation temperature	70°C@ 2770 m MD	70°C@ 2700 m MD	70°C@ 2700 m MD	70°C@ 2700 m MD
Temperature gradient	+/-3.4°C/100m	+/-3.4°C/100 m	+/-3.4°C/100 m	+/-3.4°C/100 m
Rmf, Ohmm@ °C	0.07@20	0.07@20	0.07@20	0.07@20
Rw, Ohmm@ °C	0.07@80	0.07@80	0.07@80	0.07@80

Table 8.2: Input parameters to interpretation of the A1 Formation in well 7216/11-1S

Zonal Averages, Well 7216/11-1 S						
Formation	**Interval (m MD RKB)**	**Gross (m MD RKB)**	**NTG (m)**	**Phie (frac)**	**Swe (frac)**	**Vsh (frac)**
A1	2912.0	3126.0	0.32	0.23	0.99	0.12

Table 8.3: Net Sand Averages for the A1 Formation (averages are based on CPI).

8.8 Figures

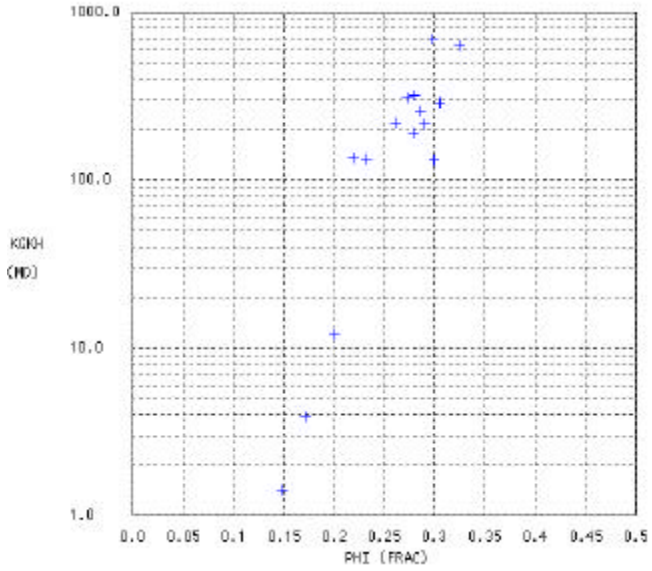


Figure 8.1: Crossplot of the horizontal Kl. corr. permeability vs. the horizontal porosity.

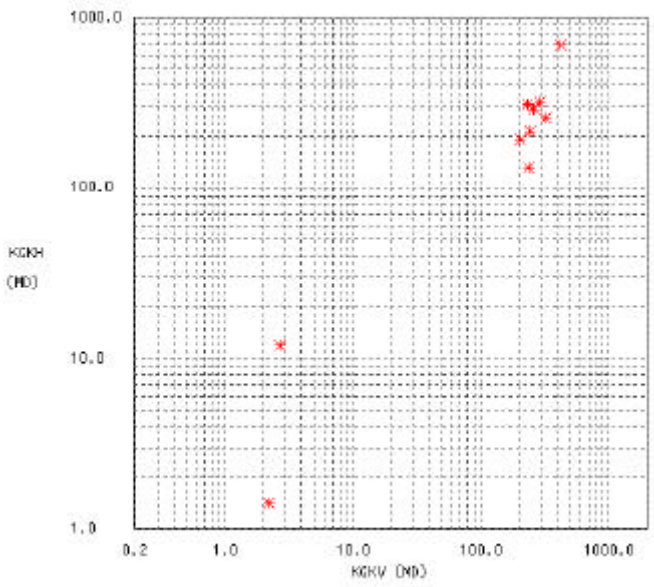


Figure 8.2: Crossplot of the horizontal Kl. corr. permeability vs. the vertical Kl. corr. permeability.

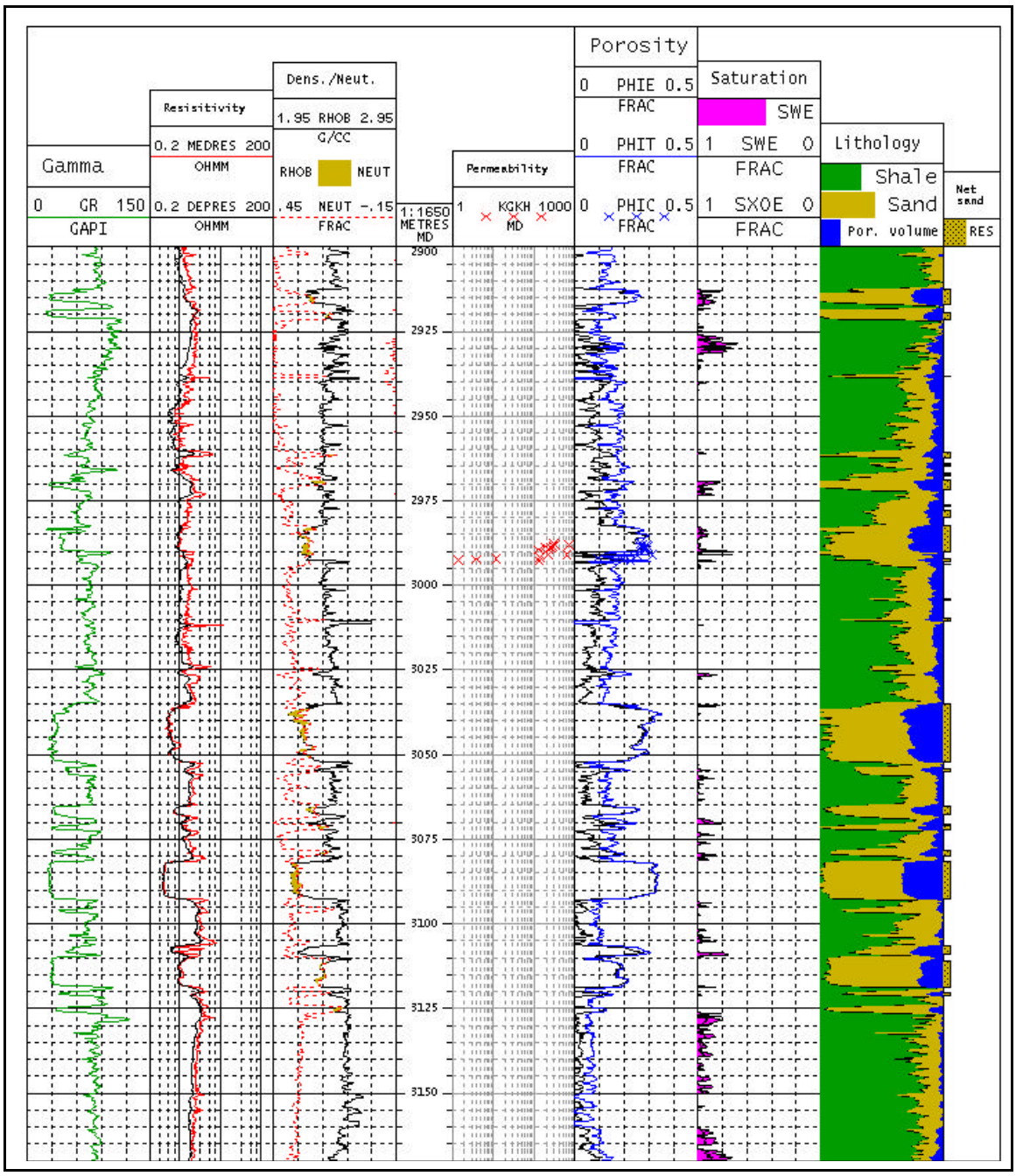


Figure 8.3: Graphical display (CPI) of the A1 Formation.

8.9 References

/8-1/ End of well report/Logs, 7216/11-1 S, Baker Hughes Inteq, 2000

/8-2/ End of well report/Logs, 7216/11-1 S, Pathfinder, 2000

/8-3/ Conventional Core Analysis -Well 7216/11- 1S, Corpro, 2000

9 Estimated Pore Pressure, Fracture, Overburden and Temperature Gradients

9.1 Pore Pressure

The pore pressures in well 7216/11-1S are based on wellsite observations, gas data, MDT pressure readings, hole instability and calculations based on logs (MWD and Dxc).

Shallow gas was not registrated in the upper sediments.
From seabottom to 1360m a hydrostatic pressure is regarded as most likely. At 1360m a change in claystone texture was observed by the wellsite geologist. The above clay / silt / sand had been soft to very soft but from 1360m a firmer and much less porous claystone was seen in the cuttings. A sealing of the thick, rapidly deposited water-rich Quaterny sediments would lead to a compaction disequilibrium below. Trendlines in resistivity and Dxc also indicated pressure increase in the firmer claystone from 1360m. In the first sand (1435m TVD) below this change in claystone texture a kick (water flow) was observed. Based on Shut-in-pressures the porepressure was estimated to 1,37sg and mudweigth raised to 1,40sg. Later RFT sampling gave 1,38sg in this sand and 1,28sg in a sand at 1586m TVD. This corresponds with the decreasing trend expected from pressure build up below a sealing horizon. Based on interpretations of Dxc and resistivity the porepressure was interpreted to cut back steadily to 1,20sg at 1800m TVD. Porepressure was interpreted to stay at approximately 1,20sg down to 2850m TVD. From 2850m TVD to TD there seems to be stepwise increase in porepressure reaching approximately 1,50sg at TD. The interpreted porepressure was based on cut back in Dxc, resistivity, density, gammaray and increased gas-values. When Pumps-Off-Gas was observed it was assumed a near-to-balance situation and mudweigth was raised correspondingly. No sandy zones was present, so pressure interpretations could not be supported by pressure-samples.

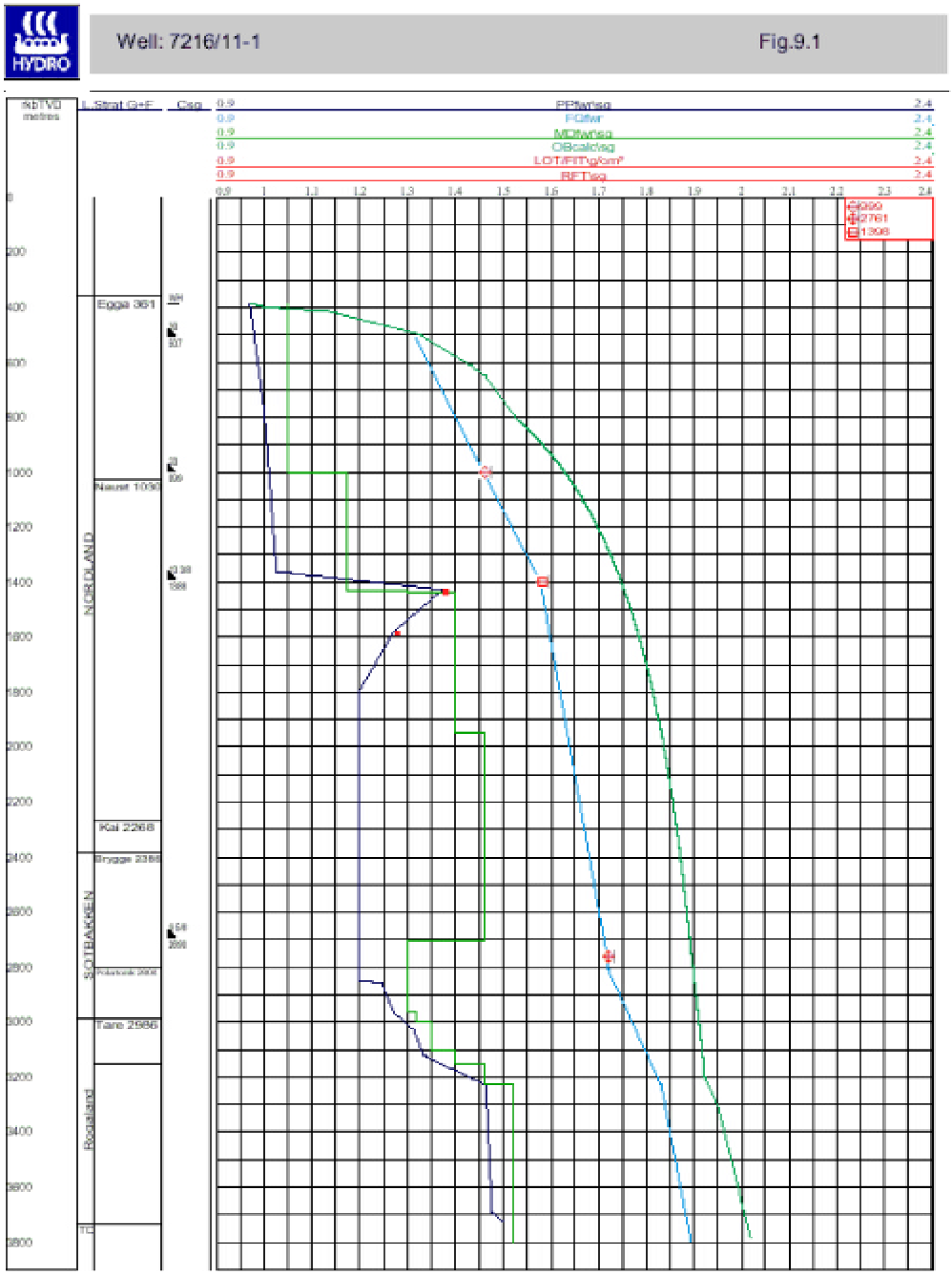


Figure 9.1: Final Pore Pressure, Fracture- and Overburden Gradient

9.2 Formation Strength

No mudlosses were observed in this well.
Three normal LOT's were performed. At 999m TVD it gave 1,46sg, prognosed 1,52sg. Combined with the high porepressure observed at 1435m TVD the 13 3/8" casing had to be set at 1388m TVD.
At 1398m TVD a LOT gave 1,58sg (prognosed 1,66sg). At 2761m TVD a LOT was taken to 1,72sg (prognosed 1,83sg). The Fracture gradient given in Fig. 9.1 is based upon Eckels & van Breckeln with best fit for the LOT's. When entering the tuffaceous claystones at 3186m TVD the porepressures goes up which again influences the calculated trend. Knowing that tuffaceous claystone in many areas are regarded as mechanically weak zones the calcaluted trend migth be higher than actual fracture gradient but still above the ECD which was up to a maximum of 1,65sg at 3600m TVD.

9.3 Overburden Gradient

Overburden gradient is based on calculated values and the density log.

For details of Pore pressure-, Fracture- and Overburden gradients see Fig. 9.1

9.4 Temperature Gradient

DST was not performed. The BHST is therefor regarded as equal to the prognosis and presented in Fig. 9.2.

For details of Temperature plot see Fig. 9.2

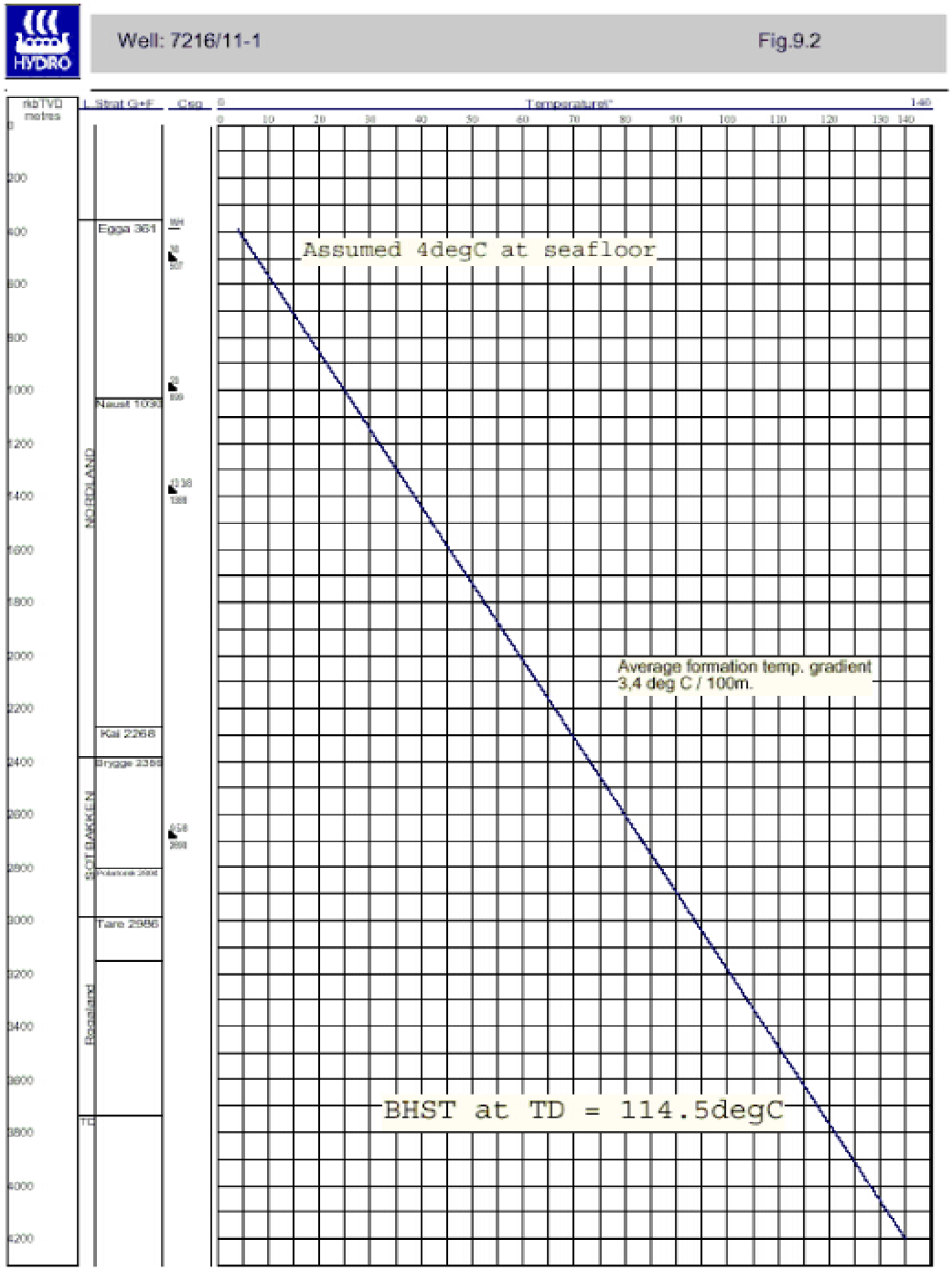


Figure 9.2: Final Formation Temperature Gradient

10 Geophysical Results

Stacking velocities (with 4 % reduction) from 3D NH9803 were used in the depth conversion for the area. The prognosed depths were generally too deep, as shown in figure 10.1. Since the stacking velocities was the only velocity information at the time, are the results acceptable.

As shown in figure 10.1, horizon 6 was encountered 120 m shallow due to the seismic pick, but still inside the error (± 160 m) established in the well prognosis.

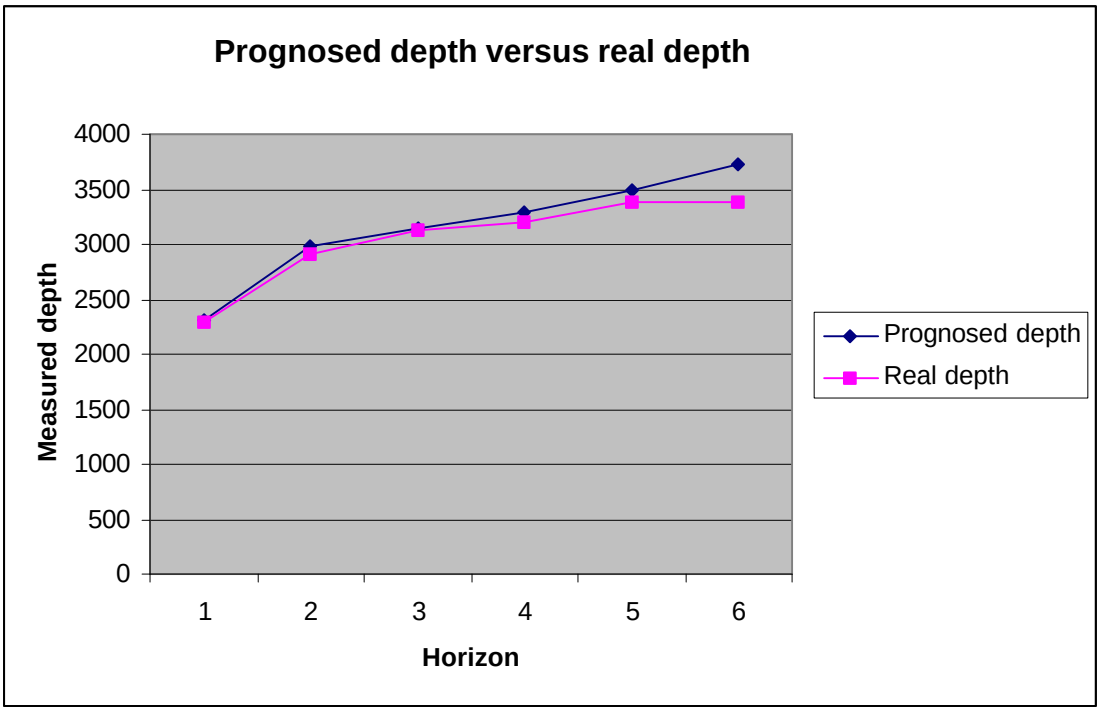


Figure 10.1: Time versus Depth Plot

11 Post Site Survey Report

11.1 Well data

1	Distance from rig floor to sea level:	24 m
2	Water depth (MSL):	361 m
3a	Setting depth for conductor (m RKB):	506.7 m
3b	Leak Off / Formation Integrity Test (g/cc):	N/A
4a	Setting depth (m RKB TVD) for casing on which BOP mounted:	998.9 m
4b	Formation Integrity Test (g/cc):	1.46 sg

5 Depth (m RKB TVD & Two Way Time) to formation/section/layer tops:

Reflector CH:	467 m	(599 ms)
Reflector R1:	500 m	(630 ms)
Reflector R2:	558.5 m	(690 ms)
Reflector R3:	631 m	(765 ms)
Reflector Int. R3-1:	792.5 m	(915 ms)
Reflector Int. R3-2:	818 m	(943 ms)
Near Base Pleistocene (R4):	974 m	(1103 ms)

Note:

No chronostratigraphic information was collected in the tophole section of the well (from seabed down to 998.9 m RKB TVD). Consequently, the interpretation of the different formations in this area is based on the MWD logs, seismic character and previous work.

Mud logging commenced at 998.9 m RKB TVD.

6 Depth interval (m RKB TVD & Two Way Time) and age of sand bodies shallower than 1000 m under the seabed. Note which layers if any contain gas:

No data exists on background gas levels from seabed down to 998.9 m (section drilled with returns to seabed). However, no gas related incidents were reported when drilling this interval.

The following sand body has been identified in well 7216/11-1:

Pleistocene Interval:

818 m - 820.5 m

7 By what means is the presence of gas proven:

The well is drilled with returns to seabed above 998.9 m RKB TVD. Below 998.9 m RKB TVD gas analyses were accomplished using flame ionisation detectors (FID) with gas measured as percentage methane (C1) equivalent in air, and chromatographic analyses expressed in parts per million.

8 Composition and origin of gas:

The results from gas (C1) measurements in section 1004.8 m - 1093.7 m RKB TVD are as follows:

Depth m RKB TVD	*Minimum %*	*Maximum %*
1004.8 - 1013.89	0.13	0.24
1013.8 -1093.7	0.21	1.04

Chromotographic Breakdown of Peak:

Depth m RKB TVD	*Peak %*	*Background %*
1049.8	1.04	0.75

9 Describe all measurements taken in gas bearing layers:

N/A

11.2 Seismic data

10 Given depth and extent of any gas blanking ("gass-skygging"), seismic anomalies etc.:

The 2D high resolution and 3D exploration seismic have been examined for indications of shallow gas. Amplitude anomalies were mapped at three levels, all of which are considered to represent a very low to low risk to drilling. The majority of amplitude anomalies identified within the survey area are considered to represent channel features or lithological features and not shallow gas.

The closest anomaly considered to represent a shallow gas risk is 199 m to the south, at a depth of 960 ms TWT (809 m MSL) between IR3-2 and R4 on a bearing of 180° from the Proposed Location.

No shallow gas hydrates were expected at the Proposed Location.

The tophole section of the well was drilled with returns to seabed to 998.9 m RKB TVD. Background gas levels were consequently not monitored. However, no gas-related problems were experienced over this section.

11 Note any indication of gas originating from deeper levels. Give description in cases where gas comes from deeper layers:

N/A

12 How does the interpretation of the site survey correspond to the well data with respect to:

12a Shallow Gas:

No amplitude anomalies were mapped at the 7216/11-1 Location and no gas warning was given for Well 7216/11-1.

No gas related problems were experienced in the well.

12b Sand Bodies:

No sand layers were predicted in the interval between 385 m RKB TVD and 496 m RKB TVD. The MWD-logs show indication of several sand layers in this interval, but since the measurements are carried out in open hole the readings are not trustworthy.

Sands were predicted from 630 m RKB TVD to 785 m RKB TVD and from 814 m RKB TVD to 962 m RKB TVD in Pleistocene. The MWD-logs indicated only a thin sand layer in the lower interval (818 m - 820.5 m RKB TVD).

12c Boulders:

Scattered boulders were predicted in the shallow section between 385 m - 962 m RKB TVD. No boulder layers were predicted. No boulders were encountered.

12d Unconformities (depths in metres RKB TVD):

Horizon	*Prognosed (P)*	*Observed (O)*	*Difference (O-P)*
Reflector CH: 473 ± 3 m		467 m	- 6 m (shallower)
Reflector R1: 496 ± 5 m		500 m	+ 4 m (deeper)
Reflector R2: 555 ± 10 m	558.5 m	+ 3.5 m (deeper)	
Reflector R3: 630 ± 10 m	631 m	+ 1 m (deeper)	
Reflector Int. R3-1:	785 ± 15 m	792.5 m	+ 7.5 m (deeper)
Reflector Int. R3-2:	814 ± 15 m	818 m	+ 4 m (deeper)
Near Base Pleistocene (R4):	962 ± 15 m	974 m	+ 12 m (deeper)

The differences between the prognosed and observed depths to different formation tops were within the uncertainty limits, except for Base Unit 1. The difference between the predicted and observed depths may be caused by discrepancies in either the seismic pick, the velocity model used for depth conversion or a combination of both.

12e Correlation to Nearby Wells:

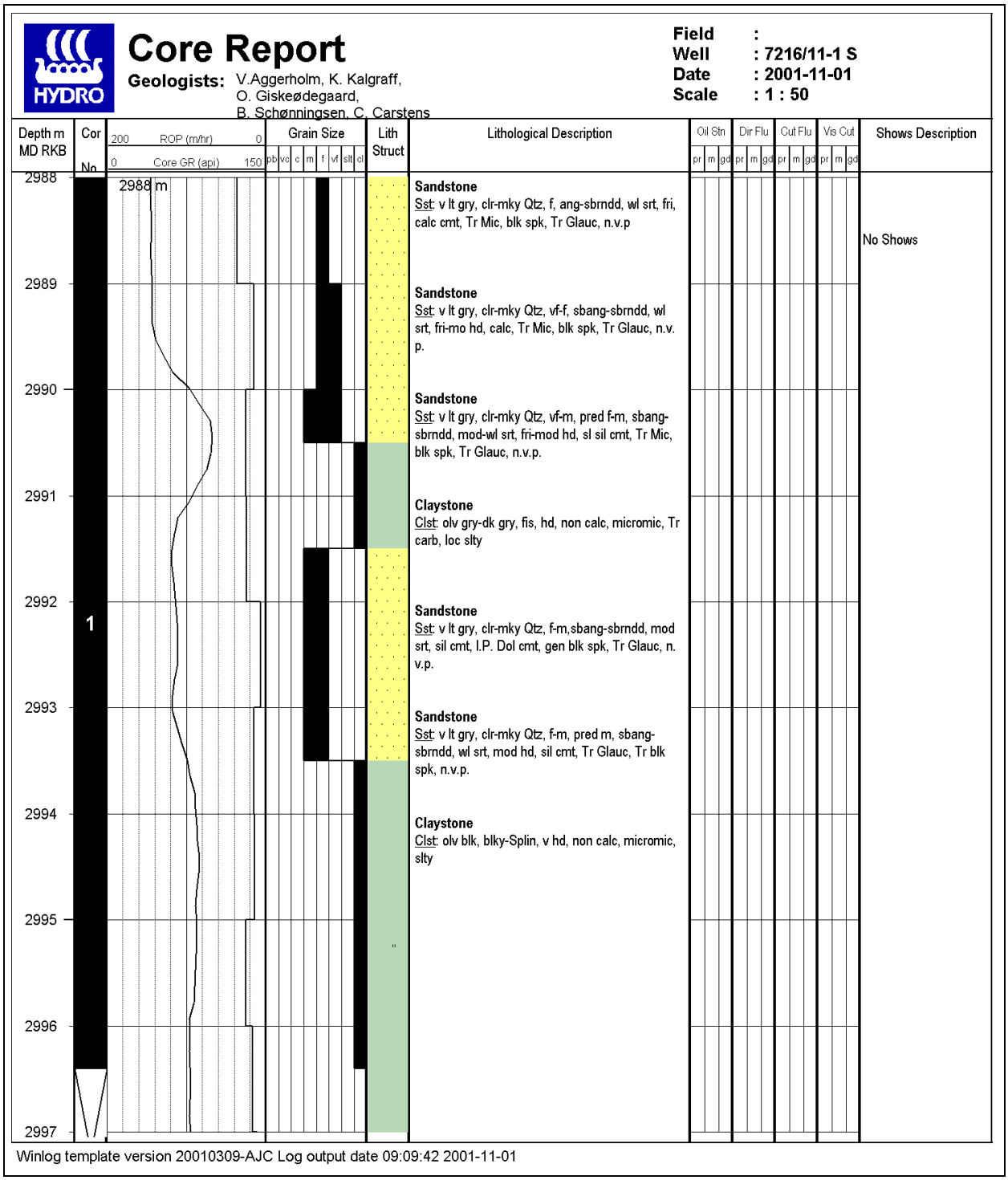
The closest tie-well 7117/9-2 was situated 80 km to the south-east on the Senja Ridge. The information from this well was of limited use because of the well's location on the Senja Ridge as opposed to within the Sørvestsnaget Basin.

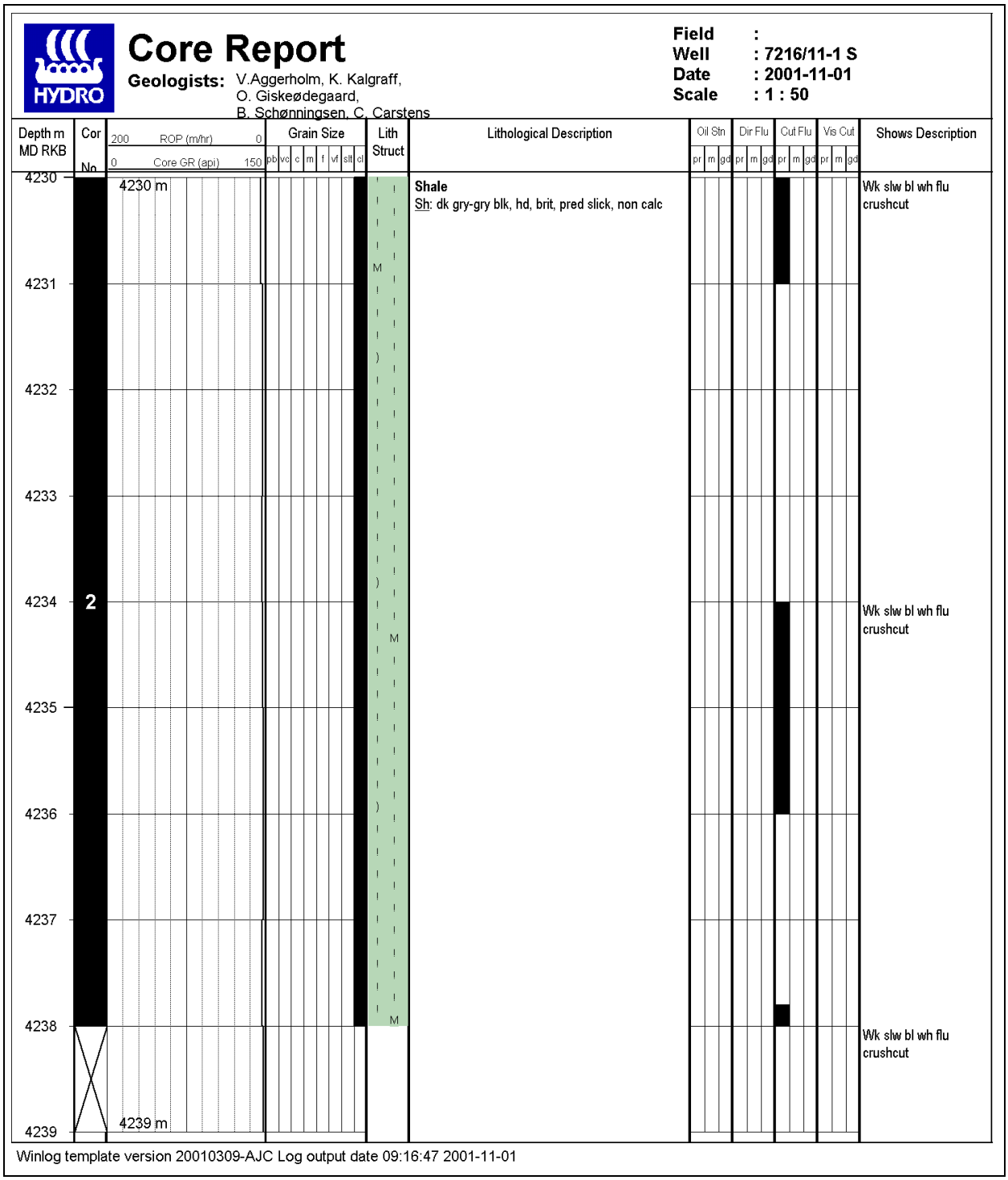
12 Standard and Special Studies

- Norsk Hydro, 2000: Well Programme 7216/11-1S
- Svitzer, 2000: Site survey 7216/11-1S
- SecurityDBS, 2000: Kjerneboringsanbefalinger for brønn 7216/11-1S
- Pathfinder Energy Services AS: End of well report, 2000.
- Geoservices: End of Well Report / Logs, 2000
- Reslab: Conventional Core Analysis, 2000
- Reslab: Core Photographs Well 7216/11-1S, Cores 1+2, Scale 1:4, White Light and UV Light
- Core descriptions, Cores 1+2, Well 7216/11-1S
- Post Site Survey report, Norsk Hydro, 2001
- Biostratigraphy well 7216/11-1S: Apt/Stratlab, 2001
- Cenozoic stratigraphy and Evolution of the Sørvestsnaget Basin, Southwest Barents Sea

APPENDIX I

CORE DESCRIPTIONS


Core Report
Geologists: V.Aggerholm, K. Kalgraff, O. Giskeødegaard, B. Schønningsen, C. Carstens
Field :
Well : 7216/11-1 S
Date : 2001-11-01
Scale : 1 : 50
Depth m MD RKB
Cor No
ROP (m/hr) 200 0
Core GR (api) 0 150
Grain Size
Lith Struct
Lithological Description
Oil Stn
Dir Flu
Cut Flu
Vis Cut
Shows Description
2988 m
Sandstone
Sst: v lt gry, clr-mky Qtz, f, ang-sbrndd, wl srt, fri, calc cmt, Tr Mic, blk spk, Tr Glauc, n.v.p
No Shows
Sandstone
Sst: v lt gry, clr-mky Qtz, vf-f, sbang-sbrndd, wl srt, fri-mo hd, calc, Tr Mic, blk spk, Tr Glauc, n.v.p.
Sandstone
Sst: v lt gry, clr-mky Qtz, vf-m, pred f-m, sbang-sbrndd, mod-wl srt, fri-mod hd, sl sil cmt, Tr Mic, blk spk, Tr Glauc, n.v.p.
Claystone
Clst: olv gry-dk gry, fis, hd, non calc, micromic, Tr carb, loc slty
Sandstone
Sst: v lt gry, clr-mky Qtz, f-m,sbang-sbrndd, mod srt, sil cmt, l.P. Dol cmt, gen blk spk, Tr Glauc, n.v.p.
Sandstone
Sst: v lt gry, clr-mky Qtz, f-m, pred m, sbang-sbrndd, wl srt, mod hd, sil cmt, Tr Glauc, Tr blk spk, n.v.p.
Claystone
Clst: olv blk, blky-Splin, v hd, non calc, micromic, slty
2988
2989
2990
2991
2992
2993
2994
2995
2996
2997
1
Winlog template version 20010309-AJC Log output date 09:09:42 2001-11-01


Core Report
Geologists: V.Aggerholm, K. Kalgraff, O. Giskeødegaard, B. Schønningsen, C. Carstens
Field :
Well : 7216/11-1 S
Date : 2001-11-01
Scale : 1 : 50
Depth m MD RKB
Cor No
ROP (m/hr)
Core GR (api)
Grain Size
Lith Struct
Lithological Description
Oil Stn
Dir Flu
Cut Flu
Vis Cut
Shows Description
4230 m
4239 m
Shale
Sh: dk gry-gry blk, hd, brit, pred slick, non calc
Wk slw bl wh flu crushcut
Wk slw bl wh flu crushcut
Wk slw bl wh flu crushcut
Winlog template version 20010309-AJC Log output date 09:16:47 2001-11-01

APPENDIX II

SIDEWALL CORE DESCRIPTIONS

NORSK HYDRO	SIDEWALL CORE DESCRIPTION	WELL : 7216/11-1S
		RIG : Transocean Arctic

Run: 2A	Date: 18.08.00	Logging Co: Cst-Gr			Page : 1 of 1
Shot: 6	Misfired 0	Lost: 1	Empty : 0	Recoverd : 5	Geologist : Schønningsen/Kalgraff

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
1	2 750	2	Clst :dk gn gry,fis,plty,mod hd,non calc,Tr blk Spk,no shows						
2	2 720	3	Sltst : olv gry,blky,mod hd,dol cmt,micromic,gen v arg,no shows						
3	2 690	3	Clst : m dk gry - dk gn gry,subfis - fis,mod hd,non calc,micromic,Tr blk Spk,gen slty,no shows.						
4	2 660	0	Lost						
5	2 630	0,5	Clst : m dk gry - olv gry,subfis - fis,mod hd,non calc,micromic,tf,slty,no shows.						
6	2 570	1	Clst : m dk gry - olv gry,fis,plty,mod hd,calc - non calc,micromic,slty,no shows.						
7									
8									
9									
10									

Tr:Trace M:Medium

Comments:

NORSK HYDRO	SIDEWALL CORE DESCRIPTION	WELL : 7216/11-1S
		RIG . Transocean Arctic

Run: 2B	Date: 21.08.00	Logging: Cst-Gr	Page : 1 of 6
Shot: 60	Misfired:	Lost: :	Empty :	Recoverd : :	Geologist : B.Schønningsen/K.Kalgraff

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
1	2 686	4	Clst : olv gry - olv blk.fis,firm,sl calc,micromic,r spk.						
2	2 660	3	Clst : olv gry,fis,firm,slk calc,r blk spk,r Glauc,micromic.						
3	2 600	3	Clst : grysh blk,fis,hd,sl calc,micromic,r blk spk,sl slty.						
4	2 550	4	Clst : olv gry,fis,firm,sl calc,micromic,r blk spk.						
5	2 540	4	Clst : olv gry,fis,firm,sl calc,micromic,r blk spk.						
6	2 539		Lost in hole.						
7	2 523,5		Lost in hole.						
8	2 510	6	Clst : olv gry,fis,firm,non calc,r blk spk,Tr Glauc.						
9	2 494,5	3,5	Clst : gn blk - olv blk,fis,firm,sl calc,micromic,r micropyr,Tr blk spk,Tr Glauc.						
10	2 485		Lost in hole.						

Tr:Trace M:Medium

Comments:

NORSK HYDRO	SIDEWALL CORE DESCRIPTION	WELL : 7216/11-1S
		RIG : Transocean Arctic

Run: 2B	Date: 21.08.00	Logging Co: CST-GR			Page : 2 of 6
Shot: 60	Misfired:	Lost:	Empty :	Recoverd :	Geologist : K.Kalgraff / B.Schønningsen

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
11	2 480	0,5	Clst : gry blk-blk,fis,non calc,micromic,r blkspk,sl slty,vsdy vf. No shows.						
12	2 450	3	Clst:olv gry,fis,firm-mod hd,non calc,micromic,blk spk,r micropyr.						
13	2 420	4,5	Clst : gry blk-blk,fis,mod hd-hd,non calc,sl slty,r sdy vf,micromic,blk spk.						
14	2 410	4,5	Clst : gry blk,firm,calc,micromic,r blk spk,sl slty,r Glauc.						
15	2 406	4	Clst as for 2410m.						
16	2 402,5	2	Clst : olv gry,mod hd - hd,v calc,sl slty,micromic,r Glauc.						
17	2 399		Lost in hole.						
18	2 395	3	Sltst : dusky gn,gry blk,blky,mod hd-hd, v calc,sdy vf,Tr micromic,r Glauc.No shows.						
19	2 390	3	Clst : lt olv gry,firm-mod hd,calc,slty,r sdy vf,micromic,Tr Glauc.						
20	2 380	4	Sltst : olv gry-olv blk,sft-frm,v calc,vf sdy,micromic,Tr Glauc.No shows.						

Tr:Trace M:Medium

Comments:

NORSK HYDRO	SIDEWALL CORE DESCRIPTION	WELL: 7216/11-1S
		RIG Transocean Arctic

Run: 2B	Date: 21.08.00	Logging: CST-GR			Page : 3 of 6
Shot: 60	Misfired:	Lost:	Empty :	Recoverd :	Geologist : K.Kalgraff / B.Schønningsen

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
21	2 370	4,5	Sltst : olv blk-brn blk,mod hd-hd,calc,micromic,Tr Glauc,r micropyr.No shows.						
22	2 360	3,5	Sltst as for 2370m.						
23	2 350	4,5	Sltst as for 2370m.						
24	2 340		Misfire						
25	2 330	3	Sltst : dk gry,mod hd,calc,micromic,vf sdy,Tr Glauc.No shows.						
26	2 320	3,5	Clst : olv blk-gy blk,fis,mod hd,v calc,sl slty,micromic,r micropyr,blk spk,Tr Glauc.						
27	2 310		Misfire						
28	2 300	3,5	Sltst : dk gry-olv gry,sft-firm,calc,micromic,Tr blk spk,Tr Glauc,vf sdy.No shows.						
29	2 270	3	Sltst as for 2300m.						
30	2 255		Misfire						
				Tr:Trace M:Medium					

Comments:

NORSK HYDRO	SIDEWALL CORE DESCRIPTION	WELL : 7216/11-1S
		RIG : Transocean Arctic

Run: 2B	Date: 21.08.00	Logging Co: Cst-Gr	Page : 4 of 6
Shot: 60	Misfired:	Lost:	Empty :	Recoverd :	Geologist : B.Schønningsen/K.Kalgraff

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
31	2 240	3	Sltst : dk gry-olv gry,sft-firm,calc,micromic,Tr Glauc,Tr blk spk,vf sdy.No shows.						
32	2 210	3	Sltst : gry blk,hd,v calc,r vf sdy,micromic,r micropyr,r blk spk,Tr Glauc.No shows.						
33	2 180	3,5	Sltst : dusky gn,olv gry,sft-firm,calc,micromic,r micropyr,Tr blk spk,vf sdy,Tr Glauc.No shows.						
34	2 150	3	Clst : gry blk-dk gry,fis,firm-mod hd,non calc,micromic,r slty,r Glauc.						
35	2 135		Lost in hole.						
36	2 120	5	Clst : gry blk-dk gry,fis,firm-mod hd,non calc,micromic,r slty,r Glauc.						
37	2 090	5	Clst as for 2120m.						
38	2 060	6	Clst : gry blk-dk gry,fis,firm-mod hd,sl calc,sl sdy vf,slty,micromic,Tr blk spk.						
39	2 030		Empty.						
40	2 000	5	Clst : gry blk-dk gry,fis,firm-mod hd,sl calc,sl sdy vf,slty,micromic,Tr blk spk.						
				Tr:Trace M:Medium					

Comments:

NORSK HYDRO	SIDEWALL CORE DESCRIPTION	WELL : 7216/11-1S
		RIG . Transocean Arctic

Run: 2B	Date: 21.08.00	Logging: Cst-Gr	Page : 5 of 6
Shot: 60	Misfire d.	Lost: . / Empty : / Recoverd : .	Geologist : B.Schønningsen/K.Kalgraff

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
41	1 970	3	Clst : olv blk-gry blk,fis,firm-mod hd,sl calc,sl sdy vf,slty,micromic,Tr blk spk.,Tf.						
42	1 940	4	Clst as for 1970m.						
43	1 910	6	Clst : olv blk-gy blk,subfis,firm-mod hd,calc,micromic,sl slty,r sdy vf,micromic,Tr blk spk,tf.						
44	1 880	4	Clst as for 1910m.						
45	1 850	4	Clst as for 1910m.						
46	1 820	5	Clst as for 1910m.						
47	1 790	5	Clst as for 1910m.						
48	1 760	2	Clst : olv blk-gy blk,subfis,firm-mod hd,calc,micromic,sl slty,r sdy vf,micromic,Tr blk spk.						
49	1 730	5	Clst as for 1760m.						
50	1 700	4,5	Clst as for 1760m.						

Tr:Trace M:Medium

Comments:

NORSK HYDRO	SIDEWALL CORE DESCRIPTION	WELL : 7216/11-1S
		RIG . Transocean Arctic

Run: 2B	Date: 21.08.00	Logging Co: Cst-Gr			Page : 6 of 6
Shot: 60	Misfire	Lost:	Empty :	Recoverd :	Geologist : B.Schønningsen/K.Kalgraff

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
51	1 670	6	Clst : olv blk-gry blk,fis,firm-sft,calc,micromic,v slty,Tr blk spk.						
52	1 640	5	Clst as for 1670m.						
53	1 610	5	Clst as for 1670m.						
54	1 580		Misfire						
55	1 550	7	Clst : olv blk-gy blk,fis,sft-frm,calc,micromic,Tr blk spk.						
56	1 520	6	Clst as for 1550m.						
57	1 488		Misfire						
58	1 450	1	Clst :olv blk,v hd,calc,Tr micromic,Tr blk spk.						
59	1 445	6	Clst as for 1450m.						
60	1 440		Misfire						
				Tr:Trace M:Medium					

Comments:

APPENDIX III

WELL SUMMARY

GEOLOGICAL WELL SUMMARY

MDT RESULTS

WELL SUMMARY

Coord: 72°00' 56.72"N **UTM**: 7 991 645.5 mN 16°30' 22.00"E 555 245.6 mE **Zone:** ED-50 UTM Zone 33 CM 15° E **Line:** NH9803, inline 2940, xline 4882 **Rig:** Transocean Arctic **Waterdepth:** 361 m MSL **KB:** 24 m **Stopped in:** Torsk Formation	**On location:** 23.07.00 **Spudded:** 24.07.00 **At TD:** 07.09.00 **Completed:** 14.09.00 **TD Driller:** 4239 m **TD Logger:** N/A m **Wireline Logging:** Schlumberger WS **MWD:** Baker Hughes/Pathfinder **Mudlogging:** Geoservices	**WELL:** 7216/11-1S **COUNTRY:** Norway

OPERATOR: NORSK HYDRO LICENCE PL 221 OWNED BY: HYDRO, TOTAL/FINA/ELF, STATOIL and SDØE

TARGETS: **Primary:** Torsk A1 prospect **Secondary:** Torsk A2 prospect	**RESULTS:** - Permanent plugged and abandoned as a dry well.

CASING	**CORES**

GAS RECORD

385-1004: returns to seabed
1004-1020:0.1-0.4%;C1
1020-1340:0.3-1.2%;C1
1340-1345:0.8-0.9%;C1,tr C3+C4
1345-1422:0.5-1.2%;C1
1422-1437:0.5-2.0%;C1,tr C2-C5
1437-2010:0.2-0.7%;C1
2010-2014:1.1-2.1%;C1,tr C3+C4
2014-2162:0.2-0.6%;C1
2162-2241:0.5-1.5%;C1
2241-2274:0.15-0.5%;C1
2274-2395:0.5-1.1%;C1,trC2-C5
2395-2750:0.1-0.4%;C1-C5
2750-2920:0.07-0.2%;C1-C5
2920-3047:0.01-0.1%:;C1-C5
3047-3145:0.1-0.3%,C1-C5
3145-3170:0.3-0.9%;C1-C5
3170-3200:1-3%:C1-C5
3200-3559:0.25-0.69%:C1-C5
3559-3576:0.7-1.5%:C1-C5
3576-3605:0.1-0.8%;C1-C5
3605-3607:1.3-3.3%;C1-C5
3607-4199:0.25-0.7%;C1-C5
4199-4230:0.6-1.0%;C1-C5
4230-4239:0.2-0.3%;C1-C5

LOGS				**OIL SHOWS**
MDT	1A	1586 - 1435 m		2991-2991.5 m (core) on Sandstone: no o stn, no pet od, bri yel dir flu in cracks, wk inst strmg bl wh cut flu, no vis cut, no res flu, no vis res
PEX-DSI-SP	2A	2751.5 - 999 m		
VSP	2A	2750 - 1100 m		
CST (on wireline)	2A	2750 - 2570 m		
CST (on TLC)	2B	2686 - 1440 m		

GEOLOGICAL WELL SUMMARY

Located on: NH9803 7 991 645.5 mN, 555 345.6 mE
Inline: A2940
X-line: A4882
WELL: 7216/11-1S

Water depth: 361 m MSL, RKB=24m

Depths in mRKB

DEPTH m MD RKB | LITHO-SECTION | EPOCH | STAGE | GROUP | FORMATION | DESCRIPTION | SHOWS

385 m Sea Floor

Cl: m gry, sft, stky, sdy inbd, tr grvl clst of cryst and sed rocks

30" 507 m

Returns to seabed from 385 - 1000 m, first sample from 1010 m MD RKB

Cl: lt-m gry, amor-sft, plas-stky, sl slty, sdy inbd, tr grvl clst of cryst and sed rocks

767 m MD/767 m TVD

Cl: lt gry-m dk gry, amor-blky, sft-frm, loc glau, loc slty, occ v f sdy/sdy inbd

tr Sd: gry, pred Qtz, f - crs, lse-fri, occ clsts of sed and cryst rocks

20" 999 m

Cl: olv gy-m dk gy, dk gy, sft, blky, mnr sbblky-frm, tr slty, loc v f sdy.

Sd: clr-trnsl Qtz, loc mky Qtz, v f-v crs, gen f-m, lse, subang-subrnd, gen rnd, mod-pr srtd, loc mod hd calc cmtd r Glau, gd Tr Shl Frag.

r Dol: lt brn-pl yel brn, blky , mod hd - v hd, splintr, micro-cryptoxln, loc grad Ls

r Pyr: r microfos, r rockfrag

13 3/8" 1390 m MD RKB 1380 m TVD RKB

Sd/Sst: clr-mky Qtz Gr, v f - crs, pred f-m, gen lse, loc lt gy mod calc cmtd agg, Glauc.

Clst: olv gy-m dk gy, dk grn gy, sft-md hd, loc stky, blky-subblky, gen blky, sli-non calc, loc slty, Glauc, Tr Shl Frag, Tr Pyr, r microfos, loc slty, v f sdy/sdy inbd

Sd/Sst: clr-mky Qtz Gr, v f - crs, pred f-m, gen lse, sbrnd/rndd, m-w srtd, r microfos, r Pyr, r Glauc.

Clst: olv gy-m dk gy, dk grnsh gy, olv blk, m dk gy-m gy, blky/sbblky, amor, sft-frm, r Glau, r microfos, r micropyr, r mic, loc slty, occ v f sdy/sdy inbd, r rockfrag, Tr Tf.

tr Sd/Sst: gry, pred Qtz, f - crs, lse-fri

Tf: m lt gy - m gy, sft, sdy

UTF 10.03.00 JRE

GEOLOGICAL WELL SUMMARY

Located on: NH9803 7 991 645.5 mN, 555 345.6 mE
Inline A2940 X-line A4882
Water depth: 361 m MSL, RKB=24m

WELL 7216/11-1S

DEPTH m RKB | LITHO SECTION | EPOCH | STAGE | GROUP | FORMATION | DESCRIPTION | SHOWS

2050 Clst: olv gry-olv blk, frm-mod hd, blky, sl slty, non calc, r Dol, r Glau

2100 Sd/Slst: m dk gy, clr trnsl Qtz, sbrndd - rndd, lse, r-Tr mic, r Ls, r blk spk, arg-v arg

2150

2200

2250 2269 m MD/2262 m TVD

2300 Slst: m gy-brn gy-dk brn gy, occ grn gy, sft-frm, micromic, Tr Glau, non calc, grdg v f Sst

2350 Sst: m gy, clr-mky wh Qtz, lse, arg, slty, subang-subrndd, mod srtd, Tr Mica.

2400 Clst: olv gy, mod hd-hd, v calc, sl slty, micromic, r glau.

2450 Lst: off wh, lt gy-lt brn gy, sbblky, arg-slty, dol, v hd

2468 m MD/2454 m TVD

2500 Clst: brn gy, olv gy-olv blk, frm-mod hd, loc sl slty, non calc, r micropyr, r dol.

2550 Clst:olv gy-dk olv gy, grn gy, Tr gy blk, blky-sbblky, pt subfis-fis, frm-mod hd, gen non calc, r micromic, pt slty-grdg Slst, loc blk specs, r Tr Pyr, r Tr Mica

2600

2650 Lst: wh-lt gy, dk olv gy, loc yel, ang-subang, micro-cryptoxln, frm-hd, loc arg, rr micromic, loc r Pyr nods, loc v f sdy.

2700 9 5/8"

2750 2750 m MD RKB
2693 m TVD RKB

2800 Clst:olv gy-dk olv gy, grn gy, Tr gy blk, blky-sbblky, pt subfis-fis, frm-mod hd, gen non calc, r micromic, pt slty-grdg Slst, loc blk specs, r Tr Pyr, r Tr Mica

2850

2900 2912 m MD/2804 m TVD

2950 Sst: lt gy, pred trnsl-mky wh Qtz, vf-crs, pred f-m, subang-subrnd, mod-w srtd, fri-mod hd, pt lse, pt sil cmt, loc calc cmt, tr Glau, tr-abdt Mic, tr Pyr.

3000

3050

EPOCH: Miocene, L. Olig., E. Olig., Middle - Late Eocene
STAGE: Pliocene, Tort.-Mess., Serrav., Chatt., Rupelian, Priabonian, Bartonian
GROUP: Sotbakken
FORMATION: Torsk, "Polartorsk" Mb (A1)

3050 Clst: olv gy-m dk gy, olv blk-dsky yel brn, subfis-fis, occ blky, mod hd, gen non calc, micromic, slty, loc grdg Slst, r Glau, Tr Pyr, loc blk specs, r carb

3100 3126 m MD/2936 m TVD

3150 Clst: dsky yel brn-lt brn, olv gy, med dk gy-olv blk-brn blk, blky, pt fis-plty, loc stky, pt sl calc, pt dol cmt, slty, micromic, Tr Pyr/micropyr, loc carb

3200 3205 m MD/2986 m TVD

3250 Clst: olv gy-md dk gy, brn gy, Tr gy blk, sbfis-blky, gen amor, psty, stky, sft-frm, Tr hd, non-sl calc, micromic, v slty-gradg Slst, Tr Pyr, pt v f sdy.

3300 Lst: gy wh-lt gy, blky, frm, micro-cryptoxln, loc blk specs, gen arg-grdg Mrl

3350

3400

3450 3460 m MD/3152 m TVD

3500 Clst: brn blk, varicol olv gy, m dk gy, gn gy-brn gy, subfis-fis, pt blky, amor, sft-frm, non calc, micromic, slty, Tr Pyr, Tr v f sdy

3550 3555 m MD/3216m TVD

3600

3650

3700 3725 m MD/3335 m TVD

3750 Sst: lt gry-m gry-lt grn gry, pred trnsl Qtz, vf-m, subang-subrnd, w srtd, lse-frm, tr Glau,tr-abdt Mic, tr Pyr.

3800

3850

3900

3950 Clst:dk gry-gry blk, occ brn blk, gen hd-v hd, occ frm, sl dol, non calc, sl slty occ grdg Slst, occ micromic, com micropyr, tr carb, tr Pyr.

4000

4050

Fault

Middle-Late Eocene
Late Paleocene - Early Eocene
Late Paleocene - Early Eocene
Lutetian
Ypresian
Thanetian
Sotbakken
Sotbakken
Torsk
"Polartorsk" Mb (A1)
(A2)
Torsk
(A3)

UTF 10.03.00 JRE

GEOLOGICAL WELL SUMMARY

Located on: NH9803 Inline X-line
7 991 645.5 mN, A2940 A4882
555 345.6 mE

Water depth: 361 m MSL, RKB=24m

WELL 7216/11-1S

DEPTH m RKB	LITHO SECTION	EPOCH	STAGE	GROUP	FORMATION	DESCRIPTION	SHOWS
4050		Selandian		Sotbakken	Torsk	Clst:lt brn-gy brn, dk brn gy, blky, sft-frm, non-sl calc, loc blk spec Tuff, gen slty, loc grdg Slst, micropyr, loc Pyr, Tr v f Sd, loc sucr.	
4100						Sh: dk gy-gy blk, hd, slickensides, sl micromic, sl slty, non calc	
4150						Siderite: blk-brn blk, blky-splntry, hd-v hd, brit	
4200		Danian?				Lst: gy wh-wh, lt olv gy, blky, sft-frm, loc hd, gen arg, micro-cryptoxln, Tr blk specs, loc grdg Dol.	
4250						4239 m MD RKB (TD) 3733 m TVD RKB	

UTF 10.03.00 JRE

Formation Pressure Worksheet

Well: 7216/11-1 S Rig: Transocean Arctic Date: 12.08.00 Conveyance
Pressure Units: Bars RKB-MSL: 24m MSL-Seabed Witnessed by:
Samples: 2 sampl depths B. Schønningsen

Test no.	Depth mMD RKB	Depth mTVD RKB	Initial Hydrostatc Pressure		Formation Pressure		Final Hydrostatic Pressure			Time hh:mm		Formation Pressure sg EMD	Fluid Gradient g/cc	Mud Gradient g/cc	Test Temp. degC	Good Data? Y/N	Quartz Mobility md/cp	Remarks	SLB Charge
			Quartz	Strain	Quartz	Strain	Quartz	Strain	Diff	Set	Retract								
1	1586 rep	1 584,2	222,89	223,36	199,22	199,84	222,85	223,46	0,04	03:30	03:40	1,29	N/A	N/A	32	Y	81,8		
2	1 586,0	1 584,2	222,82	223,41	199,14	199,79	222,82	223,41	0	03:51	04:00	1,29	#DIV/0!	#DIV/0!	32	Y	90,7		
3	1435 rep	1 433,2	201,73	202,37	194,17	194,79	201,75	202,38	-0,02	04:10	04:20	1,39	0,34	1,42	32	Y	74,6		
4	1 435,0	1 433,2	201,7	202,32	194,17	194,79	201,71	202,34	-0,01	04:40	04:45	1,39	#DIV/0!	#DIV/0!	32	Y	70,1		
5									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
6									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
7									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
8									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
9									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
10									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
11									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
12									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
13									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
14									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
15									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
16									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
17									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
18									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
19									#VALUE!			#VALUE!	#VALUE!	#VALUE!					
20									#VALUE!			#VALUE!	#VALUE!	#VALUE!					

SECTION B

OPERATIONS

Prepared by: H Ågotnes,
P.V. Fossum

Approved by: Terje Skram

LIST OF CONTENTS

TABLES

FIGURES

1 DRILLING SUMMARY AND EXPERIENCES

1.1 Mobilising

Total time used:	75 hrs	
Operational time:	75 hrs	(100.0 %)
Downtime:	0 hrs	(0 %)

Average speed during transit was 7.6 knots.

Wellhead co-ordinates:

7991645.46 mN 555345.64 mE

1.2 36" Hole Section / 30" Conductor

Water depth:	361.3 m	
Total depth of section:	507.0 m	
Total time used:	56.5 hrs	
Operational time:	50.5 hrs	(89.4 %)
Downtime:	6.5 hrs	(10.6 %)

1.2.1 Drilling

The well was spudded on July 24., 2000, at 12:28 hrs.

A 36" rotary BHA with 17-1/2" MXT03DX insert bit and 36" x 26" hole opener was run, the section was drilled to TD at 507.0 m. The 36" hole was drilled with sea water and hi-visc pills. After drilling, 10 m^3 of high visc mud was pumped before a wiper trip was performed to 10 m below seabed and back to TD. The hole was then displaced to 1.50 SG mud.

1.2.2 Casing

The 30" conductor with the Permanent Guide Base was run to 506.7 m and cemented back to the sea bed.

1.3 26" Hole Section / 20" Casing

Total depth of section:	1004 m	
Total time used:	140.0 hrs	
Operational time:	111.5 hrs	(79.6 %)
Downtime:	28.5 hrs	(20.4 %)

1.3.1 Drilling

A 9 7/8" pilot hole was drilled from 507 m to 1000 m. The pilot hole was swept with 5 m3 hi-wis on every connection. On TD the pilot hole was swept with 10 m3 hi-wis and flow-checked. Drilled 26" hole from 507 m to TD of section with a 26" MXT00DX bit in one run. Used sea water and high viscous pills for hole cleaning. Displaced hole to 1,30 SG mud and performed wiper trip to 30" casing shoe. Displaced hole once more to 1,30 SG mud prior to running casing.

1.3.2 Casing

The 20" casing with the 18-3/4" wellhead was run to 766 m were it stopped due to an obstruction. The casing was pulled and a wipertripp was done. The 20" casing with the 18-3/4" wellhead was then run to TD, this time without centralicers. Had to work the casing past tight hole at 769 m with 75 ton downweight. The casing was cemented in place with returns to seabed, and pressure tested to105 bar. Stabbed into grouting funnel were the cement was located on seabed. Ran BOP and riser. An overpull tes to 25 ton and the wellhead connector was pressure tested to 345 bar.

1.4 17 1/2" Hole Section/ 13 3/8" Casing

Total depth of section: 1395 m MD

Total time used:	225.5 hrs	
Operational time:	88.5 hrs	(39.2 %)
Downtime:	137.0 hrs	(60.8 %)

1.4.1 LOT

Drilled and milled the casing shoe in 5 runs, ref. 1.4.2. The hole was displaced to 1,30 SG KCL water based mud after milling down to 1014 m. The leak off test (LOT) confirmed formation strength of 1,46 SG equivalent mud weight (EMW) at 1014 m.

1.4.2 Drilling

Ran in with a 17 1/2" drilling assembly, tagged float at 975 m, and attemted to drill the shoe track. Pulled the drilling assembly, and ran in with a 12" mill. Milled down to 975 m. Pulled the 12" milling assembly, and ran in with a 12 1/4" junk mill. Milled down to 986 m. Pulled the 12 1/4" milling assembly, and ran in with a 17 7/16" junk mill. Attemted to mill trough obstruction at 978.5 m. Pulled the 17 7/16" milling assembly, and ran in with a 17 1/2" taper mill. Milled down to 1014 m and displaced the hole was displaced to 1,30 SG KCL water based mud. Performed LOT and pulled out of hole.

A 17 1/2" BHA with a MAXGTPT00 insert bit was run and the section was drilled and oriented down to 1437 m MD. The section was drilled with 1,30 s.g. WBM. The well had an influx after a drillbreak at 1435 m. The infux was circulated out by using drillers method, and the EMW was rised to 1.39 SG in two steps. The hole was plugged back to 1306 m MD. The plug was dressed of down to 1395 m MD, new TD of the section.

1.4.3 Casing

The 13 3/8" casing was run to 1390 m MD and cemented in place. The casing was pressure tested to 250 bar.

1.5 12 1/4" Hole Section/ 9-5/8" Casing

Total depth of section: 2758 m MD

Total time used:	293.5 hrs	
Operational time:	238.0 hrs	(81.1 %)
Downtime:	55.5 hrs	(18.9 %)

1.5.1 LOT

The cement in the 13 3/8" shoe track and 3 m new formation was drilled out with a 12 1/4" MXT03 using 1,40 sg KCL water based mud. The leak off test (LOT) confirmed formation strength of 1,59 SG equivalent mud weight (EMW) at 1398 m.

1.5.2 Drilling

A 12 1/4" BHA with a MXC03 bit was run and the section was drilled down to 1650 m MD where intermediate logging was performed. After logging the same BHA was run and the hole was drilled down to 2400 m MD. After a bit tripp the hole from 2400 m MD to TD at 2758 m MD was drilled with a MX20DDT. The section was drilled with 1,40 sg KCL water based mud down to 1650 m MD were it was raised to 1.46 SG. A wiper tripp was performed after TD logging, prior of running 9 5/8" casing.

1.5.3 Casing

The 9-5/8" casing was run to 2750 m MD and cemented in place. The casing was pressure tested to 400 bar

1.5.4 Logging

The following wire line logging runs were performed :

Log suite	Logged interval mMD	Comments
MDT	1586 and 1435	OK.
HGNS-PEX-DSI	1390-2758	HGNS failed

1.6 8 1/2" Hole Section

Total depth of section: 4239 m.

Total time used:	401.0 hrs	
Operational time:	307.0 hrs	(76.6 %)
Downtime:	94.0 hrs	(23.4 %)

1.6.1 FIT

The cement in the 9 5/8" shoe track and 3 m new formation was drilled out with a 8 1/2" G445XLDG2 using 1,30 sg KCL water based mud. The leak off test (LOT) confirmed formation strength of 1,72 SG equivalent mud weight (EMW) at 2761 m MD.

1.6.2 Drilling

A 8 1/2" BHA with a G445XLDG2 bit was run and the section was drilled down to 2944 m MD. Continued drilling with a MXC09DX bit down to coring point at 2988 m MD. After having cored the interval 2988 m - 2998 m (1 core), the section was drilled to 3930 m MD with a BD445MA bit, and to 4230 m MD with a FM2745DR bit.

At this depth where 7 wire line logging runs were made. A wiper trip was made at 4230 m MD due to hole stability problems during logging. A TD core was cut in the interval 4230 m - 4239 m due to the wireline logging problems.

1.6.3 Coring

Run #1 was performed using a 60 feet core barrel with fluted aluminium inner barrels. Run #2 was performed with a 30 feet corebarrel.

The following cores were cut:

Run #	Cored interval m MD	ROP m/h	Recovery %	Reason pulled
1	2988-2998	5	45,9	Jam
2	4230-4239	3	89	Full

1.6.4 Logging

The following wire line logging runs were performed :

Log suite	Logged interval mMD	Comments
VSP	2775-2670	OK
CST	2750-2780	Stuck after 6 shots
PEX-HRLA	No logs made	PEX failure. 3 attempts to get down
VSP-GR	No logs made	Hung up with VSP at the same depth as W/L

1.7 Plug and Abandonment

Total time used:	148,0 hrs	
Operational time:	145.0 hrs	(98.0 %)
Downtime:	3.5 hrs	(2.0 %)

Spotted a cement plug from 2900 m MD to 2600 m MD, the plug was placed on top of top of a Hi-Visc pill. The cement plug was tagged at 2696 m MD. The plug was load tested to 10 MT and pressure tested to 210 bar, 70 bar above LOT at the 9 5/8" casing shoe. Pulled out to 2050 m MD and displaced to 1.46 sg mud.

Perforated the 9 5/8" casing at 2009 m MD and squeezed of the perforations through a 9 5/8" cement retainer.

The 9 5/8" casing was cut and pulled at 696.5 m MD.

Set a 13 3/8" bridge plug on wireline at 685 m MD,and pressure tested to 90 bar, 70 bar above LOT at the13 3/8" casing shoe. Displaced the well to 1.39 sg mud.

The 13 3/8" casing was cut and pulled at 648.6 m MD.

Sat a cement pug from 680 m MD to 450 m MD.

After retrieving the BOP, the 20" and 30" casing was cut at 391m MD by using a motor. Guide base with 20" and 30" casing was retrieved.

A final seabed survey performed while anchor handling and prior to leaving location 19 September 2000 at 18:30 hrs.

GENERAL INFORMATION ON WELL 7216/11-1 S

Field : UNDEFINED **Country :** NORWAY

Licence : 221

UTM zone : 33 **Central Median :** 15' E **Horiz. Datum:** ED50

Location coordinates:		Surface	Target
UTM	**North [m]:**	7991645,5	
UTM	**East [m]:**	555345,6	
Geographical	**North :**	72 00'56.72"	
Geographical	**East :**	16 36'22.00"	

Water Depth: 361,0 **m** **Reference Point Height:** 24,0 **m**

Formation at TD: TORSK at 2270 m MD

Operators: NORSK HYDRO PRODUKSJON A/S **Share:** 35,00 %

Partners: DEN NORSKE STATS OLJESELSKAP A/S **Share:** 53,00 %

ELF PETROLEUM NORGE A/S 12,00 %

Total depth (RKB) : 4239,0 **m MD** 3733,2 **m TVD**

TIME SUMMARY

Start Time : 2000-07-20 23:25:00

Spudding date : 2000-07-24

Abandonment date : 2000-09-19

Main operation	Hours	Days	%
MOBILIZATION	93,5	3,9	7,0
DRILLING	686,0	28,6	51,2
FORMATION EVALUATION MWD	0,5	0,0	0,0
FORMATION EVALUATION LOGGING	64,0	2,7	4,8
FORMATION EVALUATION CORING	47,0	2,0	3,5
PLUG AND ABANDONMENT	124,0	5,2	9,3
DOWNTIME DRILLING	191,5	8,0	14,3
DOWNTIME FORM. EVAL. LOGGING	128,5	5,4	9,6
DOWNTIME FORM. EVAL. CORING	1,0	0,0	0,1
DOWNTIME PLUG AND ABANDONMENT	3,0	0,1	0,2
Sum:	**1339,0**	**55,8**	

Hole and casing record

Hole	Track	Depth [m MD]	Casing/Tubing	Track	Depth [m MD]
36"		507,0	30"		506,7
26"		1004,0	20"		999,0
17 1/2"		1390,0	13 3/8"		1390,0
12 1/4"		2758,0	9 5/8"		2750,0
8 1/2"		4239,0			

Well status: PERMANENTLY ABANDONED

Rig name: TRANSOCEAN ARCTIC

NORSK HYDRO A.S		WELL:	BRØNN 7216/11-1	
DRILLING SECTOR		LICENS:	PL221	
		RIG:	Transocean Arctic	
		DEPTH:	4 250	
		ACCOUNT:	2015249	
		WELL START:	23.07.2000	
		DAYS PLANNED:	50,800	
		ACTUALL DAYS:	52,979	
04.10.01				
				ESTIMATED
EDI	DESCRIPTION		AFE	COSTS
0	EMPLOYEE RELATED COSTS		10 380 000	9 933 822
1	RIG COSTS		93 175 000	95 735 383
2	RIG SUPPORT COSTS /REIMBURSABLES		5 950 000	2 865 039
3A	FUEL/LUB		1 450 000	4 250 255
3C	BITS		3 355 000	2 500 322
3D	CASING/CASING EQUIPMENT		5 250 000	4 980 430
3E	WELLHEAD/XMASTREE		1 405 000	3 800 608
3F	CEMENT/CEMENT ADDITIVES		1 370 000	20 814
3G	MUD & MUD CHEMICALS		3 540 000	3 887 899
3G	CUTTING DISPOSAL			0
3	CONSUMABLES COSTS, SUB TOTAL		16 370 000	19 440 328
4B	CHARTERFLY		2 000 000	0
4C	OTHER TRANSPORTATION		255 000	28 824
4D	STANDBY VESSEL			
4F	HELICOPTER TRANSPORT		8 555 000	12 961 274
4G	SUPPLY VESSELS/STANDBY /EKSTRA BÅTER		20 920 000	20 692 266
4	TRANSPORTATION COSTS, SUB TOTAL		31 730 000	33 682 364
5A	CORING		690 000	491 167
5B	DIRECTIONAL DRILLING/FRILLING TOOLS		2 635 000	2 926 774
5C	CUTTING OF CASING		500 000	333 710
5D	COMPLETION		0	0
5F	MWD-SERVICES		4 095 000	9 293 189
5G	CASING OPERATIONS		500 000	1 353 217
5G	MUD LOGGING/MUD SERVICES		1 515 000	1 622 718
5H	MUD SERVICES		0	
5I	CEMENTING/PRESS.TEST		1 140 000	3 202 221
5J	EL. LOGGING		2 990 000	5 714 809
5K	VSP		850 000	0
5L	PROD.TESTING		280 000	0
5M	DIVING/ROV		930 000	801 483
5N	RIGPOOL		1 015 000	1 727 273
5N	DIVERSE		260 000	7 385 590
5	SERVICE COSTS, SUB TOTAL		17 400 000	34 852 151
6A	SITE SURVEY		2 500 000	1 509 768
6B	RIG MOVING/POSITIONING		500 000	335 000
6C	DRILLING SITE CLEAN UP		350000	0
6	SURVEY COSTS, SUB TOTAL		3 350 000	1 844 768
7	WAREHOUSE COSTS		1 340 000	8 963 175
8	LAB COST		5 305 000	179 071
	NOBALES FELLESKOST. MOB/DEMOB			7 253 480
TOTAL OPERATION COSTS			185 000 000	214 749 581

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 1 **Date:** 2000-07-20
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
23:30	No activity on well 7216/11-1 S
23:59	Rig in transit to well 7216/11-1 S

Daily report no : 2 **Date:** 2000-07-21
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
23:59	Rig in transit, average speed 7.6 knots.

Daily report no : 3 **Date:** 2000-07-22
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
23:59	Rig in transit, average speed 7.6 knots.

Daily report no : 4 **Date:** 2000-07-23
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
19:00	Rig in transit, Average speed 7.6 knots. On location at 19:00 hrs.
20:00	Offloaded supply vessel.
23:59	Commensed anchor handling.

Daily report no : 5 **Date:** 2000-07-24
Midnight depth : 496 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
02:30	Pre-tensioned anchors to 150 ton.
05:00	Continued to pick up 5 1/2" DP.
06:30	Picked up 36" BHA.
08:30	Mad up and function tested the MWD tool.
10:30	Continued to pick up 36" BHA.
12:30	RIH to 10 m above sea bed. Jumped ROV. Spudded in at 361.3 m MSL at 12:28 hrs.
23:59	Drilled 36" hole from 361.3 m to 496 m.

Daily report no : 6 **Date:** 2000-07-25
Midnight depth : 507 m MD **Estimated PP:** sg **Mud weight:** 1,30 sg

Stop time	Description
03:30	Drilled 36" hole from 496 m to 507 m at 4400 lpm, 149 bar, 3-10 tonn wob. Pumped 15 m3 hi-vis pill every 15 m drilled. ROV checked for gas and for space-out mark on BHA.
04:00	Pumped and circulated out 20 m3 hi-vis pill.
05:00	Made wiper trip to 10 m below seabed.
05:30	Displaced hole to 1,50 sg mud.
07:00	Pulled out of hole. Rakced back bottom hole assembly.
07:30	Rigged up to run 30" conductor.
08:00	Pulled out shoe joint and checked float.
09:00	Skidded RGB to well centre. Installed guide wires.
12:00	Ran 30" conductor. Landed conductor in RGB in moon pool.
13:00	Made up 30" housig and running tool.
16:30	Attempted to land and release 30" housing in RGB. NO go.
19:00	Pulled out housing joint to rig floor. Disconnected 30" housing from running tool. Laid down housing joint.
20:00	Made up 30" back-up housing. Landed and latched 30" housing in RGB. Released and racked back running tool.
22:30	Ran cement stringer and connected running tool. Ran RGB to seafloor. Filled conductor with seawater.
23:59	Ran 30" conductor on 5 1/2" drill pipe. Positioned the rig and stabbed into 36" hole assisted by ROV. Landed conductor and checked stick-up, inclination and heading by ROV.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 7 **Date:** 2000-07-26

Midnight depth : 671 m MD **Estimated PP:** sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Made up cement hose to landing string. Circulated one hole volume.
03:00	Pressure tested cement line to 200 bar. Cemented 30" conductor as follows: 36,1 m3, 1,56 sg lead slurry, 38,1 m3 1.95 sg tail slurry. Displaced cement with 5,64 m3 seawater using cement pump. Checked float.
09:00	Held coductor in tension while WOC. Observed bulls eye 3/4 deg off center
11:30	Backed out running tool. Pulled out off hole. Laid down 3*5" drill pipe singles plugged with cement.
12:30	Cut and slipped 33 m drilling line
13:30	Laid down 36" bottom hole assembly
15:30	Made up 9 7/8" bottom hole assembly. Down loaded MWD memeory. Function tested MWD tool prior to RIH
17:00	Ran in to RGB. Stabbed into 30" conductor assisted by ROV
18:00	Ran in hole. Reamed and washed from 480 m. Tagged firm cement at 500 m.
19:00	Drilled shoe track from 500 m to 507 m. Cleaned rathole and reamed shoe several times. Sweept hole with 10 m3 hi-vis pill.
23:59	Drilled 9 7/8" pilot hole from 509 m to 971 m at 3850 lpm, 148 bar, 80-130 rpm, 4-6 ton weight on bit. Swept hole with 5 m3 hi-vis pill every connection.

Daily report no : 8 **Date:** 2000-07-27

Midnight depth : 307 m MD **Estimated PP:** sg **Mud weight:** 1,30 sg

Stop time	Description
09:30	Drilled 9 7/8 pilot hole from 509 m to 1000 m at 3950 lpm, 148 bar, 80-130 rpm, 5-8 ton weight on bit. Swept hole with 5 m3 hi-vis pill every connection
11:00	Sweept hole with 10 m3 hi-vis pil. Flow checked well. Displaced hole to 1,30 sg mud prior to pulled out of hole
14:30	Pulled out of hole. Broke bit. Laid down 8" CLSS and 9 7/8" stb. Down loaded MWD memory
16:30	Made up and racked back 18 3/4" running tool and 18 3/4" housing loaded with plug launcher and wiper plug.
17:30	Made up and racked back cement stand.
20:00	Made up and ran in hole with 26" bottom hole assembly
22:00	Installed guide frame. Ran in hole. Positioned rig and stabbed into 30" housing. Tagged cement at 500 m.
23:59	Drilled out track from 500 m to 507 m. Cleaned rat hole, reamed shoe several times.

Daily report no : 9 **Date:** 2000-07-28

Midnight depth : 1004 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
19:00	Drilled 26" hole from 507 m to 1004 m at 4500 lpm, 220 bar, 100 rpm and 15-20 ton wob.
21:30	Swept hole with 30 m3 hi-vis pill. Displaced hole to 1,30 sg mud prior to wiper trip.
22:30	Flow checked well. Performed wiper trip to into 30" shoe at 507 m. No fill at TD.
23:59	Swept hole with 20 m3 hi-vis pill.

Daily report no : 10 **Date:** 2000-07-29

Midnight depth : 1004 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
02:00	Displaced hole from seawater to 1,30 sg mud.
04:30	Flow checked well. POOH. Washed 30" housing on way out. Broke bit and racked back BHA.
05:30	Rigged up 20" casing handling equipment.
06:00	Made up shoe and float joint. Performed safety meeting with involved personell.
14:30	Ran 20" casing . Stabbed into 30" housing at 11:26 hrs. Filled each joint with seawater. MU 18 3/4" wellhead and running tool to 20" casing.
15:30	Ran 20" casing on 5" dp. Tagged obstruction at 766 m.
18:00	Circulated at 1500 lpm while attempting to work casing through obstruction at 766 m. Pumped 120 m3 1,30 sg mud. Displaced mud with 50 m3 seawater Applied max 65 ton down weight.
18:30	Pulled out landing string and racked back 18 3/4" housing and running tool.
23:59	Pulled out and laid down 20" casing. Removed sentralizers.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 11 **Date:** 2000-07-30
Midnight depth : 1004 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
01:30	Pulled out and laid down 20" casing. Removed sentralizers.
02:00	LD casing handling equipment.
04:30	MU 26" BHA . Installed guide frame and stabbed into 30" housing assisted by ROV. Continued RIH to 750 m.
05:00	Lowered string through casing obstruction point at 766 m. No sign of obstruction. Circulated seawater and rotated string down at obstruction point. String stalled without taking any excess weight.
05:30	Circulated and rotated string through obtruction point at 766 m. No signs of obstruction except minor fluctuations on torque gauge.
06:00	Continued RIH to 990 m. Tagged tight spot at 990 m.
07:00	Circulated and rotated string through tight spot at 990 m.
08:30	Swept hole with 20 m3 hi-vis pill and displaced hole to 1.50 sg mud.
11:30	POOH with 26" BHA. Circulated and rotated string at obstruction point at 766 m on way out. Broke bit and racked back BHA.
12:30	Rigged up 20" casing handling equipment and held pre-job safety meeting with crew.
18:00	Made up shoe and float joint. Checked shoe track for flow through. Installed sentralizers with two stop rings on four first joints. Ran 20" casing. Stabbed into 30" housing at 16:15 hrs.
19:00	Made up 18 3/4" wellhead and running tool to 20" casing. Ran 20" casing on 5" DP. Tagged tight spot at 769 m.
19:30	Circulated at 4500 lpm while worked casing through tight hole at 769 m. Max 75 ton downweight.
20:30	Continued running 20" casing on on 5" DP. Had 30-40 ton drag from 769 m to TD. Landed 18 3/4" wellhead in 30" housing. Pull tested wellhead hanger to 25 ton.
21:00	Hooked up control hoses and cementing line to cement head.
22:00	Displaced hole to seawater at 3000 lpm. pressure tested cement lines to 200 bar.
23:59	Mixed and pumped 174.6 m3, 1.44 sg lead cement slurry.

Daily report no : 12 **Date:** 2000-07-31
Midnight depth : 1004 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Mixed and pumped 23,1 m3, 1,92 sg tail slurry.
02:00	Released dart and sheared out plug at 197 bar. Displaced cement at 3000 lpm. Bumped plug and pressure tested 20" casing to 105 bar, 10 min. Checked for back-flow.
02:30	Disconnected cement head control hoses and cement line. Backed out running tool.
03:30	Racked back cement stand and POOH.
06:00	Made up 3 1/2" cement stinger. RIH and stabbed into grouting funnel. Tagged cement on seabed. POOH. LD cement stinger.
10:00	Performed pre-job meeting with crew. PU 2 x 50" riser joints. Disconnected guide wire # 3 & 4. SkiddeBOP in position under rotary.
18:30	Connected guide wire # 3 & 4. BOP in splash zone at 11:40 hrs. Ran BOP and riser. Pressure tested kill/ choke lines to 35/ 530 bar.
20:00	Ran slip joint. Installed support ring with kill/ choke lines.
22:30	Laid pod hoses in support sadles. Checked bulls eye on LMRP and flex-joint. Positioned rig over RGB. Landed BOP and verified proper installation with 25 ton overpull.
23:30	Installed diverter assembly. LD BOP running equipment.
23:59	Made up BOP test tool and bull nose on 5" DP.

Daily report no : 13 **Date:** 2000-08-01
Midnight depth : 1004 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Ran BOP test tool. Flushed kill/ chole lines with seawater.
01:30	Attempted to test wellhead connector. Found leakage on cement unit.
04:00	Pressure tested wellhead connector and kill/ choke lines to 35/ 530 bar. Function tested BOP from both yellow and blue pod. Pulled out and laid down test tool.
05:30	Pressure tested kelly cocks, IBOP, and kelly hose to 35/ 345 bar, 5/10 min.
06:00	Laid down 26" BHA.
09:00	Made up 17 1/2" BHA. Aligned scribe line. RIH with BHA to 263 m. Function tested shear rams from acoustic panel.
12:30	RIH with 17 1/2" BHA from 263 m to 975 m. Picked up 5 1/2" DP on way in. Tagged float at 975 m.
13:00	Performed choke drill with crew prior to drill shoe track.
21:00	Attempted to drill plugs/ float.
23:59	POOH with 17 1/2" BHA. Broke bit and racked back BHA.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 14 **Date:** 2000-08-02
Midnight depth : 1004 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,03 sg

Stop time	Description
01:30	Made up 12" milling assembly.
02:30	RIH with 12" milling assembly. Tagged plugs/ float at 975 m.
05:30	Milled plugs/ float from 975 m to 978,5 at 2250- 3500 lmp, 47-95 bar, 50-80 RPM and 3-10 ton WOB. Swept hole with 15 m3 hi-vis pill.
07:00	POOH and laid down 12" milling assembly.
08:00	Pressure tested 20" casing.
14:00	Made up and racked back 99 joints 5 1/2" DP.
16:30	Made up 2 x single 5" DP joints and junk basket. Tagged top fish at 978,5 m and worked junk basket several times..
17:30	Swept hole with 20 m3 hi-vis pill.
19:00	POOH with junk basket. No junk in basket.
21:30	Made up and installed plugs in 13 3/8" hanger. Racked back hanger.
23:00	Made up cement head to DP stand and racked back.
23:59	Laid down 6 x 9 1/2" DC.

Daily report no : 15 **Date:** 2000-08-03
Midnight depth : 1004 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,03 sg

Stop time	Description
02:30	Laid down used 11 3/4" Navi Drill. Picked up new motor, aligned scribeline and racked back. Loaded and racked back MWD tool.
04:30	Made up and racked back 12 1/4" milling assembly.
06:00	Made up and racked back 5 1/2" HWDP.
07:30	Cut and slip drilline.
10:30	M/u 12 1/4" junk mill and RIH to 978.5m.
12:00	Milled from 978.5m to 986m.
12:30	Pumped 15 m3 hivis pill, circulated same out of hole.
14:30	POOH, l/d 12 1/4" junk mill.
17:00	M/u 17 7/16" junk mill and 17 1/2" string mill and RIH.
20:30	Attempted to mill through obstruction @ 978.5m. No progress.
22:30	POOH. Changed out 17 7/16" junk mill with 17 1/2" taper mill.
23:59	RIH

Daily report no : 16 **Date:** 2000-08-04
Midnight depth : 1014 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
04:00	Milled from 978,5m through obstruction down to 984m. Worked mill through tight spots from 979m to 983m.
06:00	Drilled/milled cement, Floatcollar,cement in shoetrack, Floatshoe & cleaned rathole down to 1004m.
07:00	Drilled/milled 17 1/2" hole down to 1014m.
08:00	Pumped 30m3 hivisc pill. Displaced same out of hole.
09:00	POOH to 974m. Worked taper mill and string mill through obstructions/milled area from 978.5m to to 985m. RIH to TD.
12:00	Pumped 35m3 hivisc pill. Displaced hole to 1.30sg KCL mud. Circulated & conditioned mud.
12:30	Perfomed LOT, EMW: 1.46sg.
13:00	Functioned all rams, valves and annulars on BOP to verify no operational problems of same due to junk/debris from milling left in cavities.
17:00	POOH. L/d stabilizers, string mill and taper mill. Cleaned rigfloor.
19:00	M/u 17 1/2" motor assembly. RIH w/same to 975m.
21:00	Attempted to work bit through obstruction @978,5m, with and without rotation and with and without pumps running, negative.
22:30	POOH, racked back motor assy, inspected bit,ok.
23:59	M/u milling assy with 17 1/2" stabilizer on top.

Daily report no : 17 **Date:** 2000-08-05
Midnight depth : 1094 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Continued m/u packed milling assembly & RIH to 975m.
03:00	Worked milling assembly through tight spot @ 978,5m, & down to 990m.
09:30	Drilled/milled cement down to 1004m.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 17 **Date:** 2000-08-05
Midnight depth : 1094 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
12:00	Drilled/milled new formation down to 1014m.
13:00	Pumped 20 m3 hivisc pill. Displaced same out
14:00	POOH to 974m. Worked mills/stabilizer through former obstruction from 978.5m to 984m until no restriction observed.
17:00	POOH, l/d x/o's, stabilizers & mills. Cleaned rigfloor.
19:00	RIH w/ 17 1/2" bit & motor. Rotated string to enter through former obstruction, no problems to enter. Tagged bottom at 1014m & flushed for 5min to remove potential junk.
23:00	Drilled 17 1/2" hole from 1014m to 1085m. SCR @1078m: w/MP#3: 30spm/10bar, 40spm/13bar, 50spm/17bar
23:59	Oriented string and drilled to 1094m.

Daily report no : 18 **Date:** 2000-08-06
Midnight depth : 1437 m MD **Estimated PP:** 1,35 sg **Mud weight:** 1,30 sg

Stop time	Description
21:00	Continued drill/orient from 1094m to 1437m. Drilling break @1435m.
22:00	Flowchecked well. Well flowing. Shut in well on upper annular. SIDP: 6 bar, SICP: 1-2 bar. Flowchecked via chokeline, gained 400ltr in 6min. Shut in well. SIDP: 6bar, SICP: 2bar. Bled off DP. Opened choke once more and flowchecked well.
23:00	Observed Shutin pressures, SIDP:0bar, SICP: 2bar, meanwhile weighting up active to 1.35bar and displacing riser above closed upper annular to 1.35 bar.
23:59	Prepared to circulate out influx using Drillers Method. Held safety briefing with involved personnel on drillfloor. Pumped down drillstring against closed choke to monitor float opening pressure. Indications of float opening at 10bar.

Daily report no : 19 **Date:** 2000-08-07
Midnight depth : 1437 m MD **Estimated PP:** 1,37 sg **Mud weight:** 1,39 sg

Stop time	Description
06:00	Circulated out influx w/ 30spm, using Drillers Method (MW: 1.30sg), based on SIDP: 10bar, SICP:2bar. Standpipepressure during circulation kept constant @22bar. Complete circulation was performed through MGS. Max. gas in mud out of MGS: 2.0%
07:30	Stopped pumps and closed in well @0615hrs. Total strokes of 11300, ie. 2000more than full circulation. SIDP: 11bar, SICP: 8bar. Observed stable well pressures, meanwhile weighting up mud in active to 1.39sg, preparing for 2nd step of Dr.Met
15:30	Performed 2nd step of Drillers Method, displacing well to 1.39sg mud w/30spm. DPpress while pumping: 17-19bar. Max.gas 1%. Stopped circulation and shut in well after 11200stks. SIDP: 8bar, SICP 8bar. Opened choke and bled off pressures.
16:00	Stopped pumps and closed in well @1530hrs. Observed pressures fairly stable for 6min, SIDP: 8bar, SICP: 8-6bar. Bled off DP pressure, thereafter CP. Flowchecked well on triptank, gained a total of 680ltr before stabilizing.
16:30	Displaced riser to 1,39sg mud.
17:00	Opened upper annular preventer and flowchecked well up riser. Well stable.
21:30	Circulated and conditioned mud and hole. Reduced pumprate stepwise from 4000lpm to 2500lpm due to slight losses. Pumped out 2stds before continuing circulating. Managed to pump with 3000lpm, only with slight losses.
23:30	Performed wipertrip to 20" shoe, pumping out of hole.
23:59	RIH

Daily report no : 20 **Date:** 2000-08-08
Midnight depth : 1437 m MD **Estimated PP:** 1,37 sg **Mud weight:** 1,39 sg

Stop time	Description
00:30	Continued RIH. Washed down last stand, 5m fill on bottom, washed down to 1435m.
03:00	Circulated bottoms up and until shakers clean. Increased pumprate in steps to 3000lpm. Had slightly losses.
05:00	Flow checked well prior to pumping out of hole. Pumped out of hole to 20"shoe. Performed new flowcheck w/bit inside 20" casing.
07:00	Pumped slug & POOH.
07:30	Dumped MWD memory.
08:00	Racked MWD, broke bit & l/d motor.
10:00	RIH w/ 5" diverting tool on 5 1/2" DP to 1435m.
11:30	Circulated bottoms up. Losses w/3000lpm, reduced pumprate to 2500lpm and continued circulation with marginal losses.
13:00	Set balanced cement plug from 1435m to 1306m. Pumped w/ cement unit 5m3 DW ahead as spacer, and 0.4m3 DW behind 20m3 1.9sg gastight cement slurry to balance plug. Displaced w/ mud pumps w/13.8m3 1.39sg mud (0.5m3 underdisplacement)
13:30	Pulled slowly out of cement plug to 1337m.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 20 **Date:** 2000-08-08

Midnight depth : 1437 m MD **Estimated PP:** 1,37 sg **Mud weight:** 1,39 sg

Stop time	Description
16:00	Circulated bottoms up long way, dumped 58m3 of cement contaminated mud in returns. Continued circulating & conditioning mud.
17:00	Flow checked well and verified stable, prior to POOH to inside 20" casing shoe.
21:00	Waited for cement to set up, w/string @950m, closed upper annular preventer, and well pressured up to +-5bar.
22:00	POOH. L/d 5" diverting tool.
23:59	M/u 17 1/2" dress-off assembly & RIH.

Daily report no : 21 **Date:** 2000-08-09

Midnight depth : 1437 m MD **Estimated PP:** 1,37 sg **Mud weight:** 1,39 sg

Stop time	Description
00:30	Continued RIH. Washed down last stand. Tagged top of cement @1337m.
03:30	Drilled cement from 1337m to 1395m, ROP starting @40-60m/hr w/WOB +-15MT, in lower interval dropping to 5-10 m/hr w/WOB up to 20MT. Dumped 193m3 of heavily cement contaminated mud while drilling from 1370m to 1391m.
05:00	Circulated bottoms up and until shakers clean. Treated mud for cementcontamination w/citric acid and sodium bicarbonate. Checksurvey on bottom: (surveydepth 1370m) 5.1 incl., 177.3 Az.
08:00	Verified well stable, prior to pumping slug & POOH. Tight spots from 1360m to 1235m. Max o/p from 1245m to 1235m of 50MT. Worked string up/down until no restriction observed. Continued POOH. L/d 17 1/2" bit, stabilizer, float sub and 1 DC.
10:00	M/u r/t for seatprotector w/jet sub 1 std below. RIH. Flushed WH area. Landed in seatprotector. Verified landing depth w/"Vetco method".
12:30	Attempted to retrieve seatprotector w/max o/p of 60MT, negative. Worked r/t several times pulling w/20MT, unable to retrieve seatprotector. Turned r/t to get new grip on protector.
14:00	Pulled seatprotector free w/15MT o/p. POOH w/ same. L/d seatprotector, running tool & jet sub.
23:59	R/u to run 13 3/8" casing. Held safety meeting with involved personnel prior to starting running. Ran 86jts 13 3/8" casing down to 998m.

Daily report no : 22 **Date:** 2000-08-10

Midnight depth : 1437 m MD **Estimated PP:** 1,37 sg **Mud weight:** 1,40 sg

Stop time	Description
00:30	M/u casing hanger. R/d csg handling equipment. Removed protection from csg hgr/seal assembly. RIH
02:00	Ran casing landing string, filling each stand. Took weight @1312m. M/u topdrive and washed through tight spot. Continued RIH without pumping. Landed casing hanger in WH @0200hrs. Verified correct landing depth w/"Vetco Method".
03:00	Circulated csg. vol +, breaking circulation carefully and bringing pumps stepwise up to 1800lpm. No losses while circulating.
04:30	Pressure tested cement line to 200bar, pumped 13m3 spacer with rigpumps, prior to dropping ball. Mixed & pumped 15 m3 1.90sg gastight slurry w/cement unit. Dropped dart and displaced same w/ 3 m3 1.39sg mud.
05:30	Displaced cement w/rigpumps @1800lpm. Bumped plug after 4100stk (ie. pump.eff.:95%). Pressured tested casing to 165bar w/ cement unit. OK.
07:00	Attempted to set seal assembly. Unable to pressure teste same.Indications that seal assembly not completely set.
08:30	POOH w/casing hanger running tool, no sucess. L/D running tool.
10:30	RIH to wash the well head area, set and test seal assembly to 35/365 bar.
11:00	Set and tested seal assembly.
13:30	Tested the BOP stack, 35/365 bar with the yellow pod. Function tested with the blue pod. Function tested the M.P.R. acoustic.
15:00	POOH & function tested the shear ram.
16:30	M/u wear bushing. RIH and set same. Pull out and lay down running tool.
19:00	Tested IBOP on DDM, lower kelly cock & kelly hose.
21:00	Made up 12 1/4" BHA.
22:00	RIH to above float collar.
22:30	Performed choke drill.
23:00	Presure tested 13 3/8" casing to 250 bar, OK.
23:59	Tagged float at 1365m. Drilled through plugs and shoetrack down to 1390m.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 23 **Date:** 2000-08-11
Midnight depth : 1650 m MD **Estimated PP:** 1,28 sg **Mud weight:** 1,40 sg

Stop time	Description
00:30	Flow checked well and drilled 12 1/4" hole with 1,4 sg mud from 1390 - 1398m.
01:00	Circulated to even mudweight of 1,4 sg.
01:30	Performed LOT to 1,58 sg equivalent mud weight.
12:30	Drilled 12 1/4" hole from 1398 m to 1582 m. Minor drilling breaks at 1542 m and 1579 m, flow checked both for 15 min..
13:30	Circulated bottoms up to check for gas, max gas 0.57%. (BG 0.35%)
17:30	Continued drilling 12 1/4" hole from 1582 m to 1650 m.
18:30	Cirulated bottoms up prior to pulling out of open hole.
19:30	Flow checked, POOH wet in to the 13 3/8" casing. No overpull.
20:30	Performed FIT.
21:30	RIH. Reamed and worked tight spot at 1432m.
22:30	Circulated bottoms up. Max gas 1,5% from 1432m.
23:00	Slugged pipe and POOH to casing shoe. No overpull. Ran back trough sand interval, no tight spot.
23:59	Continued to POOH

Daily report no : 24 **Date:** 2000-08-12
Midnight depth : 1841 m MD **Estimated PP:** 1,16 sg **Mud weight:** 1,46 sg

Stop time	Description
00:30	Continued to POOH.
01:30	Racked BHA, dumped MWD memory, broke bit and racked motor.
02:30	Rigged up Schlumberger.
06:00	Made up and ran MDT. Took pressure points. 1,28 sg at 1586 and 1,38 sg at 1435m.
08:30	Made up and installed plugs in 9 5/8" hanger. Racked back hanger.
11:00	Commenced R.I.H with 12 1/4" BHA (#16). Performed FIT against shear ram wile tripping in riser.
12:00	Slip and cut the drilling line.
12:30	P/u CMT head, break connection and lay down same.
13:00	Continued RIH with the 12 1/4" BHA.
13:30	Filled the string and washed down to 1650 m.
23:59	Drilled 12 1/4" hole from 1650 m to 1841m. Controlled ROP: +/- 25 m/hrs

Daily report no : 25 **Date:** 2000-08-13
Midnight depth : 2195 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
21:30	Drilled 12 1/4" hole from 1841-2166 m. Controlled ROP: +/- 25 m/hrs. Drilling break at 2160 m. Flowchecked at 2163 m, OK.
22:30	Circulated bottoms up to check for gas. Max gas 0.72%.
23:59	Drilled 12 1/4" hole from 2166 - 2195 m. Controlled ROP: +/- 25 m/hrs.

Daily report no : 26 **Date:** 2000-08-14
Midnight depth : 2400 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
08:00	Drilled and oriented 12 1/4" hole from 2195 - 2304 m. Controlled ROP: +/- 25 m/hrs.
09:30	Circulated for samples.
18:00	Continued drilling and orienting from 2304 m to 2400 m. Controlled ROP: +/- 25 m/hrs.
18:30	Flow checked and slugged pipe.
23:00	POOH. Tight hole from 1727 - 1490 m, max overpull 70 ton
23:30	Circulated bottoms up.
23:59	POOH.

Daily report no : 27 **Date:** 2000-08-15
Midnight depth : 2618 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
01:00	Continued to POOH,
01:30	Pulled BHA.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 27 **Date:** 2000-08-15
Midnight depth : 2618 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
02:00	Pulled MWD and dumped memory.
03:30	Changed bit and 2 stabilizers. RIH with the 12 1/4" BHA (#17).
04:00	Made up and racked back cement stand.
04:30	RIH to casing shoe.
06:00	Continued to RIH down to 2340 m. Hole tight.
07:00	Reamed tight hole back to bottom.
23:59	Flushed and fanned bottom. Drilled and oriented 12 1/4" hole from 2400-2618 m.

Daily report no : 28 **Date:** 2000-08-16
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
18:30	Drilled and oriented 12 1/4" hole from 2618 - 2758 m. Flow checked at 2735 m due to a drilling break, negative, max. gas 0.32%.
21:00	Circulated the hole clean prior of POOH. Flow checked and pumped slug.
22:00	POOH to 2370 m. Tight hole from 2395 m, worked same. Max 50 t overpull.
22:30	Backreamed from 2370-2325 m.
23:30	Continued to POOH back to casing shoe.
23:59	RIH.

Daily report no : 29 **Date:** 2000-08-17
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
01:00	Reamed/washed from 2270-2445 m.
01:30	RIH to bottom.
03:00	Circulated to clean well. Max gas 1,77%.
04:30	POOH to casing shoe, hole in good condition.
05:30	Continued to POOH.
07:00	Pulled BHA and laid down monel, MWD, motor and broke bit.
08:00	Rigged up wireline equipment. HALS-PEX-DSI
09:30	Troubleshoot failure on logging string. Replaced the HGNS tool.
19:00	Installed radioactive sources. Ran in hole with run #1 HALS-PEX-DSI and performed wireline logging to TD. Recovered radioactive sources, and laid down run #1.
23:59	Rigged up and ran VSP, shooting from 2750-2540 at 15 m intervals.

Daily report no : 30 **Date:** 2000-08-18
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
08:00	Ran in hole with run #2 VSP, shooting from 2540 - 1145m in 15 m intervals.
09:30	Prepared to run CST.
14:00	Ran in hole with run #3 CST.
17:00	Stuck with bullet #3. Worked cable and pulled CST tool free, max overpull 2500 lbs.
19:30	Continued logging, shot bullet #6 at 2570 m.
23:00	Stuck with bullet #6. Worked cable, but unable to come loose, max overpull 5300 lbs.
23:59	Held safety meeting and prepared for cut and thread.

Daily report no : 31 **Date:** 2000-08-19
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
03:00	Rigged down compensator line and installed upper sheave below water table. Hung off logging cable, cut same and made up quick latch connectors.
14:00	Stripped over logging cable to free and recover wireline tool. CST tool came free w/overshot at 2345 m, (fish depth 2561 m).
14:30	Ran in w/overshot to 2374 m and hung off spear/cable in circulating sub. Broke circulation and circulated for 15 min.
16:30	Pulled fish into overshot, confirmed latch, and pulled cable free from tool with 5 ton overpull using the travelling block..

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 31 **Date:** 2000-08-19
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
17:30	Pulled the wireline cable out of the hole.
20:30	POOH with the fish.
21:30	Disarmed CST guns and laid down same.
23:59	Made up bit and RIH for wiper trip.

Daily report no : 32 **Date:** 2000-08-20
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
00:30	Continued to RIH to TD at 2758 m.
02:30	Circulated to clean well, max gas 1.89% from TD.
05:30	Slugged pipe and POOH, hole in good condition.
07:30	Made up 8 1/2" BHA while preparing CST run #2 on TLC.
09:00	Made up 8 1/2" MWD while preparing CST run #2 on TLC.
10:00	Slip and cut drilling line while preparing CST run #2 on TLC.
11:30	Preparing to run CST on TLC.
13:30	Made up TLC BHA.
15:30	Continued running in hole with 5 1/2" DP.
17:00	Circulated wile rigging up TLC wireline.
18:00	Ran in 100 m with the locomotive. Made up side entry sub.
20:00	Continued RIH with the locomotive to 100 m above the docking head while pumping at 200 ltr/min. Latched locomotive and verified tool communication. Tightened side entry sub pack off and cable clamp. Made pull test on clamp.
23:59	RIH w/ CST guns on pipe to 2696m. Broke circulation each fifth stand.

Daily report no : 33 **Date:** 2000-08-21
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
01:30	Pulled back to 2588 m to make GR depth correlation. Ran back in to 2696 m.
08:00	POOH slowly while shooting 60 side wall cores from 2686 - 1440 m.
09:30	Pulled back into 13 3/8" casing shoe and retrieved locomotive. Laid down side entry sub and locomotive.
11:30	POOH to 225 m.
12:00	Waited on helicopter landing and take-off due to required radio silence
12:30	Entered radio silence and continued to POOH.
14:30	Laid down logging string/CST guns and cleared floor for all logging equipment.
17:30	Made up wear bushing running tool/jet sub and RIH. Jetted wellhead area and pulled wear bushing free with 35 ton overpull. POOH and laid down wear bushing, running tool and jet sub.
19:00	Held safety meeting and rigged up 9 5/8" casing handling equipment.
20:00	P/U and ran shoe joint, 1 intermediate joint and float collar joint. Bakerlocked same.
23:59	Continued to run 9 5/8" casing.

Daily report no : 34 **Date:** 2000-08-22
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
03:00	Continued to run 9 5/8" casing down to 13 3/8" casing shoe.
04:30	Rigged up Franks fill up tool and changed to 500 t air operated elevator.
09:30	Continued to run 9 5/8" casing.
12:00	Picked up hanger and continued running casing on landing string, filled every stand. Landed casing in the wellhead.
13:00	Broke circulation. Increased circulation in steps to 2000 lpm. Pumped a total of 90 m3 1.46 sg mud.
14:00	Tested surface lines to 200 bar. Pumped 15 m3 1.68 sg spacer, 12.5 m3 1.90 sg cement and displaced lines with 2.3 m3 drill water.
15:00	Displaced the CMT with 89.07 m3 1.46 mud. The wiper plug did not bump. Checked for back flow, OK.
17:00	Energized the and tested seal assembly to 35/400 bar.
19:30	Continued pressure testing the BOP to 35/400 bar. Released casing hanger running tool with 20 t overpull
20:00	Broke and laid down cement head.
22:00	POOH with casinger hanger running tool and laid down same. Cleared rig floor.
23:00	Laid down remainders of 12 1/4" BHA.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 34 **Date:** 2000-08-22
Midnight depth : 2758 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,46 sg

Stop time	Description
23:59	Made up wear bushing running tool and jet sub.

Daily report no : 35 **Date:** 2000-08-23
Midnight depth : 2793 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,30 sg

Stop time	Description
01:30	RIH with 9 5/8" wear bushing. Jetted wellhead area and sat wear bushing. Overpull tested to 5 ton, OK.
02:00	Completed BOP test of middle pipe ram. Function tested BOP via alternate pod.
03:30	POOH with wear bushing running tool and laid down same.
04:00	Made up bit to Navigator and made scribe line.
07:00	Initialized the MWD tool, picked up Pathfinder sonic tool and loaded the radioactive source in the MWD.
10:30	R.I.H with the 8 1/2" BHA, 5" DP to 1477m, continued running in with 5 1/2" DP to 2687 m. Performed kick drill.
12:00	Pressure tested DDM hose to 35/345 bar and IBOP's kelly cock on drill stand to 400 bar.
13:00	Washed down and tagged top of CMT at 2705 m. Pressure tested the 9 5/8" casing to 400 bar.
13:30	Performed choke drill.
15:00	Drilled hard CMT down to float collar at 2722 m.
16:00	Drilled soft CMT down to 2745 m, displacing the well to 1.30 sg mud.
16:30	Continued displacing well to 1.30 sg mud.
17:30	Made connection and continued drilling shoetrack. Cleaned out rathole.
18:00	Drilled 3 m new formation from 2758-2561 m.
18:30	Flushed choke and killines and performed pressure test to 210 bar.
19:30	Performed leak off test. Leaked off at 110 bar, equivalent to 1,72 sg.
23:59	Drilled/oriented 8 1/2" hole from 2761-2793 m.

Daily report no : 36 **Date:** 2000-08-24
Midnight depth : 2941 m MD **Estimated PP:** 1,20 sg **Mud weight:** 1,30 sg

Stop time	Description
02:00	Drilled/oriented 8 1/2" hole from 2793 - 2803 m.
02:30	Circulating hole on pump #2 while repairing pump # 1 and 3.
23:00	Drilled/oriented 8 1/2" hole from 2803 -2941 m.
23:30	Pumped 5 m3 fresh water pill due to suscpected bit balling.
23:59	Drilled/oriented 8 1/2" hole from 2941 m to 2941,5 m

Daily report no : 37 **Date:** 2000-08-25
Midnight depth : 2988 m MD **Estimated PP:** 1,25 sg **Mud weight:** 1,30 sg

Stop time	Description
02:30	Drilled/oriented 8 1/2" hole from 2941.5 m to 2944 m
06:00	Flow checked well. Pooh from TD at 2944 m to 274 m
07:00	Pulled out and racked back 8 1/2" BHA
07:30	Recovered radioactive sources and LD sonic tool. Broke bit and checked Navigator.
09:00	Made up 8 1/2" BHA. Downloaded MWD tool.
09:30	Made up sonic tool and installed radioactive sources.
13:00	RIH with 8 1/2" BHA to 2927 m.
13:30	Reamed and washed hole from 2927 m to TD at 2944 m.
19:30	Drilled/oriented 8 1/2" hole from 2943 m to 2988 m at 2181/2411 lpm, 215/279 bar, 194/297 rpm, 8/16 ton wob.
21:00	Circulated bottoms up for samples.
23:59	Flow checked well. POOH from TD at 2988 m to 237 m.

Daily report no : 38 **Date:** 2000-08-26
Midnight depth : 3011 m MD **Estimated PP:** 1,25 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	POOH and racked back BHA.
01:30	Recovered radioactive sources. LD sonic tool and downloaded MWD memory.
02:30	Made up 60 foot corebarel assembly.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 38 **Date:** 2000-08-26

Midnight depth : 3011 m MD **Estimated PP:** 1,25 sg **Mud weight:** 1,30 sg

Stop time	Description
06:30	RIH with 8 1/2" coring assembly. Filled hole every 1000 m. Took 20 ton weight at 2930 m. Worked string through tigth hole at 1600 lpm/70-80 rpm. Washed and reamed down hole from 2930 m to TD at 2988 m.
07:00	Spaced out and dropped ball. Took SCR.
09:00	Cut core from 2988 m to 2998 m at 1050 lpm, 3-13 ton wob and 100 rpm. Jammed at 2998 m.
12:30	Flow checked well. POOH and racked back BHA.
14:00	Performed pre-job safety meeting. Broke corehead. LD inner barrel. Recovered 8.4 m. Total 84 % recovery.
16:30	Changed Navigator. Measured scribeline and func tion tested MWD tool. Made up sonic tool and installed radioactive sources.
17:30	Made up and RIH with 8 1/2" BHA to 830 m
18:30	Cut and slipped 33 m drilling line.
20:30	Continued RIH from 830 m to 2985 m. Filled hole and function tested MWD tool at 2000 m.
21:00	Logged hole from 2985 m to TD at 2998 m.
23:59	Drilled/oriented 8 1/2" hole from 2998 m to 3011 m at 2095/2212 lpm, 215/245 bar, 2/5 ton wob, 101/309 rpm.

Daily report no : 39 **Date:** 2000-08-27

Midnight depth : 3170 m MD **Estimated PP:** 1,27 sg **Mud weight:** 1,31 sg

Stop time	Description
16:00	Drilled/oriented 8 1/2" hole from 3011 m to 3075 m at 2200 lpm, 213 bar, 3-5 ton wob, 309 rpm.
17:00	Flow checked well. Performed wiper trip to 9 5/8" shoe at 2750 m.
23:59	Drilled/oriented 8 1/2" hole from 3075 m to 3170 m at 2140/2380 lpm. 209/263 bar SPP, 5/16 ton wob, 189/314 rpm.

Daily report no : 40 **Date:** 2000-08-28

Midnight depth : 3273 m MD **Estimated PP:** 1,39 sg **Mud weight:** 1,46 sg

Stop time	Description
01:30	Drilled/ oriented 8 1/2" hole from 3170 m to 3182 m at 2140/2380 lpm, 209/263 bar, 5/16 ton wob, 180/314 rpm.
04:00	Reciprocated and rotated string while raised mudweight from 1.32 sg to 1.35 sg.
05:30	Drilled/ oriented 8 1/2" hole from 3182 m to 3198 m at 2140/2380 lpm, 209/263 bar, 5/16 ton wob, 180/314 rpm
07:30	Reciprocated and rotated string while raised mudweight from 1.35 sg to 1.40 sg. Displaced kill/ choke/ booster to 1.45 sg mud.
08:00	Flow checked well,- static.
09:30	Circulated bottoms up. Max gas readings 2.2%.
11:30	Continued circulating and raised mudweight from 1.40 sg to 1.43 sg. Max gas 0.3%. Displaced kill/ choke/ booster to 1.43 sg mud. Flow checked well, -static.
13:00	Circulated bottoms up. Max gas readings 0.84%.
13:30	Drilled 8 1/2" hole from 3198 m to 3220 m at 2120 lpm, 225 bar, 8-12 ton wob and 80-120 rpm(surface)
14:00	Circulated hole 15 min. Flow checked well, -static.
16:00	Circulated bottoms up. Max gas readings 0.90%.
17:30	Drilled 8 1/2" hole from 3220 m to 3250 m at 2120 lpm, 225 bar, 8-12 ton wob and 80-120 rpm(surface).
18:00	Circulated hole 15 min. flow checked well, -static.
19:00	Circulated bottoms up. Max gas readings 0.91%.
21:00	Continued circulating and raised mudweight from 1.43 sg to 1.46 sg. Max gas 0.3%. Displaced kill/ choke/ booster to 1.46 sg mud.
23:00	Flow checked well 15 min. Circulated bottoms up. Max gas readings 0.57%.
23:59	Drilled 8 1/2" hole from 3250 m to 3273 at 2112 lpm , 262 bar 10 ton wob, 120 rpm (surface)

Daily report no : 41 **Date:** 2000-08-29

Midnight depth : 3511 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,52 sg

Stop time	Description
00:30	Drilled 8 1/2" hole from 3273 m to 3279 m at 2111 lpm, 265 bar, 8-12 ton wob, 110 surface rpm.
02:00	Circulated hole 15 min. Flow checked well 15 min. Circulated bottoms up. Max gas reading 0.57%.
03:30	Circulated and raised mudweight from 1.46 sg to 1.52 sg. 0.29% gas with 1.52 sg mud in returns.
06:00	Drilled 8 1/2" hole from 3279 m to 3337 m at 2100 lpm, 271 bar, 7-10 ton wob, 274 rpm.
07:00	Circulated bottoms up prior to short trip.
08:30	Performed wiper trip to 3161 m.
23:59	Drilled/ oriented 8 1/2" hole from 3337 m to 3511 m at 2288 lpm, 313 bar, 5-12 ton wob, 300-330 rpm.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 42 **Date:** 2000-08-30
Midnight depth : 3604 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,52 sg

Stop time	Description
03:30	Drilled/ oriented 8 1/2" hole from 3511 m to 3575 m at 2288 lpm, 313 bar, 5-12 ton wob, 300-330 rpm.
05:00	Circulated bottoms up for samples. Performed pump-off test.
06:00	Circulated bottoms up for gas check after pump-off test. Max gas 0.41%.
07:30	Drilled/ oriented 8 1/2" hole from 3575 m to 3604 m at 2288 lpm, 313 bar, 5-12 ton wob, 300-330 rpm.
08:30	Lost MWD signals. Circulated hole while attemting to re-start tool..No go.
14:00	Flow checked well. POOH from TD at 3604 m to 237 m.
15:00	Pulled out and racked back BHA.
17:30	Recoverd radioactive sources. LD sonic, MWD and navigator. Broke bit.
19:30	Made up 8 1/2" bit to Navigator and measured scribe line.
22:00	Initialized MWD tool, picked up Pathfinder sonic tool and loaded radioactive sources in MWD tool.
23:59	RIH with 8 1/2" BHA to 2617 m.

Daily report no : 43 **Date:** 2000-08-31
Midnight depth : 3861 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,52 sg

Stop time	Description
01:00	RIH with 8 1/2" BHA from 2617 m to 3578 m.
01:30	Filled string and broke circulation. Washed and reamed down hole from 3578 m to to TD at 3604 m.
21:30	Drilled/ orieniting 8 1/2" hole from 3604 m to 3841 m at 2137 lpm, 321 bar SPP, 5-12 ton WOB, 322 RPM.
22:00	Installed new washpipe.
23:59	Drilled/ orieniting 8 1/2" hole from 3841 m to 3861 m at 2137 lpm, 321 bar SPP, 5-12 ton WOB, 322 RPM.

Daily report no : 44 **Date:** 2000-09-01
Midnight depth : 4041 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,52 sg

Stop time	Description
01:30	Drilled/ orieniting 8 1/2" hole from 3861 m to 3889 m at 2137 lpm, 321 bar SPP, 5-12 ton WOB, 322 RPM.
02:30	Changed leaking washpipe.
23:59	Drilled/ orieniting 8 1/2" hole from 3920 m to 4041m at2092 lpm, 312 bar SPP, 5-14 ton WOB, 309 RPM.

Daily report no : 45 **Date:** 2000-09-02
Midnight depth : 4183 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,52 sg

Stop time	Description
19:30	Drilled 8 1/2" hole from 4041 m to 4146 m at 2085 lpm, 316 bar SPP, 10-15 ton WOB, 315 RPM. Flow checked well due to drilling break.
21:00	Circulated bottoms up for samples.
23:59	Drilled 8 1/2" hole from 4046 m to 4183 m at 2000 lpm, 302 bar SPP, 10-15 ton WOB, 296 RPM

Daily report no : 46 **Date:** 2000-09-03
Midnight depth : 4183 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,55 sg

Stop time	Description
06:00	Drilled 8 1/2" hole from 4183 m to TD at 4230 m at 2000 lpm, 302 bar SPP, 10-15 ton WOB, 296 RPM,
08:00	Circulated bottoms up prior to wiper trip.
09:00	Flow checked well. Pulled out to 4090 m prior to pumping slug.
12:30	POOH with 8 1/2" to 9 5/8" casing shoe at 2750 m.
14:30	RIH with 8 1/2" BHA to 4203 m. Reamed and washed last stand down hole grom 4203 m to TD at 4230 m.
16:30	Circulated bottoms up at TD.
17:00	Performed pump-off test 2x10 min.
18:30	Circulated bottoms up at TD.
21:00	Raised mud weight from 1.52 sg to 1.55 sg mud. Displaced kill/choke/booster to 1.55 sg. Flow checked well 15 min prior tp POOH.
23:59	POOH from TD at 4230 m into 9 5/8" casing shoe at 2750 m.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 47 **Date:** 2000-09-04
Midnight depth : 4230 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,55 sg

Stop time	Description
01:30	Circulated bottoms up at 9 5/8" casing shoe at 2750 m.
04:30	Flow checked well. POOH with 8 1/2" BHA from 2750 m to 237 m.
08:00	Racked back BHA. Recoverd radioactive sources. LD pathfinder sonic and MWD tool. LD core barrel.
08:30	Rigged up surface wire line equipment.
09:00	Made up toolstring # 1: HRLA- PEX
10:30	Trouble-shoot and repair tool failure.
12:30	RIH with toolstring #1.
13:00	Logged down hole from 2750 m to 2780 m.
13:30	Tool hung up at 2780 m. Attempted to pass obstruction several times. No go.
15:00	POOH with toolstring #1.
17:00	Trouble-shoot and repair tool failure. Installed centralizer.
18:00	Re-ran toolstring #1.
18:30	Tool hung up at 2780 m. Attempted to pass obstruction several times. No go.
20:00	POOH with toolstring #1.
22:30	Re-configurated toolstring #1: DSI-HRLA-PEX-LEHQT.
23:59	RIH with toolstring #1 to 2000 m.

Daily report no : 48 **Date:** 2000-09-05
Midnight depth : 4230 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,55 sg

Stop time	Description
00:30	RIH with toolstring #1 to 2780 m.
01:30	Tool hung up at 2780 m. Attempted to pass obstruction several times. No go.
03:00	POOH with toolstring #1.
04:00	LD logging tools. RD wire line surface equipment.
08:30	Made up PEX-VSP-MDT logging tools to 5" DP.
14:30	RIH with logging tools on 5" & 5 1/2" DP to 2692 m. Broke circulation and pumped 5 m3 every 10 stands at rate of 1200 LPM.
16:00	Cut and slipped drilling line.
18:00	Performed pre-job safety meeting and rigged up surface wire line equipment.
19:00	Removed diverter element.
19:30	Performed pre-job safety meeting with night crew. Rigged up cable tie-back sheave in derrick. Pumped and displaced fresh-water pill
21:30	Made up side-entry sub and ran in with electric cable
23:00	Latched on to wet connector with running speed of 36 MPM and pumping 1100 LPM. Tested electrical connection to tool. Made up and pull tested wire line anchor to 4000 LBS.
23:59	RIH with wireline and DP from 2692 m to 2779 m. Worked string through thight hole at 2779 m.

Daily report no : 49 **Date:** 2000-09-06
Midnight depth : 4230 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,55 sg

Stop time	Description
01:30	RIH with wire line and 5 1/2" DP from 2779 m to 2806 m. Worked through thight spot at 2797 m. Tagged obstruction at 2806 m. Made several attempts to pass obstruction. No go.
03:00	Prepared for VSP. Pulled out to 2775 m.
04:00	Took VSP from 2775 m to 2670 m in intervals of 15 m.
06:30	Released wire line clamp, disconnected wet connector and pulled out wire line cable.
08:00	Rigged down side entry sub, tools and sheaves from derrick.
11:00	POOH from 2670 m to surface.
12:30	Broke down and laid down logging tools.
14:00	Made up 8 1/2" BHA fop wiper trip.
17:00	RIH with 8 1/2" BHA from 128 m to 9 5/8" casing shoe at 2750 m.
21:00	Reamed and washed thight hole from 2750 m to 2848 m.
21:30	RIH with 8 1/2" BHA from 2848 m to 3032 m.
23:00	Reamed and washed thight hole from 3032 m to 3177 m.
23:30	RIH with 8 1/2" BHA from 3177 m to 3274 m
23:59	Washed and reamed thight hole at 3274 m.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 50 **Date:** 2000-09-07

Midnight depth : 4230 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,55 sg

Stop time	Description
01:30	Washed and reamed tight hole from 3274 m to 3293 m.
02:30	RIH with 8 1/2" BHA from 3293 m to TD at 4230 m.
04:00	Circulated bottoms up at TD with 1848 LPM and 302 bar.
06:00	Flow checked well. POOH with 8 1/2" BHA from TD at 4230 m to 3650 m.
08:30	Continued POOH to 2737m. Verified clean interval below shoe by RIH to 2827m. Steady up/down wt. of 125MT/110MT. POOH inside 9 5/8" casingshoe.
10:00	Circulated bottoms up. Max. gas on bottoms up: 0,3%. Flowchecked well prior to pumping slug.
14:00	Continued POOH.
17:30	R/u Schlumberger for logging. In w/run #1 VSP-GR @1429hrs, out @1650hrs. Unable to pass below 2770m. R/d logging equipment. Clean drill floor.
18:00	L/d MWD tool and stabilizers.
19:30	M/u 30ft corebarrel
23:00	RIH w/corebarrel
23:59	Continued RIH w/corebarrel in open hole. Took wt. @3095m. String stuck. Max. o/p 90MT. Jarred string free.

Daily report no : 51 **Date:** 2000-09-08

Midnight depth : 4239 m MD **Estimated PP:** 1,46 sg **Mud weight:** 1,55 sg

Stop time	Description
01:00	Washed and reamed tight interval from 3085m to 3130m. Circulation rate: 1400lpm.
02:30	Continued RIH w/corebarrel to TD.
04:00	Circulated prior to coring. Washed/reamed bottom stand down. Dropped ball & circulated until same landed in ball seat.
07:00	Cut core from 4230m to 4239m. Max. gas from zone at 3100m: 2.9%
07:30	Broke core with 20MT o/p. Flowchecked well and pumped slug
16:00	POOH. Tight spot @3065m. Max. o/p: 50MT. Flowchecked well with corebarrel inside casing shoe. Continued POOH, w/ 12 last stands pulled with reduced speed.
17:00	Held safety meeting with crew prior to recovering core & l/d corehead and corebarrel. Recovered 8 m (89 %).
20:00	M/u diverting tool below 11 stands of 3 1/2" DP, x/o, 7 stds of 5" DP, x/o and RIH w/ same on 5 1/2"DP to 3000m.
22:00	Circulated bottoms up, max gas: 0,6%. Spotted Hivisc pill from 3000m to 2900m.
22:30	POOH to 2900m. M/u circulating sub and attached cementing hose and low-torque valve to same.
23:30	Pumped 5 m3 of 1.70sg spacer with MP. Pressure tested cementhose to 200bar. Mixed and pumped 11 m3 of 1.90sg gastight cement slurry. Pumped w/ MP 2 m3 of 1.70sg spacer behind to balance plug, prior to displacing same w/ 24.5m3 1.55sg mud.
23:59	Pulled slowly through cement plug.

Daily report no : 52 **Date:** 2000-09-09

Midnight depth : 4239 m MD **Estimated PP:** sg **Mud weight:** 1,55 sg

Stop time	Description
00:30	Continued POOH slowly to 2560m.
01:30	Circulated bottoms up. Pumped slug.
04:00	POOH w/cement stinger.
06:00	M/u BOP testplug w/ 3stds of HWDP & jetsub below. Land testplug in wellhead, flushed relevant lines and prepared to pressuretest BOP to 35/400bar.
09:00	Attempted to test BOP to 35/400bar, leaking. Suspected sealdamage on testplug. POOH w/testplug. Found seal missing on same. Changed to BOP isolation test tool, RIH and landed same in WH.
11:30	Pressuretested BOP to 35/400bar and K/C lines to 35/690bar. Function tested BOP from yellow pod.
13:00	POOH w/BOP testtool. L/d same. POOH w/ 3 stds of HWDP and jetsub.
14:30	M/u 3 x 8"DC and spear assy for casing retrieval. Rack in derrick.
17:30	RIH w/ 8 1/2" bit to 2550m.
18:30	Washed down while rotating string to 2666m to tag cement plug. No indication of hard cement.
20:00	Circulated bottoms up to check for cement in return.
21:00	Cut and slip drilling line, meanwhile circulating.
21:30	Washed down with 300lpm and slight rotation to 2692m to tag cement plug. Bottom 2mtr slight indication of string taking weight, suspected cement still not sufficiently set up.
22:30	Circulated bottoms up to check for cement in return
23:00	Washed down with 300lpm and slight rotation to 2696m. Tagged top of cement w/10MT.
23:59	POOH to 2050m

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 53 **Date:** 2000-09-10

Midnight depth : 4239 m MD **Estimated PP:** sg **Mud weight:** 1,46 sg

Stop time	Description
00:30	Pressure tested cement plug against closed annular to 120bar, ie 70 bar above LOT @ 9 5/8" shoe.
03:00	Displaced well above 2050m to 1.46sg mud. Continued circulate until even MW in/out.
05:00	POOH.
06:30	RIH w/ 5 1/2" DP to 1900m.
12:00	R/u Schlumberger & prepare to run 3 3/8" perforation gun on wireline. Held safety meeting w/crew prior to making up gun. 0842hrs: Run in w/ perf. gun, using sideentry sub as stuffing box. Perforated well @1138hrs, @2009m.
12:30	Performed injection test. Formation broke @ 25 bar. Final squeeze pressure: 25bar@500lpm. Injected a total of 2m3. Bled back 500ltr to cement unit. Opened bag and observed well on triptank. 150ltr in return before triptank stabilized.
15:00	Pulled out w/perforation gun on wireline. Out w/same @1404hrs. R/d Schlumberger wireline equipment.
17:00	POOH w/ 5 1/2" DP. Cleaned drillfloor.
20:30	M/u Halliburton mechanical setting tool w/ 9 5/8" EZSV cement retainer attached. RIh w/ same on 5 1/2" DP w/ running speed 1.5 min/std.
21:00	Set cement retainer as per procedure @1888m. M/u cement hose and pressure tested same to 200bar.
23:30	Stinged in w/10MT. Set 50 bar on annulus.Performed injection test:90bar/750lpm.Stinged out of retainer, pumped 10m3 1.7sg spacer, followed by 10.4m3 1.9sg cmt slurry, and 7 m3 mud. Stinged in & squeezed 11.7m3. Stinged out. Flowchecked well
23:59	POOH to 1833m.

Daily report no : 54 **Date:** 2000-09-11

Midnight depth : 4239 m MD **Estimated PP:** sg **Mud weight:** 1,46 sg

Stop time	Description
01:00	Circulated bottoms up.
03:00	POOH. L/d mechanical setting tool, meanwhile pressure testing cement retainer against closed shear ram to 140 bar, ie. 70 bar above LOT @ 9 5/8" shoe.
05:00	M/u 9 5/8" casing cutter. Function tested same, before RIH. Filled string and landed marine swivel in WH. Cut casing @696.5m. Parameters: 550lpm/70bar, dropping to 30 bar when casing cut, rotating torque: free: 4.5kNm, cutting: 7-10kNm.
06:30	Observed well stable on triptank, prior to POOH w/cutting assy. L/d 9 5/8" casing cutter.
09:00	M/u wearbushing r/t w/ 3 stds of HWDP and jetsub below. RIH. Flush wellhead area. Land r/t in wearbushing and pull same free w/40MT o/p. POOH. L/d wearbushing.
13:30	M/u sealassy r/t w/ 3 stds of HWDP + jetsub below. RIH. Flush WH. Latch r/t in seal assembly. Pulled sealassy free w/ 20MT o/p, with annular closed. Flowchecked well. Flushed across WH. Opened bag. POOH.
15:30	RIH w/ 9 5/8" casing spear w/pack off below. Engaged spear and pulled cut casing free w/50MT o/p, with annular closed. Flowchecked well. Attempted to circ. btms up, no success due to leak across packoff. Opened annular and flowchecked well
17:00	Pumped slug & POOH w/ cut casing. Released spear from casing hanger and racked spear assy in derrick.
20:00	R/u 9 5/8" casing handling equipment. Held safety meeting with crew. Pulled and l/d a total of 28 jts of 9 5/8" casing. Cleaned drillfloor.
23:00	R/u Schlumberger. Ran and set 13 3/8" EZSV bridgeplug on wireline, @685m. Pulled out r/t on wireline. Pressuretested plug against closed shear ram to 90 bar, ie 70 bar above 13 3/8" LOT. R/d Schlumberger.
23:59	RIH w/jetsub on 5 1/2" DP.

Daily report no : 55 **Date:** 2000-09-12

Midnight depth : 4239 m MD **Estimated PP:** sg **Mud weight:** 1,39 sg

Stop time	Description
00:30	Continued RIH w/ jetsub on 5 1/2" DP.
02:00	M/u seal assy r/t to string and continued RIH. Flushed WH/seal assembly area on way. Continued RIH to 640m.
03:30	Displaced well to 1.39sg mud.
05:30	Latched r/t in sealassembly. Pulled sealassembly free w/ 25MT o/p, with annular closed. Monitored for pressure build up against closed choke, negative. Flushed across WH. Opened bag and flowchecked well. POOH, l/d r/t + seal assembly.
06:30	POOH w 5 1/2" DP stinger/jetsub. Cleaned drillfloor.
08:00	M/u 13 3/8" casing cutter & RIH w/ same. Land marine swivel in WH.
08:30	Cut 13 3/8" casing @648,6m. Flowcheck well. Parameters: 160rpm, 70bar, 10-13kNm.
10:30	POOH, l/d marine swivel on way, service broke & l/d cutter.
12:30	Redressed spear to 13 3/8", RIH w/same & latched onto casing. Pulled casing free w/25MT o/p. Flowchecked well.
14:00	Circulated bottoms up via choke, @30spm. Flowchecked well & pumped slug.
18:00	POOH w/ cut 13 3/8" casing. Released spear & racked same in derrick. R/u casing handling equipment, before pulling & l/d 23 jts. of casing. L/d casing handling equipment & cleaned drillfloor.
19:00	L/d 2 x 6 1/2" DC and 6 1/2" jar. L/d casing tong.
20:00	RIH w/diverting tool on 5 1/2" DP to 680m.

DAILY REPORT ON WELL 7216/11-1 S

Daily report no : 55 **Date:** 2000-09-12

Midnight depth : 4239 m MD **Estimated PP:** sg **Mud weight:** 1,39 sg

Stop time	Description
22:00	M/u cement hose, pumped 8m3 SW, before pressure testing cement hose to 200bar. Mixed and pumped 37.4m3 1.90sg slurry. Displaced same with 0.5m3 SW and 4m3 1.39sg mud.
22:30	POOH to 400m.
23:00	Displaced riser, choke/kill and booster lines to SW.
23:30	POOH w/diverting tool.
23:59	Prepared for pulling of BOP.

Daily report no : 56 **Date:** 2000-09-13

Midnight depth : 4239 m MD **Estimated PP:** sg **Mud weight:** 1,39 sg

Stop time	Description
05:30	Prepared to pull BOP. Laid down diverter. Disconnected BOP at 0140 hrs, parked support ring, laid down slip joint. Pulled riser and BOP.
06:00	Drive chain on pod reel broke, repaired same.
13:30	Pulled riser and BOP. BOP in moonpool at 0950 hrs. laid down bottom riser joints and skidded BOP to parking position. Rigged down BOP handling equipment.
16:30	Picked up 11 3/4" motor made up below most tool, 2x8" drillcollar, made up top drive and tested motor. Made up 20"x30" casing cutter and jet sub below motor, adjusted spaceout, installed clamps on most tool housing. Spaceout to cut casing
18:00	Ran in hole with cutter assembly and most tool, picked up 4x8" drillcollars on way
18:30	Stabbed into wellhead assisted by rig thrusters and ROV. Landed most tool on 18 3/4" wellhead at 1826 hrs. Set down 6 MT.
23:59	Cut 20"x30" casing at 391 m. Attempted to pull wellhead frame with max overpull, no success. Cut casing for 2 more hours. Observed pumppressure dropping in the end, indicating full sweep of knives. Pulled free. Cut wellhead w 75 MToverpull.

Daily report no : 57 **Date:** 2000-09-14

Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 1,39 sg

Stop time	Description
18:30	Anchorhandling. End of well. Rig transferred to Norsk Agip. Drillfloor operations: Pulled R&B/stump and landed on trolley, released pulling tool, laid down cutting BHA, released 30x18 3/4" housing from RGB.

TIME DISTRIBUTION

Well: 7216/11-1 S **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN ARCTIC **Depth:** 4239,0 **m MD**

All sections **Stop date:** 2001-10-05

Operations	Hours	%	Hours	%	Acc. total
MOBILIZATION					
MOVING	68,5	5,12			
MOORING; RUNNING ANCHORS	6,5	0,49			
MOORING; PULLING ANCHORS	18,5	1,38			
Sum.			93,5	6,98	93,5
DRILLING					
BHA HANDLING/TESTING	45,0	3,36			
EQUIPMENT TEST	6,0	0,45			
MWD HANDLING/TESTING/SURVEYING	4,5	0,34			
TRIPPING IN CASED HOLE	26,0	1,94			
TRIPPING IN OPEN HOLE	31,5	2,35			
DRILLING	343,0	25,62			
OTHER	2,0	0,15			
WELLHEAD EQUIPMENT INSTALLATION	10,5	0,78			
REAMING	5,0	0,37			
CIRC. AND COND. MUD/HOLE	62,0	4,63			
WIPER TRIP	4,5	0,34			
CASING HANDLING/TESTING	31,5	2,35			
RUNNING CASING IN CASED HOLE	8,0	0,60			
RUNNING CASING IN OPEN HOLE	26,0	1,94			
DRILLING OUT OF CASING	11,0	0,82			
PRIMARY CEMENTING	24,0	1,79			
TRIPPING FOR CEMENT JOB	6,0	0,45			
DRILLING OUT CEMENT PLUG	2,0	0,15			
FORMATION STRENGTH TESTING	3,5	0,26			
BOP HANDLING	4,0	0,30			
BOP RUNNING/RETRIEVING	14,0	1,05			
BOP TESTING	10,5	0,78			
WELLHEAD EQUIPMENT HANDLING	2,0	0,15			
SLIP AND CUT DRILLING LINE	3,5	0,26			
Sum.			686,0	51,23	779,5
FORMATION EVALUATION MWD					
LOGGING WITH MWD	0,5	0,04			
Sum.			0,5	0,04	780,0
FORMATION EVALUATION LOGGING					
LOGGING	15,0	1,12			
LOGGING EQUIPMENT HANDLING/TESTING	3,5	0,26			
FORMATION TESTER	4,5	0,34			
SIDEWALL CORING	19,0	1,42			
TRIPPING IN CASED HOLE	5,0	0,37			
TRIPPING IN OPEN HOLE	1,5	0,11			
VERTICAL SEISMIC	15,5	1,16			
Sum.			64,0	4,78	844,0
FORMATION EVALUATION CORING					
BHA HANDLING/TESTING	9,0	0,67			
CIRCULATING FOR SAMPLE	1,5	0,11			
TRIPPING IN CASED HOLE	16,0	1,19			
CORING EQUIPMENT/CORE HANDLING	1,0	0,07			
TRIPPING IN OPEN HOLE	11,0	0,82			
CORING	6,0	0,45			
CIRC. AND COND. MUD/HOLE	1,5	0,11			
SLIP AND CUT DRILLING LINE	1,0	0,07			
Sum.			47,0	3,51	891,0
PLUG AND ABANDONMENT					
BHA HANDLING/TESTING	1,0	0,07			
TRIPPING IN CASED HOLE	18,0	1,34			
TRIPPING IN OPEN HOLE	1,0	0,07			

TIME DISTRIBUTION

Well: 7216/11-1 S **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN ARCTIC **Depth:** 4239,0 **m MD**
All sections **Stop date:** 2001-10-05

Operations	Hours	%	Hours	%	Acc. total
PLUG AND ABANDONMENT					
WELLHEAD EQUIPMENT INSTALLATION	10,5	0,78			
CIRC. AND COND. MUD/HOLE	12,5	0,93			
TRIPPING FOR CEMENT JOB	8,0	0,60			
SQUEEZE CEMENTING	3,0	0,22			
BOP RUNNING/RETRIEVING	24,5	1,83			
BOP TESTING	6,0	0,45			
SET CEMENT PLUG	5,5	0,41			
PERFORATING	8,0	0,60			
SET MECHANICAL PLUG	3,5	0,26			
TRIPPING OF CASING CUTTING EQUIPMENT	21,0	1,57			
CUT CASING/WELLHEAD	0,5	0,04			
SLIP AND CUT DRILLING LINE	1,0	0,07			
Sum.			124,0	9,26	1015,0
DOWNTIME DRILLING					
EQUIPMENT FAILURE AND REPAIR	26,5	1,98			
WELL CONTROL	56,0	4,18			
FISHING	62,5	4,67			
OTHER	46,5	3,47			
Sum.			191,5	14,30	1206,5
DOWNTIME FORM. EVAL. LOGGING					
EQUIPMENT FAILURE AND REPAIR	5,0	0,37			
WAITING	0,5	0,04			
STICKING/GOING STUCK WITH EQUIPMENT	6,5	0,49			
FISHING	22,5	1,68			
OTHER	58,0	4,33			
WIPER TRIP	33,5	2,50			
SLIP AND CUT DRILLING LINE	2,5	0,19			
Sum.			128,5	9,60	1335,0
DOWNTIME FORM. EVAL. CORING					
OTHER	1,0	0,07			
Sum.			1,0	0,07	1336,0
DOWNTIME PLUG AND ABANDONMENT					
EQUIPMENT FAILURE AND REPAIR	3,0	0,22			
Sum.			3,0	0,22	1339,0
Reported time (100,0 % of well total 1339,0 hours) :					1339,0

Norsk Hydro

2001-10-05

HOLE DEVIATION

Well: 7216/11-1 S **Reference point:** RKB ; 24,0 m ABOVE MSL

Waterdepth: 361,0 m **Vertical to:** 384,9 m **Total Depth:** 4239,0 m MD

Utm zone: 33 **Central Median:** 15' E **Horizontal datum:** ED50

Template Centre Coordinates, UTM: **North :** m, **East :** m

Wellhead Coordinates, UTM: **North :** 7991645,45 m, **East :** 555345,64 m

Official Surveys: N **Track :**

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
385,0	0,00	0,00	MWD	1	385,0	0,00	0,00	0,0	0,00	0,00	0,00
399,0	0,50	227,00	MWD	1	399,0	-0,04	-0,04	0,1	1,07	1,07	-285,00
414,0	0,40	71,30	MWD	1	414,0	-0,07	-0,04	0,1	1,76	-0,20	-311,40
428,0	0,80	71,00	MWD	1	428,0	-0,02	0,10	0,1	0,86	0,86	-0,64
442,0	0,90	73,70	MWD	1	442,0	0,04	0,29	0,3	0,23	0,21	5,79
457,0	1,10	88,40	MWD	1	457,0	0,08	0,55	0,6	0,65	0,40	29,40
472,0	1,30	19,20	MWD	1	472,0	0,24	0,75	0,8	2,75	0,40	-138,40
486,0	1,60	96,40	MWD	1	486,0	0,37	1,00	1,1	3,91	0,64	165,43
525,0	1,50	97,70	MWD	1	525,0	0,24	2,04	2,1	0,08	-0,08	1,00
553,0	1,90	100,30	MWD	1	553,0	0,11	2,86	2,9	0,44	0,43	2,79
582,0	1,30	91,20	MWD	1	582,0	0,02	3,67	3,7	0,67	-0,62	-9,41
611,0	1,40	93,30	MWD	1	610,9	-0,01	4,35	4,3	0,12	0,10	2,17
640,0	1,40	106,20	MWD	1	639,9	-0,13	5,04	5,0	0,33	0,00	13,34
669,0	1,00	119,00	MWD	1	668,9	-0,35	5,60	5,6	0,50	-0,41	13,24
700,0	0,90	116,80	MWD	1	699,9	-0,59	6,06	6,1	0,10	-0,10	-2,13
730,0	1,00	117,90	MWD	1	729,9	-0,82	6,50	6,6	0,10	0,10	1,10
759,0	1,00	102,10	MWD	1	758,9	-0,99	6,97	7,0	0,28	0,00	-16,34
789,0	0,80	96,10	MWD	1	788,9	-1,07	7,43	7,5	0,22	-0,20	-6,00
817,0	0,80	88,80	MWD	1	816,9	-1,09	7,82	7,9	0,11	0,00	-7,82
846,0	0,80	123,50	MWD	1	845,9	-1,19	8,20	8,3	0,49	0,00	35,90
875,0	0,60	114,60	MWD	1	874,9	-1,37	8,50	8,6	0,23	-0,21	-9,21
904,0	0,70	114,00	MWD	1	903,9	-1,50	8,80	8,9	0,10	0,10	-0,62
933,0	0,70	90,60	MWD	1	932,9	-1,58	9,14	9,3	0,29	0,00	-24,21
963,0	0,60	99,00	MWD	1	962,9	-1,60	9,48	9,6	0,14	-0,10	8,40
991,0	0,40	66,80	MWD	1	990,9	-1,59	9,71	9,8	0,36	-0,21	-34,50
1026,0	2,90	21,00	MWD	1	1025,9	-0,71	10,14	10,2	2,26	2,14	-39,26
1055,0	3,00	23,30	MWD	1	1054,8	0,67	10,71	10,7	0,16	0,10	2,38
1084,0	3,30	24,10	MWD	1	1083,8	2,13	11,35	11,5	0,31	0,31	0,83
1113,0	4,90	19,70	MWD	1	1112,7	4,05	12,11	12,8	1,69	1,66	-4,55
1143,0	6,20	17,70	MWD	1	1142,6	6,80	13,03	14,7	1,31	1,30	-2,00
1171,0	5,40	34,70	MWD	1	1170,4	9,33	14,24	17,0	2,02	-0,86	18,21
1200,0	5,20	65,50	MWD	1	1199,3	11,00	16,21	19,6	2,91	-0,21	31,86
1230,0	6,10	94,40	MWD	1	1229,2	11,44	19,04	22,2	2,95	0,90	28,90
1258,0	6,00	114,20	MWD	1	1257,0	10,72	21,86	24,3	2,23	-0,11	21,21
1288,0	5,60	135,70	MWD	1	1286,9	9,03	24,31	25,9	2,20	-0,40	21,50
1317,0	5,80	157,10	MWD	1	1315,7	6,67	25,87	26,7	2,20	0,21	22,14

Norsk Hydro

2001-10-05

HOLE DEVIATION

Well: 7216/11-1 S **Reference point:** RKB ; 24,0 m ABOVE MSL

Waterdepth: 361,0 m **Vertical to:** 384,9 m **Total Depth:** 4239,0 m MD

Utm zone: 33 **Central Median:** 15' E **Horizontal datum:** ED50

Template Centre Coordinates, UTM: **North :** m, **East:** m

Wellhead Coordinates, UTM: **North :** 7991645,45 m, **East:** 555345,64 m

Official Surveys: N **Track :**

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
1347,0	5,30	180,90	MWD	1	1345,6	3,89	26,44	26,7	2,34	-0,50	23,80
1375,0	5,00	196,90	MWD	1	1373,5	1,43	26,06	26,1	1,57	-0,32	17,14
1404,0	5,10	195,90	MWD	1	1402,4	-1,02	25,34	25,4	0,14	0,10	-1,03
1405,0	5,20	176,60	MWD	1	1403,4	-1,11	25,33	25,4	51,81	3,00	-579,00
1436,0	5,20	175,60	MWD	1	1434,2	-3,91	25,52	25,8	0,09	0,00	-0,97
1464,0	5,70	178,20	MWD	1	1462,1	-6,57	25,67	26,5	0,60	0,54	2,79
1493,0	6,20	182,80	MWD	1	1491,0	-9,57	25,63	27,4	0,71	0,52	4,76
1521,0	6,40	186,60	MWD	1	1518,8	-12,63	25,38	28,4	0,50	0,21	4,07
1550,0	6,40	186,60	MWD	1	1547,6	-15,84	25,01	29,6	0,00	0,00	0,00
1579,0	6,40	187,90	MWD	1	1576,4	-19,05	24,60	31,1	0,15	0,00	1,34
1608,0	6,50	189,90	MWD	1	1605,2	-22,27	24,10	32,8	0,25	0,10	2,07
1629,0	6,40	189,40	MWD	1	1626,1	-24,59	23,70	34,2	0,16	-0,14	-0,71
1666,0	6,50	189,80	MWD	1	1662,9	-28,69	23,01	36,8	0,09	0,08	0,32
1695,0	6,50	192,10	MWD	1	1691,7	-31,91	22,39	39,0	0,27	0,00	2,38
1725,0	6,30	194,00	MWD	1	1721,5	-35,17	21,63	41,3	0,29	-0,20	1,90
1754,0	6,20	190,20	MWD	1	1750,3	-38,26	20,97	43,6	0,44	-0,10	-3,93
1783,0	5,80	190,00	MWD	1	1779,2	-41,24	20,44	46,0	0,41	-0,41	-0,21
1813,0	5,80	189,20	MWD	1	1809,0	-44,23	19,93	48,5	0,08	0,00	-0,80
1842,0	5,70	189,80	MWD	1	1837,9	-47,10	19,45	51,0	0,12	-0,10	0,62
1870,0	5,70	189,90	MWD	1	1865,7	-49,84	18,98	53,3	0,01	0,00	0,11
1899,0	5,60	190,30	MWD	1	1894,6	-52,65	18,48	55,8	0,11	-0,10	0,41
1928,0	5,60	191,20	MWD	1	1923,5	-55,43	17,95	58,3	0,09	0,00	0,93
1957,0	5,70	187,90	MWD	1	1952,3	-58,24	17,48	60,8	0,35	0,10	-3,41
1985,0	5,60	189,10	MWD	1	1980,2	-60,97	17,07	63,3	0,17	-0,11	1,29
2015,0	5,70	190,40	MWD	1	2010,0	-63,88	16,57	66,0	0,16	0,10	1,30
2044,0	5,60	189,50	MWD	1	2038,9	-66,69	16,07	68,6	0,14	-0,10	-0,93
2072,0	5,40	190,90	MWD	1	2066,8	-69,33	15,60	71,1	0,26	-0,21	1,50
2102,0	5,60	207,30	MWD	1	2096,6	-72,02	14,66	73,5	1,58	0,20	16,40
2131,0	6,70	230,70	MWD	1	2125,5	-74,35	12,70	75,4	2,81	1,14	24,21
2161,0	7,60	245,20	MWD	1	2155,2	-76,29	9,55	76,9	2,01	0,90	14,50
2190,0	7,50	254,60	MWD	1	2184,0	-77,60	5,98	77,8	1,28	-0,10	9,72
2219,0	7,70	265,80	MWD	1	2212,7	-78,24	2,22	78,3	1,54	0,21	11,59
2248,0	8,70	272,00	MWD	1	2241,4	-78,31	-1,91	78,3	1,38	1,03	6,41
2277,0	11,10	288,10	MWD	1	2270,0	-77,36	-6,76	77,7	3,77	2,48	16,66
2316,0	13,60	297,10	MWD	1	2308,1	-74,11	-14,41	75,5	2,42	1,92	6,92
2344,0	14,70	301,50	MWD	1	2335,3	-70,75	-20,37	73,6	1,65	1,18	4,71

HOLE DEVIATION

Well: 7216/11-1 S **Reference point:** RKB ; 24,0 m ABOVE MSL

Waterdepth: 361,0 m **Vertical to:** 384,9 m **Total Depth:** 4239,0 m MD

Utm zone: 33 **Central Median:** 15' E **Horizontal datum:** ED50

Template Centre Coordinates, UTM: **North :** m, **East:** m

Wellhead Coordinates, UTM: **North :** 7991645,45 m, **East:** 555345,64 m

Official Surveys: N **Track :**

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
2374,0	16,10	302,10	MWD	1	2364,2	-66,55	-27,14	71,9	1,41	1,40	0,60
2384,0	16,40	299,80	MWD	1	2373,8	-65,11	-29,54	71,5	2,13	0,90	-6,90
2413,0	17,20	300,40	MWD	1	2401,5	-60,91	-36,79	71,2	0,85	0,83	0,62
2442,0	18,30	300,30	MWD	1	2429,2	-56,44	-44,42	71,8	1,14	1,14	-0,10
2471,0	20,30	301,40	MWD	1	2456,5	-51,52	-52,65	73,7	2,10	2,07	1,14
2500,0	22,60	301,50	MWD	1	2483,5	-45,99	-61,69	76,9	2,38	2,38	0,10
2530,0	24,60	302,30	MWD	1	2511,0	-39,64	-71,89	82,1	2,03	2,00	0,80
2558,0	27,20	305,50	MWD	1	2536,2	-32,81	-82,02	88,3	3,16	2,79	3,43
2588,0	29,40	303,70	MWD	1	2562,6	-24,74	-93,73	96,9	2,36	2,20	-1,80
2616,0	31,50	304,10	MWD	1	2586,7	-16,82	-105,51	106,8	2,26	2,25	0,43
2645,0	33,80	304,60	MWD	1	2611,2	-7,99	-118,42	118,7	2,40	2,38	0,52
2674,0	36,30	304,80	MWD	1	2634,9	1,49	-132,12	132,1	2,59	2,59	0,21
2702,0	39,30	304,50	MWD	1	2657,0	11,24	-146,23	146,7	3,22	3,21	-0,32
2735,0	40,90	304,60	MWD	1	2682,3	23,30	-163,74	165,4	1,46	1,45	0,09
2762,0	43,60	304,50	MWD	1	2702,2	33,59	-178,69	181,8	3,00	3,00	-0,11
2789,0	46,10	305,20	MWD	1	2721,4	44,47	-194,31	199,3	2,83	2,78	0,78
2819,0	48,80	305,00	MWD	1	2741,7	57,18	-212,39	220,0	2,70	2,70	-0,20
2838,0	48,20	304,40	MWD	1	2754,3	65,28	-224,09	233,4	1,18	-0,95	-0,95
2867,0	47,90	304,50	MWD	1	2773,7	77,48	-241,88	254,0	0,32	-0,31	0,10
2896,0	48,90	303,30	MWD	1	2792,9	89,57	-259,88	274,9	1,39	1,03	-1,24
2935,0	49,60	304,80	MWD	1	2818,4	106,12	-284,36	303,5	1,03	0,54	1,15
2965,0	50,90	305,80	MWD	1	2837,5	119,45	-303,18	325,9	1,51	1,30	1,00
2993,0	52,50	306,50	MWD	1	2854,9	132,41	-320,92	347,2	1,81	1,71	0,75
3021,0	52,40	305,20	MWD	1	2872,0	145,41	-338,91	368,8	1,11	-0,11	-1,39
3051,0	52,40	305,10	MWD	1	2890,3	159,09	-358,35	392,1	0,08	0,00	-0,10
3081,0	52,50	307,50	MWD	1	2908,6	173,17	-377,51	415,3	1,91	0,10	2,40
3110,0	52,30	306,80	MWD	1	2926,2	187,05	-395,83	437,8	0,61	-0,21	-0,72
3138,0	51,20	305,90	MWD	1	2943,6	200,08	-413,53	459,4	1,40	-1,18	-0,96
3168,0	50,20	305,90	MWD	1	2962,6	213,70	-432,34	482,3	1,00	-1,00	0,00
3197,0	50,30	305,80	MWD	1	2981,1	226,75	-450,41	504,3	0,13	0,10	-0,10
3227,0	50,20	305,80	MWD	1	3000,3	240,25	-469,12	527,1	0,10	-0,10	0,00
3255,0	50,10	306,00	MWD	1	3018,3	252,85	-486,53	548,3	0,20	-0,11	0,21
3284,0	49,60	304,60	MWD	1	3037,0	265,66	-504,62	570,3	1,22	-0,52	-1,45
3314,0	49,50	305,20	MWD	1	3056,4	278,72	-523,34	592,9	0,47	-0,10	0,60
3341,0	49,40	305,20	MWD	1	3074,0	290,55	-540,11	613,3	0,11	-0,11	0,00
3371,0	49,20	305,70	MWD	1	3093,5	303,74	-558,64	635,9	0,43	-0,20	0,50

HOLE DEVIATION

Well: 7216/11-1 S **Reference point:** RKB ; 24,0 m ABOVE MSL

Waterdepth: 361,0 m **Vertical to:** 384,9 m **Total Depth:** 4239,0 m MD

Utm zone: 33 **Central Median:** 15' E **Horizontal datum:** ED50

Template Centre Coordinates, UTM: **North :** m, **East :** m

Wellhead Coordinates, UTM: **North :** 7991645,45 m, **East :** 555345,64 m

Official Surveys: N **Track :**

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
3400,0	49,10	307,90	MWD	1	3112,5	316,88	-576,20	657,6	1,72	-0,10	2,28
3429,0	48,30	306,30	MWD	1	3131,6	330,02	-593,57	679,1	1,49	-0,83	-1,66
3458,0	48,40	308,20	MWD	1	3150,9	343,13	-610,82	700,6	1,47	0,10	1,97
3487,0	48,00	305,00	MWD	1	3170,2	356,02	-628,17	722,0	2,50	-0,41	-3,31
3516,0	47,90	305,20	MWD	1	3189,7	368,41	-645,79	743,5	0,19	-0,10	0,21
3545,0	48,20	304,10	MWD	1	3209,1	380,67	-663,53	765,0	0,90	0,31	-1,14
3574,0	48,10	304,50	MWD	1	3228,4	392,84	-681,38	786,5	0,33	-0,10	0,41
3610,0	46,50	305,60	MWD	1	3252,8	408,03	-703,04	812,9	1,49	-1,33	0,92
3640,0	47,00	304,40	MWD	1	3273,4	420,56	-720,94	834,6	1,01	0,50	-1,20
3669,0	45,10	303,90	MWD	1	3293,5	432,28	-738,21	855,5	2,00	-1,97	-0,52
3697,0	42,80	305,00	MWD	1	3313,7	443,27	-754,24	874,9	2,60	-2,46	1,18
3726,0	40,60	306,30	MWD	1	3335,3	454,51	-769,92	894,1	2,45	-2,28	1,34
3756,0	40,30	306,60	MWD	1	3358,1	466,07	-785,57	913,4	0,36	-0,30	0,30
3784,0	39,90	306,60	MWD	1	3379,6	476,83	-800,05	931,4	0,43	-0,43	0,00
3814,0	39,70	307,30	MWD	1	3402,6	488,37	-815,40	950,5	0,49	-0,20	0,70
3843,0	39,10	306,60	MWD	1	3425,0	499,44	-830,11	968,8	0,77	-0,62	-0,72
3871,0	38,60	306,00	MWD	1	3446,8	509,83	-844,26	986,3	0,67	-0,54	-0,64
3901,0	38,60	306,70	MWD	1	3470,3	520,93	-859,34	1004,9	0,44	0,00	0,70
3930,0	38,50	305,10	MWD	1	3492,9	531,52	-873,97	1022,9	1,04	-0,10	-1,66
3959,0	38,70	304,70	MWD	1	3515,6	541,88	-888,81	1041,0	0,33	0,21	-0,41
3987,0	38,30	304,30	MWD	1	3537,5	551,75	-903,18	1058,4	0,50	-0,43	-0,43
4016,0	38,10	303,30	MWD	1	3560,3	561,73	-918,08	1076,3	0,67	-0,21	-1,03
4046,0	38,30	303,50	MWD	1	3583,9	571,94	-933,57	1094,8	0,24	0,20	0,20
4075,0	38,50	301,30	MWD	1	3606,6	581,59	-948,78	1112,8	1,43	0,21	-2,28
4104,0	39,20	301,80	MWD	1	3629,2	591,11	-964,28	1131,0	0,79	0,72	0,52
4132,0	39,80	298,00	MWD	1	3650,8	599,98	-979,71	1148,8	2,67	0,64	-4,07
4161,0	39,60	298,00	MWD	1	3673,1	608,67	-996,07	1167,3	0,21	-0,21	0,00
4191,0	39,60	299,30	MWD	1	3696,2	617,84	-1012,85	1186,4	0,83	0,00	1,30
4229,0	39,60	300,00	MWD	1	3725,5	629,83	-1033,90	1210,6	0,35	0,00	0,55

Norsk Hydro

2001-10-05

MAIN CONSUMPTION OF CASING/TUBING ON WELL 7216/11-1 S PO: 1

Size	Casing string	Grade	Weight [kg/m]	Weight [lb/ft]	Threads type	Length [m]	No. of joints
30"	CONDUCTOR	X-52	460,86	309,70	ST - 2 FB	123,4	10
20"	SURFACE	X-56	197,92	133,00	RL -4S	616,5	48
13 3/8"	INTERMEDIATE	P-110	107,14	72,00	NS-CC	1006,5	84
9 5/8"	PRODUCTION	P-110	79,61	53,50	NS-CC	2366,8	204

BITRECORD FOR WELL 7216/11-1 S PO: 1

Bit No	Bit RR	Bit Type	Size (in)	Manu-fact-urer	Trade name	Serial no.	IADC code	Nozzles diameter (../32in)	Flow area (in2)	BHA no.	Depth out (m MD)	Bit meter (m)	Rot. hours (hrs)	ROP (m/hr)	Rotation min/max) (rpm)	Total bit revol.	Weight min/max (kN)	Flow min/max (l/min)	Pump min/max (bar)	Cutting Structure I - O -DC- L - B	Gauge 1/16 (in)	Other Remarks	Pull Cause
1		ISRT	17,50	HTC	MXT03DX	H99DW	415	18,24,24,24	1,574	1	507	124		0,0									
2		MITO	9,88	HTC	ATMCG1	P2YD	117	14,20,20,20	1,071	2	1004	497	10,20	48,7	48/82	89000	2/6	2936/4211		1 - 2 - WT - A - E	I	NO	TD
3	2	ISRT	26,00	HTC	MXT00DX	D63DF	415	16,18,18,18	0,942	3	1004	497	14,20	35,0	79/120	106000	10/21	4211/4499	183/234	2 - 2 - WT - A - E	8	NR	TD
3	3	ISRT	26,00	HTC	MXT00DX	D63DF	415	16,18,18,18	0,942	4	1004	497		0,0						2 - 2 - WT - A - E	8	NR	TD
4		ISRT	17,50	HTC	MXT03DDT	K68DM	415	18,24,24,24	1,574	5	975	0	6,30	0,0	100/170	50000	6/25	3000/3500	115/125	8 - 8 - BT - A - E	2	LT	PR
		MILL	12,25	REDB	JUNKMILL	120466			0,000	6	978	3		0,0									
		MILL	12,25	REDB	JUNKMILL	RB10862			0,000	8	986	8	1,50	5,0	60/140		5/15	4000/4500	70/90				
5		ISRT	17,50	HTC	MAXGTPT00	G5DJ	415		0,000	11	979	0		0,0									
5	1	ISRT	17,50	HTC	MAXGTPT00	G5DJ	415	20,24,24,24	1,632	13	1437	423	15,10	28,0	92/205	237000	80/190	3590/4250	141/209	1 - 2 - BT - A - E	I	JD	HP
5	2	ISRT	17,50	HTC	MAXGTPT00	G5DJ1	415	20,24,24,24	1,632	14	1395	58		0,0	100/100	21000	150/200	3500/3500	115/115	1 - 2 - BT - A - E	I	JD	TD
6		ISRT	12,25	HTC	MXC03	J14D6	415M	14,18,18,18	0,896	15	1650	255	9,30	27,4	150/210	125000	0/15	2500/3000	115/168	1 - 2 - WT - H - E	I	BT	LOG
6	1	ISRT	12,25	HTC	MXC03	J14D6	415M	14,18,18,18	0,896	16	2400	750	36,00	20,8	115/228	380000	0/340	2180/3225	163/230	8 - 8 - BT - A - E	4	CR	PR
7		ISRT	12,25	HTC	MX20DDT	G53DV	517	18,18,20	0,804	17	2758	358	30,10	11,9	125/224	250000	0/350	2316/3276	112/248	2 - 2 - BT - H - E	I	CT	TD
7	1	ISRT	12,25	HTC	MX20DDT	G53DV	517	18,18,20	0,804	19	2758	0		0,0						2 - 2 - BT - H - E	I	CT	LOG
8		PDC	8,50	HTC	G445XLDG2	1901907	M333	13,13,14,14	0,560	21	2944	186	30,10	6,2	194/297	490000	8/29	2181/2411	215/279	3 - 8 - RO - S - X	1	LT	PR
9		ISRT	8,50	HTC	MXC09DX	K82DV	437	16,16,16	0,589	22	2988	44	4,90	9,0	194/297	112000	8/16	2181/2411	215/279	1 - 1 - BT - 3 - 0	I	NO	CP
10		CORE	8,50	SDBS	FC264LI	7980827	243		0,000	23	2998	10	1,80	5,6	100/100	49000	3/16	1050/1050	60/60	1 - - NO - -	I	NO	CJ
11		PDC	8,50	HTC	BD445MA	1211573	M333	16,16,16	0,589	24	3604	606	55,00	11,0	187/324	2000000	5/14	2058/2373	255/320	1 - 2 - WT - A - X	I	RO	DTF
12		PDC	8,50	SDBS	FM2745DR	5007775	M433	13,13,14,14	0,560	25	4230	626	60,30	10,4	291/295	1426000	9/15	1930/2114	291/320	1 - 1 - LT - H - X	I	WT	TD
12	1	PDC	8,50	SDBS	FM2745DR	5007775	M433	13,13,14,14	0,560	26	4230	0		0,0						1 - 1 - LT - H - X	I	WT	CM
14		CORE	8,50	SDBS	CT103	7970313	T6X3		0,000	27	4739	509	3,30	154,2	120/120	32000	50/180		130/138	1 - 1 - WT - A - X	I	NO	TD

BOTTOM HOLE ASSEMBLIES USED ON WELL 7216/11-1 S PO: 1

BHA no. 1: No. / Element / OD(in) / Length(m) Depth In: 383 m MD Out: 507 m MD

1	MXT03DX	17,5	0,41	2	HEAVYDUTY	36,0	3,95
3	BIT SUB	9,5	0,87	4	MWD	8,25	17,56
5	X-OVER	9,5	0,70	6	DRILL COLLAR STEEL	9,5	62,85
7	X-OVER	9,25	0,90	8	DRILL COLLAR STEEL	8,0	18,29
9	JAR	8,0	9,66	10	X-OVER	7,75	0,72
11	HWDP	5,5	82,82				

Reason pulled: Sum: 198,73

BHA no. 2: No. / Element / OD(in) / Length(m) Depth In: 507 m MD Out: 1004 m MD

1	ATMCG1	9,875	0,26	2	BIT SUB	8,0	0,85
3	MWD	8,25	17,61	4	NON MAG. STAB	9,875	1,78
5	OTHER	8,0	9,69	6	NON MAG. COLLAR	7,875	9,47
7	DRILL COLLAR STEEL	8,0	46,62	8	JAR	7,875	9,66
9	X-OVER	7,75	0,72	10	HWDP	5,5	110,09

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 206,75

BHA no. 3: No. / Element / OD(in) / Length(m) Depth In: 507 m MD Out: 1004 m MD

1	MXT00DX	26,0	0,54	2	BIT SUB	9,5	0,86
3	MWD	8,25	17,56	4	X-OVER	9,812	0,69
5	STEEL STAB	26,0	1,87	6	X-OVER	9,5	0,90
7	NON MAG. COLLAR	7,875	9,47	8	DRILL COLLAR STEEL	8,0	83,41
9	JAR	7,875	9,66	10	DRILL COLLAR STEEL	8,0	18,35
11	X-OVER	7,75	0,72	12	HWDP	5,53	110,09

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 254,12

BHA no. 4: No. / Element / OD(in) / Length(m) Depth In: 507 m MD Out: 1004 m MD

1	MXT00DX	26,0	0,54	2	BIT SUB	9,5	0,86
3	MWD	8,25	17,56	4	X-OVER	9,812	0,69
5	STEEL STAB	26,0	1,87	6	X-OVER	9,5	0,90
7	NON MAG. COLLAR	7,875	9,47	8	DRILL COLLAR STEEL	8,0	83,41
9	JAR	7,875	9,66	10	DRILL COLLAR STEEL	8,0	18,35
11	X-OVER	7,75	0,72	12	HWDP	5,53	110,09

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 254,12

BHA no. 5: No. / Element / OD(in) / Length(m) Depth In: 975 m MD Out: 975 m MD

1	MXT03DDT	17,5	0,43	2	NAVIGATOR	11,375	11,51
3	X-OVER	9,5	0,86	4	MWD	8,25	16,70
5	NON MAG. STAB	16,75	2,33	6	NON MAG. COLLAR	7,875	9,47
7	DRILL COLLAR STEEL	8,0	83,41	8	JAR	7,875	9,66
9	DRILL COLLAR STEEL	8,0	18,35	10	X-OVER	7,75	0,72
11	HWDP	5,5	110,09				

Reason pulled: PENETRATION RATE Sum: 263,53

BHA no. 6: No. / Element / OD(in) / Length(m) Depth In: 975 m MD Out: 978 m MD

1	JUNKMILL	12,0	0,57	3	X-OVER	8,0	0,65
6	JUNK BASKET	9,325	0,76	7	FLOAT SUB	8,0	0,84
8	JAR	7,875	9,66	9	DRILL COLLAR STEEL	8,0	18,35
10	X-OVER	7,75	0,72	11	HWDP	5,5	110,09
13	STEEL STAB	16,25	2,34				

Reason pulled: Sum: 143,98

BOTTOM HOLE ASSEMBLIES USED ON WELL 7216/11-1 S PO: 1

BHA no. 7: No. / Element / OD(in) / Length(m) Depth In: 979 m MD Out: 979 m MD

1	OTHER	5,0	19,66	2	X-OVER	6,5	0,80
3	JUNK BASKET	6,5	0,77	4	DRILL PIPE	5,0	9,83
5	X-OVER	6,5	0,74				

Reason pulled: Sum: 31,80

BHA no. 8: No. / Element / OD(in) / Length(m) Depth In: 979 m MD Out: 986 m MD

1	JUNKMILL	12,25	0,75	2	JUNK SUB	9,625	0,76
3	FLOAT SUB	8,0	0,84	4	DRILL COLLAR STEEL	8,0	9,14
5	X-OVER	8,0	0,70	6	STEEL STAB	17,125	1,40
7	STEEL STAB	17,375	1,75	8	X-OVER	9,375	0,91
9	DRILL COLLAR STEEL	8,0	74,20	10	JAR	7,875	9,66
11	DRILL COLLAR STEEL	8,0	18,35	12	X-OVER	8,0	1,17
13	HWDP	5,5	55,23				

Reason pulled: Sum: 174,86

BHA no. 9: No. / Element / OD(in) / Length(m) Depth In: 979 m MD Out: 979 m MD

1	JUNKMILL	17,437	0,99	2	STRING MILL	17,5	2,05
3	X-OVER	9,5	0,86	4	X-OVER	9,5	0,78
5	X-OVER	8,0	0,70	5	DRILL COLLAR STEEL	8,0	9,14
6	STEEL STAB	17,125	1,40	7	STEEL STAB	17,375	1,75
8	X-OVER	9,375	0,91	9	DRILL COLLAR STEEL	8,0	74,20
10	JAR	7,875	9,66	11	DRILL COLLAR STEEL	8,0	18,35
12	X-OVER	8,0	1,17	13	HWDP	5,5	55,23

Reason pulled: Sum: 177,19

BHA no. 10: No. / Element / OD(in) / Length(m) Depth In: 979 m MD Out: 1007 m MD

1	STRINGMILL	17,5	1,64	2	STRING MILL	17,5	2,05
3	X-OVER	9,5	0,86	4	X-OVER	9,5	0,78
5	X-OVER	8,0	0,70	5	DRILL COLLAR STEEL	8,0	9,14
6	STEEL STAB	17,125	1,40	7	STEEL STAB	17,375	1,75
8	X-OVER	9,375	0,91	9	DRILL COLLAR STEEL	8,0	74,20
10	JAR	7,875	9,66	11	DRILL COLLAR STEEL	8,0	18,35
12	X-OVER	8,0	1,17	13	HWDP	5,5	55,23

Reason pulled: Sum: 177,84

BHA no. 11: No. / Element / OD(in) / Length(m) Depth In: 979 m MD Out: 979 m MD

1	MAXGTPT00	17,5	0,43	2	NAVIGATOR	17,38	11,59
3	X-OVER	9,5	0,86	4	MWD	8,25	16,70
5	NON MAG. STAB	16,75	2,33	6	NON MAG. COLLAR	7,875	9,47
7	DRILL COLLAR STEEL	8,0	83,41	8	JAR	7,875	9,66
9	DRILL COLLAR STEEL	8,0	18,35	10	X-OVER	7,75	0,72
11	HWDP	5,5	110,09				

Reason pulled: Sum: 263,61

BHA no. 12: No. / Element / OD(in) / Length(m) Depth In: 979 m MD Out: 1003 m MD

1	TAPERMILL	17,0	1,64	2	STRING MILL	17,375	2,05
3	STEEL STAB	17,438	2,13	4	DRILL COLLAR STEEL	8,0	9,14
5	X-OVER	8,0	0,70	6	STEEL STAB	17,313	1,40
7	STEEL STAB	17,313	1,75	8	X-OVER	9,375	0,91
9	DRILL COLLAR STEEL	8,0	74,20	10	JAR	7,875	9,66
11	DRILL COLLAR STEEL	8,0	18,35	12	X-OVER	8,0	1,17
13	HWDP	5,5	55,23				

Reason pulled: Sum: 178,33

BOTTOM HOLE ASSEMBLIES USED ON WELL 7216/11-1 S PO: 1

BHA no. 13: No. / Element / OD(in) / Length(m) — Depth In: 1014 m MD Out: 1437 m MD

1	MAXGTPT00	17,5	0,43	2	DOWN HOLE MOTOR WITH ST/	17,38	11,59
3	X-OVER	9,5	0,86	4	MWD	8,25	16,70
5	NON MAG. STAB	16,75	2,33	6	NON MAG. COLLAR	7,875	9,47
7	DRILL COLLAR STEEL	8,0	83,41	8	JAR	7,875	9,66
9	DRILL COLLAR STEEL	8,0	18,35	10	X-OVER	7,75	0,72
11	HWDP	5,5	110,09				

Reason pulled: HOLE PROBLEMS Sum: 263,61

BHA no. 14: No. / Element / OD(in) / Length(m) — Depth In: 1337 m MD Out: 1395 m MD

1	MAXGTPT00	17,5	0,43	2	NEAR BIT STAB	17,5	2,13
3	FLOAT SUB	8,0	1,08	4	MWD	8,25	17,56
5	NON MAG. STAB	16,75	2,33	6	NON MAG. COLLAR	7,875	9,47
7	DRILL COLLAR STEEL	8,0	55,77	8	JAR	7,875	9,66
9	DRILL COLLAR STEEL	8,0	18,35	10	X-OVER	7,75	1,17
11	HWDP	5,5	110,09	12	DRILL COLLAR STEEL	8,0	9,38
13	X-OVER	8,0	0,69	14	STEEL STAB	17,375	1,40

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 239,51

BHA no. 15: No. / Element / OD(in) / Length(m) — Depth In: 1395 m MD Out: 1650 m MD

1	MXC03	12,25	0,34	2	DOWN HOLE MOTOR WITH ST/	12,125	10,29
3	NON MAG. STAB	12,125	1,74	4	PUP JOINT	8,25	0,91
5	MWD	8,25	4,89	6	MWD	8,25	11,89
7	NON MAG. STAB	12,125	1,59	8	NON MAG. COLLAR	7,875	9,47
9	DRILL COLLAR STEEL	8,0	55,77	10	JAR	7,875	9,66
11	DRILL COLLAR STEEL	8,0	18,35	12	X-OVER	8,0	1,17
13	HWDP	5,5	110,09				

Reason pulled: RUN LOGS Sum: 236,16

BHA no. 16: No. / Element / OD(in) / Length(m) — Depth In: 1650 m MD Out: 2400 m MD

1	MXC03	12,25	0,34	2	DOWN HOLE MOTOR WITH ST/	12,125	10,29
3	NON MAG. STAB	12,125	1,74	4	PUP JOINT	8,25	0,91
5	MWD	8,25	4,89	6	MWD	8,25	11,89
7	NON MAG. STAB	12,125	1,59	8	NON MAG. COLLAR	7,875	9,47
9	DRILL COLLAR STEEL	8,0	55,77	10	JAR	7,875	9,66
11	DRILL COLLAR STEEL	8,0	18,35	12	X-OVER	8,0	1,17
13	HWDP	5,5	110,09				

Reason pulled: PENETRATION RATE Sum: 236,16

BHA no. 17: No. / Element / OD(in) / Length(m) — Depth In: 2400 m MD Out: 2758 m MD

1	MX20DDT	12,25	0,34	2	DOWN HOLE MOTOR WITH ST/	12,125	10,29
3	NON MAG. STAB	11,75	1,74	4	PUP JOINT	8,25	0,91
5	MWD	8,25	4,89	6	MWD	8,25	11,89
7	NON MAG. STAB	12,0	1,59	8	NON MAG. COLLAR	7,875	9,47
9	DRILL COLLAR STEEL	8,0	55,77	10	JAR	7,875	9,66
11	DRILL COLLAR STEEL	8,0	18,35	12	X-OVER	8,0	1,17
13	HWDP	5,5	110,09				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 236,16

BHA no. 18: No. / Element / OD(in) / Length(m) — Depth In: 2570 m MD Out: 2570 m MD

1	OVER SHOT	6,94	0,94	2	X-OVER	6,82	0,62
3	HWDP	5,5	137,32				

Reason pulled: Sum: 138,88

BOTTOM HOLE ASSEMBLIES USED ON WELL 7216/11-1 S PO: 1

BHA no. 19: No. / Element / OD(in) / Length(m) Depth In: 2758 m MD Out: 2758 m MD

1	MX20DDT	12,25	0,34	2	BIT SUB	8,0	0,88
3	STEEL STAB	12,125	1,59	4	DRILL COLLAR STEEL	8,0	21,10
5	STEEL STAB	12,125	1,74	6	DRILL COLLAR STEEL	8,0	37,48
7	JAR	7,875	9,66	8	DRILL COLLAR STEEL	8,0	18,35
9	X-OVER	8,0	1,17	10	HWDP	5,5	137,32

Reason pulled: RUN LOGS Sum: 229,63

BHA no. 21: No. / Element / OD(in) / Length(m) Depth In: 2758 m MD Out: 2944 m MD

1	G445XLDG2	8,5	0,31	2	NAVIGATOR	8,375	14,69
3	LOGGING WHILE DRILLING TOOL	8,375	2,47	4	LOGGING WHILE DRILLING TO	6,75	2,35
5	MWD	6,75	10,94	6	NON MAG. STAB	8,375	1,97
7	LOGGING WHILE DRILLING TOOL	6,875	9,73	8	FLOAT SUB	6,56	0,97
9	NON MAG. COLLAR	6,5	8,85	10	DRILL COLLAR STEEL	6,5	47,25
11	JAR	6,25	9,30	12	DRILL COLLAR STEEL	6,5	18,91
13	HWDP	5,0	109,40	14	DART SUB	6,375	0,80
15	DRILL PIPE	5,0	1238,50	16	X-OVER	6,938	

Reason pulled: PENETRATION RATE Sum: 1476,44

BHA no. 22: No. / Element / OD(in) / Length(m) Depth In: 2944 m MD Out: 2988 m MD

1	MXC09DX	8,5	0,24	2	NAVIGATOR	8,375	14,69
3	LOGGING WHILE DRILLING TOOL	8,375	2,47	4	LOGGING WHILE DRILLING TO	6,75	2,35
5	MWD	6,75	10,94	6	NON MAG. STAB	8,375	1,97
7	LOGGING WHILE DRILLING TOOL	6,875	9,73	8	FLOAT SUB	6,56	0,97
9	NON MAG. COLLAR	6,5	8,85	10	DRILL COLLAR STEEL	6,5	47,25
11	JAR	6,25	9,30	12	DRILL COLLAR STEEL	6,5	18,91
13	HWDP	5,0	109,40	14	DART SUB	6,375	0,80
15	DRILL PIPE	5,0	1476,37	16	X-OVER	6,938	1477,16

Reason pulled: CORE POINT Sum: 3191,40

BHA no. 23: No. / Element / OD(in) / Length(m) Depth In: 2988 m MD Out: 2998 m MD

1	FC264LI		0,36	2	CORE BARREL		20,95
3	FLOAT SUB	6,56	0,97	4	NON MAG. COLLAR	6,5	8,85
5	DRILL COLLAR STEEL	6,5	47,25	6	JAR	6,25	9,30
7	DRILL COLLAR STEEL	6,5	18,91	8	HWDP	5,0	109,40
9	DART SUB	6,375	0,80	10	DRILL PIPE	5,0	1457,09
11	X-OVER	6,938	0,79				

Reason pulled: CORE JAMMED Sum: 1653,36

BHA no. 24: No. / Element / OD(in) / Length(m) Depth In: 2998 m MD Out: 3604 m MD

1	BD445MA		0,32	2	NAVIGATOR	8,375	14,69
3	LOGGING WHILE DRILLING TOOL	8,375	2,47	4	LOGGING WHILE DRILLING TO	6,75	2,35
5	MWD	6,75	10,94	6	NON MAG. STAB	8,375	1,97
7	LOGGING WHILE DRILLING TOOL	6,875	9,73	8	FLOAT SUB	6,56	0,97
9	NON MAG. COLLAR	6,5	8,85	10	DRILL COLLAR STEEL	6,5	47,25
11	JAR	6,25	9,30	12	DRILL COLLAR STEEL	6,5	18,91
13	HWDP	5,0	109,40	14	DART SUB	6,375	0,80
15	DRILL PIPE	5,0	1238,50	16	X-OVER	6,938	0,79

Reason pulled: DOWNHOLE TOOL FAILURE Sum: 1476,92

BOTTOM HOLE ASSEMBLIES USED ON WELL 7216/11-1 S PO: 1

BHA no. 25: No. / Element / OD(in) / Length(m) Depth In: 3604 m MD Out: 4230 m MD

1	FM2745DR		0,23	2	NAVIGATOR	6,75	14,69
3	LOGGING WHILE DRILLING TOOL	6,75	2,52	4	LOGGING WHILE DRILLING TO	6,75	2,36
5	MWD	6,75	10,82	6	NON MAG. STAB	8,375	1,97
7	LOGGING WHILE DRILLING TOOL	6,875	9,72	8	FLOAT SUB	6,56	0,97
9	NON MAG. COLLAR	6,5	8,85	10	DRILL COLLAR STEEL	6,5	47,25
11	JAR	6,25	9,30	12	DRILL COLLAR STEEL	6,5	18,91
13	HWDP	5,0	109,40	14	DART SUB	6,375	0,80
15	DRILL PIPE	5,0	1739,26	16	X-OVER	6,938	0,79

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 1977,61

BHA no. 26: No. / Element / OD(in) / Length(m) Depth In: 4230 m MD Out: 4230 m MD

1	FM2745DR		0,23	2	BIT SUB	6,437	0,91
3	MWD	6,75	11,43	4	NON MAG. STAB	8,375	1,97
5	NON MAG. COLLAR	6,5	8,85	6	DRILL COLLAR STEEL	6,5	47,25
7	JAR	6,25	9,30	8	DRILL COLLAR STEEL	6,5	18,91
9	HWDP	5,0	27,46	10	DART SUB	6,375	0,80
11	DRILL PIPE	5,0	1827,90	12	X-OVER	6,938	0,79

Reason pulled: CONDITION MUD Sum: 1955,57

BHA no. 27: No. / Element / OD(in) / Length(m) Depth In: 4230 m MD Out: 4739 m MD

1	CT103		0,36	2	CORE BARREL		11,80
3	FLOAT SUB	6,56	0,97	4	NON MAG. COLLAR	6,5	8,85
5	DRILL COLLAR STEEL	6,5	47,25	6	JAR	6,25	9,30
7	DRILL COLLAR STEEL	6,5	18,91	8	HWDP	5,0	109,40
9	DART SUB	6,375	0,80	10	DRILL PIPE	5,0	1827,90
11	X-OVER	6,938	0,79				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 2024,17

CEMENT SLURRY REPORT ON WELL 7216/11-1 S PO: 1

2001-10-05

Date	CsgSize	Jobtype	Slurry Type	Pumped Volume [m3]	Density [sg]	BHCT [DegC]	Yield [l/100 kg]	Additive	Unit	Additives [../100 kg Cement]	Additives [../m3 Slurry]
2000-07-26	30"	CASING CEMENTING	LEAD	33,60	1,56	10,00	129,42	ECONO	l	3,20	
								NF-6	l	0,10	
			DISPLACEMENT	5,65	1,03	10,00	75,06				
			TAIL SLURRY	34,50	1,95	10,00	75,06	CaCl2C	l	4,35	
2000-07-31	20"	CASING CEMENTING	LEAD	175,00	1,44	15,00	169,13	NF-6	l	0,10	
								ECONO	l	6,00	
			TAIL SLURRY	23,00	1,92	15,00	77,58	NF-6	l	0,10	
								NF-6	l	0,10	
								CaCl2C	l	4,35	
			DISPLACEMENT			15,00		ECONO	l		6182,70
2000-08-09	13 3/8"	CASING CEMENTING	WATER BASED MUD SPACER (WEIGHTED)	13,00	1,65	30,00		BARITC	kg		843,64
								SP500	l		20,26
								NF-6	l		3,00
			TAIL SLURRY	15,00	1,90	30,00	77,65	HR-5L	l	0,60	
								NF-6	l	0,10	
								HAL99	l	7,00	
								CFR-3L	l	2,00	
								GASC	l	3,50	
			DISPLACEMENT	3,00	1,65	30,00					
			DISPLACEMENT	77,20	1,65	30,00					
2000-08-10	UNDEFINED	PLUG IN OPEN HOLE	DISPLACEMENT	0,65	1,03	30,00					
			TAIL SLURRY	20,00	1,90	30,00	77,65	CFR-3L	l	2,00	
								GASC	l	3,50	
								HAL99	l	7,00	
								HR-5L	l	0,60	
								NF-6	l	0,10	
			DISPLACEMENT	13,80	1,40	30,00					
2000-08-22	9 5/8"	CASING CEMENTING	DISPLACEMENT	88,15	1,46	57,00					
			WEIGHTED SPACER	10,00	1,68	57,00		NF-6	l		
								SP500	l		20,00
								D031	kg		875,30

CEMENT SLURRY REPORT ON WELL 7216/11-1 S PO: 1

2001-10-05

Date	CsgSize	Jobtype	Slurry Type	Pumped Volume [m3]	Density [sg]	BHCT [DegC]	Yield [l/100 kg]	Additive	Unit	Additives [../100 kg Cement]	Additives [../m3 Slurry]
2000-08-22	9 5/8"	CASING CEMENTING	TAIL SLURRY	12,56	1,90	57,00		HR-5L	l	131,00	
								NF-6	l	16,40	
			DRILL WATER	2,30	1,00	57,00					
2000-09-08	9 5/8"	PLUG IN CASED TO OPEN HOLE	TAIL SLURRY	11,00	1,90	69,00	77,75	CFR-3L	l	2,00	
								GASC	l	3,50	
								HAL99	l	8,00	
								HR-5L	l	1,00	
								NF-6	l	0,10	
			SPACER		1,70	69,00		D031	kg		906,90
								NF-6	l		3,00
								SP500	l		19,70
2000-09-10	9 5/8"	SQUEEZE	TAIL SLURRY	10,40	1,90	48,00	77,71	CFR-3L	l	2,00	
								GASC	l	3,50	
								HAL99	l	7,00	
								HR-5L	l	0,90	
								NF-6	l	0,10	
			SPACER		1,70	48,00		D031	kg		906,90
								NF-6	l		3,00
								SP500	l		19,70
			DISPLACEMENT			48,00					
2000-09-12	UNDEFINED	PLUG IN CASED HOLE	TAIL SLURRY	37,40	1,90	12,00	77,90	NF-6	l	46,74	
			FRESHWATER		1,00	12,00					

CEMENT CONSUMPTION PER JOB ON WELL 7216/11-1 S PO: 1

Date	CsgSize	Job Type	Cement/ Additive	Description	Unit	Actual Amount Used
2000-07-26	30"	CASING CEMENTING	CaCl2C	CaCl2 / ACCELERATOR: CALCIUM CHLORIDE	l	2144
			ECONO	EXTENDER: ECONOLITE	l	831
			NF-6	NF-6	l	78
2000-07-31	20"	CASING CEMENTING	CaCl2C	CaCl2 / ACCELERATOR: CALCIUM CHLORIDE	l	682
			ECONO	EXTENDER: ECONOLITE	l	6182
			NF-6	NF-6	l	134
2000-08-09	13 3/8"	CASING CEMENTING	BARITC	WEIGHT MATERIAL: BARITE	kg	10967
			CFR-3L	DISPERSANT: CFR-3 LIQUID	l	386
			GASC	GASCON	l	676
			HAL99	FLUID LOSS ADDITIVE: HALAD-99LE+	l	1351
			HR-5L	RETARDER: HR-5L, LIQUID	l	116
			NF-6	NF-6	l	22
			SP500	SPACER 500	l	230
2000-08-10	NDEFINE	PLUG IN OPEN HOLE	CFR-3L	DISPERSANT: CFR-3 LIQUID	l	514
			NF-6	NF-6	l	26
			HR-5L	RETARDER: HR-5L, LIQUID	l	154
			GASC	GASCON	l	900
			HAL99	FLUID LOSS ADDITIVE: HALAD-99LE+	l	1799
2000-08-22	9 5/8"	CASING CEMENTING	D031	WEIGHTING AGENT: BARITE	kg	0
			HR-5L	RETARDER: HR-5L, LIQUID	l	0
			NF-6	NF-6	l	0
			SP500	SPACER 500	l	0
2000-09-08	9 5/8"	PLUG IN CASED TO OPEN HOLE	CFR-3L	DISPERSANT: CFR-3 LIQUID	l	0
			GASC	GASCON	l	0
			HR-5L	RETARDER: HR-5L, LIQUID	l	0
			SP500	SPACER 500	l	0
			NF-6	NF-6	l	0
			HAL99	FLUID LOSS ADDITIVE: HALAD-99LE+	l	0
			D031	WEIGHTING AGENT: BARITE	kg	0
2000-09-10	9 5/8"	SQUEEZE	CFR-3L	DISPERSANT: CFR-3 LIQUID	l	270
			GASC	GASCON	l	473
			HAL99	FLUID LOSS ADDITIVE: HALAD-99LE+	l	945
			NF-6	NF-6	l	44
			SP500	SPACER 500	l	197
			HR-5L	RETARDER: HR-5L, LIQUID	l	122
			D031	WEIGHTING AGENT: BARITE	kg	9069
2000-09-12	NDEFINE	PLUG IN CASED HOLE	NF-6	NF-6	l	0

TOTAL CONSUMPTION OF CEMENT ADDITIVES ON WELL 7216/11-1 S PO: 1

Section	Cement/Additive	Unit	Total Amount Used
36"	EXTENDER: ECONOLITE	l	831,00
	NF-6	l	78,00
	CaCl2 / ACCELERATOR: CALCIUM CHLORIDE	l	2144,00
26"	EXTENDER: ECONOLITE	l	6182,40
	NF-6	l	134,00
	CaCl2 / ACCELERATOR: CALCIUM CHLORIDE	l	682,00
17 1/2"	GASCON	l	1575,50
	FLUID LOSS ADDITIVE: HALAD-99LE+	l	3150,00
	RETARDER: HR-5L, LIQUID	l	270,20
	WEIGHT MATERIAL: BARITE	kg	10967,00
	NF-6	l	48,00
	SPACER 500	l	230,00
	DISPERSANT: CFR-3 LIQUID	l	900,00
12 1/4"	SPACER 500	l	0,00
	NF-6	l	0,00
	WEIGHTING AGENT: BARITE	kg	0,00
	RETARDER: HR-5L, LIQUID	l	0,00
8 1/2"	DISPERSANT: CFR-3 LIQUID	l	270,00
	NF-6	l	43,50
	GASCON	l	472,50
	FLUID LOSS ADDITIVE: HALAD-99LE+	l	945,00
	WEIGHTING AGENT: BARITE	kg	9069,00
	RETARDER: HR-5L, LIQUID	l	121,50
	SPACER 500	l	197,00

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 7216/11-1 S PO: 1

Hole section : 36" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2000-07-25	507	507	BENTONITE MUD		1,30						0	0							
2000-07-26	671	671	BENTONITE MUD		1,30						0	0							
2000-07-27	671	671	BENTONITE MUD		1,30						0	0							

Hole section : 26" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2000-07-28	1004	1004	BENTONITE MUD		1,30						0	0							
2000-07-29	10012	8181	BENTONITE MUD	100,0	1,30						0	0							
2000-07-30	1004	1004	BENTONITE MUD	100,0	1,30						0	0							
2000-07-31	1004	1004	BENTONITE MUD	120,0	1,30						0	0							
2000-08-01	1004	1004	BENTONITE MUD	100,0	1,30						0	0							
2000-08-02	1004	1004	BENTONITE MUD	100,0	1,03						0	0							
2000-08-03	1004	1004	BENTONITE MUD	120,0	1,03						0	0							

Hole section : 17 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2000-08-04 23:59	1004	1004	GLYDRIL		1,30		75	60	49	38	0	0	12	10	50,0	15,0	22,5	5,0	8,0
2000-08-05 23:59	1094	1094	GLYDRIL		1,30		59	44	36	27	0	0	12	10	50,0	15,0	14,5	5,0	8,0
2000-08-06 23:59	1437	1435	GLYDRIL		1,30		55	41	35	27	0	0	11	10	50,0	14,0	13,5	5,0	7,5
2000-08-07 23:59	1437	1435	GLYDRIL		1,39		58	42	35	27	0	0	11	10	50,0	16,0	13,0	5,0	7,5
2000-08-08 23:59	1337	1336	GLYDRIL		1,39		58	42	36	26	0	0	11	10	50,0	16,0	13,0	5,0	7,5
2000-08-09 23:59	1395	1393	GLYDRIL		1,39		57	41	35	26	0	0	10	9	50,0	16,0		5,0	
2000-08-10	1390	1388	GLYDRIL		1,40		56	4025	3520	25	0	0	9	8		16,0	12,0	5,0	6,5

Hole section : 12 1/4" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2000-08-11	1650	1647	GLYDRIL	53,0	1,40		58	44	36	26	0	0	11	9	50,0	14,0	15,0		8,0
2000-08-12	1841	1837	GLYDRIL	53,0	1,46		66	48	41	30	0	0	12	10	50,0	18,0	15,0	5,0	8,0

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 7216/11-1 S PO: 1

Hole section : 12 1/4" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2000-08-13	2195	2189	GLYDRIL	53,0	1,46		68	51	43	31	0	0	11	10	50,0	17,0	17,0	5,0	10,5
2000-08-14	2400	2389	GLYDRIL	53,0	1,46		69	51	41	31	0	0	11	10	50,0	18,0	16,5	5,0	10,0
2000-08-15	2618	2588	GLYDRIL	53,0	1,46		71	51	42	32	0	0	12	10	50,0	20,0	15,5	5,0	10,0
2000-08-16	2758	2699	GLYDRIL	53,0	1,46		78	56	46	36	0	0	12	10	50,0	22,0	17,0	5,0	10,0
2000-08-17	2758	2699	GLYDRIL	53,0	1,46		78	56	46	36	0	0	12	10	50,0	22,0	17,0	5,0	10,0
2000-08-18	2758	2699	GLYDRIL	53,0	1,46		78	56	46	36	0	0	12	10	50,0	22,0	17,0	5,0	10,0
2000-08-19	2758	2699	GLYDRIL	55,0	1,46		82	59	49	36	0	0	13	10	50,0	23,0	18,0	5,0	10,0
2000-08-20	2758	2699	GLYDRIL	55,0	1,46		80	60	49	35	0	0	12	10	50,0	20,0	20,0	5,0	10,0
2000-08-21	2758	2699	GLYDRIL	55,0	1,46		80	60	49	35	0	0	12	10	50,0	20,0	20,0	5,0	10,0
2000-08-22	2758	2699	GLYDRIL	56,0	1,46		82	62	50	35	0	0	12	10	50,0	20,0	21,0	5,0	10,0
2000-08-23	2793	2724	GLYDRIL	54,0	1,30		56	43	36	28	0	0	10	9	50,0	13,0	15,0	5,0	8,0

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings 600	300	200	100	60	30	6	3	Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
2000-08-24	2941	2822	GLYDRIL	54,0	1,30		57	43	36	27	0	0	10	9	50,0	14,0	14,5	5,0	8,0
2000-08-25	2988	2852	GLYDRIL	54,0	1,30			36	27	21	0	0	10	9	50,0	14,0	14,5	5,0	8,0
2000-08-26	3011	2866	GLYDRIL	57,0	1,30		56	42	36	27	0	0	10	9	50,0	14,0	14,0	6,0	8,0
2000-08-27	3170	2964	GLYDRIL	55,0	1,31		65	50	43	34	0	0	12	10	50,0	15,0	17,5	6,0	10,0
2000-08-28	3273	3030	GLYDRIL	55,0	1,46		70	53	45	35	0	0	13	11	50,0	17,0	18,0	6,0	10,0
2000-08-29	3511	3186	GLYDRIL	55,0	1,52		80	61	51	38	0	0	13	11	50,0	19,0	21,0	6,0	12,0
2000-08-30	3604	3249	GLYDRIL	66,0	1,52		93	70	58	43	0	0	15	13	50,0	23,0	23,5	7,0	12,0
2000-08-31	3861	3439	GLYDRIL	58,0	1,52		81	57	48	35	0	0	12	10	50,0	24,0	16,5	6,0	11,0
2000-09-01	4041	3580	GLYDRIL	58,0	1,52		86	61	48	36	0	0	14	12	50,0	25,0	18,0	6,0	13,0
2000-09-02	4183	3690	GLYDRIL	61,0	1,52		86	62	51	38	0	0	13	11	50,0	24,0	19,0	6,0	13,0
2000-09-03	4230	3726	GLYDRIL	61,0	1,55		94	67	56	40	0	0	13	11	50,0	27,0	20,0	6,0	13,0
2000-09-04	4230	3726	GLYDRIL	63,0	1,55		94	67	56	40	0	0	13	11	50,0	27,0	20,0	6,0	13,0
2000-09-05	4230	3726	GLYDRIL	64,0	1,55		94	67	56	40	0	0	13	11	50,0	27,0	20,0	6,0	13,0
2000-09-06	4230	3726	GLYDRIL	60,0	1,55		92	66	55	40	0	0	13	11	50,0	26,0	20,0	6,0	13,0
2000-09-08	4230	3726	GLYDRIL	65,0	1,55		88	61	49	35	0	0	12	10	50,0	27,0	17,0	5,5	12,0
2000-09-09	4239	3733	GLYDRIL	65,0	1,55		82	57	49	26	0	0	12	10	50,0	25,0	16,0	5,0	12,0
2000-09-09 23:59	4239	3733	GLYDRIL	65,0	1,55		82	57	49	26	0	0	12	10	50,0	25,0	16,0	5,0	12,0
2000-09-10	4239	3733	GLYDRIL	65,0	1,46		80	57	46	33	0	0	10	8	50,0	23,0	17,0	5,0	10,0
2000-09-11	4239	3733	GLYDRIL	65,0	1,46		80	57	46	33	0	0	10	8	50,0	23,0	17,0	5,0	10,0

Norsk Hydro

2001-10-05

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 7216/11-1 S PO: 1

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2000-09-12	4239	3733	GLYDRIL	55,0	1,39		45	32	27	20	0	0	7	5	50,0	13,0	9,5	2,5	5,0

Norsk Hydro

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 7216/11-1 S PO: 1

Hole section : 36" — **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2000-07-25	507	507	BENTONITE MUD	1,30					/																
2000-07-26	671	671	BENTONITE MUD	1,30					/																
2000-07-27	671	671	BENTONITE MUD	1,30					/																

Hole section : 26" — **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2000-07-28	1004	1004	BENTONITE MUD	1,30					/																
2000-07-29	10012	8181	BENTONITE MUD	1,30					/																
2000-07-30	1004	1004	BENTONITE MUD	1,30					/																
2000-07-31	1004	1004	BENTONITE MUD	1,30					/																
2000-08-01	1004	1004	BENTONITE MUD	1,30					/																
2000-08-02	1004	1004	BENTONITE MUD	1,03					/																
2000-08-03	1004	1004	BENTONITE MUD	1,03					/																

Hole section : 17 1/2" — **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2000-08-04 23:59	1004	1004	GLYDRIL	1,30	3,5		1		/	8,5		0,1	0,7	162		78000	600		800	13,5					47
2000-08-05 23:59	1094	1094	GLYDRIL	1,30	2,9				/	9,0		0,1	1,1	154		72000	520		600	14,0		0,1	15		87
2000-08-06 23:59	1437	1435	GLYDRIL	1,30	2,9		1		/	8,6		0,1	1,2	146		72000	600		720	14,5		0,4	20		115
2000-08-07 23:59	1437	1435	GLYDRIL	1,39	2,9		1		/	9,1		0,1	1,2	140		72000	600		720	17,0		0,2	20		103
2000-08-08 23:59	1337	1336	GLYDRIL	1,39	2,9		1		/	9,2		0,1	1,2	138		72000	600		720	17,0		0,2	20		103
2000-08-09 23:59	1395	1393	GLYDRIL	1,39			1		/	10,0				164		83000	680		720				15		
2000-08-10	1390	1388	GLYDRIL	1,40	3,1		1		/	10,8	1,5	0,3	2,0	164		83000	680		1000	18,0	0,0	0,2	15		114

Hole section : 12 1/4" — **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2000-08-11	1650	1647	GLYDRIL	1,40	3,0		1		/		1,8	0,2	2,0	144		74000	800		860	18,0	0,0	0,4	16		136
2000-08-12	1841	1837	GLYDRIL	1,46	2,8		1		/	10,0		0,1	1,5	140		73000	750		800	20,0	0,0	0,2	18		150
2000-08-13	2195	2189	GLYDRIL	1,46	3,0		1		/	9,3	1,0	0,1	0,5	145		80000	800		840	20,0	0,0	0,2	24		134

Norsk Hydro

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 7216/11-1 S PO: 1

Hole section : 12 1/4" — **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2000-08-14	2400	2389	GLYDRIL	1,46	3,0		1		/		0,8	0,1	0,4	150		83000	920		980	20,5	0,0	0,4	31		153
2000-08-15	2618	2588	GLYDRIL	1,46	3,0		1		/	8,8		0,1	0,4	154		83000	930		980	20,5	0,0	0,4	28		153
2000-08-16	2758	2699	GLYDRIL	1,46	2,8		1		/	8,4		0,0	0,3	154		83000	760		800	20,5	0,0	0,2	31		153
2000-08-17	2758	2699	GLYDRIL	1,46	2,8		1		/	8,4		0,0	0,3	154		83000	760		800	20,5	0,0	0,2	31		153
2000-08-18	2758	2699	GLYDRIL	1,46	2,8		1		/	8,4		0,0	0,3	154		83000	760		800	20,5	0,0	0,2	31		153
2000-08-19	2758	2699	GLYDRIL	1,46	2,8		1		/	8,5		0,0	0,3	152		83000	760		800	20,5	0,0	0,2	31		153
2000-08-20	2758	2699	GLYDRIL	1,46	2,7		1		/	8,5		0,0	0,3	150		82500	760		800	20,5	0,0	0,2	31		154
2000-08-21	2758	2699	GLYDRIL	1,46	2,7		1		/	8,5		0,0	0,3	150		82500	760		800	20,5	0,0	0,2	31		154
2000-08-22	2758	2699	GLYDRIL	1,46	2,8		1		/	8,5		0,0	0,3	150		82000	760		800	20,5	0,0	0,2	31		155
2000-08-23	2793	2724	GLYDRIL	1,30	2,5		1		/	8,0	0,3	0,1	0,3	160		80000	760		800	15,0	0,0	0,2	25		121

Hole section : 8 1/2" — **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2000-08-24	2941	2822	GLYDRIL	1,30	2,5		1		/	8,2	0,3	0,1	0,3	154		80000	760		800	16,0		0,2	25		
2000-08-25	2988	2852	GLYDRIL	1,30	2,8		1		/	8,2	0,3	0,0	0,5	154		80000	800		840	16,0		0,2	25		176
2000-08-26	3011	2866	GLYDRIL	1,30	3,0	0,0	1		/		0,4	0,1	0,3	154		80000			840	16,0		0,3	25		160
2000-08-27	3170	2964	GLYDRIL	1,31	2,4		1		/	8,3	0,3	0,1	0,4	155		80000			840	17,0		0,3	25		214
2000-08-28	3273	3030	GLYDRIL	1,46	3,0		1		/	8,3	0,3	0,1	0,3	141		78000	760		800	20,0		0,4	28		139
2000-08-29	3511	3186	GLYDRIL	1,52	2,8		1		/	8,3	0,3	0,1	0,3	165		93000	800		840	23,0		0,4	33		171
2000-08-30	3604	3249	GLYDRIL	1,52	2,6		1		/	8,3	0,3	0,1	0,3	145		90000	800		840	23,0		0,4	33		178
2000-08-31	3861	3439	GLYDRIL	1,52	3,0		1		/	8,2	0,3	0,0	0,3	161		87000	720		800	23,0		0,2	33		185
2000-09-01	4041	3580	GLYDRIL	1,52	3,2		1		/	8,2	0,2	0,0	0,3	155		87000	360		440	23,0		0,2	40		185
2000-09-02	4183	3690	GLYDRIL	1,52	3,0		1		/	8,2	0,2	0,0	0,3	155		87000	360		440	23,0		0,2	42		185
2000-09-03	4230	3726	GLYDRIL	1,55	2,8		1		/	8,2	0,1	0,0	0,3	155		91000	320		400	23,0		0,1	40		177
2000-09-04	4230	3726	GLYDRIL	1,55	2,8		1		/	8,2	0,1	0,0	0,3	155		91000	320		400	23,0		0,1	40		161
2000-09-05	4230	3726	GLYDRIL	1,55	2,8		1		/	8,2	0,1	0,0	0,3	155		91000	320		400	23,0		0,1	40		161
2000-09-06	4230	3726	GLYDRIL	1,55	3,0		1		/	8,2	0,1	0,0	0,3	154		90000	320		400	23,0		0,1	40		163
2000-09-08	4230	3726	GLYDRIL	1,55	2,6		1		/	8,1	0,0	0,0	0,4	155		93000	320		400	23,6		0,1	42		156
2000-09-09	4239	3733	GLYDRIL	1,55	2,6		1		/	8,3	0,0	0,0	0,4	155		93000	320		400	23,6		0,1	42		156
2000-09-09 23:59	4239	3733	GLYDRIL	1,55	2,6		1		/	9,5	0,8	0,2	1,2	155		93000	320		400	23,6		0,1	42		156
2000-09-10	4239	3733	GLYDRIL	1,46	3,0		1		/	9,5	0,8	0,2	1,2	155		93000	320		400	21,0		0,1	42		160
2000-09-11	4239	3733	GLYDRIL	1,46	3,0		1		/	9,5	0,8	0,2	1,2	155		93000	320		400	21,0		0,1	42		160

Norsk Hydro

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 7216/11-1 S PO: 1

Hole section : 8 1/2" **WATER BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2000-09-12	4239	3733	GLYDRIL	1,39	5,0		1		/	11,7		0,2	2,2	127		69000	320		360	17,4			32		132

Norsk Hydro

2001-10-0E

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 7216/11-1 S PO: 1

Section	Product/ Additive	Unit	Total Amount Used
36"	BENTONITE	kg	22000,00
	CELPOL ESL	kg	750,00
	CMC EHV	kg	350,00
	M-I BAR	kg	85000,00
	SODA ASH	kg	625,00
26"	BENTONITE	kg	52,00
	CELPOL ESL	kg	1800,00
	CMC EHV	kg	1675,00
	M-I BAR	kg	205,00
	SODA ASH	kg	525,00
17 1/2"	CELPOL ESL	kg	11050,00
	M-I BAR	kg	398,00
12 1/4"	CELPOL ESL	kg	4825,00
	M-I BAR	kg	162,00
8 1/2"	CELPOL ESL	kg	7450,00
	M-I BAR	kg	205,00
	SODA ASH	kg	550,00
0.0	CITRIC ACID	kg	1125,00
	DUOTEC NS	kg	200,00
	M-I BAR	kg	20,00

LOGGING INFORMATION ON WELL 7216/11-1 S

Hole size: 12 1/4"

#	Run No.	Logging Company	Logged Bottom [m MD]	Logged Top [m MD]	Log Suite
1	1A		1586	1435	GR/MDT
3	2A		2758	1390	DSI/PEX/HNGS

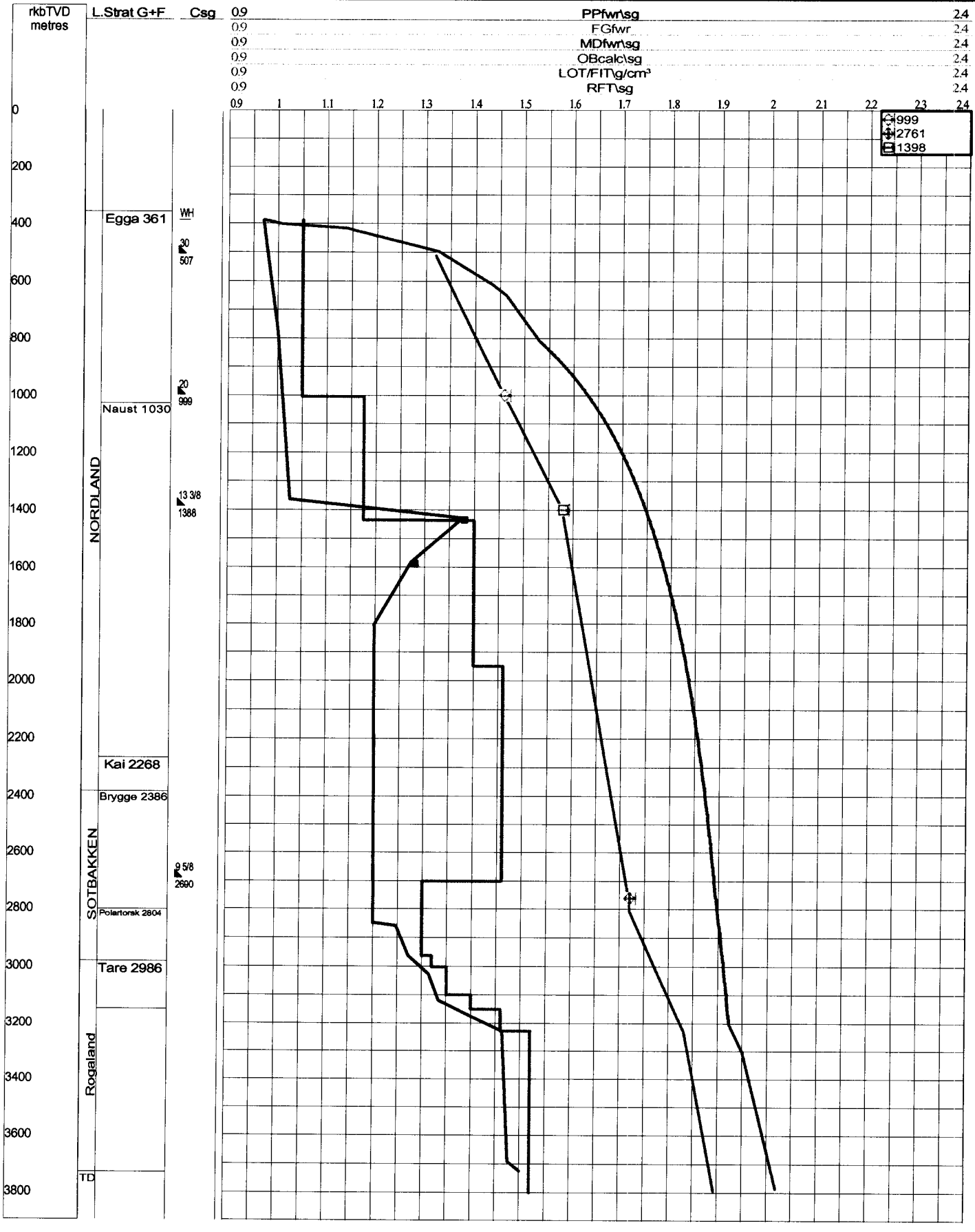
Hole size: 8 1/2"

#	Run No.	Logging Company	Logged Bottom [m MD]	Logged Top [m MD]	Log Suite
3	2A		2758	1390	DSI/PEX/HNGS
4	2A		2775	2750	VSP/CST/PEX/GR

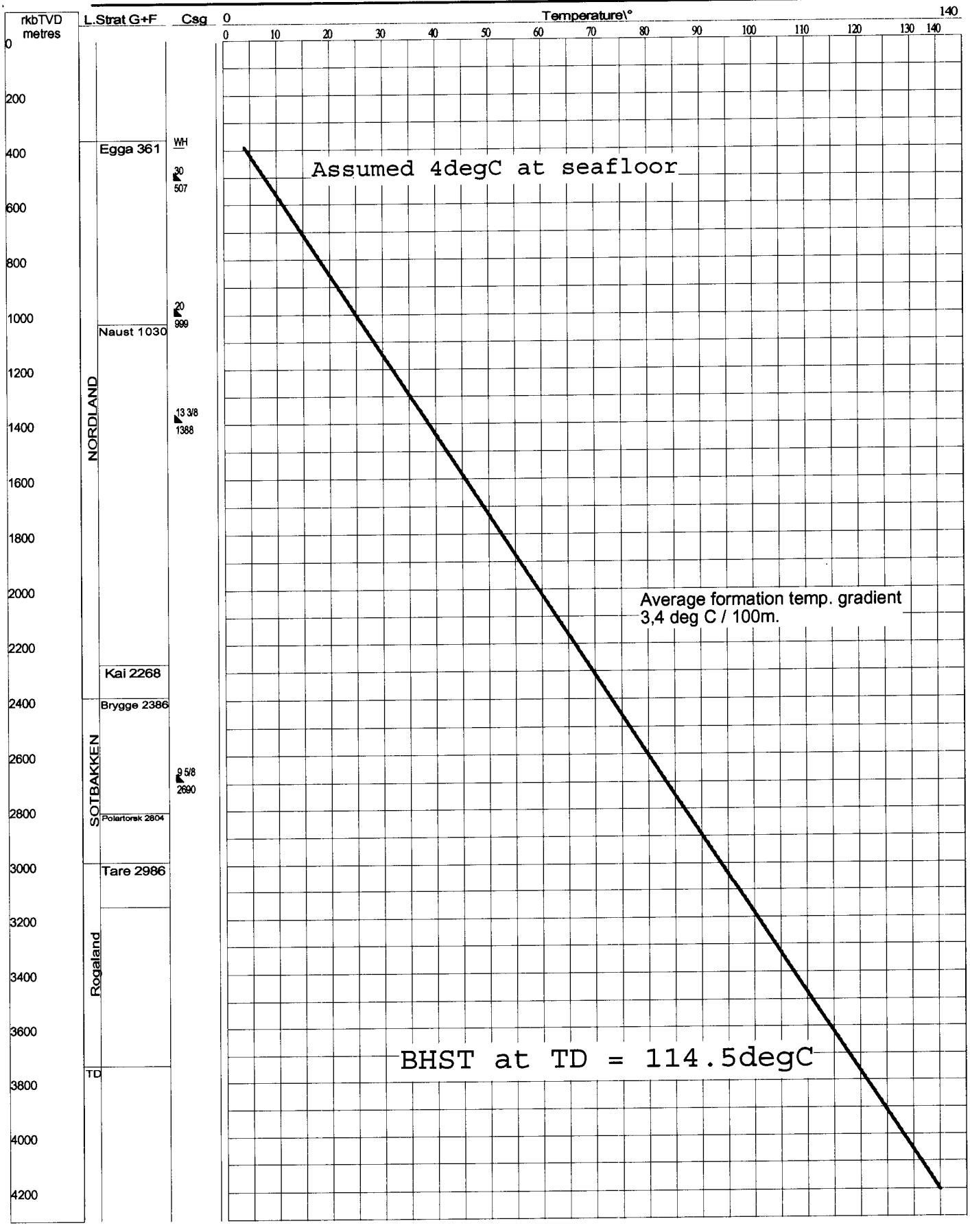
HYDRO

Well: 7216/11-1

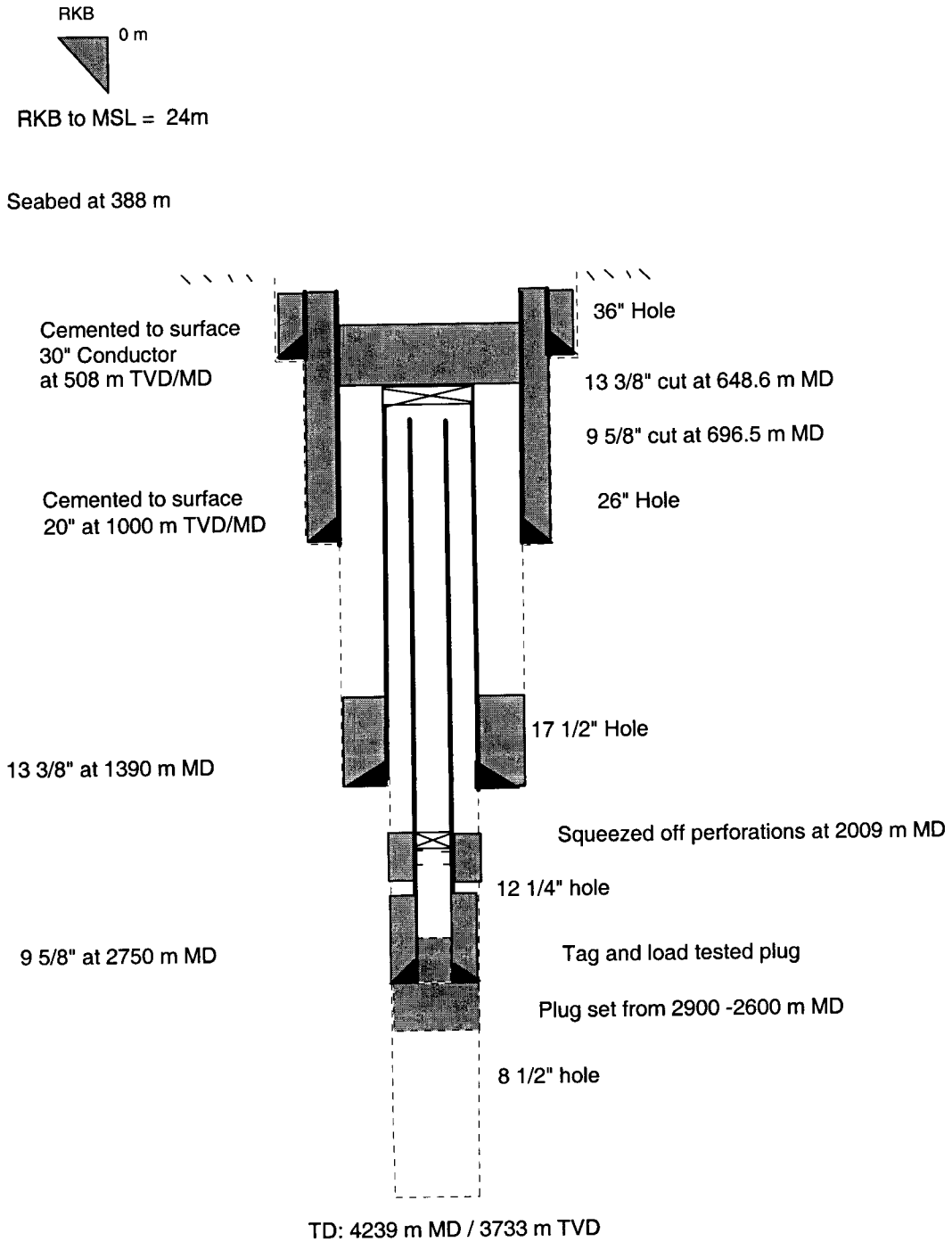
Fig.9.1



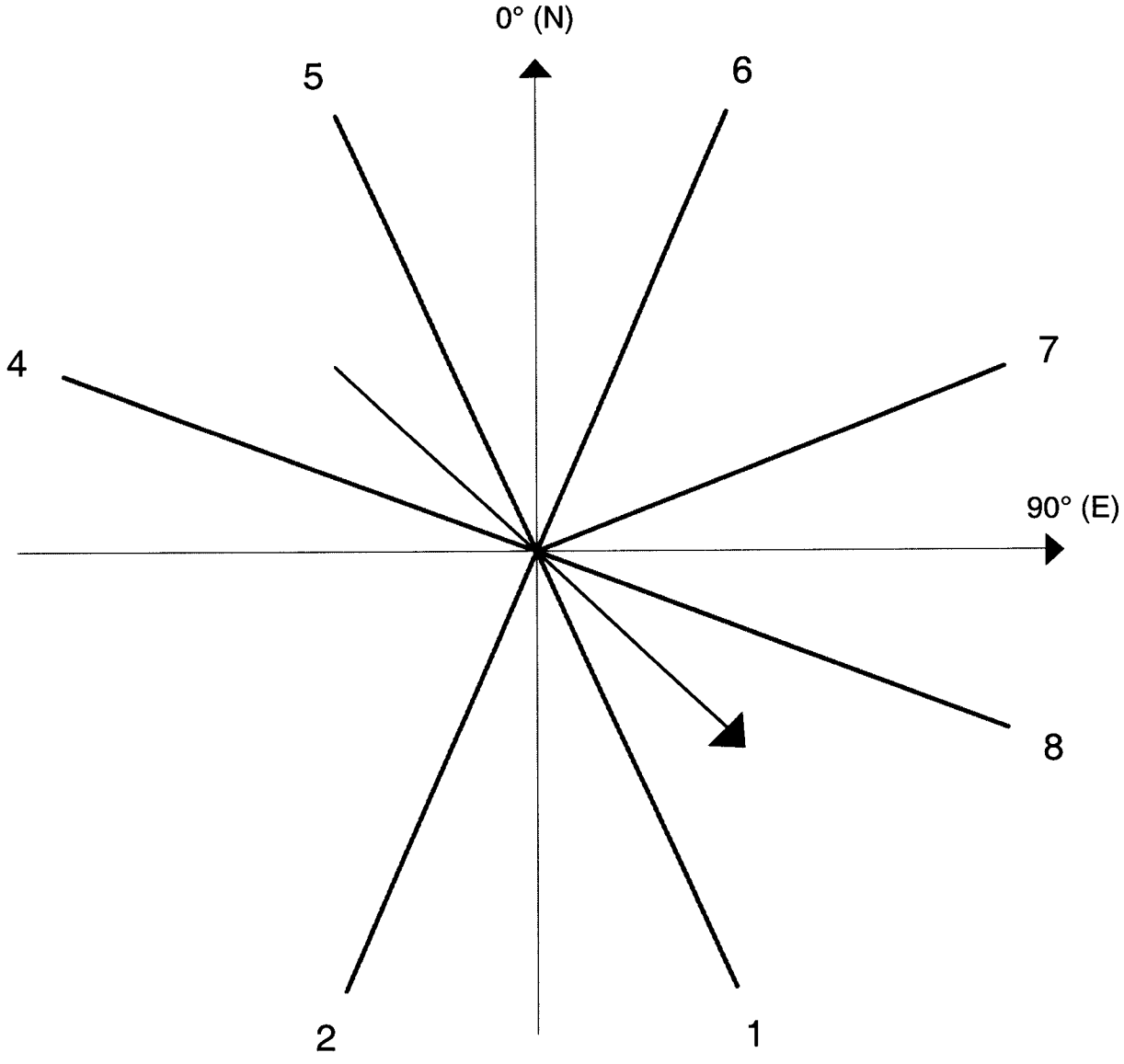
Final Pore Pressure-, Fracture- and Overburden Gradients



Final Formation Temperature Gradient



Final Well 7216/11-1	**Fig. Revision: 0**	**Permanent Plug & Abandonment**



RIGHEADING 135 DEG.

ANCHOR NO		DIRECTION (DEG.)		LENGTH (m)	
	1		157		1750
	2		202		1750
	3				
	4		292		1750
	5		337		1750
	6		22		1750
	7		67		1750
	8		112		1750

Figure 1		RIG ANCHORS TRANSOCEAN ARCTIC 7216/11-1 S	**HYDRO**

2001-10-05

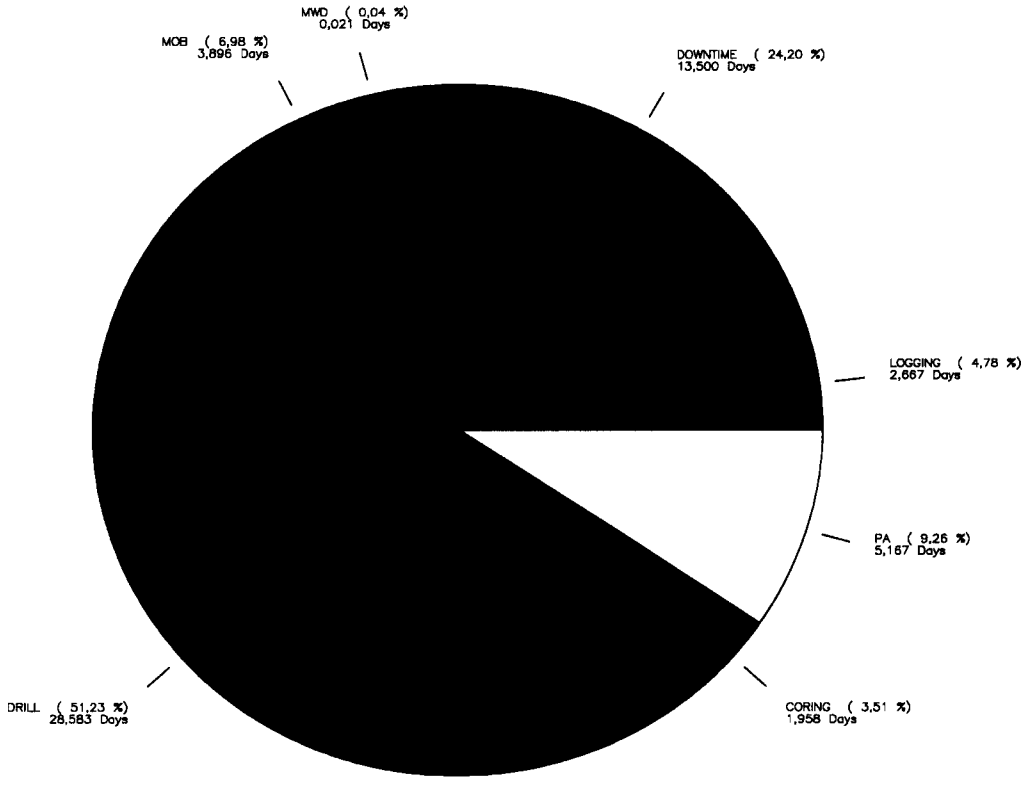


Figure 1		Time Distribution 7216/11-1 S	HYDRO