Final Well Report

30/6-26

PL 053

Title: FINAL WELL REPORT
WELL 30/6-26
PL 053

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PREFACE

Licence PL 053

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

Norsk Hydro ASA(operator)	22.23462 %
Statoil ASA	14.00000 %
Petoro AS	50.78379 %
Total Fina Elf	8.65439 %
ExxonMobil	4.32720 %

The well was drilled by Norsk Hydro ASA., on behalf of the group, during September - October 2001 (see Location Map, page 3).

All depths in this report are in m MD RKB (RKB elevation at Transocean Arctic is 24m) unless otherwise stated.

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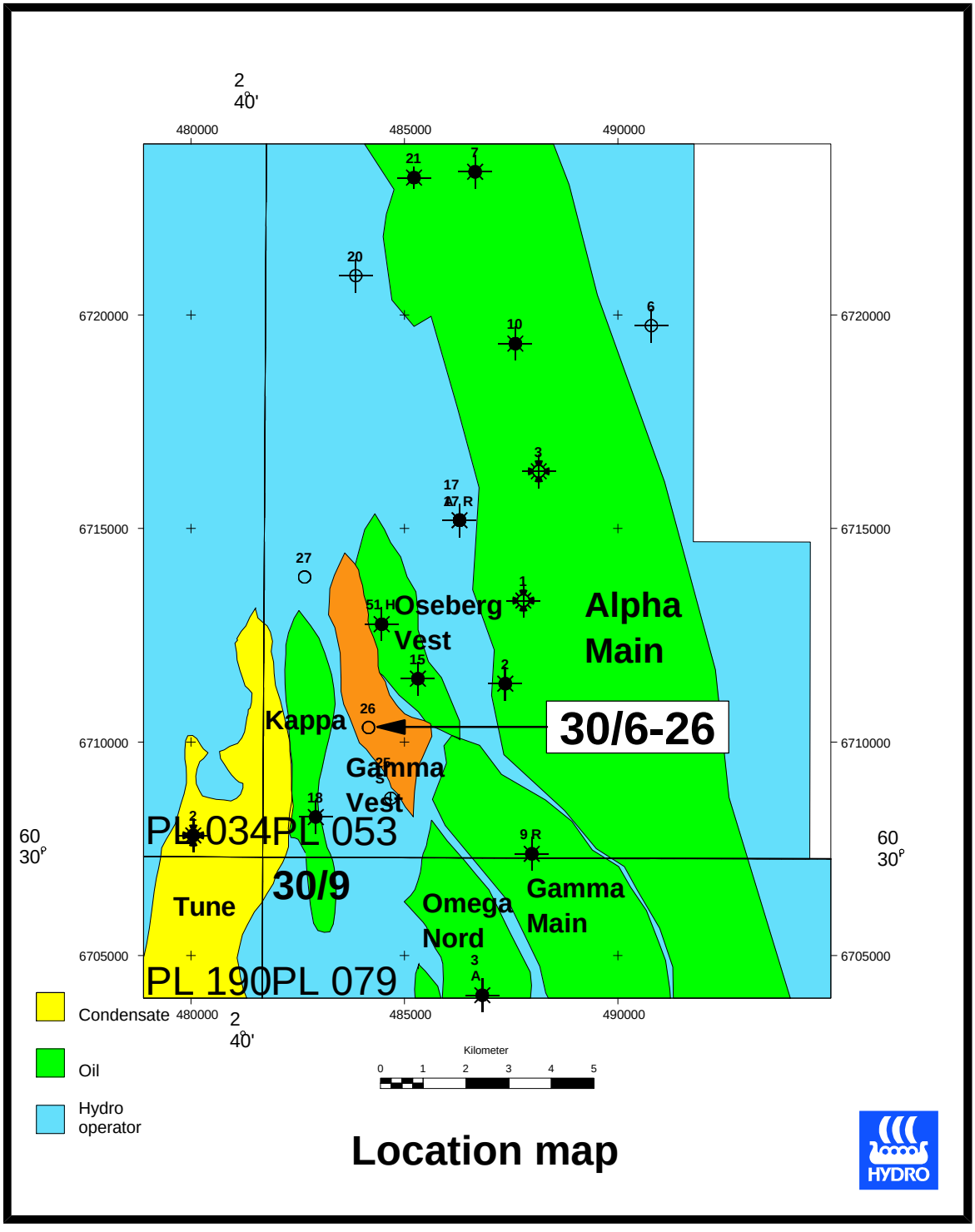
LOCATION MAP:



SUMMARY OF WELL DATA	
LOCATION:	Geo: 60° 31' 39.70" N 02° 42' 37.61" E UTM 6 710 374.7m N 484 106.5m E ED 50, UTM Zone 31, CM 03°E
OPERATOR: RIG: CONTRACTOR:	Norsk Hydro Transocean Arctic Transocean
KB ELEVATION (to MSL): WATER DEPTH (MSL):	24m 108m
START OF OPERATIONS: WELL SPUDDED: WELL SIDE-TRACKED: REACHED TD ON: LEFT THE LOCATION / OFF COST: STATUS: FORMATION AT TD:	14.09.2001 15.09.2001 No Side-track 28.09.2001 07.10.2001 Plugged and abandoned Lower Statfjord Formation
TD DRILLER (mRKB): TD LOGGER (mRKB):	2865 m MD Not logged m MD
DRILLING DEPTHS:	36" to 193m 17½" to 1223m 12¼" to 2636m 8½" to 2865m
CASING DEPTHS:	30" to 193.0m 13-3/8" to 1217.4m 9 5/8" to 2631.6m

S E C T I O N A

G E O L O G Y

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SECTION A: LIST OF FIGURES, TABLES AND APPENDICES

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1 Objectives

The well 30/6-26 is an exploration well, located in the Oseberg Field area, in the southwestern part of block 30/6 on the Gamma Vest structure on PL053 Oseberg Unit.
The main objectives of the well is to prove sufficient volumes of oil and/or gas in The Statfjord Formation on the Gamma Vest structure for a joint sub sea development with the Kappa Main and Kappa North structures.

2 Results

The well was spudded 15. September 2001 and reached a total depth of 2865m MD RKB in the Statfjord Fm. on 28. September 2001. The well was permanently plugged and abandoned as a discovery well 07.10.2001.

The main results of the well can be summarised as follows:

- The well made an oil and gas discovery in the Upper Statfjord Formation.
- Top reservoir was penetrated 44 m shallower than prognosed. This was caused by an erroneous seismic pick and lower seismic velocities than prognosed.
- Well defined gas/oil and oil/water contacts were penetrated in the Upper Statfjord Formation. The depths of these contacts are shallower than expected, but a a proven oil column of 44 m is 14 m thicker than expected. Fluid contacts in the well are only slightly different from the initial contacts in the Oseberg Vest (Gamma Nord) Field.
- The Lower Statfjord Formation was water-bearing in the well.
- The oil zone is divided in two parts by a marine shale, which represents a pressure barrier in the oil zone penetrated by the well.
- The oil-bearing part of the Statfjord Formation has excellent reservoir properties.

GROUP	SERIES and FORMATION	m MD RKB	m TVD RKB	m TVD MSL	Thickness m TVD
NORDLAND	Sea floor (Quaternary)	132,00	132,00	108,00	223,50
	Base Pleistocene	356,00	355,50	331,50	262,50
	Intra Pliocene Sand	622,50	618,00	594,00	37,00
	Base Intra PlioceneSand	659,80	655,00	631,00	20,00
	UTSIRA Fm	679,80	675,00	651,00	216,50
HORDALAND		896,50	891,50	867,50	59,50
	SKADE Fm	956,00	951,00	927,00	28,00
	Base SKADE Fm	984,00	979,00	955,00	85,00
	Intra Hordaland Sand	1069,00	1064,00	1040,00	63,30
	Base Intra Hordaland Sand	1132,00	1127,30	1103,30	
	GRID Fm	Not present			
	Base GRID Fm	Not present			
	Green Clay Marker	1649,00	1643,90	1619,90	331,00
	Brown Marker	1980,00	1974,90	1950,90	25,90
ROGALAND	BALDER Fm	2006,00	2000,80	1976,80	94,00
	SELE Fm	2100,00	2094,80	2070,80	82,00
	LISTA Fm	2182,00	2176,80	2152,80	110,00
	VÅLE Fm	2292,00	2286,80	2262,80	15,00
SHETLAND	HARDRÅDE Fm	2307,00	2301,80	2277,80	123,90
	KYRRE Fm	2431,00	2425,70	2401,70	166,40
DUNLIN	Burton - Amundsen Fm	2597,50	2592,10	2568,10	70,90
(STATFJORD)	STATFJORD Fm	2668,50	2663,00	2639,00	143,50
	Middle STATFJORD Fm	2812,00	2806,50	2782,50	53,00
	TD	2865,00	2859,50	2835,50	

Table 2.1: Formation Tops (All depths from RKB)

3 Biostratigraphy

The biostratigraphical evaluation of well 30/6-26 was carried out by Millennia Ltd. The analysed interval is 1300m - 2865m TD RKB.
Micropaleontological and palynological analyses have formed the basis for the biostratigraphical interpretation of the well. The analyses were carried out on ditch cuttings and core samples. The results are documented in the report "Biostratigraphic analysis of the Norsk Hydro Well 30/6-26 (interval: 1300m - 2865m TD) NOCS"
109 ditch cuttings samples and 9 core samples were analysed for palynology, and 114 ditch cuttings and 9 core samples were analysed for micropaleontology. In general alternating depths were selected for the palyno and micro samples.

Tables 3.1 and 3.2 on pages 14 and 15 show a summarised geochronological and lithostratigraphical subdivision of the well. The interpretation is in accordance with Norsk Hydro's standard zonation for the area.

3.1 Major points

- The youngest sediments analysed at 1300 m are of Early Oligocene age

- The uppermost analysed sample in the Jurassic section (2600m) is of Early Pliensbachian age

- The oldest sediments at 2865m are probably of Hettangian age

- The Rogaland Group was penetrated at 2006m

- The Shetland Group was penetrated at 2307m

- The Dunlin Group was penetrated at 2597,5m

- There is an unconformity between the Rogaland Group and the Shetland Group, where sediments from the earliest Early Paleocene are missing.

- A major unconformity is seen between the Shetland Group and the Dunlin Group, where sediments of Early Campanian rest on sediments of Early Pliensbachian

3.2 Biostratigragraphic summary of the Statfjord Formation (2668,5m - 2865m TD)

Age: Late Sinemurian - Hettangian
No dinoflagellate cysts or microfossils were found below 2694m. Pollen and spores were dominant, but no age-diagnostic specimens were observed in the interval 2695m - 2865m TD to prove an accurate age. A marked decrease in ?Cerebropllenites spp. at 2815m may indicate Hettangian age. The Statfjord Formation is assigned to Palynozone PJ2B-PJ1

SAMPLE DEPTH m	PERIOD	AGE	Palyno Zone	Mikro Zone
	TERTIARY			
1300,00	Early Oligocene	Rupelian	PT7C-1	
1650,00	Late Eocene - Middle Eocene	Priabonian - Bartonian		MEB4
1700,00	Middle Eocene	Bartonian - Lutetian	PT5-1	
1850,00	Early Eocene	Ypresian	PT3C	
2050,00	earliest Eocene- latest Paleocene	earliest Ypresian - latest Thanetian	PT3A-PT2C	
2175,00	Late Paleocene	Thanetian	PT2B	
2240,00		Selandian	PT2A-4	
2310,00	Early Paleocene	Danian		MPP2
		----UNCONFORMITY----		
2320,00	LATE CRETACEOUS	Late Maastrichtian		MK12B
2380,00		Early Maastrichtian	PK9A	
2400,00		Late Campanian- Middle Campanian	PK8C-PK8B	
2450,00		Middle Campanian		MK11
2560,00		Early Campanian	PK8B.1	
		----UNCONFORMITY----		
2600,00	EARLY JURASSIC	Early Pliensbachian	PJ2C	
2675,00		Late Sinemurian	PJ2B	
2700,35		Late Sinemurian - Early Sinemurian	Unassigned	
2815,00		? Hettangian	?PJ1	
2865,00 TD				

Table 3.1 Geochronological Breakdown, Well 30/6-26

GROUP	FORMATION	MEMBER	DEPTH mMD RKB
Nordland			132
	Utsira		679.8
Hordaland			896.5
	Skade		956-984
	Intra Hordaland sand		1069-1133.5
Rogaland	Balder		2006
	Sele		2100
	Lista		2182
	Våle		2292
Shetland	Jorsalfar		2307
	Kyrre		2431
Dunlin	Burton - Amundsen		2597.5
	Statfjord		2668.5
			TD 2865

Figure 3.2: Lithostratigraphical Breakdown, WELL 30/6-26

4 Lithostratigraphy

All depths are in m MD RKB (RKB elevation is 24 m).

This summary is compiled predominantly from ditch cuttings descriptions. A total of 1 conventional core was cut in the interval from 2690 m to 2717,7 m in the well, see Table 5.1.1.

MWD logs were used to aid lithological interpretation and the placement of formation boundaries.

The well was drilled with returns to seabed from the seafloor at 132 m to 1226 m before setting 13 3/8" casing at 1217 m. The first drill cuttings samples were taken at 1225 m. The lithology interpretation is based on MWD logs and cuttings descriptions.

4.1 QUATERNARY: 132 - 356m MD (132 - 355,5m TVD)

4.1.1 Nordland Group, Pleistocene: 132m MD (132m TVD)

132m MD (132m TVD):
From MWD logs: Clays interbedded with Sands.

4.2 TERTIARY: 356 - 679,8m MD (355,5 - 675,0m TVD)

4.2.1 Nordland Group, Pliocene-Miocene: 132 - 896,5m MD (132-891,5m TVD)

356-622,5m MD (355,5-618,0 m TVD):
From MWD logs: Clays interbedded with Sands.

622,5-660m MD (618,0-655.0m TVD):
From MWD logs: Sand

660-680mMD (655.0-675,0m TVD):
From MWD logs: Clay

4.2.1.1 Utsira Formation, Miocene: 680 - 896,5m MD (675,0-891,5m TVD)

From MWD logs: Sand with Clay units.

4.2.2 Hordaland Group, Oligocene-Eocene-Paleocene: 896,5 - 2006m MD (891,5 - 2000,8m TVD)

896,5-956,0 m MD (891,5-951,0m TVD)

From MWD logs: Clays.

4.2.2.1 Skade Formation: 956,0-984,0m MD (951,0-979,0m TVD)

956,0-984,0m MD (951,0-979,0m TVD)
From MWD logs: Sandstone.

984,0-1069,0m MD (979,0-1064,0m TVD)
From MWD logs: Claystones interbedded with Sand- and Siltstones.

Intra Hordaland Sand: 1069,0-1132,0m MD (1064,0-1127,3m TVD)
From MWD logs: Sandstone.

1132,0-1373,5 m MD (1127,3-1368,5mTVD):
The interval comprises Claystones with Sandstone beds.

Claystones: olv gry-brn gry, blky-sbfis, firm, loc plas, stky, non calc, micromic, var slty, r sdy vf, Tr Glauc.
Sandstones: lt gry, clr-mky Qtz, vf-f,IP tr m, sbang-sbrndd, wl-mod srt, fri,gen sil cmt, loc arg Mtrx, Tr Mic, r Carb, Tr Glauc.
Age: Oligocene

1373.5 - 1520m MD (1368.5-1515,0 m TVD):
The interval consists of Claystones with Dolomite, Limestone stringers and thin Sandstone beds.

Claystones(1): brn gry-brn blk, sbfis- blky, mod hd, gen non calc IP Calc, micromic, var slty, r sdy vf,

4.2.2.2 Green Claystone Marker 1649-1980m MD (1643,9-1974,9m TVD)

1649,0- 1980,0 m MD (1644,0-1974,9m TVD):
The interval consists of Claystones with rare Dolomite and Limestone stringers.

Claystones:	grn gry-dk grn gry-olv gry, in lower part also olv blk-dusky yel brn, Firm, sbfis, r fis, non calc, micromic, slty, Tr Glauc.
Limestones:	pl yel brn, mod hd, microxln, IP v arg grad Mrl.
Dolomites:	pl yel or, mod hd, blky, crpxln, arg, loc grad Ls

Age: **Eocene**

4.2.2.3 Brown Claystone Marker 1980-2006,5 m MD (1974,9-2000,8 m TVD)

The interval consists of Claystones.

Claystones:	mod brn-occ lt gry-olv gry-grn-gry, frm-mod hd, blky, occ sbfis, slily slty, non-slily calc, loc v calc, grad Mrl.

4.2.3 Rogaland Group 2006,5 - 2307,0 m MD (2000,8-2301,8 m TVD)

4.2.3.1 Balder Formation 2006,0 - 2100,0 m MD (2000,8-2094,8 m TVD)

The interval comprises of Claystones with minor Limestone stringers.

Claystones (1):	olv gry-olv blk, occ dsky yel brn, r dk gn gry, frm-mod hd, blky, non calc, I.P.v slily calc, slily micromic, slty.
Claystones (2):	mod bl gry-lt bl gry, frm-mod hd, blky, non-sl calc, wh-trnsl spks, slty-v slty.
Limestones:	wh-v lt gry, pl yel brn, frm-mod hd, blky, arg, micrcrpxln

Age: **Paleocene**

4.2.3.2 Sele Formation 2100,0 - 2182,0 m MD (2094,8-2176,8 m TVD)

The interval comprises of Claystones with Limestone stringers.

Claystones:	dk gry-gry blk, olv blk-dusky yel brn, firm-mod hd, blky non calc, I.P.micromic, occ micropyr, slily slty.
Limestones:	wh-v lt gry, pl yel brn, frm-mod hd, blky, arg, micrcrpxln

Age: **Paleocen**e

4.2.3.3 Lista Formation 2182,0 - 2292,0 m MD (2176,8-2286,8m TVD)

The interval consists of Claystones with thin Limestone stringers.

Claystones: dk gry-olv gry, firm-mod hd, blky-sbfis, loc plas, non calc, loc calc, micromic, slty, Tr vf sdy.
Limestones: lt gry-pl yel brn, mod hd, microxln, loc v arg grad Mrl.
Age: **Paleocene**

4.2.3.4 Våle Formation (2292,0 - 2307,0 m MD (2286,8-2301,8m TVD)

2292 - 2307 m MD (2286,8-2301,8m TVD):
This inerval consists of Claystones with rare Limestone stringers.

Claystone: m dk gry-olv gry, mod hd, blky, Tr fis, loc plas, calc grad Mrl, micromic, Slty, Tr Glauc.
Age: **Paleocene**

4.3 CRETACEOUS: 2307,0 - 2597,5 m MD (2301,8-2592,1m TVD)

4.3.1 Shetland Group 2307 - 2597,5 m MD (2301,8-2592,1m TVD)

4.3.1.1 Hardråde Formation 2307 - 2431,0m MD (2301,8-2425,7m TVD)

2307 - 2323,5m MD (2301,8 - 2318,3m TVD):
This interval consists of Limestones

Limestone: v pl or, pl yel brn, firm-mod hd, blky, amor, crpxln, loc arg, nvp.
Age: **Upper Maastrichtian**

2323,5 - 2431,0m MD (2318,3 - 2425,7m TVD):
This interval consists of Claystones with stringers of Limestone.

Claystone: dk gry-m dk gry, firm-mod hd, sbfis-blky, calc grad Mrl, micromic, slty, r sdy vf, r micropyr.
Limestone: pk gry-lt olv gry, hd-mod hd, blky, crpxln, loc arg, r Glauc.
Sandstone: olv gry, gen clr Qtz, vf-f, sbang-sbrndd, mod srt, fri-mod hd, calc cmt, arg, slty, nvp.
Age: **Upper Campanian - Lower Maastrichtian**

4.3.1.2 Kyrre Formation 2431,0 - 2597,5m MD (2425,7-2592,1m TVD)

2431,0 - 2455,0m MD (2425,7 - 2449,7m TVD):
This interval consists of Claystones with stringers of Limestone.

Claystone: dk gry-m dk gry, firm-mod hd, sbfis-blky, calc grad Mrl, micromic, slty, r sdy vf, r micropyr.

Limestone: pk gry-lt ov gry, hd-mod hd, blky, crpxln, loc arg, r Glauc.

Sandstone: olv gry, gen clr Qtz, vf-f, sbang-sbrndd, mod srt, fri-mod hd, calc cmt, arg, slty, nvp.

Age: **Middle - Upper Campanian**

2455 - 2469m MD (2449,7 - 2463,7m TVD):
This interval consists of Claystone.

Claystone: m dk gry-dk gry, mod hd, sbfis, non calc, micromic, slty.
Age: **Middle Campanian**

2469 - 2483m MD (2463,7 - 2477,7m TVD):
This interval consists of Limestone.

Limestone: wh-pk gry, mod hd-hd, blky, micro-crpxln, Tr Glauc.
Age: **Lower - Middle Campanian**

2483 - 2592m MD (2477,7 - 2586,6m TVD):
This interval consists of Claystones with rare stringers of Limestone.

Claystone: dk gry-gry blk, olv blk, bcm pred olv blk, mod hd, sbfis, sl calc-calc, micromic, loc Tr micropyr, slty.
Limestone: lt gry, loc pl yel brn, mod hd, blky, micro-crpxln, loc Tr Glauc, loc arg.
Age: **Lower Campanian**

2592 - 2597,5m MD (2586,6 - 2592,1m TVD):
This interval consists of Claystones.

Claystone: dk gry-gry blk, olv blk, bcm pred olv blk, mod hd, sbfis, sl calc-calc, micromic, loc Tr micropyr, slty.
Claystone: lt gn gry, mod hd-hd, blky, calc, micromic.
Age: **Lower Campanian**

4.4 JURASSIC: 2597,5 - 2865,0 M MD (TD) (2592,1-2859,5 m TVD)

4.4.1 Dunlin Group 2597,5 - 2668,5 m MD (2592,1-2663,0m TVD)

2597,5 - 2632m MD (2592,5-2626,6m TVD)
This interval comprises of Claystones with rare Limestones and rare Sandstones

Claystone: brn blk-olv blk, mod hd, blky, non-calc, micromic, Tr carb, r-Tr micropyr, slty.
Claystone: brn gry-dsky yel brn, frm-mod hd, loc sft, loc stky, sl calc, loc calc, micromic, loc Tr carb, slty, loc grd Sltst, I.P vf sdy.
Limestone: pl yel brn, mod hd, blky, microxln.

Sandstone: pl yel brn, clr-trnsl Qtz, vf, r f, sbrndd-sbang, sl calc, arg Mtrx, r Mic.
Age: **Lower Pliensbachian**

2632 - 2668,5m MD (2626,6-2663,0m TVD)
This interval comprises of Claystones with rare Limestones.

Claystones: brn gry-lt brn gry-olv gry, frm-mod hd, loc sft, loc stky, sl calc, loc calc, micromic, loc Tr carb, slty, loc grd Sltst, I.P vf sdy.
Limestone: lt olv gry, mod hd, blky, microxln, arg.
Age: **Upper Sinemurian - Lower Pliensbachian**

4.4.2 Undifferentiated 2668,5 - 2865,0m MD (2663,0-2859,5m TVD)

4.4.2.1 Statfjord Formation 2668,5 - 2865,0m MD (2663,0-2859,5m TVD)

Upper Statfjord Formation; 2668,5-2812,0m MD (2663,0-2806,5m TVD)

2668,5 - 2690m MD (2663,0-2684,6m TVD):
This interval comprises of Sandstones with Claystone stringers, rare Dolomite.

Sandstone: lt gry-olv gry, clr Qtz, f-m, Tr crs, loc pred m, ang-sbrndd, mod srt, fri-lse, IP calc cmt, loc Kao cmt/Mtrx, var arg, Tr Mic, gen carb, r C frags, r Pyr. nvp.
Sandstone: m dk gry, clr Qtz, vf-f, r crs, sbang-sbrndd, pr-mod srt, fri-mod hd, gen non calc IP calc, v arg, v slty grad Sltst, carb, micromic, nvp.
Claystone: dusky yel brn-brn blk, hd, sbfis-fis, non calc, v carb, slty, loc vf sdy, micromic.
Dolomite: pl yel brn, mod hd, blky, amor, arg, gen calc grad Ls.
Age: **Upper Sinemurian**

2690 - 2730m MD (2684,6-2724,6m TVD):
This interval comprises of Sandstones with Claystone stringers, rare Coal.

Sandstone: pl brn-lt brn gry, gen clr Qtz, f-m, pred m, sbang-sbrndd, mod srt, fri-mod hd, wk sil cmt, Tr Mic, Tr Carb, pr vis por.
Sandstone: pl brn-lt brn gry, gen clr Qtz, vf-pbly, gen m, ang-sbrndd, pr srt, mod hd, sil cmt, gen arg, loc lam Carb Sh w/vf Sst lam, pr-fair vis por.
Claystone: brn gry, hd,fis, non calc, v Mic, Carb/C frags, v slty grad Sltst loc vf sdy w/Sst lam.
Coal: blk-gy blk, mod hd, blky, brit, vit, glos, loc arg dull.
Age: **Lower / Upper Sinemurian**

2730 - 2812m MD (2724,6-2806,5m TVD):
This interval comprises of Sandstones with minor Claystone and Trace of Coal.

Sandstone: pl yel brn-pl yel or, loc lt gry, clr-trnsl, loc mky Qtz, vf-crs, r vcrs, pred f-m, ang-sbrndd, pr-mod srt, arg, loc sil cmt, loc Kao cmt, Tr Mic, Tr Carb, bcm also r-Tr micropyr, pr-fair vis por.
Sandstone: v lt gry-pl yel brn, clr-trnsl, occ mky wh Qtz, vf-v crs, pred f-m, arg Mtrx, loc Kao cmt/Mtrx, loc sil cmt, Mic, Tr Carb, non-r micropyr, pr-fair vis por.
Claystone: brn gry, m dk gr-olv gry, frm-mod hd, blky, non-sl calc, micromic, loc carb, slty, loc grad Sltst I.P. vf sdy.
Claystone: brn gry, olv blk-dsky yel brn, mod hd, blky, non calc, Tr micromic, loc C lam, slty.
Coal: brn blk-blk, mod hd, loc brit, glos, r-Tr Pyr, arg-v arg grad Coaly Shale.
Age: **?Hettangian - Lower Sinemurian**

<u>Middle Statfjord Formation; 2812,0-2865,0m MD (2663,0-2859,5m TVD)</u>

2812 - 2840,5m MD (2806,5-2835,0m TVD):
This interval comprises of Claystones interbedded with Coal, minor Sandstone.

Claystone: brn gry, r olv gry, mod hd, blky, non calc, micromic, r carb, slty.
Coal: brn blk-blk, mod hd, loc brit, glos, r-Tr Pyr, arg-v arg grad Coaly Shale.
Sandstone: v lt gry-pl yel brn, clr-trnsl, occ mky wh Qtz, vf-crs, pred f-m, fri-frm, arg Mtrx, loc Kao cmt/Mtrx, loc sil cmt, Mic, Tr Carb, non-r micropyr, pr-fair vis por.
Age: **?Hettangian**

2840,5 - 2865m MD (2835,0-2859,5m TVD):
This interval comprises of Sandstones with minor Claystones.

Sandstone: pl yel brn, loc olv gry, clr-trnsl Qtz, vf-crs, r v crs, pred f-m, ang-sbrndd, fri-frm, gen mod srt, loc pr srt, arg Mtrx, loc Kao cmt/Mtrx, loc sil cmt, Mic, Carb, pr vis por.
Claystone: brn gry, olv gry, r olv blk, mod hd, blky, non calc, sl micromic, loc Carb, slty
Age: **?Hettangian**

4.5 Hydrocarbon Shows

The evaluation of hydrocarbon shows at the wellsite was carried out in a conventional manner. A standard (Geoservices) hydrocarbon total gas detector system (Geoservices Gaslogger) together with a gas chromatograph for automatic and continuous gas analysis, recorded as ppm by volume of C1 through nC5, were operational below 1223m MD down to the TD of the well.

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

4.6 Gas Record

132 - 1223m MD: This interval was drilled with returns to sea bed. No gas detection possible. For gas chromatographic record in the well, see Lithology Log attached in Section C, and End of Well Report from Geoservices, Well 30/6-26.

4.7 Oil stain and Fluorescence

A summary of the observed shows is given in Table 6.1 below:

INTERVAL (mRKB)	SOURCE	LITHOLOGY	SHOWS DESCRIPTION
2690-2693	Core	Sandstone	Fair pet od,wk lt brn O stn,no dir Fluor,wk fast-inst strmg yel wh Fluor cut,no vis cut,wk bl wh Fluor Res,no vis Res.
2694-2696	Core	Sandstone	Fair pet od,lt brn O stn,uni bri yel dir Fluor,fr mod strmg yel wh Fluor cut,no vis cut,wk bri yel Fluor Res,no vis Res.
2696-2698	Core	Sandstone	Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strmg yel wh Fluor cut,lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
2698-2700	Core	Sandstone	Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strmg yel wh Fluor cut,lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
2700-2703	Core	Sandstone	Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strmg yel wh Fluor cut,lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
2704-2713	Core	Sandstone	Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strmg yel wh Fluor cut,lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
2713-2715	Core	Sandstone	Pr pet od,uni dull or dir Fluor,mod strmg yel wh Fluor cut,no vis cut,pl yel Fluor Res,no vis Res.
2715-2717	Core	Sandstone	Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strmg yel wh Fluor cut,lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
2717	Core	Sandstone	Pr pet od,uni dull or dir Fluor,mod strmg yel wh Fluor cut,no vis cut,pl yel Fluor Res,no vis Res.

Table 4.1 Shows summary 30/6-26

5 Coring

5.1 Conventional Cores

One core was cut in the Upper Statfjord Formation. The core was cut in 1 m lengths. A summary of the core is presented in Table 5.1 below and the core description can be found in Appendix I.

No	C: Cut(m) R: Recovery(m)	Rec. %	Lithology	Formations
1	C: 2690-2718m R: 2690-2717,7	98,9	Sandstone	Upper Statfjord Formation.

Table 5.1.1: Conventional Cores 30/6-26

5.2 Sidewall Cores

No sidewall cores were taken in this well.

6 Logging

6.1 MWD Logs

A MWD service (Schlumberger Anadrill) yielding gamma ray, resistivity, density, neutron and survey measurements was run in the following sections:

Run no.	Hole section	Drill Depth Interval m MD RKB	Log Depth Interval m MD RKB	Tool	Comments
1	36"	132 - 195	132 - 186	PowerPulse	
2	36"	195 - 196	195 - 196	PowerPulse	
3	17½"	196 - 1223	195 - 1208	PowerPulse-CDR	
4	17½"	195 - 280	N/A	PowerPulse-CDR	Cleaned obstruction around 13 3/8" casing shoe.
5	12¼"	1223 - 2636	1217 - 2621	PowerPulse-CDR	
6	8½"	2636 - 2690	2631 - 2677	PowerPulse-ARC-ADN	Pulled out for coring.
7	8½"	2718 - 2865	2635 - 2857	PowerPulse-ARC-ADN	Relogged from 9 5/8" casing shoe due to incorrect data.

Table 6.1.1: MWD runs

More detailed MWD results can be found in the report "End of Well Report"/Logs, (Schlumberger/Geoservices) Well 25/2 16 S / 16 S T2

6.2 Wireline Logs

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.

Run:	Toolstring:	Date:	Logged interval (mRKB)	Comments:
1A	GR/MDT	28/09 - 29/09.01	2857.7 - 2669.2	26 pressure points, 25 good.
1A	GR/VSP/DSI	30/09.01	2860.0 - 2100.0	0 offset VSP
1B	GR/MDT	30/09 - 01/10.01	2735.0	Misrun due to Power Cartridge failure.
1C	GR/MDT	01/10.01	2716.0 - 2735.0	Oil sampling

Table 6.2.1: Wireline log runs

6.2.1 MDT pressure data and fluid sampling

A total of 26 pressure data were recorded not including pretests for sampling.
Fluid sampling were performed at 2772m (Water), 2735m (Oil), 2716m (Oil) and 2669m (Gas).
The pressure data is shown in Figure 8.1 and listed in Table 8.1.

6.2.2 Velocity Surveys

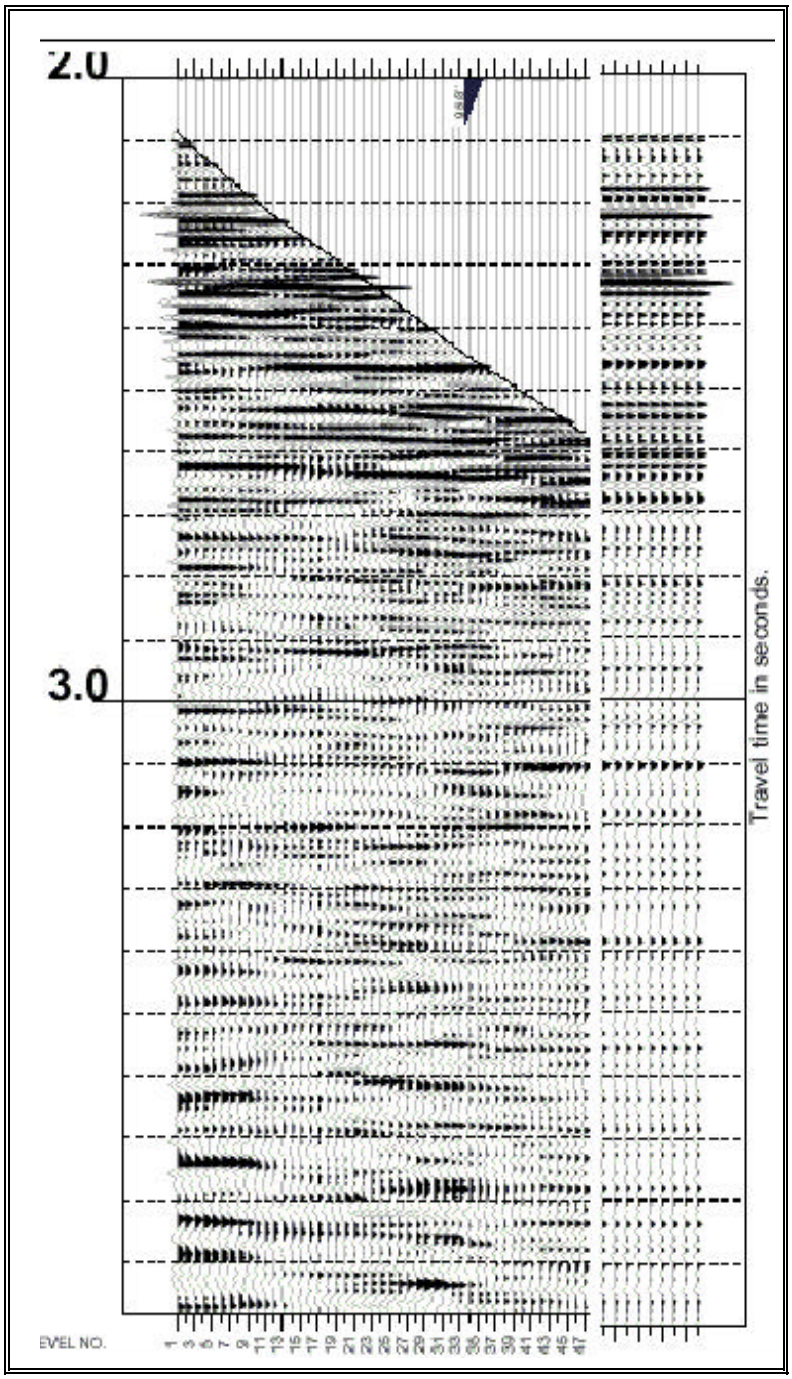
The VSP data was collected by Schlumberger on 30th. of September 2001. The survey ranged from 2834 m to 2145 m MD RKB. The spacing between levels was 15 m. The seismic source employed was a 3x150 cu.in. G-guns cluster.

The VSP processing and the sonic calibration were performed by Read Well Services.

The figure shows a **Final upgoing VSP gather** to the left and a **Corridor Stack** to the right.

The data quality is good.

For more information see the VSP contractor report.
Ref. Chapter 11.



6.3 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 (mTVD RKB)	Temp °C	Time since circ.
MDT	1A	2852,20	108,80	35,35 hrs
DSI-VSP	1A	2854,50	108,00	56,35 hrs
MDT	1B	2730,00	106,00	68,02 hrs
MDT	1C	2730,00	107,70	81,43 hrs

Table 6.3.1: Bottom Hole Temperatures 30/6-26

When entered into a Horner plot, this give a static formation temperature estimate of 112,1°C at 2730 m.

7 Petrophysical Evaluation.

7.1 Summary

Well 30/6-26 proved a 29m gas column and a 43m oil column in the Upper Statfjord Formation (US5, US4, and upper part US3). The gas-oil-contact is interpreted at 2668 m TVD MSL and the oil-water contact at 2711 m TVD MSL. The lower part of the US3, US2, US1, and the entire Middle Statfjord (MS) are water-filled. Fluid samples confirmed the fluid types.

The petrophysical interpretation is based on a shaly sand model. The log interpretation is core calibrated. One core was taken in the US5 Formation. A 12% effective porosity cut-off criteria was applied to determine net sand. An additional cut-off on water saturation (40%) was applied to determine net pay.

The Upper Statfjord Formation shows good reservoir properties. Average effective porosity in the net sand fraction ranges from 22.0 % (US3) to 12.1 % (US4). Average core permeability, not corrected for overburden, is 4871 mD. Net sand fraction ranges from 99.4% (US3) to 1.6 % (US4). Net pay is only defined in US5 and US3. The average net pay water saturation is 12.6 % and 24.1 % in US5 and US3, respectively.

The Middle Statfjord Formation consists mainly of claystone. Total net sand fraction is 16% and effective net sand porosity is 16.9%. Net pay is absent.

7.2 Log Data Acquisition and Quality

Table 6.1.1 and 6.2.1 summarise the logging-while-drilling (including log corrections) and wireline logs acquired in well 30/6-26. More details on the MWD and LWD services can be found in the Reference /7-1/.

The two uppermost sections (36" and 17½" hole sections) of the well were drilled with seawater, and the 12¼" and 8½" hole sections with Versavert oil-based drilling mud.

Schlumberger provided a total of 4 MWD-LWD runs in this well (run 3, 5, 6, and 8). In addition, a limited wireline-logging program was performed. The LWD CDR tool was run in the 17½", and 12¼" hole sections and provides a phase and attenuation resistivity The log quality is generally good. Only, the phase resistivity showed some “spikyness” in the 17½" section.

In the 8½" hole section, phase shift and attenuation resistivities were measured at multiple depths of investigation and two different frequencies by means of the VISION675 tool. In addition, the Azimuthal Density Neutron (ADN) tool was used to measure formation bulk density, bulk density correction, and neutron porosity. All LWD logs were environmentally corrected by Schlumberger at the wellsite. The LWD log quality in this 8½" section is generally good.

Besides this LWD program only a limited wireline-logging program was performed. The only wireline surveys in the 8½" section were DSI-VSP (0-offset) and MDT. The DSI was run in upper and lower dipole and P&S mode. In addition, the DSI was run in casing to check cement quality (top good cement estimated at 2100 mMD). The MDT formation tester collected both pressure data and fluid samples. The acquired wireline data in this section is also of good quality. The wireline data was depth correlated to the LWD logs at 2750m.

By editing, depth shifting and merging the individual MWD and WL runs continuous composite logs were generated.

7.3 Core

One 28m core, with 98.9% recovery, was cut in the Upper Statfjord Formation (2690-2718m drillers depth). A total of 110 core plugs were subjected to Conventional Core Analysis, performed by Reslab, for details see /7-2/. The program involved measurements of helium porosity, Klinkenberg corrected horizontal and vertical air permeability's, grain density, and a lithological description. Furthermore, by recording the natural gamma radiation from the cores using a NaI crystal scintillator, a spectral core gamma log of the cores was obtained.

Finally, core photos, white light and UV-light, were taken of the B-cut of the core, after all samples had been drilled, with each frame covering up to 5 metres of core. Digital core images, white and UV-light, were taken of the entire core. Photos are also delivered as separate reports (Ref Chap.12).

Using the GeoFrame-WellEdit software, the core gamma ray log was depth shifted to match the reference LWD gamma ray log (from VISION tool). The whole core was shifted +0.54 m to match the log data.

A crossplot of core porosity and permeability measurements is shown in Figure 7.2.

More information about the core analysis can be found in Reference /7-2/.

7.4 Formation Testing

The Schlumberger MDT (Modular Dynamic Tester) wireline tool was used for formation pressure testing and fluid sampling. Pressure data was taken at several depths over the complete reservoir interval collecting data from both the hydrocarbon and the water zone. In total 26 draw down pressure pretests were attempted of which 25 were successful with generally very good mobilities. The MDT run was depth correlated to the LWD GR log at 2750m MD. The pressure pretests were performed with the standard probe. Both quartz gauge and strain gauge data was collected. The large diameter probe was used for fluid sampling. Sampling was performed at 2772m (Water), 2735m (Oil), 2716m (Oil) and 2669m (Gas).
The pressure data is shown in Figure 7.1 and listed in Table 7.1. The interpretation is discussed in the next section. Fluid sampling results are extensively discussed in Reference /7-3/.

No Drill Stem Testing was performed.

Run 1A Test #	Depth (m MD RKB)	Depth (m TVDSS)	Drawdown mobility (mD/cp)	Initial mud Pressure CQG (bar)	Final mud Pressure CQG (bar)	Formation Pressure CQG (bar)	Test type/ Remarks
	2693.51	2664.07	6669.4	364.422	364.048	244.189	normal
1	2669.19	2639.76	2663.8	361.022	361.042	243.891	drawdown
2	2673.70	2644.27	2668.3	361.618	361.639	243.968	drawdown
3	2678.02	2648.58	3450.3	362.152	362.211	244.034	drawdown
4	2682.28	2652.84	11542.6	362.710	362.758	244.103	drawdown
5	2685.20	2655.76	2679.8	363.191	363.211	244.150	drawdown
6	2685.69	2656.25	2680.3	363.261	363.276	180.660	tight
7	2692.23	2662.79	12066.1	364.012	364.062	244.255	drawdown
8	2695.72	2666.28	11502.3	364.469	364.517	244.309	drawdown
9	2699.20	2669.76	537.2	364.920	364.975	244.491	drawdown
10	2704.66	2675.21	2450.4	365.687	365.723	244.881	drawdown
11	2710.69	2681.24	523.5	366.475	366.513	245.288	drawdown
12	2715.17	2685.72	617.1	367.109	367.114	245.585	drawdown
13	2730.51	2701.06	134.8	369.086	369.121	247.770	drawdown
14	2735.02	2705.56	429.0	369.687	369.719	248.077	drawdown
15	2738.53	2709.07	37.4	370.178	370.180	248.319	drawdown
16	2745.02	2715.56	430.7	371.004	371.021	248.921	drawdown
17	2752.01	2722.55	282.1	371.944	371.952	249.634	drawdown
18	2764.41	2734.95	2.1	373.528	373.569	251.018	drawdown
19	2766.43	2736.97	217.8	373.940	373.849	251.154	drawdown
20	2771.89	2742.43	967.7	374.564	374.561	251.683	drawdown
21	2785.07	2755.60	627.3	376.282	376.292	252.981	drawdown
22	2800.23	2770.76	1736.6	378.273	378.280	254.453	drawdown
23	2811.71	2782.24	125.6	379.789	379.783	255.566	drawdown
24	2826.23	2796.76	147.2	381.733	381.709	307.226	drawdown
25	2849.70	2820.23	547.3	384.992	384.824	330.552	drawdown
26	2857.73	2828.26	645.4	387.086	386.731	331.313	drawdown

Table 7.1: MDT formation pressure data.

7.5 Fluid Contacts

The fluid contacts have been estimated based on the combined interpretation of formation pressure data, log readings and fluid sampling. From the pressure data (Figure 7.1) an GOC at 2668 mTVD MSL (= 2697 mMD RKB) and an OWC at 2711 mTVD MSL (=2741mMD RKB) can be interpreted. The log analysis supports these fluid contacts (Figure 7.4) and the fluid sampling confirms the fluid types.

7.6 Petrophysical Interpretation

The main reservoir in well 30/6-26 is the Upper Statfjord Formation. This interval comprises of sandstones with minor claystone and traces of coal. The Middle Statfjord Formation comprises of claystones interbedded with coal and minor sandstone. The well TD was in the Lower Statfjord Formation. This reservoir zonation is also used for calculating average reservoir properties.

The petrophysical interpretation is based on a shaly-sand model calibrated to the available core data and analysed by means of the GeoFrame PetroViewPlus module. All input curves to the CPI are shown on the CPI plot (Figure 7.3). Total porosity is calculated using the density log. In the cored interval, the log derived total porosity is calibrated to overburden corrected core porosity (assumed overburden correction factor of 0.95). To reduce the effect of non-clay radioactive minerals on the gamma ray readings, the shale volume was determined from a non-linear gamma ray response (Larionov). Effective porosity is evaluated by subtracting from the total porosity the porosity associated with the shale volume (estimated at 0.06 from core porosity measurements in shale sections). The water saturation is calculated by means of the Indonesia equation. As at the time of reporting this document no results were available from the water analysis study, a Rw salinity of 35.000 ppm NaCl was used based on water sample measurements in well 30/9-2. The P40H_UNC LWD resistivity curve was used as true resistivity. Input parameters to the log analysis are listed in Table 7.2.

Input Parameters	Statfjord (gas)	Statfjord (oil and water)
GR sand (GAPI)	40	40
GR shale (GAPI)	110	110
Rshale ohm.m	5	5
Shale density (g/cc)	2.55	2.55
Matrix density (g/cc)	2.63	2.63
Fluid density (g/cc)	0.31 (2668 - 2695m) 0.37 (2695 -2697.5m)	0.89
Wet shale porosity	0.06	0.06
A	1	1
M	1.8	1.8
N	1.8	1.8
Formation temperature	102°C@ 2697 mMD	108°C@ 2840 mMD
Temperature gradient	+/-3.6°C / 100m	+/-3.6°C / 100 m
Rmf. ohm.m @ °C	OBM	OBM
Rw. ohm.m @ °C	0.196@ 20	0.196@ 20

Table 7.2: Input parameters to petrophysical interpretation.

Core data crossplots are shown in Figure 7.2. Both the core porosity-permeability and a core vertical-horizontal permeability crossplot are shown. For porosities below 17-18% the core porosity-permeability regression looks excellent. However, for higher porosities the variation in permeability with porosity becomes significant and a trendline is difficult to choose. More core data from other wells have to be incorporated or different modelling techniques have to be used to generate a reliable continuous permeability log. Furthermore, from the core vertical-horizontal permeability crossplot, some heterogeneity effects can be observed, as the horizontal permeability is generally higher than the vertical permeability.

The average core porosity is 23.0 %. As mentioned before, for the log porosity calibration we assumed an overburden correction factor of 0.95. The arithmetic mean of the Klinkenberg corrected horizontal core permeability is 4871 mD, the geometric mean 622mD. It should be noted that these plug permeability measurements are not overburden corrected to reservoir conditions. Generally, the overburden correction factors vary with rock type. No SCAL program is initiated to quantify overburden corrections for this well. All core data is also plotted on the CPI plots (Figure 7.3 and Figure 7.4).

The net sand was determined using an effective porosity cut-off: PHIE < 0.12.
The net pay was based on an additional cut-off on water saturation: SWE > 0.40.

Furthermore, coal beds were discriminated from density and neutron log responses. In this well they are defined by density < 2.15 g/cc and neutron porosity> 30%.

7.7 Petrophysical Results

The average reservoir properties for the Upper and Middle Statfjord Formations in net sand and net pay are listed in Table 7.3 and Table 7.4, respectively.

Well 30/6-26 Net Sand Zone Averages						
Zone	Top m MD RKB	Bottom m MD RKB	Gross (m)	Net Sand (m)	NTG (frac)	Net Sand Phie (frac)
US5	2668.5	2719.0	50.5	46.3	0.917	0.206
US4	2719.0	2728.0	9.0	0.1	0.016	0.121
US3	2728.0	2752.5	24.5	24.3	0.994	0.220
US2	2752.5	2762.5	10.0	2.0	0.203	0.169
US1	2762.5	2812.0	49.5	46.8	0.945	0.210
MS	2812.0	2840.5	28.5	4.6	0.160	0.169

Table 7.3: Net Sand Averages.

Well 30/6-26 Net Pay Zone Averages							
Zone	Top m MD RKB	Bottom m MD RKB	Gross (m)	Net Pay (m)	NPTG (frac)	Net Pay Phie (frac)	Net Pay Swe (frac)
US5	2668.5	2719.0	50.5	40.8	0.809	0.212	0.126
US4	2719.0	2728.0	9.0	0.0	0.000		
US3	2728.0	2752.5	24.5	9.0	0.367	0.224	0.241
US2	2752.5	2762.5	10.0	0.0	0.000		
US1	2762.5	2812.0	49.5	0.0	0.000		
MS	2812.0	2840.5	28.5	0.0	0.000		

Table 7.4: Net Pay Averages

CPI plots including core data are shown in Figure 7.3 and Figure 7.4.

The CPI legend is as follows:

Track1 : GR = Gamma Ray (green) - from VISION
: HORD = caliper (red) – from AND
Track2 : Depth track in m MD RKB
Track3 : RD = Deep resistivity (blue) – P40H curve from VISION
: RM = Medium resistivity (green) – P28H curve from VISION
: RS = Shallow resistivity (red) - P16H curve from VISION
Track4 : RHOB = Bulk density (blue) - from ADN
: TNPH = Neutron porosity (red) - from ADN
: DRHO = Density correction (dotted blue) - from ADN
Track5 : DT = compressional slowness (blue) - from DSI
: DTSM = shear slowness (red) – from DSI
Track6 : Zonation
Track7 : PHIE = effective porosity (blue)
: PHIT = total porosity (green)
: CPORC = overburden corrected core porosity (red)
Track8 : NET = Net sand flag (yellow)
Track9 : CKHK = Klinkenberg corrected horizontal core permeability (red)
Track10 : SWE = effective water saturation (black)
Track11 : SAND = sandstone volume relative to total volume (yellow)
: SHALE = shale volume relative to total volume (brown)
: GAS = gas volume relative to total volume (red)
: OIL = oil volume relative to total volume (green)
: COAL = coal flag (black)

7.8 Figures Petrophysical Evaluation

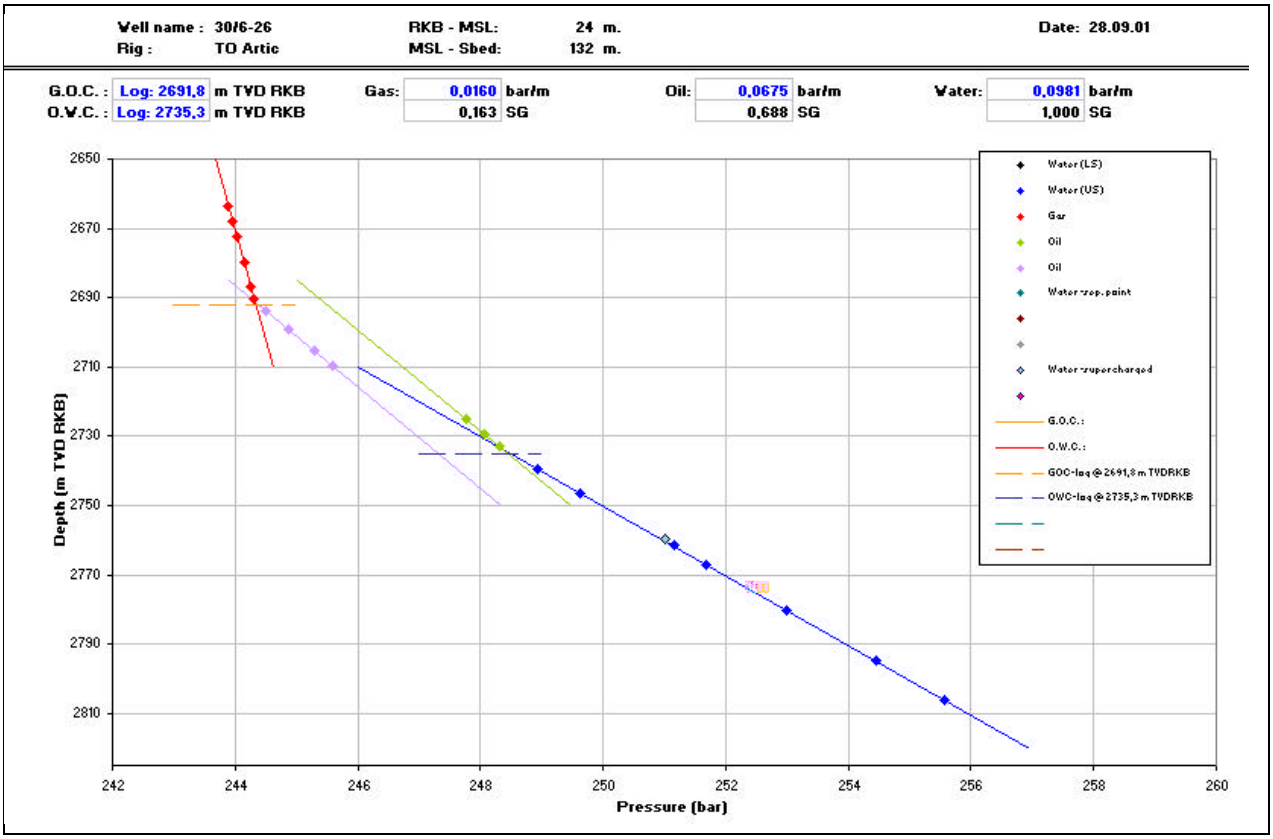
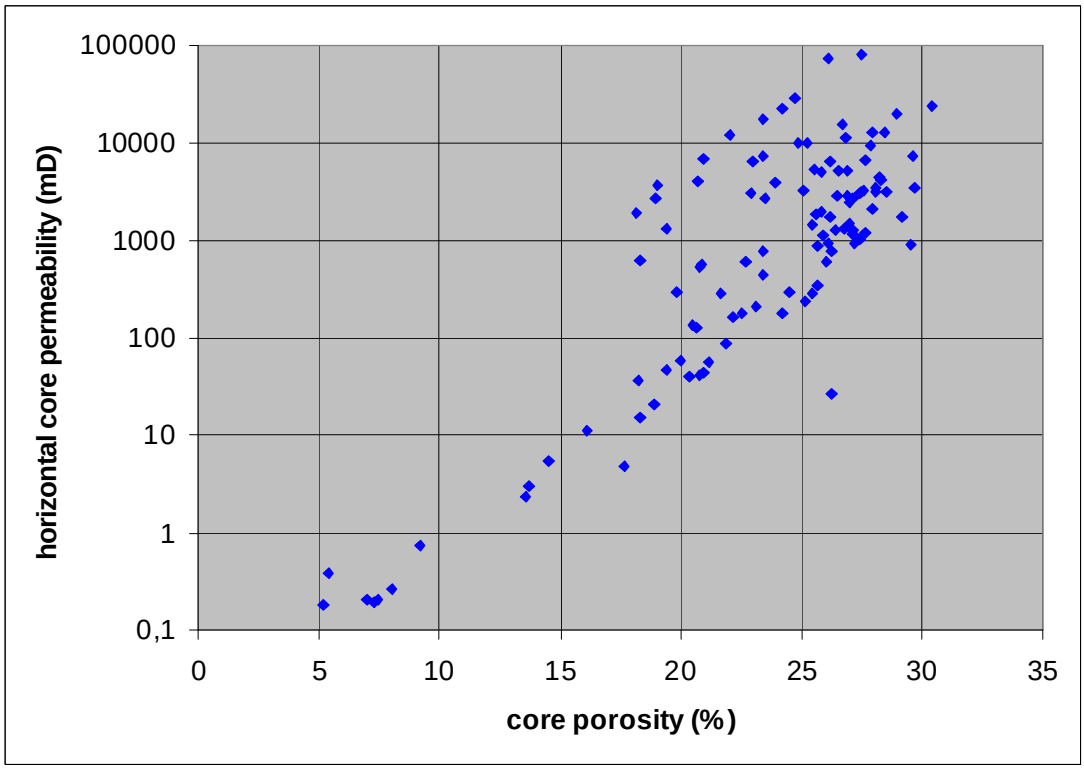
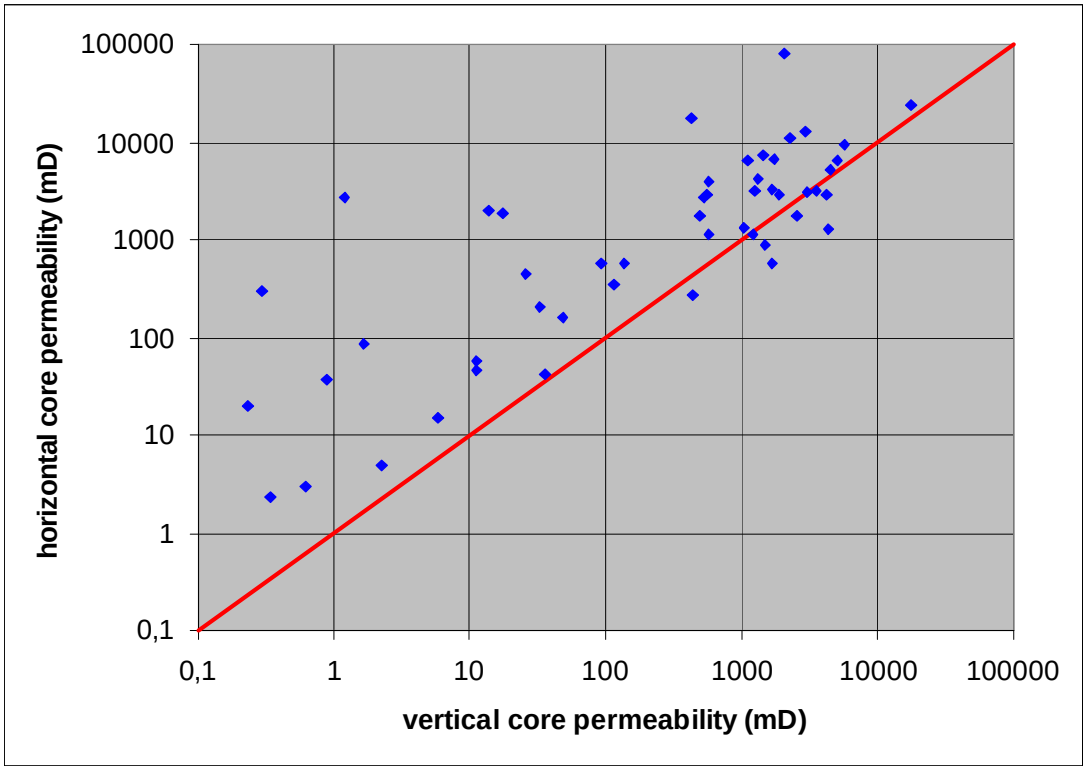


Figure 7.1: MDT pressure data with fluid contacts and fluid gradients.

Figure4: Core porosity and permeability crossplots.





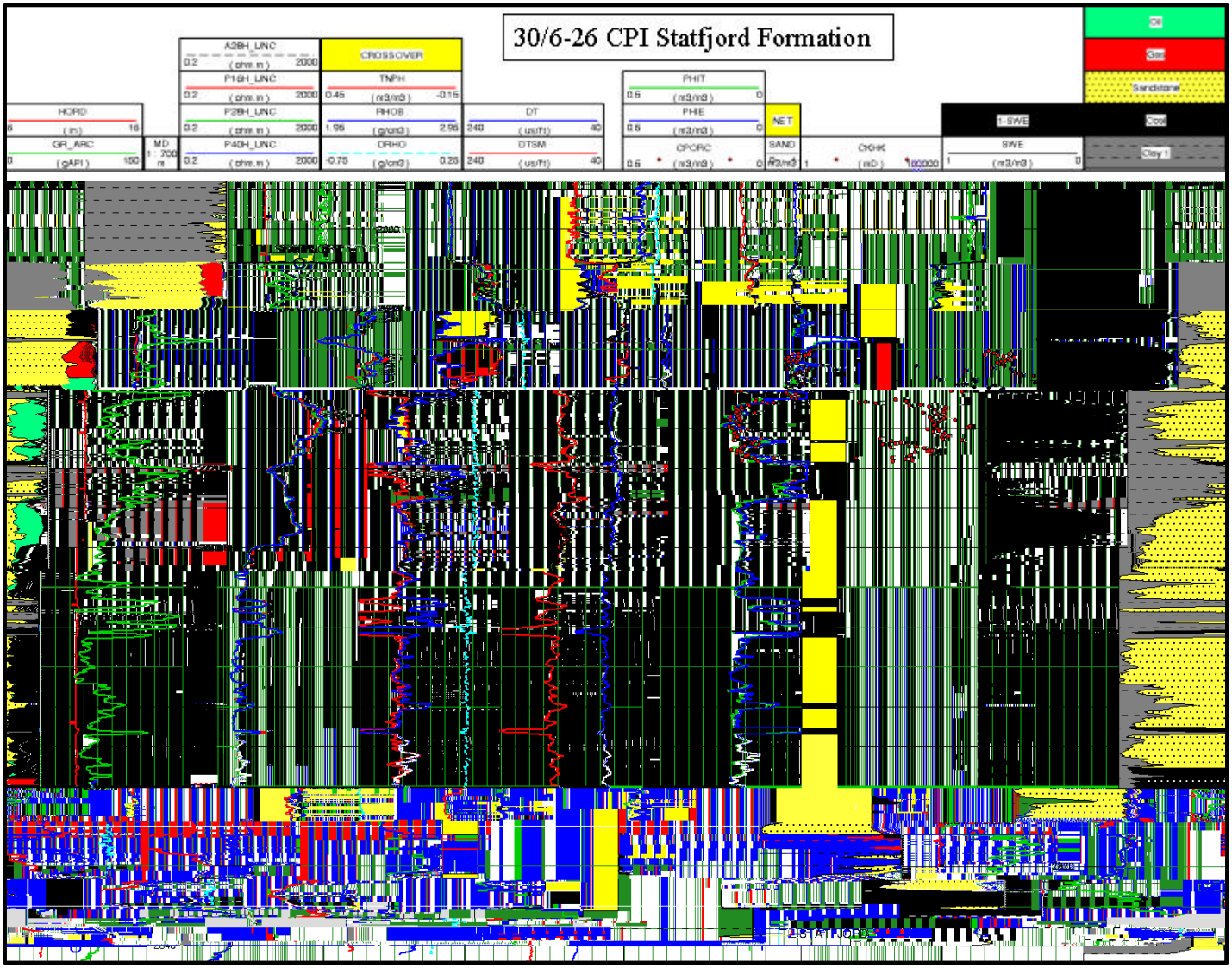


Figure 7.3: 30/6-26 CPI entire reservoir interval.

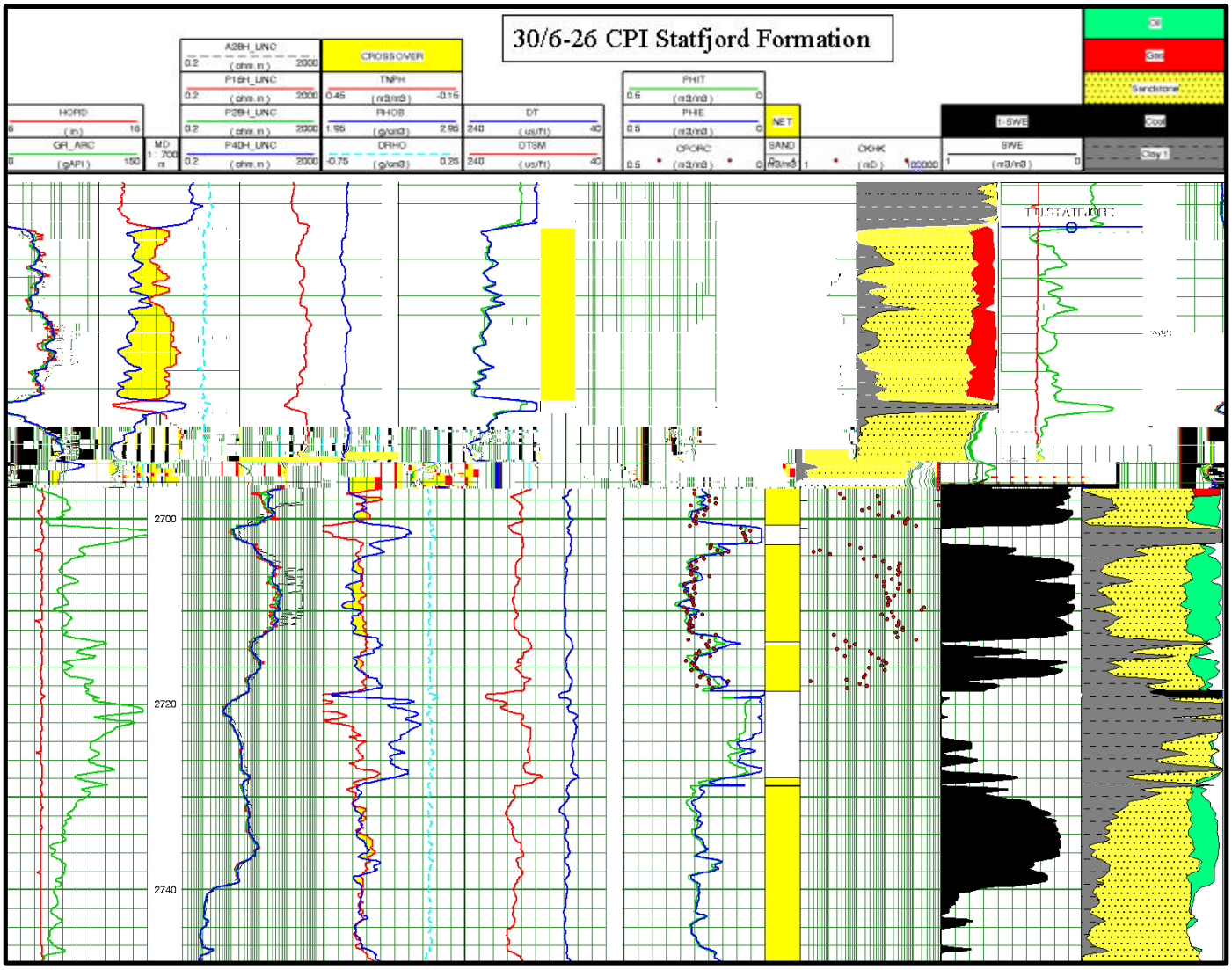


Figure 7.4: 30/6-26 CPI hydrocarbon reservoir interval.

7.9 References

/7-1/ End of well report/LWD logs, 30/6-26, Schlumberger.
/7-2/ Conventional Core Analysis, 30/6-26, Reslab.
/7-3/ Formation Evaluation Report, 30/6-26, Hydro.

8 Estimated Pore Pressure, Fracture, Overburden and Temperature Gradients

8.1 Pressure prognosis

The pore pressure-, fracture -, and overburden gradients are presented graphically in figure 8.1. All depths are in meters true vertical depth TVD, relative to rotary table.
Air gap 24 m and water depth 132 m RKB. The pore pressure-, fracture -, and overburden gradient are given in Equivalent Mud Density, g/cm^3 or sg.
The pore pressure analysis is based on interpretations from MWD-logs and MDT pressure sampling.

8.2 Pore pressure gradient

A hydrostatic pore pressure was interpreted down to top Eocene.
The pore pressure increased steadily through Eocene reaching approximately 1.22sg at base Eocene. The pore pressure continuos to increase through the Rogaland Group reaching 1.28sg in middle Lista formation. This pressure continued through the Shetland Group until a pressure drop occurred towards base Shetland, continuing into the Dunlin Group where it levels out at 1.20sg or less. In the upper Statfjord of the Gamma West structure a pore pressure of 0.93sg was recorded using MDT. This was significantly less then prognosed and confirms a pressure communication with the main Oseberg field. The lower Statfjord, separated from the upper Statfjord by the middle Statfjord shale sequence, exhibited a pressure close to initially pressure.

8.3 Fracture gradient

The fracture gradient is based on the assumed rock mechanical properties to each stratigraphic layer (Daines (1982)), Eckels & van Breckelen and adjusted to leak off tests in nearest reference wells and in this well. One LOT was performed below 13 3/8" shoe at 1212m. The result of 1.70sg was higher than minimum expected gradient but within the range of previous LOT in the area.

8.4 Overburden gradient

Overburden gradient is based on density log readings and theoretical weights.

8.5 Temperature gradient

The temperature gradient (fig 8.2) is based on regional temperature data (Horner plots and Test results). An average formation temperature gradient of approximately 4.45 degrees Celsius / 100m TVD is assumed, even though we did not obtain any good temperature data to estimate the true bottom hole. Assuming 4 degrees Celsius at sea floor, this will give a static formation temperature at TD of 131 °C in 30/6-26.

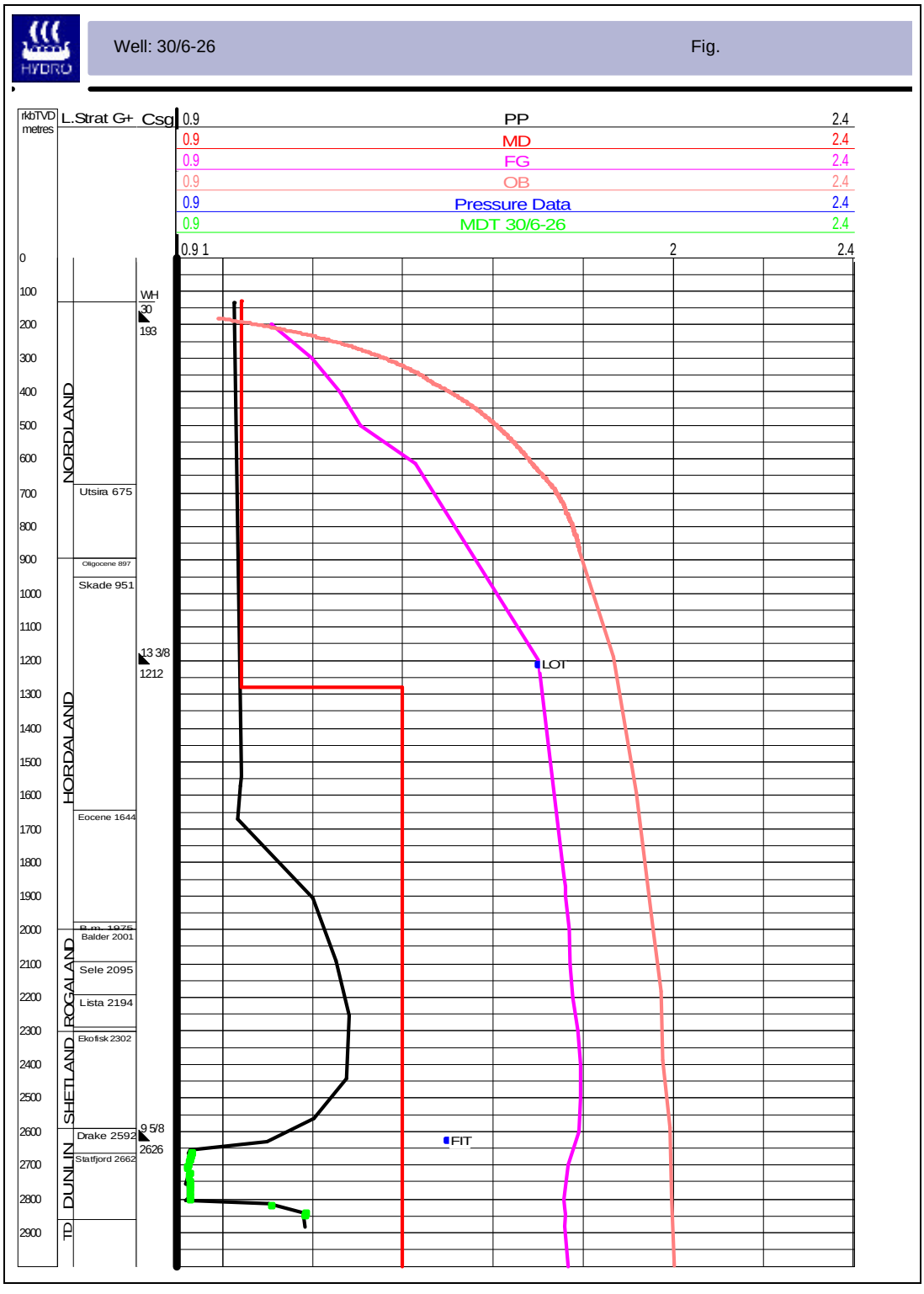


Figure 8.1: Porepressure, Fracture- and Overburden gradients

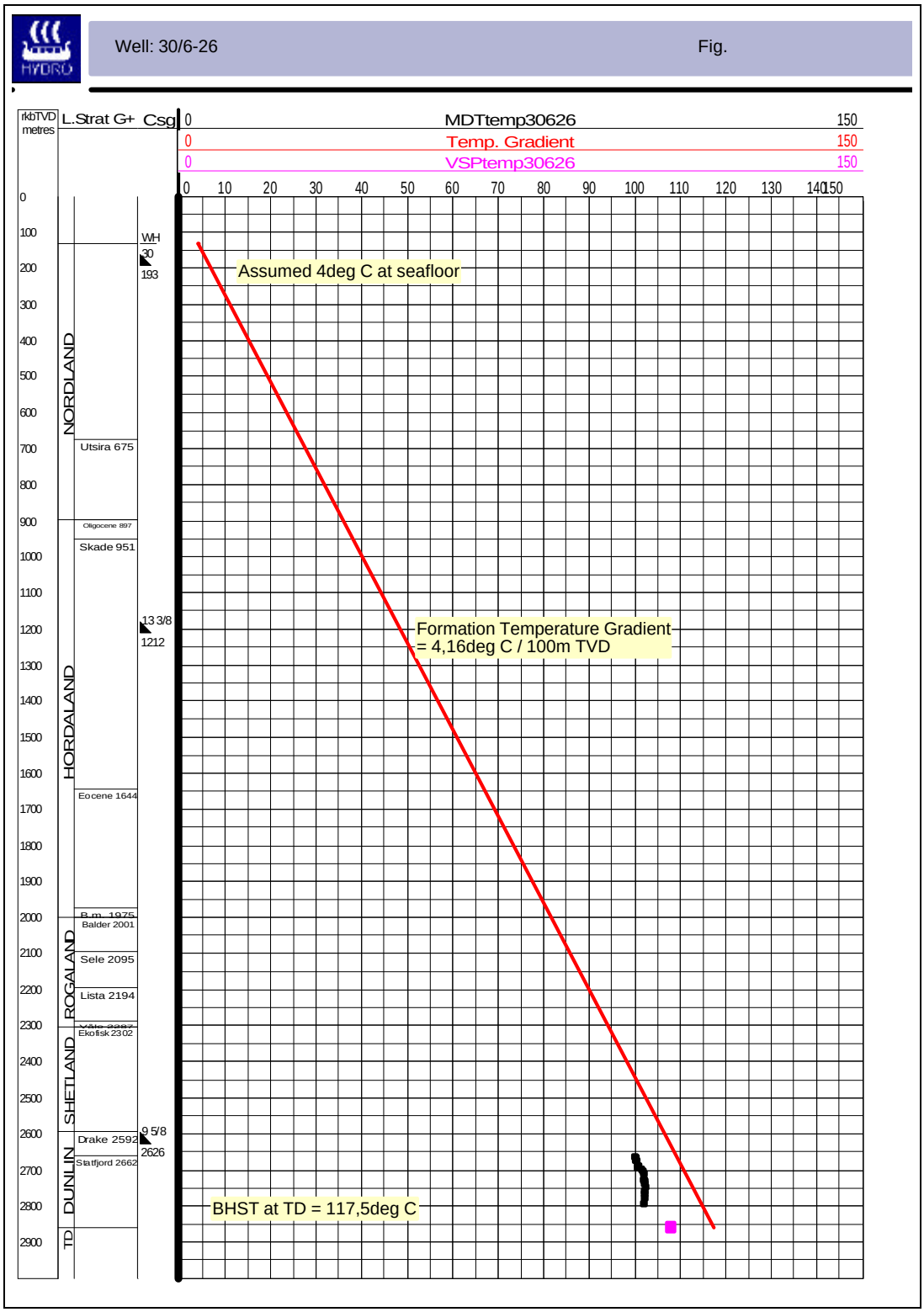


Figure 8.2: Temperature gradient

9 Geophysical Results

A normal zero offset VSP was acquired in the well in the range from 2145 m to 2834 m RKB MD. For more detailed information see the Read Well Services report "Normal incidence VSP, well 30/6-26" of 2001.12.20, containing check shot report, sonic calibration and synthetic seismograms.

Actual versus prognosed formation tops with two-way times are shown in Table 9.1.

Formation	Prognosd TWT(ms)	Result TWT (ms)	Prognosed Depth mTVD MSL	Result Depth mTVD MSL	Discrepancy (result-prog) mTVD	Prognosed UTM	Result UTM
Sea Floor	145	No VSP	108,5	108,0	-0,5	6710372 484108	6710374.5 484106.7
Top Utsira	691	No VSP	660,0	651,0	-9,0	6710349 484145	6710342.4 484158.4
Base Utsira	892	No VSP	887,0	867,5	-19,5	6710339 484162	6710338.5 484165.3
Top Balder	1955	No VSP	1990,0	1976,8	-13,2	6710339 484162	6710329.3 484156.4
Top Shetland	2211	2220	2232,0	2277,8	45,8	6710339 484162	6710335.7 484160.0
Base Cretaceous	2387	2416	2554,0	2568,1	14,1	6710339 484162	6710342.6 484165.6
Top Statfjord	2470	2460	2682,0	2639,0	-43,0	6710339 484162	6710345.1 484166.9

Table 9.1. Geophysical prognosis and results, well 30/6-26

10 Post Site Survey Report

10.1 Well data

1	Distance from rig floor to sea level:	24.0 m
2	Water depth (MSL):	108.5 m
3a	Setting depth for conductor (m RKB):	193.0 m
3b	Leak Off / Formation Integrity Test (g/cc):	N/A
4a	Setting depth (m RKB TVD) for casing on which BOP mounted:	1212.4 m
4b	Formation Integrity Test (g/cc):	N/A
5	Depth (m RKB TVD & Two Way Time) to formation/section/layer tops:	

Intra Pleistocene 3:	268 m	(305 ms)
Intra Pleistocene 4:	302 m	(333 ms)
Base Pleistocene:	332 m	(367 ms)
Intra Pliocene 1:	618 m	(636 ms)
Intra Pliocene 2:	655 m	(674 ms)
Base Pliocene:	675 m	(703 ms)
Intra Miocene 1:	721 m	(735 ms)
Intra Miocene 2:	785 m	(799 ms)
Intra Miocene 3:	833 m	(843 ms)
Base Miocene:	891.5 m	(897 ms)
Intra Oligocene:	951 m	(961 ms)

Note:

No chronostratigraphic information was collected in the tophole section of the well (from seabed down to 1223.0 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 1223.0 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 1223 m (section drilled with returns to seabed). However, no gas related incidents were reported when drilling this interval.

The following sand bodies have been identified in well 30/6-26:

Pliocene Interval: 618 m - 655 m

Miocene Interval: 675 m - 891.5 m

Oligocene Interval: 951 m - 979 m

7 By what means is the presence of gas proven: N/A

The well is drilled with returns to seabed above 1217.4 m RKB TVD.

8 Composition and origin of gas:

N/A

9 Describe all measurements taken in gas bearing layers:

N/A

10.2 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 amplitude anomalies and other indications of shallow gas down to the Upper Oligocene (951 m RKB TVD). No amplitude anomalies have been mapped at the 30/6-26 Well Location. The nearest anomaly to location occurs approximately 375 m to the north-northeast associated with the Base Pleistocene. No shallow gas warning was issued for the Well Location 30/6-26.

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 gas warning were given and no gas related problems were experienced in the well.

12b Sand Bodies:

The Pliocene, Miocene and Oligocene sand layers down to 979 m RKB TVD were predicted and encountered sand layers correspond with the interpretation.

12c Boulders:

Scattered boulders were predicted in the shallow section between 180 m - 250 m. No boulders layers were predicted. No boulders were encountered.

12d Unconformities (depths in metres RKB (TVD)):

Horizon		*Prognosed (P)*	*Observed (O)*	*Difference (O-P)*
Base Pleistocene	:	336 ± 5 m	332 m	- 4 m (shallower)
Intra Pliocene 1	:	627 ± 15 m	618 m	- 9 m (shallower)
Intra Pliocene 2	:	665 ± 15 m	655 m	- 10 m (shallower)
Base Pliocene (Top Utsira)	:	694 ± 15 m	675 m	- 19 m (shallower)
Base Miocene	:	882 ± 15 m	891,5 m	+ 9.5 m (deeper)
Intra Oligocene	:	960 ± 25 m	951 m	- 9 m (shallower)

The differences between the prognosed and observed depths to different formation tops were within the uncertainty limits, except for Base Pliocene (Top Utsira). 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.

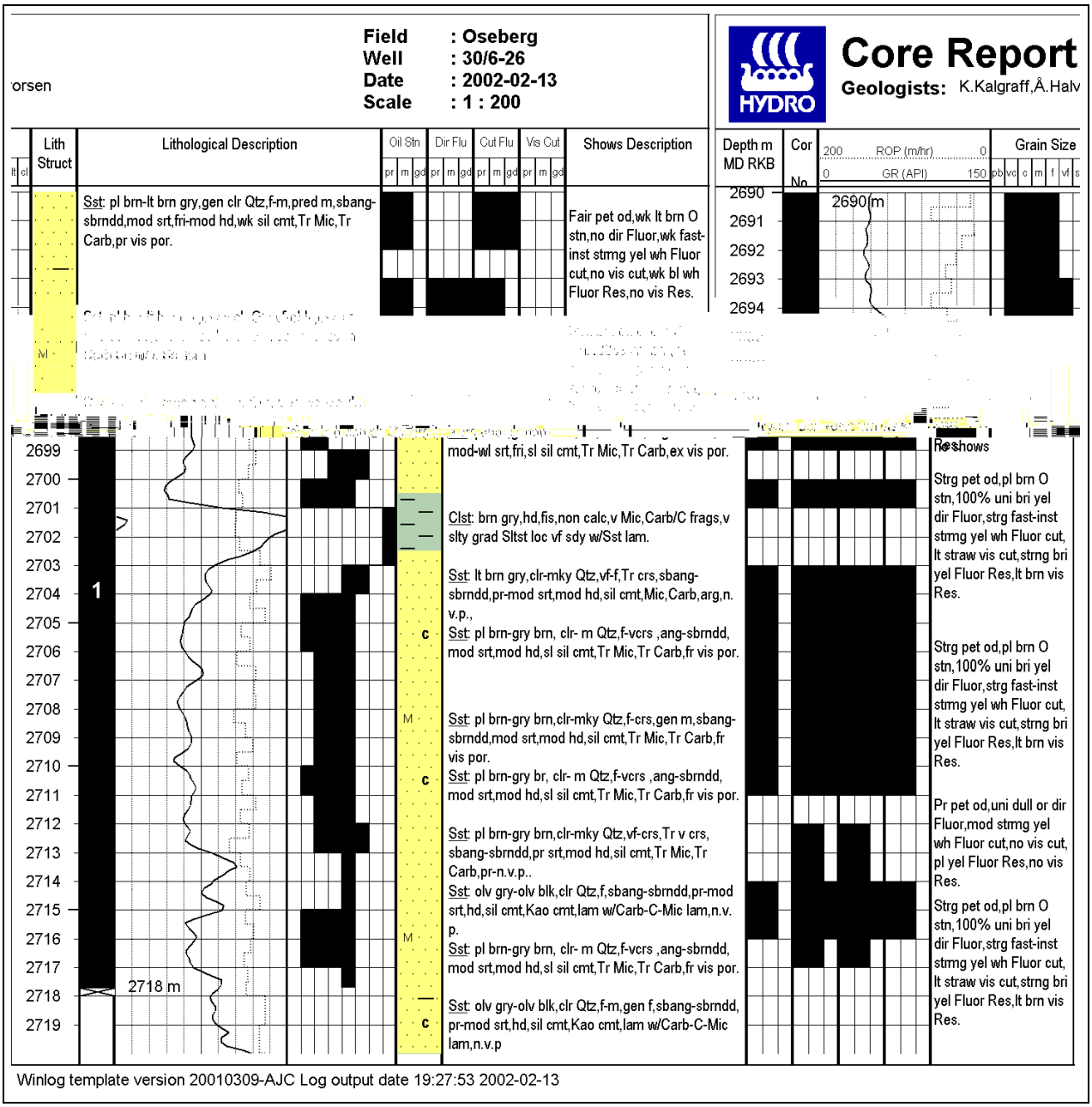
12e Correlation to Nearby Wells:

The drilling conditions experienced in well 30/6-26 are as predicted and similar to those encountered in tie-wells (30/6-15, 17 and 18).

11 Standard and Special Studies

- Norsk Hydro, 2002: Formation Evaluation Report, Well 30/6-26.
- Norsk Hydro, 2002: Geochemical Characterisation, Well 30/6-26.
- Norsk Hydro, 2002: Standard Core Description, Well 30/6-26.
- Norsk Hydro, 2002: Biostratigraphy, Well 30/6-26. Norsk Hydro Standard Zonation.
- Fugro Survey AS, 2001: Site Survey at Location 30/6-26 PL 053, Survey NH0154, Report No 7106.
- Fugro Survey AS, 2001: Navigation and Positioning of Transocean Arctic to Well 30/6-26 for Norsk Hydro.Report No. 7196
- Geoservices, 2002: End of Well Report, Surface Logging data Well 30/6-26.
- Oilphase, 2001: Field Operations Report, Well 30/6-26.
- Read Well Services, 2001: Normal Incidence VSP, Well 30/6-26. NH-00038522
- ResLab, 2001: Conventional Core Analysis, Well 30/6-26. Rep No 10318-00.
- ResLab, 2001: Core Photographs, Scale 1:4, White Light and UV Light, Core #1-#6.
- Schlumberger Anadrill, 2001: End of Well Report/Logs, Well 30/6-26.

APPENDIX I


Field : Oseberg
Well : 30/6-26
Date : 2002-02-13
Scale : 1 : 200
Core Report
Geologists: K.Kalgraff,Å.Halv
Lith Struct
Lithological Description
Oil Stn
Dir Flu
Cut Flu
Vis Cut
Shows Description
Depth m MD RKB
Cor No
ROP (m/hr)
GR (API)
Grain Size
Sst: pl brn-lt brn gry,gen clr Qtz,f-m,pred m,sbang-sbrndd,mod srt,fri-mod hd,wk sil cmt,Tr Mic,Tr Carb,pr vis por.
Fair pet od,wk lt brn O stn,no dir Fluor,wk fast-inst strng yel wh Fluor cut,no vis cut,wk bl wh Fluor Res,no vis Res.
2690 m
2718 m
mod-wl srt,fri,sl sil cmt,Tr Mic,Tr Carb,ex vis por.
Clst: brn gry,hd,fis,non calc,v Mic,Carb/C frags,v slty grad Sltst loc vf sdy w/Sst lam.
Sst: lt brn gry,clr-mky Qtz,vf-f,Tr crs,sbang-sbrndd,pr-mod srt,mod hd,sil cmt,Mic,Carb,arg,n.v.p.,
Sst: pl brn-gry brn, clr- m Qtz,f-vcrs ,ang-sbrndd, mod srt,mod hd,sl sil cmt,Tr Mic,Tr Carb,fr vis por.
Sst: pl brn-gry brn,clr-mky Qtz,f-crs,gen m,sbang-sbrndd,mod srt,mod hd,sil cmt,Tr Mic,Tr Carb,fr vis por.
Sst: pl brn-gry br, clr- m Qtz,f-vcrs ,ang-sbrndd, mod srt,mod hd,sl sil cmt,Tr Mic,Tr Carb,fr vis por.
Sst: pl brn-gry brn,clr-mky Qtz,vf-crs,Tr v crs, sbang-sbrndd,pr srt,mod hd,sil cmt,Tr Mic,Tr Carb,pr-n.v.p..
Sst: olv gry-olv blk,clr Qtz,f,sbang-sbrndd,pr-mod srt,hd,sil cmt,Kao cmt,lam w/Carb-C-Mic lam,n.v.p.
Sst: pl brn-gry brn, clr- m Qtz,f-vcrs ,ang-sbrndd, mod srt,mod hd,sl sil cmt,Tr Mic,Tr Carb,fr vis por.
Sst: olv gry-olv blk,clr Qtz,f-m,gen f,sbang-sbrndd, pr-mod srt,hd,sil cmt,Kao cmt,lam w/Carb-C-Mic lam,n.v.p
Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strng yel wh Fluor cut, lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strng yel wh Fluor cut, lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
Pr pet od,uni dull or dir Fluor,mod strng yel wh Fluor cut,no vis cut, pl yel Fluor Res,no vis Res.
Strg pet od,pl brn O stn,100% uni bri yel dir Fluor,strg fast-inst strng yel wh Fluor cut, lt straw vis cut,strng bri yel Fluor Res,lt brn vis Res.
Winlog template version 20010309-AJC Log output date 19:27:53 2002-02-13

APPENDIX II

WELL SUMMARY
GEOLOGICAL WELL SUMMARY

Title: FINAL WELL REPORT
WELL 30/6-26
PL PL 053

WELL SUMMARY

Coord: 60°31' 39.70"N UTM: 6 710 374.7 mN
02°42' 37.61"E 484 106.5 mE

Zone: ED-50 UTM Zone 31 CM 3° E

Line: NH-9201R97, In-line 842, X-line 1266

Rig: Transocean Arctic

Waterdepth: 108 m MSL **KB:** 24 m

Stopped in: Lower Statfjord Formation

On location: 14.09.01 @ 02:00hrs
Spud: 15.09.01 @ 14:30hrs
At TD: 28.09.01 @
P&A finished: 07.10.01 @ 15:00hrs

TD Driller: 2865 m MD (2860mTVD)
TD Logger: Not logged to TD
Wireline Logg: Schlumberger WS
MWD: Schlumberger Anadrill
Mudlogging: Geoservices

WELL: **30/6-26**

LICENCE: **PL 053**

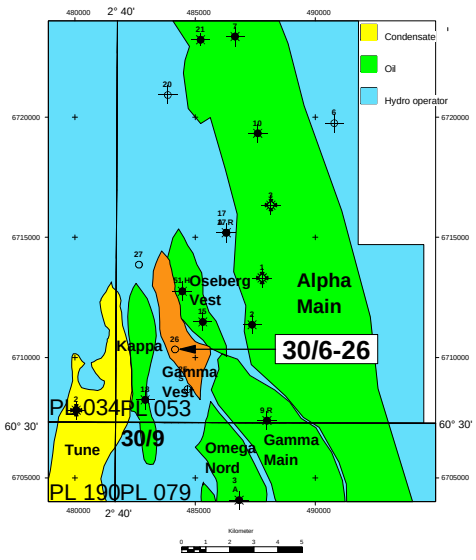
COUNTRY: **Norway**

OPERATOR: NORSK HYDRO **OWNED BY: Hydro, Statoil, Shell, TotalFinaElf, Conoco**

TARGETS:
Primary: Statfjord Formation on the Gamma Vest structure

RESULTS:
- Oil and Gas in Upper Statfjord Formation

CASING (MD / TVD RKB)	MUD TYPE / WEIGHT
30" at 193.0 m / 193.0m	Seawater -HiVis pills
13 3/8" at 1217.4 m / 1212.0m	Seawater -HiVis pills
9 5/8" at 2631.0 m / 2625.0m	OBM.Versavert 1.20sg
TD at 2865.0 m / 2860.0m	OBM.Versavert 1.35sg

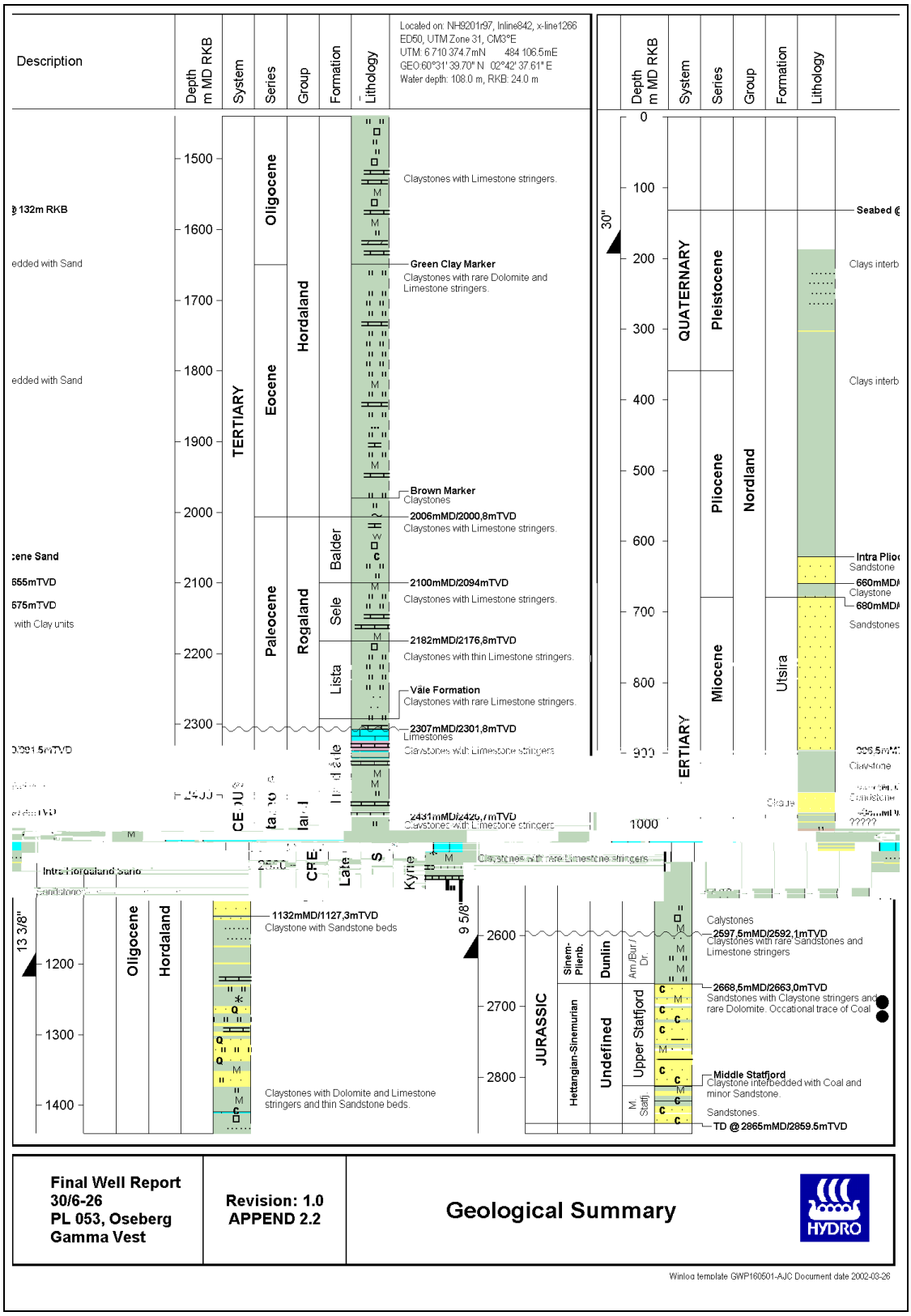


LOGS

MWD/LWD		
PowerPulse	36"	132,0 - 196,0 m
PowerPulse-CDR	17½"	196,0 - 1223,0 m
PowerPulse-CDR	12¼"	1223,0 - 2636,0 m
PowerPulse-ARC-ADN	8½"	2636,0 - 2690,0 m
PowerPulse-ARC-ADN	8½"	2690,0 - 2865,0 m
Wireline		
MDT (Pressure only)	1A	1519,5 - 2017,0 m
VSP-DSI (0-offset)	1A	2860,0 - 2100,0 m
MDT (Misrun due to failure)	1B	
MDT (Fluid sampling)	1C	2716,0 - 2735,0 m

CORES

Core #1: 2690,0 - 2718,0 m
Rec.: 2690,0 - 2717,7 m 98.9%


Description
Depth m MD RKB
System
Series
Group
Formation
Lithology
Located on: NH9201r97, Inline842, x-line1266
ED50, UTM Zone 31, CM3°E
UTM: 6 710 374.7 mN 484 106.5mE
GEO:60°31' 39.70" N 02°42' 37.61" E
Water depth: 108.0 m, RKB: 24.0 m
TERTIARY
Oligocene
Eocene
Paleocene
Hordaland
Rogaland
Balder
Sele
Lista
Claystones with Limestone stringers.
Green Clay Marker
Claystones with rare Dolomite and Limestone stringers.
Brown Marker
Claystones
2006mMD/2000,8mTVD
Claystones with Limestone stringers.
2100mMD/2094mTVD
Claystones with Limestone stringers.
2182mMD/2176,8mTVD
Claystones with thin Limestone stringers.
Våle Formation
Claystones with rare Limestone stringers.
2307mMD/2301,8mTVD
Limestones
Claystones with Limestone stringers
2431mMD/2426,7mTVD
Claystones with Limestone stringers
Claystones with rare Limestone stringers
Intra Hordaland Sand
Sandstone
1132mMD/1127,3mTVD
Claystone with Sandstone beds
Claystones with Dolomite and Limestone stringers and thin Sandstone beds.
13 3/8"
9 5/8"
30"
QUATERNARY
Pleistocene
Pliocene
Miocene
Nordland
Utsira
Seabed
Clays interb
Intra Plio
Sandstone
660mMD
Claystone
680mMD
Sandstones
Claystone
Calystones
2597,5mMD/2592,1mTVD
Claystones with rare Sandstones and Limestone stringers
2668,5mMD/2663,0mTVD
Sandstones with Claystone stringers and rare Dolomite. Occational trace of Coal
Middle Statfjord
Claystone interbedded with Coal and minor Sandstone.
Sandstones.
TD @ 2865mMD/2859.5mTVD
JURASSIC
Hettangian-Sinemurian
Undefined
Upper Statfjord
Dunlin
Sinem-Pliensb.
Am/Bur/Dr
M. Statfj
Kyrre
Late
CRE
Geological Summary
Final Well Report
30/6-26
PL 053, Oseberg
Gamma Vest
Revision: 1.0
APPEND 2.2
Winloa template GWP160501-AJC Document date 2002-03-26

SECTION B

OPERATIONS

Prepared by: G. Smaaskjær

Approved by: T. Skram

LIST OF CONTENTS

TABLES

FIGURES

1 DRILLING SUMMARY AND EXPERIENCES

1.1 Mobilising

Total time used:	35.5 hrs	
Operational time:	23.0 hrs	(64.8 %)
Downtime:	12.5 hrs	(35.2 %)

Wellhead co-ordinates :

6 710 374.7 mN 0 484 106.5 mE

Rig heading:

214 degrees

The rig move towards well 30/6-26 started on 14 September 2001 at 02:00 and anchor handling was finished on 15 September 2001 at 13:30.

The downtime during mobilisation was due to testing and verification of new Hydroacoustic Positioning Reference system and interrupted travel to take onboard spud equipment for the well due to late arrival of boat due to bad weather

1.2 36" Hole Section / 30" Conductor

Water depth:	132.5 m	
Total depth of section:	193.0 m	
30" Conductor shoe:	193.0 m	
Total time used:	23.0 hrs	
Operational time:	23.0 hrs	(100 %)
Downtime:	0.0 hrs	

1.2.1 Drilling

The well was spudded on 15 September 2001, at 14:30 hrs.

A 36" rotary BHA with 17 1/2" Smith 10GMODPD insert bit and 36" hole opener was run and the section was drilled to TD at 193.0 m (17 1/2" bit at 195 m). The section was drilled with sea water and hi-visc pills. After drilling, high-visc was pumped and the hole displaced to 1,50 SG mud before a wiper trip was performed to 5 m below seabed. The hole was displaced once more to 1.5 SG mud prior to pulling out of hole.

1.2.2 Casing

The 30" conductor with the Permanent Guide Base was run and the conductor took weight from 176 m and was run with 15-20 tons drag to bottom at 193.0 m. The conductor was cemented back to the sea bed with good returns and held for 6 hrs prior to releasing the conductor running tool. The wellhead inclination was less than 1 degree after releasing the conductor running tool.

1.3 17-1/2" Hole Section / 13 3/8" casing

Total depth of section:	1223.0	m	
13 3/8" casing shoe	1217.4	m	
Total time used:	110.5	hrs	
Operational time:	92.0	hrs	(83.3 %)
Downtime:	18.5	hrs	(16.7 %)

1.3.1 Drilling

Ran in hole with a 26" Smith Milltooth bit and drilled out hard cement from 188 m to shoe at 193 m. Drilled out shoe and cleaned out 17 1/2" rathole to 195 m. The rathole was reamed several times until able to pass through without rotation, and the hole was swept with hi-visc pill and prior to pulling out.

Ran in with a 17 1/2" motor assembly Smith Insert MXT03DDT bit and a motor bend setting off 1.15 degrees and drilled 17 1/2" hole down to 230 m. Kicked off well at 230 m and drilled and oriented 17 1/2" hole to section TD of 1223 m. Performed a wiper trip to above Utsira Fm. and displaced hole to 1.4 SG KCL mud prior to pulling out.

1.3.2 Casing

Started to run the 13 3/8" casing but casing stood up at 194 m. Engaged circulating tool and slowly washed string down to 196 m. No further progress possible. Pulled casing and hung same off in cellar deck.

Ran in hole with a 17 1/2" rotary assembly and the same 17 1/2" insert bit and drilled and reamed through the rathole below the 30" casing and down to 286 m. Displaced hole to hi-visc pill from 286 m and pulled out.

Rerun the 13 3/8" casing and observed no problems through the rathole section and landed casing. However unable to get a positive lock-down of the 18 5/8" wellhead housing in the 30" casing, even after several attempts. Cemented the 13 3/8" casing with full returns to sea bed and bumped cement plug with 70 bar and continued to pressure test the casing to 165 bar.

Ran BOP and riser and pressure tested wellhead connector to 290 bar.

1.4 12-1/2" Hole Section / 9-5/8" Casing

Total depth of section:	2636.0	m	
9 5/8 casing shoe:	2631.6	m	
Total time used:	119.0	hrs	
Operational time:	108.0	hrs	(92.3 %)
Downtime:	9.0	hrs	(7.7 %)

1.4.1 LOT

The cement in the 13 3/8" shoe track and 4 m new formation was drilled out with a Smith 12 1/4" MA89HPX bit using 1.40 SG KCL water based mud. A leak off test (LOT) was performed and gave a formation strength of 1.70 SG equivalent mud weight (EMW) at 1220m MD.

1.4.2 Drilling

Displaced hole to 1,2 SG oil based mud after the leak off test and continued drilling with the 12 1/4" motor assembly and a Smith MA89HPX PDC bit. Drilled and oriented 12 1/4" hole down to 1575 m and where mud weight was gradually raised to 1.45 SG. The 12 1/4" hole was then drilled and oriented to section TD of 2636.0 m.

1.4.3 Casing

The 9 5/8" casing was run to 2631.6 m without any problems. The cement plug was bumped and the casing was pressure test to 330 bar. The 9 5/8" seal assembly was set and both seal assembly and BOP was pressure tested to 345 bar.

1.5 8-1/2" Hole Section

Total depth of section:	2865.0 m		
Total time used:	142.0	hrs	
Operational time:	115.0	hrs	(81.0 %)
Downtime:	27.0	hrs	(19.0 %)

1.5.1 FIT

The cement in the 9 5/8" shoe track and 4 m new formation was drilled out with a motor assembly and a Smith 8 1/2" MA74PX bit using 1,35 SG Oil based mud. A formation integrity test (FIT) confirmed formation strength of 1,50 SG equivalent mud weight (EMW) at 2640m MD.

1.5.2 Drilling

Continued drilling 8 1/2" hole with the motor assembly and a Smith 8 1/2" MA74PX bit using 1.35 SG oil base mud as drilling fluid and drilled down to coring point at 2690 m and pulled out of hole.

Ran in hole after coring with a rotary assembly and a Smith 8 1/2" MA74PX bit and drilled 8 1/2" hole to well TD at 2865.0 m A wiper trip was performed prior to pulling out of hole

1.5.3 Coring

A core was cut from 2690 to 2818 m using a Sequrity Diamond Board 8 1/2" FC274RLI core bit from. The core recovery was 27.7 m or 100 %.

1.5.4 Logging

The well was logged according to the logging program. The following runs were run;

WIRELINE logs:

Run:	Toolstring:	Date:	Logged interval (mRKB)	Comments:
1A	GR/MDT	28/09 - 29/09.01	2857.7 - 2669.2	26 pressure points, 25 good.
1A	GR/VSP/DSI	30/09.01	2860.0 - 2100.0	0 offset VSP
1B	GR/MDT	30/09 - 01/10.01	2735.0	Misrun due to Power Cartridge failure.
1C	GR/MDT	01/10.01	2716.0 - 2735.0	Oil sampling

1.6 Plug and Abandonment

Total time used:	109.5 hrs	
Operational time:	77.5 hrs	(70.8 %)
Downtime:	32.0 hrs	(29.2 %)

The well was permanently abandoned with cement plug from TD to 50 m inside the 9 5/8" casing. The cement plug was not tagged with the required 10 mT down force and a 9 5/8" Bridge plug was run as pressure barrier and set at 2566 m. The Bridge plug was then pressure tested to 176 bar (70 bar above LOT).

A 200 m cement plug was dumped on top of the bridge plug after the pressure test

The 9 5/8" casing was then cut at 357.5 and the 9 5/8" casing and seal assembly was pulled in one go (no lock-ring installed on the 9 5/8" casing).

A cement plug was set from 450 m to 150 using a Parabow and foundation for the plug. The plug was finally tagged after waiting for 18 hrs at 180 m with 10 mT. The plug was pressure tested to 110 bar (70 bar above LOT).

The 20" was cut 5 meters below seabed and pulled to together with the 18 5/8" wellhead. The 30" casing was then cut and retrieved together with the PGB. A final seabed survey was performed as well while anchor handling and location was left 7 October 2001 at 24:00 hrs.

1.7 Recommendations

Drilling of long 12 1/4" section with OBM and full removal off all cuttings to shore for destruction requires a good logistics plan. A 12 1/4" hole requires 1 skip per stand drilled, while in the 8 1/2" section one can drill 3 stands per skip as a rule of thumb.

The use of motor together with a proper bit and oil based mud greatly increases the ROP even if a motor is not required for steering purposes.

The bit selection was optimised to use both new and rerun bits. In summary there were ten hole sections drilled all together on Wells: 30/6-26 and 30/6-27. This was achieved using only four new drill bits (three on 30/6-26 and one on 30/6-27). Two of the new bits used on 30/6-26 were rerun on the second well 30/6-27. The remaining four sections were drilled using rerun bits from wells drilled prior to 30/6-26 and 30/6-27. This methodology allowed a considerable bit cost save in with no compromise in drilling performance.

During the Plug and Abandonment considerable time was spent waiting for cement to set up. In the end the bottom plug could not be tagged even after waiting for 24 hrs after the cement was pumped. In these type of well where the open hole is cemented from TD into the 9 5/8" casing, it recommended dress of the top of the cement, pull out of hole and run a 9 5/8" bridge plug as the pressure barrier. Considerable time is saved compared to waiting for cement to cure. In addition a 200 m cement plug should be dumped on top of the plugs in order to comply with Norsk Hydro's Steering documentation on Plug and Abandonment.

The same conclusion can be given for the top barrier set in wells that are permanently abandoned. The 9 5/8" casing should be cut at a depth that enables a bridge plug to be run, with 200 m of cement dumped on top, resulting in the top of cement being less than 50 m below seabed. After cutting and retrieval of the 9 5/8" casing , it is recommended to set at top bridge plug just above the 9 5/8" cut. In this case a 13 3/8" bridge plug. This plug should be pressure to 70 bar above the 13 3/8" leak of pressure and a 200 m cement plug can then be dumped on top of the bridge plug. No time is spend waiting for cement to cure and time is most likely saved.

GENERAL INFORMATION ON WELL 30/6-26

Field : GAMMA VEST **Country** : NORWAY

Licence : 53 **Installation** : TRANSOCEAN ARCTIC

UTM zone : 31 **Central Median** : 3' E **Horiz. Datum:** ED50

Location coordinates:		**Surface**	**Target**
UTM	**North [m]:**	6710374.7	6710339.0
UTM	**East [m]:**	484106.5	484162.0
Geographical	**North :**	60 31'39.70"	603138,56
Geographical	**East :**	02 42'37.61"	024241,26

Water Depth: 108.5 **m** **Reference Point Height:** 24.0 **m**

Formation at TD: AMUND/BURTON at 2598 m MD

Operators:	NORSK HYDRO PRODUKSJON A/S	**Share:** 22.23 **%**
Partners:	PETORO	**Share:** 50.78 **%**
	DEN NORSKE STATS OLJESELSKAP A/S	14.00 **%**
	TOTALFINAELF	8.65 **%**
	EXXON MOBIL	4.33 **%**

Total depth (RKB) : 2865.0 **m MD** 2859.5 **m TVD**

TIME SUMMARY

Start Time : 2001-09-14 02:00:00

Spudding date : 2001-09-15

Abandonment date : 2001-10-07

Main operation	**Hours**	**Days**	**%**
MOBILIZATION	30.5	1.3	5.4
DRILLING	255.5	10.6	45.2
FORMATION EVALUATION MWD	2.0	0.1	0.4
FORMATION EVALUATION LOGGING	53.5	2.2	9.5
FORMATION EVALUATION CORING	27.0	1.1	4.8
PLUG AND ABANDONMENT	77.5	3.2	13.7
DOWNTIME MOBILIZATION	32.5	1.4	5.8
DOWNTIME DRILLING	28.0	1.2	5.0
DOWNTIME FORM. EVAL. LOGGING	26.5	1.1	4.7
DOWNTIME PLUG AND ABANDONMENT	32.0	1.3	5.7
Sum:	**565.0**	**23.5**	

Hole and casing record

Hole	**Track**	**Depth [m MD]**	**Casing/Tubing**	**Track**	**Depth [m MD]**
36"		193.0	30"		193.0
17 1/2"		1223.0	13 3/8"		1217.4
12 1/4"		2636.0	9 5/8"		2631.6
8 1/2"		2865.0			

Well status: PERMANENTLY ABANDONED

BRØNN 30/6-26 "Gamma Vest"

Periode 01/2002

EDI	TEKST	BOKFØRT TOTAL	DAGRAPP ESTIMAT	EVT. KORR.	NY FINAL COST
0	EMPLOYEE RELATED COS	4,426,662	5,088,333	0	5,088,333
1	RIGCOSTS	40,186,990	42,280,358	-1,093,368	41,186,990
2	RIG SUPPORT COSTS/REII	2,964,810	5,609,992	-645,182	4,964,810
3A	FUEL/LUB	1,298,418	1,183,333	115,085	1,298,418
3C	BITS	1,099,775	2,771,028	-671,253	2,099,775
3D	CASING/CASING EQUIPME	3,880,584	5,121,644	-541,060	4,580,584
3E	WELLHEAD/X-MASTREE	944,122	1,583,360	-639,238	944,122
3F	CEMENT/CEMENT ADDITIV	1,200,112	594,748	605,364	1,200,112
3G	MUD	2,976,874	2,496,505	480,369	2,976,874
0	0	0	0	0	0
					0
4B	CHARTERFLY		100,000	-100,000	0
4C	OTHER TRANSPORTATION	55,123	118,333	0	118,333
4D	STANDBY VESSEL	1,660,177	1,656,667	3,510	1,660,177
4F	HELICOPTER TRANSPORT	746,808	994,000	-247,192	746,808
4G	POOL VESSEL -*	9,361,998	7,316,667	2,045,331	9,361,998
5A	CORING	329,646	275,000	54,646	329,646
5B	DRILLING TOOLS	0	855,778	-355,778	500,000
5C	CUTTING OF CASING	317,363	448,486	-131,123	317,363
5D	COMPLETION SERVICES	0	0	0	0
5E	PERFORATION	0	0	0	0
5F	MWD SERVICES	93,512	1,080,511	0	1,080,511
5G	CASING OPERATIONS	270,088	500,000	-29,912	470,088
5H	MUD LOG - Noe tidsrel. + no	328,169	722,786	-294,617	428,169
5H	MUD SERVICES	0	0	0	0
5I	CEMENTING SERVICES	655,051	591,667	63,384	655,051
5J	ELECTRICAL LOGGING	4,874,240	4,200,000	674,240	4,874,240
5K	VSP- DSL	0	400,000	0	400,000
5L	PROD TESTING	1,956,939	266,250	1,690,689	1,956,939
5M	DIVING/ROV	690,998	902,694	-211,696	690,998
5N	RIGPOOL	639,095	544,333	94,762	639,095
5N	DIVERSE	992,037	2,655,540	0	2,655,540
6A	SITE SURVEY	0	450,000		450,000
6B	RIG POSITIONING	337,350	500,000	-162,650	337,350
6C	DRILLING SITE CLEAN UP	0			
7	WAREHOUSE COSTS	668,512	1,301,667		1,301,667
					0
8	LAB COST	0	3,500,000	-500000	3,000,000
SUM		82,955,453	96,109,680	204,311	93,313,991

AVSETNING BORING 12,725,384

DOWNTIME REPORT TRANSOCEAN ARCTIC

Last 189 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOA	30/6-26	2001-09-14	1	5.5	Other	TRANSOCEAN OFFSHORE EUROPE LIMITED		Calibrating and testing new HPR system.		RIG MOVE/SKIDDI				
TOA	30/6-26	2001-09-14	2	7.0	Waiting for materials/equip	NORSK HYDRO A/S		Spudding equipment not recieved at previous location due to over booking of boats. Travel interrupted to take on board spud equipment. At the same time tested new SPM.		RIG MOVE/SKIDDI	OTHER			
TOA	30/6-26	2001-09-18	3	18.5	Other	NORSK HYDRO A/S		String stood up at 194 m. Engaged circulating tool and slowly washed/worked string down to 196 m. No further progress possible. Free upwards at all times. Washed with 2500 lpm, max set down weigth 10 ton.		CASING				
TOA	30/6-26	2001-09-21	4	3.0	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Attempted to pressure test iBOP - no good. Remove torque wrench and change out iBOP valve.	WELLCONTROL EQUIPMENT/SYS	BOP INSTALLATIOI AND TESTING	DRILLING CONTRACTOI	337.03	Inside BOP, Kelly Cock etc.	
TOA	30/6-26	2001-09-21	5	3.5	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Lost power to DDM. Picked up off bottom to effect repair. One of low pressure supply pumps to the high pressure DDM pumps failed.	DRILL FLOOR EQUIPMENT/SYS	DRILLING	DRILLING CONTRACTOI	317.00	Other Drill Floor Eq./Syst.	
TOA	30/6-26	2001-09-22	6	0.5	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Picked up off bottom and changed out leaking washpipe.	DRILL FLOOR EQUIPMENT/SYS	DRILLING	DRILLING CONTRACTOI	317.00	Other Drill Floor Eq./Syst.	

Norsk Hydro

2002-03-22

DOWNTIME REPORT TRANSOCEAN ARCTIC

Last 189 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOA	30/6-26	2001-09-25	7	1.0	Equipment failure	BJ SERVICES	BJ SERVICES	Attempted to cement but automatic mixing equipment failed. Switched to manual operation.	SERVICE EQUIPMENT/SYS	CEMENTING	CEMENTING	371.01	Cement: Unit/pipe	
TOA	30/6-26	2001-09-25	8	1.0	Equipment failure	DRIL-QUIP	DRIL-QUIP	Released running tool and picked up - no shear off seen. Washed seal area and set down. Attempted pressure test but fluid coming out of drill pipe.	SERVICE EQUIPMENT/SYS	WELLHEAD AND GUIDEBASE OPERATIONS	WELLHEAD	376.01	Wellhead	
TOA	30/6-26	2001-09-26	9	0.5	Other	ANADRILL		Re-logged 2632m - 2654m with LWD tools.		DRILLING				
TOA	30/6-26	2001-09-30	10	2.5	Equipment failure	SCHLUMBERG WIRELINE	SCHLUMBERG WIRELINE	Communication problem during tool check. Found to be faulty GR tool.	SERVICE EQUIPMENT/SYS	LOGGING	ELECTRIC LOGGING	374.10	Gamma Ray/CCL equipment	
TOA	30/6-26	2001-09-30	11	13.0	Equipment failure	SCHLUMBERG WIRELINE	OILTOOLS A/S	Rerun of MDT tool due to failure to fill SPMC samplers at the 2 oil sample depths during the initial MDT run.	SERVICE EQUIPMENT/SYS	LOGGING	ELECTRIC LOGGING	374.02	Formation Tester (RFT)	
TOA	30/6-26	2001-10-01	12	11.0	Equipment failure	SCHLUMBERG WIRELINE	SCHLUMBERG WIRELINE	Log run #3 - Rerun of MDT tool. Troubleshoot power failure. Lost power to MDT tool.Checked out surface system. POOH and found faulty power cartridge and short in cable head. Changed out faulty parts and RIH.	SERVICE EQUIPMENT/SYS	LOGGING	ELECTRIC LOGGING	374.02	Formation Tester (RFT)	
TOA	30/6-26	2001-10-02	13	12.5	Waiting for cement to cure	BJ SERVICES		Wait on cement to cure.		PLUG AND ABANDONMEI				

Norsk Hydro

2002-03-22

DOWNTIME REPORT TRANSOCEAN ARCTIC

Last 189 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOA	30/6-26	2001-10-03	13.1	11.5	Other	BJ SERVICES		Cement not setting up within specified time. Circulated bottoms up. "Green" cement over shakers. POOH to run bridge plug.		PLUG AND ABANDONMEI				
TOA	30/6-26	2001-10-05	14	6.0	Waiting for cement to cure	BJ SERVICES		Waited on cement to cure. Circulated bottoms. "Green" cement in return.		PLUG AND ABANDONMEI				
TOA	30/6-26	2001-10-05	15	2.0	Equipment failure	BJ SERVICES	BJ SERVICES	Attempted to test cement plug. No success. Trouble shoot on surface equipment. Changed valve on cement unit.	SERVICE EQUIPMENT/SYS	PLUG AND ABANDONMEI	CEMENTING	371.01	Cement: Unit/pipe	
TOA	30/6-26	2001-10-06	16	20.0	Waiting on weather			Weather deteriorating, not able to perform anchor handling or obtain close stand-by. Waiting on weather.		PLUG AND ABANDONMEI				
			Sum:	119.0										
			Total Sum:	119.0										

DAILY REPORT ON WELL 30/6-26

Daily report no : 1 **Date:** 2001-09-14

Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0.00 sg

Stop time	Description
02:00	No activety. Rig on well 25/2-16S
06:00	Calibrating and testing new HPR system.
10:00	Rig en route to well 30/6-26 with Maersk Assister in bridle.
17:00	Travel interrupted to take on board spud equipment. At the same time tested new SPM.
18:30	Tested SPM system.
23:59	Rig en route to well 30/5-26. Position at midnigth: N 060 deg 26' 49, E 002 deg 40' 36. Average speed since stop 5,5 knots. Total distance sailed from previous location 36 nautical miles.

Daily report no : 2 **Date:** 2001-09-15

Midnight depth : 195 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.08 sg

Stop time	Description
01:30	Rig in transit. Average speed 5,5 knots since stop.
13:30	Rig on location. Anchor handling . Tested all anchors to 180 ton. Total distance travelled 47 nautical miles.
14:30	Ran in water with 36" hole opener assembly and tagged seabed with 5 ton at 132 m.
19:00	Drilled 36" hole from 132 m to 193 m (17 1/2" bit at 195 m.).
20:00	Displaced hole to 1,50 SG mud and performed wipertrip to 5 m below sea bed. Displaced hole once more to 1,50 SG mud.
21:30	POOH to 5 m below sea bed. ROV spotted 2 bouys and transponder close to hole. Continued POOH and racked back drilling assembly.
23:59	Held safety meeting. Rigged up and ran 30" conductor.

Daily report no : 3 **Date:** 2001-09-16

Midnight depth : 195 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.08 sg

Stop time	Description
01:30	Made up conductor running tool. Ran conductor and hung off same in moonpool. Released running tool. Pulled out and racked same. Ran 5 " stinger inside conductor. Made up running tool and engaged same in conductor.
02:00	Released PGB fastenings.
03:00	Ran casing. Stabbed into hole. Took weigth at 176 m. Had 15-20 drag to bottom. ROV confirmed 1,90 m stick up. Inclination 1 deg.
03:30	Circulated 15 m3 sea water with 2500 lpm. Pressure tested surface lines to 170 bar.
04:30	Mixed and pumped 19 m3 1,56 SG lead cement followed by 19 m3 1,95 SG tail cement. Displaced with 3,96 m3 sea water from cement unit.
10:30	Waited on cement.
11:00	Released conductor running tool.
12:00	Pooh. Laid out running tool and pup joint from stinger.
14:30	Held safety meeting. Made up 20" hanger, installed plugs and racked assembly in derrick.
15:00	Laid out 17 1/2" bit and 36" hole opener.
17:30	Made up 26 " bit and near bit stabiliser. Installed guide frame, stabbed into well and ran in hole to 170 m.
18:00	Washed down and tagged cement at 188 m.
19:00	Drilled hard cement from 188 m to shoe at 193 m. Drilled out shoe and cleaned out 17 1/2" rathole to 195 m. Reamed untill able to pass through shoe several times without rotation. Swept hole with 10 m3 hi-vis.
20:30	POOH and laid out 26" bit.
22:00	Picked up 17 1/2" motor assembly.
23:59	Ran in water with 17 1/2" motor assembly. Installed guide fram. Stabbed into wellhead and retrieved guide frame. Ran in hole to 170 m.

Daily report no : 4 **Date:** 2001-09-17

Midnight depth : 1025 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.08 sg

Stop time	Description
01:30	Commenced drilling 17 1/2" hole from 195 m to 230 m.
23:59	Kicked off well and oriented and drilled 17 1/2" hole from 230 m to 1025 m.

DAILY REPORT ON WELL 30/6-26

Daily report no : 5 **Date:** 2001-09-18

Midnight depth : 1223 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.40 sg

Stop time	Description
05:30	Continued drilling 17 1/2" hole from 1025 m to section TD at 1223 m.
07:00	Pumped 20 m3 hi-vis and displaced hole to 1,40 SG mud.
09:30	Performed wiper trip to 597 m.
10:30	Displaced hole to 1,40 SG KCL mud.
13:30	POOH and racked 17 1/2" motor assembly in derrick.
14:30	Made up and loaded cement head. Racked same back in derrick.
16:30	Rigged up to run casing.
20:00	Picked up 13 3/8" shoe and shoe track. Ran in water with casing and stabbed into well head. Ran in hole to casing shoe at 193 m.
21:00	Installed La Fleur circulating tool.
23:59	String stood up at 194 m. Engaged circulating tool and slowly washed/worked string down to 196 m. No further progress possible. Free upwards at all times. Washed with 2500 lpm, max set down weigth 10 ton.

Daily report no : 6 **Date:** 2001-09-19

Midnight depth : 1223 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.40 sg

Stop time	Description
01:00	Continued attempting to pass 196 m with 13 3/8" casing. No succes.
04:00	Pulled out of well with 13 3/8" casing. Laid out 8 joints and hung off 9 joints in the moonpool. Rigged down casing handling equipment.
05:30	Made up 17 1/2" BHA and ran in to the 30" casing shoe at 193m.
09:00	Drilled and reamed through the rathole section below the 30" shoe. Continued to wash down to 286m. Hole clear.
10:00	Pulled out of hole and racked back the 17 1/2" BHA.
11:00	Rigged up to run 13 3/8" casing.
13:30	Moved the hung off 13 3/8" casing below rotary table and picked up to rig floor using wire slings.
15:30	Ran 13 3/8" casing. No problems through rathole section 193-196m.
20:00	Continued to run 13 3/8" casing.
21:00	Picked up and made up the 18 3/4" wellhead housing to the casing string.
22:00	Ran 13 3/8" casing into the well on 5" drill pipe - no problems.
22:30	Landed casing / 18 3/4" wellhead in 30" housing.
23:00	Circulated the casing contents.
23:59	Rigged up cement lines and tested them. Commenced cement job on 13 3/8" casing.

Daily report no : 7 **Date:** 2001-09-20

Midnight depth : 1223 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.40 sg

Stop time	Description
03:00	Continued cementing 13 3/8" casing. Total of 168m3 lead slurry at 1,44sg followed by 20m3 tail slurry at 1,92sg. Released dart and sheared out top plug using cement unit.
03:30	Displaced top wiper plug with rig pumps. Bumped plug with 70bar (35 bar over final displacement pressure)
04:00	Pressure tested casing to 165bar using cement unit.
04:30	Checked for backflow - none. Released running tool.
06:00	Racked cement stand and pulled out of hole. Laid out 2 jts + 2 pups of 5" drill pipe plus running tool.
08:00	Rigged up to run BOP stack. Held safety meeting.
16:30	Prepared and ran BOP stack.
18:00	Picked up slip joint and installed pod saddles. Installed support ring and landed BOP. Latched connector and performed overpull test to 25 ton.
20:00	Installed diverter and laid out BOP handling equipment.
23:30	Ran down to wellhead with BOP test plug and tested connector to 290 bar. Function tested both pods. Pulled out of well and laid out test plug.
23:59	Made up and ran wear bushing into well.

Daily report no : 8 **Date:** 2001-09-21

Midnight depth : 1226 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.20 sg

Stop time	Description
00:30	Set wear bushing in wellhead and pulled out of hole. Laid down wear bushing running tool.
03:00	Laid down 17 1/2" BHA.
04:30	Picked up and racked back the bottom stand of the 12 1/4" BHA.

DAILY REPORT ON WELL 30/6-26

Daily report no : 8 **Date:** 2001-09-21

Midnight depth : 1226 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.20 sg

Stop time	Description
06:30	Made up 9 5/8" casing hanger and accessories and racked back in the derrick.
07:30	Serviced and loaded ball and dart into cement head and racked back in the derrick.
08:30	Pressure tested washpipe, hose and DDM to 345 bar.
11:00	Attempted to pressure test iBOP - no good. Remove torque wrench and change out iBOP valve.
11:30	Tested iBOP to 345 bar.
12:00	Re-installed torque wrench on DDM.
12:30	Pressure tested kelly cock to 345 bar.
15:00	Picked up and ran the 12 1/4" BHA into the well.
16:30	Ran in hole to 1055m.
17:00	Performed choke drill with drilling crew.
17:30	Contiued to run in hole to 1141m. Washed down and tagged cement plugs at 1176m.
19:30	Drilled cement plugs and float collar.
22:30	Lost power to DDM. Picked up off bottom to effect repair.
23:30	Drilled out cement in shoe track, float shoe and cleaned out rathole. Drilled 3m new hole.
23:59	Circulated the well clean with a high vis sweep. Spotted a 10m3 high vis pill on the bottom of the well.

Daily report no : 9 **Date:** 2001-09-22

Midnight depth : 2015 m MD **Estimated PP:** 1.25 sg **Mud weight:** 1.45 sg

Stop time	Description
01:00	Performed leak off test to 1,70 sg EMW.
02:00	Displaced well to 1,20 sg OBM.
03:00	Installed cuttings conveyor in dump shute.
10:00	Drilled ahead in 12 1/4" hole from 1226m to 1404m.
10:30	Work on low pressure supply pumps to DDM.
12:00	Drilled ahead in 12 1/4" hole from 1404m to 1431m.
15:00	Drilled ahead in 12 1/4" hole from 1431m to 1575m.
15:30	Picked up off bottom and changed out leaking washpipe.
23:59	Drilled ahead in 12 1/4" hole from 1575m to 2015m.

Daily report no : 10 **Date:** 2001-09-23

Midnight depth : 2620 m MD **Estimated PP:** 1.22 sg **Mud weight:** 1.45 sg

Stop time	Description
23:59	Drilled 12 1/4" hole from 2015m to 2620m.

Daily report no : 11 **Date:** 2001-09-24

Midnight depth : 2636 m MD **Estimated PP:** 1.20 sg **Mud weight:** 1.50 sg

Stop time	Description
01:00	Drilled 12 1/4" hole from 2620m to 2636m - casing point for hole section.
03:00	Circulated well clean while raising mud weight to 1,50 sg.
09:00	Pulled out of hole to run casing.
11:00	Pulled wear bushing from wellhead.
12:00	Rigged up to run casing.
23:59	Ran 9 5/8" casing as per programme.

Daily report no : 12 **Date:** 2001-09-25

Midnight depth : 2636 m MD **Estimated PP:** 1.20 sg **Mud weight:** 1.50 sg

Stop time	Description
08:00	Continued to pick up and run 9 5/8" casing.
08:30	Changed handling equipment and picked up and made up the casing hanger stand.
09:30	Ran casing into the well on 5" drill pipe and landed in the wellhead.
10:00	Completed circulation of casing contents.
10:30	Tested surface lines. Pumped 4 m3 base oil preflush and 15 m3 MSC-G spacer with rig pumps.
11:30	Attempted to cement but automatic mixing equipment failed. Switched to manual operation.

DAILY REPORT ON WELL 30/6-26

Daily report no : 12 **Date:** 2001-09-25

Midnight depth : 2636 m MD **Estimated PP:** 1.20 sg **Mud weight:** 1.50 sg

Stop time	Description
12:00	Mixed and pumped 22,5 m3 of 1.92 sg cement slurry. Dropped dart and sheared out with cement unit.
13:00	Displaced cement with rig pumps. Bumped plug with 5840 strokes.
13:30	Tested casing to 330 bar. Bled pressure off and checked the floats holding.
14:00	Set seal assembly and pressure tested to 345 bar.
16:30	Tested BOP's and related equipment to 345 bar.
17:30	Released running tool and picked up - no shear off seen. Washed seal area and set down. Attempted pressure test but fluid coming out of drill pipe.
18:30	POOH and inspected casing hanger running tool. Seals on running tool were found to be damaged.
20:00	Ran wear bushing on running tool with cup tester below. Set wear bushing and tested seal assembly to 345 bar. Sheared off and POOH.
22:30	Laid out 12 1/4" BHA.
23:59	Pressure tested drilling stand, iBOP and kelly hose to 345 bar.

Daily report no : 13 **Date:** 2001-09-26

Midnight depth : 2690 m MD **Estimated PP:** 1.15 sg **Mud weight:** 1.35 sg

Stop time	Description
05:00	Make up 8 1/2" BHA.
09:00	RIH with 8 1/2" BHA on 5" drill pipe.
10:00	Performed choke drill and stripping drill.
12:30	Drilled out cement wiper plugs, float collar, shoe track and float shoe.
13:00	Cleaned out rathole and drilled 4m new formation 2636m - 2640m.
13:30	Circulated the well clean and to even out mud weight.
14:00	Performed F.I.T. to 1.50 sg EMW.
14:30	Drilled 2640m - 2654m.
15:00	Re-logged 2632m - 2654m with LWD tools.
17:00	Drilled 2654m - 2690m.
18:00	Circulating bottoms up for sample.
18:30	Flowchecked, pumped slug and POOH to 9 5/8" shoe.
23:00	Continued to POOH and rack back BHA.
23:59	Picked up and began to make up the core barrel.

Daily report no : 14 **Date:** 2001-09-27

Midnight depth : 2750 m MD **Estimated PP:** 1.15 sg **Mud weight:** 1.35 sg

Stop time	Description
00:30	Continued to make up core barrel.
01:30	Made up and ran coring BHA.
05:00	Ran coring BHA into the well on 5" drill pipe.
06:00	Slipped and cut drilling line.
06:30	Spaced out for coring and ran in hole to 2660m.
07:00	Washed down 2660m - 2690m and tagged bottom.
07:30	Dropped ball and circulated down to seat.
08:00	Cut core # 1 2690m - 2818m.
08:30	Circulated to complete bottoms up from tagging bottom with core barrel.
09:00	Flowchecked, pumped slug and pulled out of hole to 9 5/8" shoe.
12:00	Pulled out of hole with core #1.
13:30	Laid out core and racked core barrel in the derrick.
16:30	Made up drilling BHA.
19:30	Ran into well with drilling BHA to 9 5/8" casing shoe.
20:00	Ran in to 2657m. Washed down to 2670m.
22:00	Reamed overlap and cored hole section 2670m to 2718m.
23:59	Drilling 2718m to 2750m.

DAILY REPORT ON WELL 30/6-26

Daily report no : 15 **Date:** 2001-09-28

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.35 sg

Stop time	Description
05:30	Drilled ahead in 8 1/2" hole 2750m to 2865m.
06:00	Circulated bottoms up.
07:00	Flowchecked and pulled to 9 5/8" shoe for a wiper trip.
07:30	Ran in hole and washed last stand down to bottom.
08:30	Circulated the well clean.
09:00	Flowchecked well then continued circulation.
10:00	Pumped slug and POOH to the 9 5/8" shoe. Flowchecked well.
12:30	POOH and racked top section of BHA.
13:30	Laid out LWD tools.
14:00	Clear and clean the rig floor.
17:00	Rigged up for wireline logging. Picked up, made up and checked out MDT tool.
23:59	Ran log #1 - MDT tool.

Daily report no : 16 **Date:** 2001-09-29

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.35 sg

Stop time	Description
23:59	Ran log #1 - MDT tool.

Daily report no : 17 **Date:** 2001-09-30

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.35 sg

Stop time	Description
04:00	Completed log run #1 - MDT tool.
06:30	Broke down and laid out MDT tool. Prepared to pick up and run VSP-DSI tool.
09:00	Communication problem during tool check. Found to be faulty GR tool.
09:30	Did final checks on VSP-DSI tool.
16:00	Log run #2 VSP-DSI. Proceeded to do VSP logging.
20:00	Log run #2 VSP-DSI. Logged with DSI tool.
21:30	Laid out VSP-DSI toolstring.
23:30	Made up MDT toolstring and checked functions/continuity.
23:59	Re-ran MDT tool. Log run #3.

Daily report no : 18 **Date:** 2001-10-01

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.35 sg

Stop time	Description
03:30	Log run #3 - Rerun of MDT tool. RIH,tied in, set tool at 2735,5m and began pumping.
05:00	Log run #3 - Rerun of MDT tool. Troubleshoot power failure.
07:00	Log run #3 - Rerun of MDT tool. POOH to surface.
10:30	Log run #3 - Rerun of MDT tool. Trouble shoot tool.
14:30	Log run #4 - Rerun of MDT tool. RIH,tied in,set tool at 2735m and began pumping.
20:30	Log run #4 - Rerun of MDT tool. Took samples at 2735m and 2716m. POOH with tool.
21:30	Log run #4 - Rerun of MDT tool. Broke down and laid out tool string..
22:00	Rigged down E-line logging equipment and cleared rig floor.
23:59	Ran 232m of 3 1/2" drill pipe into well on 5" drill pipe string.

Daily report no : 19 **Date:** 2001-10-02

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.36 sg

Stop time	Description
01:30	Continued to RIH with 232m 3 1/2" drill pipe on 5" drill pipe string.
03:00	Circulated bottoms up to remove gas from the well and condition mud. Rigged up to cement.
04:00	Cement plug #1 - 2865m to 2682m - Pumped 5m3 weighted spacer. Mixed and pumped 9m3 of 1,90sg cement slurry.
04:30	Spot as balanced plug by displacing cement plug with rig pump (1,4m3 spacer and 19,1m3 mud)
05:30	Pulled slowly out of plug 2865m to 2682m.
06:00	Circulated out contaminated spacer and cement.

DAILY REPORT ON WELL 30/6-26

Daily report no : 19 **Date:** 2001-10-02

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.36 sg

Stop time	Description
06:30	Cement plug #2 - 2682m to 2486m - Pumped 5m3 weighted spacer with rig pump. Mixed and pumped 7,5m3 of 1,90sg slurry.
07:00	Spot as balanced plug by displacing cement plug with rig pump (1,4m3 spacer and 17,6m3 mud)
07:30	Pulled slowly out of plug up to 2420m.
08:30	Circulated out contaminated spacer.
11:30	Pumped slug and POOH. Racked back 3 1/2" stinger.
12:30	Loaded cement head with dart and ball for future job and racked in derrick.
13:00	Made up 9 5/8" casing cutter assembly and swivel assembly and racked back in derrick.
13:30	Make up 8 1/2" BHA and run into well.
14:30	Made up 9 5/8" spear assembly and racked back in derrick.
17:00	Ran in hole with 8 1/2" bit.
18:00	Washed down 2396m to 2544m and attempted to tag cement. No resistance.
19:00	Circulated bottoms up for sample - mainly spacer with trace of cement.
19:30	Washed down 2544m to 2563m and attempted to tag cement - no resistance.
21:00	Circulated bottoms up for sample - "green" cement at bottoms up.
23:59	Wait on cement to cure.

Daily report no : 20 **Date:** 2001-10-03

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.36 sg

Stop time	Description
00:30	Waited on cement to cure - Washed down 2563m to 2570m and attempted to tag hard cement - no resistance seen.
01:00	Waited on cement to cure - Circulated bottoms up - "green" cement over shakers.
05:00	Waited on cement to cure.
05:30	Waited on cement to cure - Washed down 2570m to 2577m and attempted to tag hard cement - no resistance seen.
06:00	Waited on cement to cure - Circulated bottoms up - "green" cement over shakers.
09:00	Waited on cement to cure.
09:30	Waited on cement to cure - Washed down from 2577 m to 2582 m.
10:00	Circulated bottoms up. "Green" cement over shakers.
12:30	Pumped slug and POOH.
13:00	Cleaned rig floor.
19:00	Ran in hole with 9 5/8" bridge plug, circulating sub and 233 m 3 1/2" drill pipe on 5" drill pipe to setting depth 2566 m..
19:30	Dropped ball and set bridge plug at 2566 m with 250 bar. Released running tool and set down 3 ton to confirm plug set.
20:30	Pressure tested plug aganinst BOP to 176 bar/10 min.
21:00	Mixed and pumped 10.6 m3 1,65 SG spacer and 7,5 m3 1,90 SG "G" neat cement. Spotted as balanced plug with weighed spacer to balance and 1,35 SG mud.
23:00	POOH to 2000 m.
23:30	Pumped and left 50 m3 slop with average weigth 1,30 SG in hole.
23:59	POOH from 2000 m to 1400 m.

Daily report no : 21 **Date:** 2001-10-04

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.36 sg

Stop time	Description
02:00	Continued POOH from 1400 m to surface.
02:30	Made up 9 5/8"casing cutter. Tested sweep.
03:30	Ran in hole with casing cutter. Landed with annular swivel in wear bushing with cutters spaced out at 357 m.
04:00	Cut 9 5/8" casing at 357,5 m. Flow checked well.
04:30	POOH with 9 5/8" cutting assembly.
05:30	Ran in hole with 9 5/8" casing spear.
06:00	Engaged spear and pulled 9 5/8" casing free with 15 ton over pull. Flow checked well with seal assembly above wellhead.
07:30	POOH with spear and 9 5/8" casing.
08:00	Held safety meeting. Released spear and prepared to lay down casing.
10:00	Laid out 9 5/8" casing.
10:30	Laid out 9 5/8" casing handling equipment and cleaned rig floor.
13:00	Made up parabow to 3 1/2" drill pipe and ran in hole to 453 m.
13:30	Dropped ball and set parabow at 453 m. Pulled free of parabow to 450 m.
14:30	Displaced well and BOP to seawater.

DAILY REPORT ON WELL 30/6-26

Daily report no : 21 **Date:** 2001-10-04

Midnight depth : 2865 m MD **Estimated PP:** 1.18 sg **Mud weight:** 1.36 sg

Stop time	Description
15:00	Pumped 10 m3 soap wash spacer with rig pumps. Mixed and pumped 19,6 m3 1,95 SG cement followed by 1 m3 seawater to balance. Spotted plug from 450 m to 150 m.
16:00	POOH to 150 m.
16:30	Circulated out exess cement and spacer.
17:00	POOH and laid out parabow running tool.
18:00	Made up jetting sub to 5" drill pipe. Ran in and jetted BOP. POOH and laid out sub.
19:00	Laid out 9 5/8" cutting and fishing assembly.
21:00	Made up 20"/30" cutting assembly.
21:30	Waited on cement to cure. Re-arranged drill collar stands in derrick. Cleaned rig floor.
22:00	Waited on cement to cure. Made up 1 stand 9 1/2" drill collars and racked in derrick.
23:00	Performed slip and cut on drilling line.
23:30	Waited on cement to cure. Prepared to pick up 9 1/2" MWD.
23:59	Waited on cement to cure. Commenced picking up 9 1/2" MWD and NMDC.

Daily report no : 22 **Date:** 2001-10-05

Midnight depth : 2865 m MD **Estimated PP:** sg **Mud weight:** 1.36 sg

Stop time	Description
01:30	Waited on cement to cure.
02:30	Made up 12 1/4" bit and ran in hole to 140 m.
03:00	Waited on cement to cure.
03:30	Washed down from 140 to 169 m. No firm cement seen.
04:00	Waited on cement to cure. Circulated bottoms up. "Green" cement in return.
05:00	Waited on cement to cure.
05:30	Washed down to 176 m. No cement seen. Circulated bottoms up. "Green" cement in returns.
09:00	Waited on cement.
09:30	Washed down and tagged firm cement with 10 ton at 180 m.
10:30	POOH and laid out 12 1/4" bit.
11:30	Prepared to retrieve BOP.
13:30	Attempted to test cement plug. No success. Trouble shoot on surface equipment.
14:00	Pressure tested cement plug to 110 bar (70 bar above leak off) with sea water. Good test.
15:00	Laid out diverter and installed lifting nipple on slip joint.
22:30	Unlatched and retrieved BOP while laying out riser.
23:00	Rigged down BOP handling equipment.
23:59	Picked up 20/30" cutting assembly. Installed guide wires and ran in hole to 68 m.

Daily report no : 23 **Date:** 2001-10-06

Midnight depth : 2865 m MD **Estimated PP:** sg **Mud weight:** 1.36 sg

Stop time	Description
01:00	Continued running in hole with 20/30" cutting assembly. Stabbed into wellhead and landed off in same. Confirmed with 5 ton over pull.
05:00	Cut 20/30" casing at 138 m. Only able to pull 20" casing free.
06:30	POOH with 18 3/4" wellhead and 20" casing stump. Laid all out.
07:30	Laid out lower part of cutting assembly.
09:00	Made up 30" retrieving tool, bumper sub, 8" drill collars and high tensile drill pipe.
10:00	Stabbed into well, landed and engaged retrieving tool.
10:30	Pulled 30" casing free with 250 ton over pull and POOH to moon pool.
11:30	Prepared to land and release 30" conductor from guidebase.
21:30	Weather deteriorating, not able to perform anchor handling or obtain close stand-by. Waiting on weather.
23:59	Waiting on weather for anchor handling. - Started retrieving conductor. Landed guide base on transporter and released conductor. Commenced laying out conductor pipe.

Daily report no : 24 **Date:** 2001-10-07

Midnight depth : 2865 m MD **Estimated PP:** sg **Mud weight:** 1.36 sg

Stop time	Description
03:00	Continued waiting on weather for anchor handling. Continued laying out 30" conductor. Rigged down 30" handling equipment.

DAILY REPORT ON WELL 30/6-26

Daily report no : 24 **Date:** 2001-10-07

Midnight depth : 2865 m MD **Estimated PP:** sg **Mud weight:** 1.36 sg

Stop time	Description
04:00	Waited on weather. Laid out cutting assembly.
07:30	Waited on weather. Made up 18 3/4" well head with plugs and racked same in derrick.
15:00	Retrieved all anchors.
23:59	Rigmove to well 30/6-27.

TIME DISTRIBUTION

Well: 30/6-26 **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN ARCTIC **Depth:** 2750.0 **m MD**
All sections **Stop date:** 2002-03-22

Operations	Hours	%	Hours	%	Acc. total
MOBILIZATION					
MOVING	11.0	1.95			
MOORING; RUNNING ANCHORS	12.0	2.12			
MOORING; PULLING ANCHORS	7.5	1.33			
Sum.			30.5	5.40	30.5
DRILLING					
BHA HANDLING/TESTING	21.0	3.72			
EQUIPMENT TEST	1.5	0.27			
MWD HANDLING/TESTING/SURVEYING	1.0	0.18			
TRIPPING IN CASED HOLE	8.5	1.50			
TRIPPING IN OPEN HOLE	15.0	2.65			
DRILLING	89.5	15.84			
OTHER	3.0	0.53			
WELLHEAD EQUIPMENT INSTALLATION	0.5	0.09			
CIRC. AND COND. MUD/HOLE	9.0	1.59			
WIPER TRIP	2.5	0.44			
CASING HANDLING/TESTING	38.0	6.73			
RUNNING CASING IN CASED HOLE	4.5	0.80			
RUNNING CASING IN OPEN HOLE	7.0	1.24			
PRIMARY CEMENTING	18.0	3.19			
DRILLING OUT CEMENT PLUG	7.0	1.24			
FORMATION STRENGTH TESTING	2.0	0.35			
BOP HANDLING	2.0	0.35			
BOP RUNNING/RETRIEVING	12.0	2.12			
BOP TESTING	8.0	1.42			
WELLHEAD EQUIPMENT HANDLING	5.5	0.97			
Sum.			255.5	45.22	286.0
FORMATION EVALUATION MWD					
LOGGING WITH MWD	2.0	0.35			
Sum.			2.0	0.35	288.0
FORMATION EVALUATION LOGGING					
LOGGING	4.0	0.71			
LOGGING EQUIPMENT HANDLING/TESTING	8.0	1.42			
FORMATION TESTER	35.0	6.19			
VERTICAL SEISMIC	6.5	1.15			
Sum.			53.5	9.47	341.5
FORMATION EVALUATION CORING					
BHA HANDLING/TESTING	4.0	0.71			
CIRCULATING FOR SAMPLE	1.0	0.18			
TRIPPING IN CASED HOLE	14.0	2.48			
CORING EQUIPMENT/CORE HANDLING	3.0	0.53			
TRIPPING IN OPEN HOLE	2.5	0.44			
CORING	0.5	0.09			
CIRC. AND COND. MUD/HOLE	1.0	0.18			
SLIP AND CUT DRILLING LINE	1.0	0.18			
Sum.			27.0	4.78	368.5
PLUG AND ABANDONMENT					
BHA HANDLING/TESTING	4.5	0.80			
TRIPPING IN CASED HOLE	7.0	1.24			
OTHER	1.0	0.18			
CIRC. AND COND. MUD/HOLE	1.5	0.27			
CASING HANDLING/TESTING	2.0	0.35			
TRIPPING FOR CEMENT JOB	14.0	2.48			
BOP HANDLING	2.5	0.44			
BOP RUNNING/RETRIEVING	7.5	1.33			
SET CEMENT PLUG	17.0	3.01			
TRIPPING OF CASING CUTTING EQUIPMENT	5.5	0.97			
CUT CASING/WELLHEAD	6.0	1.06			

TIME DISTRIBUTION

Well: 30/6-26 **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN ARCTIC **Depth:** 2750.0 **m MD**
All sections **Stop date:** 2002-03-22

Operations	Hours	%	Hours	%	Acc. total
PLUG AND ABANDONMENT					
CASING RETRIEVING	8.0	1.42			
SLIP AND CUT DRILLING LINE	1.0	0.18			
Sum.			77.5	13.72	446.0
DOWNTIME MOBILIZATION					
WAITING	27.0	4.78			
OTHER	5.5	0.97			
Sum.			32.5	5.75	478.5
DOWNTIME DRILLING					
EQUIPMENT FAILURE AND REPAIR	9.0	1.59			
OTHER	19.0	3.36			
Sum.			28.0	4.96	506.5
DOWNTIME FORM. EVAL. LOGGING					
EQUIPMENT FAILURE AND REPAIR	26.5	4.69			
Sum.			26.5	4.69	533.0
DOWNTIME PLUG AND ABANDONMENT					
EQUIPMENT FAILURE AND REPAIR	2.0	0.35			
WAITING	18.5	3.27			
CEMENTING	11.5	2.04			
Sum.			32.0	5.66	565.0
Reported time (100.0 % of well total 565.0 hours) :					565.0

HOLE DEVIATION

Well: 30/6-26 **Reference point:** RKB ; 24.0 **m** ABOVE MSL

Waterdepth: 108.5 **m** **Vertical to:** 123.7 **m** **Total Depth:** 2865.0 **m MD**

Utm zone: 31 **Central Median:** 3' E **Horizontal datum:** ED50

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

Wellhead Coordinates, UTM: **North :** 6710374.70 **m,** **East:** 484106.50 **m**

Official Surveys: Y **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]
0.10	0.00	0.00	MWD	5	0.10	0.00	0.00	0.00	0.00	0.00	0.00
123.80	0.20	142.40	MWD	5	123.80	-0.17	0.13	0.22	0.05	0.05	34.54
131.80	1.10	95.60	MWD	5	131.80	-0.19	0.22	0.29	3.65	3.38	-175.50
140.80	0.70	131.30	MWD	5	140.80	-0.23	0.34	0.42	2.23	-1.33	119.00
182.30	0.50	110.80	MWD	5	182.30	-0.47	0.70	0.84	0.21	-0.14	-14.82
189.70	0.40	91.80	MWD	5	189.70	-0.48	0.76	0.90	0.72	-0.41	-77.03
200.50	0.20	103.60	MWD	5	200.50	-0.48	0.82	0.95	0.58	-0.56	32.78
227.50	0.50	107.40	MWD	5	227.49	-0.53	0.97	1.11	0.33	0.33	4.22
255.30	1.00	103.30	MWD	5	255.29	-0.62	1.33	1.46	0.54	0.54	-4.42
313.80	5.80	124.10	MWD	5	313.67	-2.40	4.27	4.90	2.50	2.46	10.67
342.60	9.10	122.00	MWD	5	342.23	-4.42	7.41	8.63	3.45	3.44	-2.19
370.70	10.30	123.50	MWD	5	369.92	-6.99	11.39	13.36	1.31	1.28	1.60
400.10	10.10	122.30	MWD	5	398.86	-9.81	15.76	18.57	0.30	-0.20	-1.22
428.00	9.70	123.70	MWD	5	426.34	-12.42	19.78	23.36	0.50	-0.43	1.51
456.70	10.00	125.00	MWD	5	454.62	-15.20	23.84	28.27	0.39	0.31	1.36
484.30	10.80	124.00	MWD	5	481.77	-18.02	27.94	33.25	0.89	0.87	-1.09
513.20	10.60	123.60	MWD	5	510.17	-21.00	32.40	38.61	0.22	-0.21	-0.42
541.70	10.20	123.60	MWD	5	538.20	-23.85	36.69	43.76	0.42	-0.42	0.00
572.50	10.00	123.20	MWD	5	568.52	-26.82	41.20	49.16	0.21	-0.19	-0.39
601.50	8.60	119.90	MWD	5	597.14	-29.28	45.18	53.84	1.55	-1.45	-3.41
629.80	5.70	113.30	MWD	5	625.22	-30.89	48.31	57.34	3.19	-3.07	-7.00
658.30	4.40	111.00	MWD	5	653.60	-31.84	50.63	59.81	1.38	-1.37	-2.42
686.50	3.00	112.60	MWD	5	681.74	-32.52	52.32	61.60	1.49	-1.49	1.70
715.50	2.80	116.80	MWD	5	710.71	-33.13	53.65	63.06	0.30	-0.21	4.34
744.50	3.40	117.30	MWD	5	739.66	-33.84	55.05	64.62	0.62	0.62	0.52
773.10	2.60	119.20	MWD	5	768.23	-34.55	56.37	66.11	0.85	-0.84	1.99
801.10	1.40	121.80	MWD	5	796.21	-35.04	57.21	67.09	1.29	-1.29	2.79
830.00	1.10	120.40	MWD	5	825.10	-35.36	57.75	67.72	0.31	-0.31	-1.45
859.30	1.10	126.50	MWD	5	854.40	-35.67	58.22	68.28	0.12	0.00	6.25
887.20	1.30	130.50	MWD	5	882.29	-36.04	58.68	68.86	0.23	0.22	4.30
916.40	1.40	136.10	MWD	5	911.48	-36.51	59.18	69.53	0.17	0.10	5.75
944.20	1.30	134.30	MWD	5	939.27	-36.97	59.64	70.17	0.12	-0.11	-1.94
973.10	1.60	157.40	MWD	5	968.16	-37.58	60.03	70.82	0.68	0.31	23.98
1002.90	1.80	152.70	MWD	5	997.95	-38.38	60.40	71.56	0.25	0.20	-4.73
1030.90	1.60	134.70	MWD	5	1025.94	-39.04	60.88	72.32	0.61	-0.21	-19.29
1059.40	0.60	168.70	MWD	5	1054.43	-39.47	61.19	72.82	1.21	-1.05	35.79

HOLE DEVIATION

Well: 30/6-26 **Reference point:** RKB ; 24.0 **m** ABOVE MSL

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1087.70	0.40	189.10	MWD	5	1082.73	-39.71	61.21	72.96	0.28	-0.21	21.63
1116.80	0.40	233.70	MWD	5	1111.83	-39.87	61.11	72.97	0.31	0.00	45.98
1145.80	0.50	264.70	MWD	5	1140.83	-39.94	60.90	72.83	0.27	0.10	32.07
1174.60	0.70	277.60	MWD	5	1169.63	-39.93	60.60	72.57	0.25	0.21	13.44
1196.80	0.80	251.30	MWD	5	1191.83	-39.96	60.32	72.36	0.48	0.14	-35.54
1231.20	1.10	234.20	MWD	5	1226.22	-40.23	59.83	72.10	0.36	0.26	-14.91
1260.40	1.20	238.60	MWD	5	1255.42	-40.56	59.34	71.87	0.14	0.10	4.52
1318.30	1.20	241.10	MWD	5	1313.30	-41.16	58.29	71.36	0.03	0.00	1.30
1346.70	1.30	248.40	MWD	5	1341.70	-41.43	57.73	71.06	0.20	0.11	7.71
1375.80	1.30	250.30	MWD	5	1370.79	-41.66	57.11	70.69	0.04	0.00	1.96
1405.30	1.40	248.10	MWD	5	1400.28	-41.91	56.46	70.32	0.11	0.10	-2.24
1460.60	1.30	251.40	MWD	5	1455.57	-42.36	55.24	69.61	0.07	-0.05	1.79
1546.50	1.30	237.00	MWD	5	1541.45	-43.20	53.50	68.76	0.11	0.00	-5.03
1575.50	1.20	234.80	MWD	5	1570.44	-43.55	52.98	68.58	0.11	-0.10	-2.28
1603.80	1.20	232.10	MWD	5	1598.73	-43.91	52.50	68.44	0.06	0.00	-2.86
1632.60	1.40	221.40	MWD	5	1627.52	-44.36	52.03	68.37	0.33	0.21	-11.15
1662.20	1.30	219.90	MWD	5	1657.12	-44.89	51.58	68.37	0.11	-0.10	-1.52
1691.50	1.30	218.80	MWD	5	1686.41	-45.40	51.15	68.39	0.02	0.00	-1.13
1751.00	1.10	212.50	MWD	5	1745.90	-46.41	50.42	68.53	0.12	-0.10	-3.18
1780.20	1.10	211.50	MWD	5	1775.09	-46.88	50.13	68.63	0.02	0.00	-1.03
1839.00	1.10	221.40	MWD	5	1833.88	-47.79	49.46	68.77	0.10	0.00	5.05
1868.20	0.80	223.70	MWD	5	1863.08	-48.14	49.13	68.79	0.31	-0.31	2.36
1897.70	1.20	18.00	MWD	5	1892.57	-48.00	49.09	68.65	1.99	0.41	156.92
1926.90	1.40	19.80	MWD	5	1921.77	-47.37	49.30	68.37	0.21	0.21	1.85
1956.50	1.50	17.90	MWD	5	1951.36	-46.66	49.54	68.06	0.11	0.10	-1.93
1986.40	1.50	15.60	MWD	5	1981.25	-45.92	49.77	67.71	0.06	0.00	-2.31
2015.20	1.50	22.20	MWD	5	2010.04	-45.20	50.01	67.41	0.18	0.00	6.88
2045.00	1.40	24.60	MWD	5	2039.83	-44.51	50.31	67.17	0.12	-0.10	2.42
2074.70	1.40	26.60	MWD	5	2069.52	-43.86	50.62	66.98	0.05	0.00	2.02
2104.40	1.40	30.00	MWD	5	2099.21	-43.22	50.97	66.82	0.08	0.00	3.43
2133.30	1.40	30.50	MWD	5	2128.10	-42.61	51.32	66.71	0.01	0.00	0.52
2163.30	1.40	26.30	MWD	5	2158.09	-41.96	51.67	66.57	0.10	0.00	-4.20
2192.70	1.40	31.00	MWD	5	2187.48	-41.33	52.02	66.44	0.12	0.00	4.80
2222.10	1.40	30.90	MWD	5	2216.87	-40.72	52.39	66.35	0.00	0.00	-0.10
2251.60	1.30	31.20	MWD	5	2246.37	-40.12	52.74	66.27	0.10	-0.10	0.31
2281.10	1.50	31.50	MWD	5	2275.86	-39.51	53.12	66.20	0.20	0.20	0.31

Norsk Hydro

2002-03-22

HOLE DEVIATION

Well: 30/6-26 **Reference point:** RKB ; 24.0 **m** ABOVE MSL

Waterdepth: 108.5 **m** **Vertical to:** 123.7 **m** **Total Depth:** 2865.0 **m MD**

Utm zone: 31 **Central Median:** 3' E **Horizontal datum:** ED50

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

Wellhead Coordinates, **UTM:** **North :** 6710374.70 **m,** **East:** 484106.50 **m**

Official Surveys: Y **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]
2310.60	1.40	34.80	MWD	5	2305.35	-38.88	53.53	66.16	0.13	-0.10	3.36
2339.80	1.50	34.90	MWD	5	2334.54	-38.28	53.95	66.15	0.10	0.10	0.10
2369.40	1.50	33.40	MWD	5	2364.13	-37.63	54.38	66.14	0.04	0.00	-1.52
2399.00	1.50	32.60	MWD	5	2393.72	-36.98	54.81	66.12	0.02	0.00	-0.81
2428.90	1.60	36.20	MWD	5	2423.61	-36.32	55.26	66.13	0.14	0.10	3.61
2457.70	1.50	35.20	MWD	5	2452.40	-35.69	55.72	66.17	0.11	-0.10	-1.04
2517.00	2.00	41.30	MWD	5	2511.67	-34.27	56.85	66.38	0.27	0.25	3.09
2546.00	2.00	42.50	MWD	5	2540.65	-33.52	57.52	66.58	0.04	0.00	1.24
2575.60	2.00	42.00	MWD	5	2570.23	-32.76	58.22	66.80	0.02	0.00	-0.51
2612.30	2.30	41.30	MWD	5	2606.91	-31.73	59.13	67.11	0.25	0.25	-0.57
2699.40	1.60	45.30	MWD	5	2693.96	-29.56	61.15	67.92	0.25	-0.24	1.38
2757.80	1.10	69.40	MWD	5	2752.34	-28.79	62.26	68.59	0.38	-0.26	12.38
2787.30	1.10	65.00	MWD	5	2781.83	-28.57	62.78	68.97	0.09	0.00	-4.47
2817.40	0.80	62.20	MWD	5	2811.93	-28.35	63.23	69.29	0.30	-0.30	-2.79
2848.20	0.10	138.20	MWD	5	2842.73	-28.27	63.43	69.45	0.76	-0.68	74.03

MAIN CONSUMPTION OF CASING/TUBING ON WELL 30/6-26 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	SL-60	62.7	5
13 3/8"	SURFACE	P-110	107.14	72.00	NS-CC	1088.0	87
9 5/8"	INTERMEDIATE	P-110	79.61	53.50	NS-CC	2501.2	211

BITRECORD FOR WELL 30/6-26 PO: 1

Bit No		RR	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	SMIT	10GMODPD	LW8944	435	13,22,24,24	1.384	1	195	63	3.90	16.2	56/120	17000	5/40	1891/4392	31/102	1 - 1 - NO - A - E	I	NO	TD
			HO	36.00	REDB	HEAVYDUTY	21473		11,11,11,11,11,11	0.557	1	195	63		0.0	56/120		5/40	1891/4392	31/102	0 - 0 - NO - A - E	I	NO	
2			MITO	26.00	SMIT	MSDSHCOD	LW6136	115	14,22,24,24	1.405	2	195	0		0.0						1 - 1 - NO - A - E	I	NO	TD
3			ISRT	17.50	HTC	MXT03DDT	H39DG	415	14,16,24,24	1.230	3	1223	1028	20.00	51.4	97/252	308000	10/110	3280/4572	111/233	1 - 1 - NO - A - E	I	NO	TD
3		1	ISRT	17.50	HTC	MXT03DDT	H39DG	415	14,16,24,24	1.230	4	1223	0		0.0	80/120		0/1	4000/4500	110/125	1 - 1 - NO - A - E	I	NO	TD
4			PDC	12.25	SMIT	MA89HPX	JS5353	223	15,15,15,15,16,16	1.279	5	2636	1413	32.80	43.1	174/228	518	1/13	2917/3176	276/316	1 - 4 - BT - N - X	2	PN	TD
5		1	PDC	8.50	SMIT	MA74PX	JS1961	M223	12,12,12,13,13,13	0.720	6	2690	54	2.20	24.5	112/189	67	10/50	2229/3021	255/270	0 - 2 - CT - G - X	I	NO	CP
6			COR	8.50	SDBS	FC274RILI	7000940			0.000	7	2718	28	0.70	40.0	82/129	7	20/70	1081/1092	66/71	1 - 1 - WT - A - X	I	PN	TD
5		1	PDC	8.50	SMIT	MA74PX	JS1961	M223	12,12,12,13,13,13	0.720	8	2865	147	5.00	29.4	108/160	78	10/70	2307/2376	229/246	1 - 2 - CT - G - X	I	NO	TD

BOTTOM HOLE ASSEMBLIES USED ON WELL 30/6-26 PO: 1

BHA no. 1: No. / Element / OD(in) / Length(m) Depth In: 132 m MD Out: 195 m MD

1	10GMODPD	17.5	0.42	2	HEAVYDUTY	36.0	3.33
3	FLOAT SUB	9.375	0.85	4	MWD	9.25	8.93
5	NON MAG. STAB	16.75	2.20	6	NON MAG. COLLAR	9.063	8.71
7	DRILL COLLAR STEEL	9.438	17.89	8	X-OVER	9.5	0.95
9	DRILL COLLAR STEEL	7.813	54.94	10	JAR	7.813	9.62
11	DRILL COLLAR STEEL	7.875	18.21				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 126.05

BHA no. 2: No. / Element / OD(in) / Length(m) Depth In: 195 m MD Out: 195 m MD

1	MSDSHCOD	26.0	0.66	2	FLOAT SUB	9.375	0.85
3	MWD	9.25	8.93	4	NON MAG. STAB	16.75	2.20
5	NON MAG. COLLAR	9.063	8.71	6	DRILL COLLAR STEEL	9.438	17.89
7	X-OVER	9.5	0.95	8	DRILL COLLAR STEEL	7.813	54.94
9	JAR	7.813	9.62	10	DRILL COLLAR STEEL	7.875	18.21
11	X-OVER	8.0	1.00				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 123.96

BHA no. 3: No. / Element / OD(in) / Length(m) Depth In: 195 m MD Out: 1223 m MD

1	MXT03DDT	17.5	0.41	2	DOWN HOLE MOTOR WITH ST/	17.25	8.96
3	FLOAT SUB	9.5	0.70	4	NON MAG. STAB	17.25	2.20
5	CDR	9.5	7.13	6	MWD	9.25	8.93
7	NON MAG. STAB	16.75	2.20	8	NON MAG. COLLAR	9.063	8.71
9	DRILL COLLAR STEEL	9.438	17.89	10	X-OVER	9.5	0.95
11	DRILL COLLAR STEEL	7.813	54.94	12	JAR	7.813	9.62
13	DRILL COLLAR STEEL	7.875	18.21	14	X-OVER	8.0	0.86
15	HWDP	5.0	140.85				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 282.56

BHA no. 4: No. / Element / OD(in) / Length(m) Depth In: 1223 m MD Out: 1223 m MD

1	MXT03DDT	17.5	0.41	2	DOWN HOLE MOTOR WITH ST/	17.25	8.96
3	FLOAT SUB	9.5	0.70	4	NON MAG. STAB	17.25	2.20
5	CDR	9.5	7.13	6	MWD	9.25	8.93
7	NON MAG. STAB	16.75	2.20	8	NON MAG. COLLAR	9.063	8.71
9	DRILL COLLAR STEEL	9.438	17.89	10	X-OVER	9.375	0.79
11	DRILL COLLAR STEEL	7.813	27.47	12	JAR	7.813	9.62
13	DRILL COLLAR STEEL	7.875	18.21	14	X-OVER	8.0	0.86
15	HWDP	5.0	56.39				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 170.47

BHA no. 5: No. / Element / OD(in) / Length(m) Depth In: 1223 m MD Out: 2636 m MD

1	MA89HPX	12.25	0.37	2	DOWN HOLE MOTOR WITH ST/	12.125	9.23
3	FLOAT SUB	8.0	0.79	4	NON MAG. STAB	12.125	2.46
5	CDR	8.375	6.91	6	MWD	8.375	8.31
7	NON MAG. STAB	8.125	2.39	8	NON MAG. COLLAR	8.0	17.37
9	DRILL COLLAR STEEL	7.812	64.30	10	JAR	7.812	9.62
11	DRILL COLLAR STEEL	7.875	18.21	12	X-OVER	8.0	0.86
13	HWDP	5.0	140.85				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 281.67

BOTTOM HOLE ASSEMBLIES USED ON WELL 30/6-26 PO: 1

BHA no. 6: No. / Element / OD(in) / Length(m) Depth In: 2636 m MD Out: 2690 m MD

1	MA74PX	8.5	0.27	2	DOWNHOLE MOTOR	6.75	7.68
3	FLOAT SUB	6.5	0.85	4	NON MAG. STAB	8.437	1.46
5	CDR	7.25	5.66	6	MWD	6.875	8.31
7	ADN	8.375	6.14	8	NON MAG. COLLAR	6.5	8.57
9	DRILL COLLAR STEEL	6.5	66.26	10	JAR	6.812	9.25
11	DRILL COLLAR STEEL	6.5	28.08	12	HWDP	5.0	169.02

Reason pulled: CORE POINT Sum: 311.55

BHA no. 7: No. / Element / OD(in) / Length(m) Depth In: 2690 m MD Out: 2718 m MD

1	FC274RILI	8.5	0.36	2	CORE BARREL	8.437	30.44
3	FLOAT SUB	6.5	0.85	4	DRILL COLLAR STEEL	6.5	9.46
5	NON MAG. STAB	8.312	1.51	6	DRILL COLLAR STEEL	6.5	37.84
7	JAR	6.812	9.25	8	DRILL COLLAR STEEL	6.5	28.08
9	HWDP	5.0	140.85				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 258.64

BHA no. 8: No. / Element / OD(in) / Length(m) Depth In: 2718 m MD Out: 2865 m MD

1	MA74PX	8.5	0.27	2	FLOAT SUB	6.5	0.85
3	NON MAG. COLLAR	6.75	3.08	4	NON MAG. STAB	8.437	1.46
5	CDR	7.25	5.66	6	MWD	6.875	8.31
7	ADN	8.375	6.14	8	NON MAG. COLLAR	6.5	8.57
9	DRILL COLLAR STEEL	6.5	66.26	10	JAR	6.812	9.25
11	DRILL COLLAR STEEL	6.5	28.08	12	HWDP	5.0	140.85

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 278.78

CEMENT SLURRY REPORT ON WELL 30/6-26 PO: 1

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]
2001-09-16	30"	CASING CEMENTING	LEAD	19.00	1.56	7.00	129.60	A-3L	l	3.50	
								FP-14L	l	0.20	
			TAIL SLURRY	19.00	1.95	7.00	74.73	A-7L	l	3.50	
								FP-14L	l	0.20	
			DISPLACEMENT	3.90	1.03	7.00					
			DISPLACEMENT			7.00					
2001-09-19	13 3/8"	CASING CEMENTING	LEAD	164.00	1.44	39.00	169.46	A-3L	l	5.30	
								FP-14L	l	0.20	
								R-15L	l	1.50	
			TAIL SLURRY	20.00	1.92	39.00	75.07	FP-14L	l	0.20	
								R-12L	l	0.65	
			DISPLACEMENT		1.30	39.00					
			DISPLACEMENT			39.00					
2001-09-25	9 5/8"	CASING CEMENTING	SPACER	15.00	1.65	80.00		FP-14L	l		10.00
								G-21R	kg		1.80
								MCS-G	l		104.00
			TAIL SLURRY	22.50	1.92	80.00	100.24	CD-31L	l	0.30	
								FP-14L	l	0.20	
								MICRO	l	3.00	
								R-12L	l	1.25	
			DISPLACEMENT	90.90	1.50	80.00					
			DISPLACEMENT			80.00					
2001-10-02	9 5/8"	PLUG IN OPEN HOLE	SPACER	5.00	1.36	101.00		FP-14L	l		10.00
								G-21R	kg		1.80
								MCS-G	l		104.00
			TAIL SLURRY	9.00	1.90	101.00	106.64	CD-31L	l	2.00	
								FP-14L	l	0.20	
								MICRO	l	11.00	
								R-15L	l	0.50	
			DISPLACEMENT	20.00	1.36	101.00					
			DISPLACEMENT			101.00					
2001-10-02		PLUG IN CASED TO OPEN HOLE	TAIL SLURRY	7.50	1.90	80.00	106.89	CD-31L	l	1.20	

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CEMENT SLURRY REPORT ON WELL 30/6-26 PO: 1

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]
2001-10-02		PLUG IN CASED TO OPEN HOLE	TAIL SLURRY	7.50	1.90	80.00	106.89	D-8	kg	35.00	
								FL45LN	l	7.50	
								FP-14L	l	0.20	
								MICRO	l	12.00	
								R-12L	l	1.25	
2001-10-04	13 3/8"	PLUG IN CASED HOLE	SPACER	10.00	1.03	17.00		FP-14L	l		10.00
								MCS-G	l		104.00
			TAIL SLURRY	19.50	1.95	17.00	74.73	A-7L	l	3.50	
								FP-14L	l	0.20	
			DISPLACEMENT	1.00	1.03	17.00					
			DISPLACEMENT			17.00					

CEMENT CONSUMPTION PER JOB ON WELL 30/6-26 PO: 1

Date	CsgSize	Job Type	Cement/ Additive	Description	Unit	Actual Amount Used
2001-09-16	30"	CASING CEMENTING	A-3L	EXTENDER: LIQUID LODENSE	l	576
			A-7L	ACCELERATOR: LIQUID CACL2	l	1008
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	80
			G	API CLASS G	MT	46
2001-09-19	13 3/8"	CASING CEMENTING	A-3L	EXTENDER: LIQUID LODENSE	l	5331
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	250
			G	API CLASS G	MT	127
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 D	l	201
			R-15L	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DE	l	1516
2001-09-25	9 5/8"	CASING CEMENTING	CD-31L	DISPERSANT: CD-31L LIQUID	l	120
			D-8	SPECIAL ADDITIVE: SILICA FLUOR, TEMP. TO 204 I	kg	62000
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100
			G-21R	SPACER ADDITIVE: G-21R viscosifier	kg	36
			MCS-G	SPACER ADDITIVE: MCS-G	l	2000
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGF	l	1323
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 D	l	481
2001-10-02	9 5/8"	PLUG IN OPEN HOLE	CD-31L	DISPERSANT: CD-31L LIQUID	l	170
			D-8	SPECIAL ADDITIVE: SILICA FLUOR, TEMP. TO 204 I	kg	35500
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100
			MCS-G	SPACER ADDITIVE: MCS-G	l	780
			R-15L	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DE	l	50
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGF	l	950
			G-21R	SPACER ADDITIVE: G-21R viscosifier	kg	14
2001-10-04	13 3/8"	PLUG IN CASED HOLE	A-7L	ACCELERATOR: LIQUID CACL2	l	938
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100

TOTAL CONSUMPTION OF CEMENT ADDITIVES ON WELL 30/6-26 PO: 1

Section	Cement/Additive	Unit	Total Amount Used
36"	ACCELERATOR: LIQUID CACL2	l	1008.00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	80.00
	API CLASS G	MT	46.00
	EXTENDER: LIQUID LODENSE	l	576.00
17 1/2"	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	250.00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	201.00
	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DEGC	l	1516.00
	EXTENDER: LIQUID LODENSE	l	5331.00
	API CLASS G	MT	127.00
12 1/4"	SPECIAL ADDITIVE: SILICA FLUOR, TEMP. TO 204 DEGC	kg	62000.00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100.00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	481.00
	SPACER ADDITIVE: MCS-G	l	2000.00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	1323.00
	SPACER ADDITIVE: G-21R viscosifier	kg	36.00
	DISPERSANT: CD-31L LIQUID	l	120.00
8 1/2"	SPACER ADDITIVE: MCS-G	l	780.00
	SPECIAL ADDITIVE: SILICA FLUOR, TEMP. TO 204 DEGC	kg	35500.00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100.00
	SPACER ADDITIVE: G-21R viscosifier	kg	14.00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	950.00
	DISPERSANT: CD-31L LIQUID	l	170.00
	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DEGC	l	50.00
0.0	ACCELERATOR: LIQUID CACL2	l	938.00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100.00

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 30/6-26 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]
2001-09-15	194	194	SEA WATER	116.0	1.08	1.1					0	0			0.0				
2001-09-16	195	195	SEA WATER	106.0	1.08	0.0	131	92	66	51	0	0	29	19	50.0	39.0	26.5	9.0	14.0

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]
2001-09-17 23:30	1020	1015	SEA WATER	109.0	1.08	0.0	130	92	65	51	0	0	29	18	50.0	38.0	27.0	9.0	14.0
2001-09-18 14:00	1223	1218	GLYDRIL	65.0	1.40	0.0	67	47	37	27	0	0	22	17	50.0	20.0	13.5	9.0	8.0
2001-09-19 22:00	1223	1218	GLYDRIL	68.0	1.40	0.0	65	46	37	28	0	0	22	16	50.0	19.0	13.5	9.0	8.0
2001-09-20 22:00	1223	1218	GLYDRIL	66.0	1.40	0.0	67	46	37	27	0	0	21	16	50.0	21.0	12.5	9.0	18.0

Hole section : 17 1/2" **OIL 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]
2001-09-21	1226	1221	VERSAVERT		1.20		90	57	44	30	0	0	14	12	50.0	33.0	12.0	9.0	13.0

Hole section : 12 1/4" **OIL 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]
2001-09-22 20:00	2015	2010	VERSAVERT	72.0	1.45		70	42	32	21	0	0	10	9	50.0	28.0	7.0	6.0	10.0
2001-09-23 20:30	2620	2615	VERSAVERT	70.0	1.45	53.0	81	49	37	25	0	0	10	9	50.0	32.0	8.5	7.0	13.0
2001-09-24 20:30	2636	2631	VERSAVERT	70.0	1.50	53.0	94	57	44	30	0	0	11	10	50.0	37.0	10.0	8.0	15.0
2001-09-25 21:00	2636	2631	VERSAVERT	71.0	1.50	46.0	92	56	45	30	0	0	11	10	50.0	36.0	10.0	9.0	15.0

Hole section : 8 1/2" **OIL 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]
2001-09-26 21:00	2690	2685	VERSAVERT	65.0	1.35		62	39	29	20	0	0	10	9	50.0	23.0	8.0	6.0	9.0
2001-09-27 22:00	2744	2739	VERSAVERT	63.0	1.35	40.0	65	42	29	19	0	0	10	9	50.0	23.0	9.5	6.0	12.0

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 30/6-26 PO: 1

Hole section : 8 1/2" **OIL 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]
2001-09-28 21:00	2865	2860	VERSAVERT		1.35		68	44	32	21	0	0	10	9	50.0	24.0	10.0	6.0	12.0
2001-09-29 12:00	2865	2860	VERSAVERT		1.35		68	44	32	21	0	0	10	9	50.0	24.0	10.0	6.0	12.0
2001-09-30 12:00	2865	2860	VERSAVERT	64.0	1.35		68	44	32	21	0	0	10	9	50.0	24.0	10.0	6.0	12.0
2001-10-01 12:00	2865	2860	VERSAVERT	64.0	1.35		68	44	32	21	0	0	10	9	50.0	24.0	10.0	6.0	12.0

Hole section : P&A **OIL 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]
2001-10-02 20:00	2865	2860	VERSAVERT	68.0	1.36		76	45	35	23	0	0	10	9	50.0	31.0	7.0	6.0	13.0
2001-10-03 22:00	2865	2860	VERSAVERT	68.0	1.36		78	47	36	24	0	0	10	9	50.0	31.0	8.0	6.0	13.0
2001-10-04	2865	2860	VERSAVERT				0	0	0	0	0	0	0	0					

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 30/6-26 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]
2001-09-15	194	194	SEA WATER	1.08					/																
2001-09-16	195	195	SEA WATER	1.08					/																

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]
2001-09-17 23:30	1020	1015	SEA WATER	1.08					/																
2001-09-18 14:00	1223	1218	GLYDRIL	1.40	3.0		1		/	8.0	1.3	0.0	1.0			65000	1200		1200	16.5		0.3	28	3.5	115
2001-09-19 22:00	1223	1218	GLYDRIL	1.40	3.0		1		/	8.0	1.2	0.0	1.0			65000	1200		1200	16.5		0.3	28	3.5	115
2001-09-20 22:00	1223	1218	GLYDRIL	1.40	3.0		1		/	8.0	1.3	0.0	1.2			65000	1200		1200	16.5		0.0	28	3.5	115

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Density [sg]	Filtrate HPHT [ml]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	Electrical stability [V]	Alcalinity Pm [ml]	CaCl2 [mg/l]	Oil/Water Ratio	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	ASG [sg]	LGS [Kg/m3]
2001-09-21	1226	1221	VERSAVERT	1.20	3.0	2	/ 150	600	1.5	164	71/ 29	12.5	61.0	0.3	3.5	136

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Density [sg]	Filtrate HPHT [ml]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	Electrical stability [V]	Alcalinity Pm [ml]	CaCl2 [mg/l]	Oil/Water Ratio	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	ASG [sg]	LGS [Kg/m3]
2001-09-22 20:00	2015	2010	VERSAVERT	1.45	3.5	2	/ 150	990		205	82/ 18	21.0	64.5	0.3	3.7	158
2001-09-23 20:30	2620	2615	VERSAVERT	1.45	3.0	2	/	990	1.6	205	81/ 19	21.0	64.0	0.3	3.7	160
2001-09-24 20:30	2636	2631	VERSAVERT	1.50	3.0		/ 150	1140		198	81/ 19	23.0	62.0	0.3	3.7	188
2001-09-25 21:00	2636	2631	VERSAVERT	1.50	3.0	2	/ 250	1170		198	81/ 19	23.0	62.0	0.3	3.7	188

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Density [sg]	Filtrate HPHT [ml]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	Electrical stability [V]	Alcalinity Pm [ml]	CaCl2 [mg/l]	Oil/Water Ratio	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	ASG [sg]	LGS [Kg/m3]
2001-09-26 21:00	2690	2685	VERSAVERT	1.35	3.6	2	/ 150	1095		198	81/ 19	17.0	68.0	0.2	3.8	102
2001-09-27 22:00	2744	2739	VERSAVERT	1.35	3.4	2	/ 150	1140		185	82/ 18	18.0	67.5	0.3	3.7	140
2001-09-28 21:00	2865	2860	VERSAVERT	1.35	3.4	2	/ 150	1195		185	82/ 18	18.0	67.5	0.3	3.6	156
2001-09-29 12:00	2865	2860	VERSAVERT	1.35	3.4	2	/ 150	1195		185	82/ 18	18.0	67.5	0.3	3.6	156

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 30/6-26 PO: 1

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Density [sg]	Filtrate HPHT [ml]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	Electrical stability [V]	Alcalinity Pm [ml]	CaCl2 [mg/l]	Oil/Water Ratio	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	ASG [sg]	LGS [Kg/m3]
2001-09-30 12:00	2865	2860	VERSAVERT	1.35	3.4	2	/ 150	1195		185	82/ 18	18.0	67.5	0.3	3.6	156
2001-10-01 12:00	2865	2860	VERSAVERT	1.35	3.4	2	/ 150	1195		185	82/ 18	18.0	67.5	0.3	3.6	156

Hole section : P&A **OIL BASED SYSTEM**

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Density [sg]	Filtrate HPHT [ml]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	Electrical stability [V]	Alcalinity Pm [ml]	CaCl2 [mg/l]	Oil/Water Ratio	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	ASG [sg]	LGS [Kg/m3]
2001-10-02 20:00	2865	2860	VERSAVERT	1.36	4.0	2	/ 150	807		147	79/ 21	18.0	64.0	0.3	3.7	152
2001-10-03 22:00	2865	2860	VERSAVERT	1.36	4.0	2	/ 150	700		147	78/ 22	18.0	64.0	0.3	3.7	152
2001-10-04	2865	2860	VERSAVERT				/				/					

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 30/6-26 PO: 1

Section	Product/ Additive	Unit	Total Amount Used
17 1/2"	BARITE	kg	245000.00
	BENTONITE	kg	65000.00
	CMC EHV	kg	1450.00
	GLYDRIL MC	l	250000.00
	SODA ASH	kg	1825.00
12 1/4"	BARITE	kg	185000.00
	CALCIUM CHLORIDE	kg	2850.00
	EDC 95/11	l	178000.00
	LIME	kg	7200.00
	VERSAVERT F	l	2336.00
	VERSAVERT PE	l	6295.00
	VERSAVERT SE	l	4793.00
	VERSAVERT VIS	kg	4075.00
8 1/2"	BARITE	kg	45000.00
	CALCIUM CHLORIDE	kg	375.00
	DUOTEC NS	kg	50.00
	EDC 95/11	l	15000.00
	LIME	kg	240.00
	VERSAMOD	kg	200.00
	VERSAVERT F	l	200.00
	VERSAVERT PE	l	500.00
	VERSAVERT VIS	kg	700.00

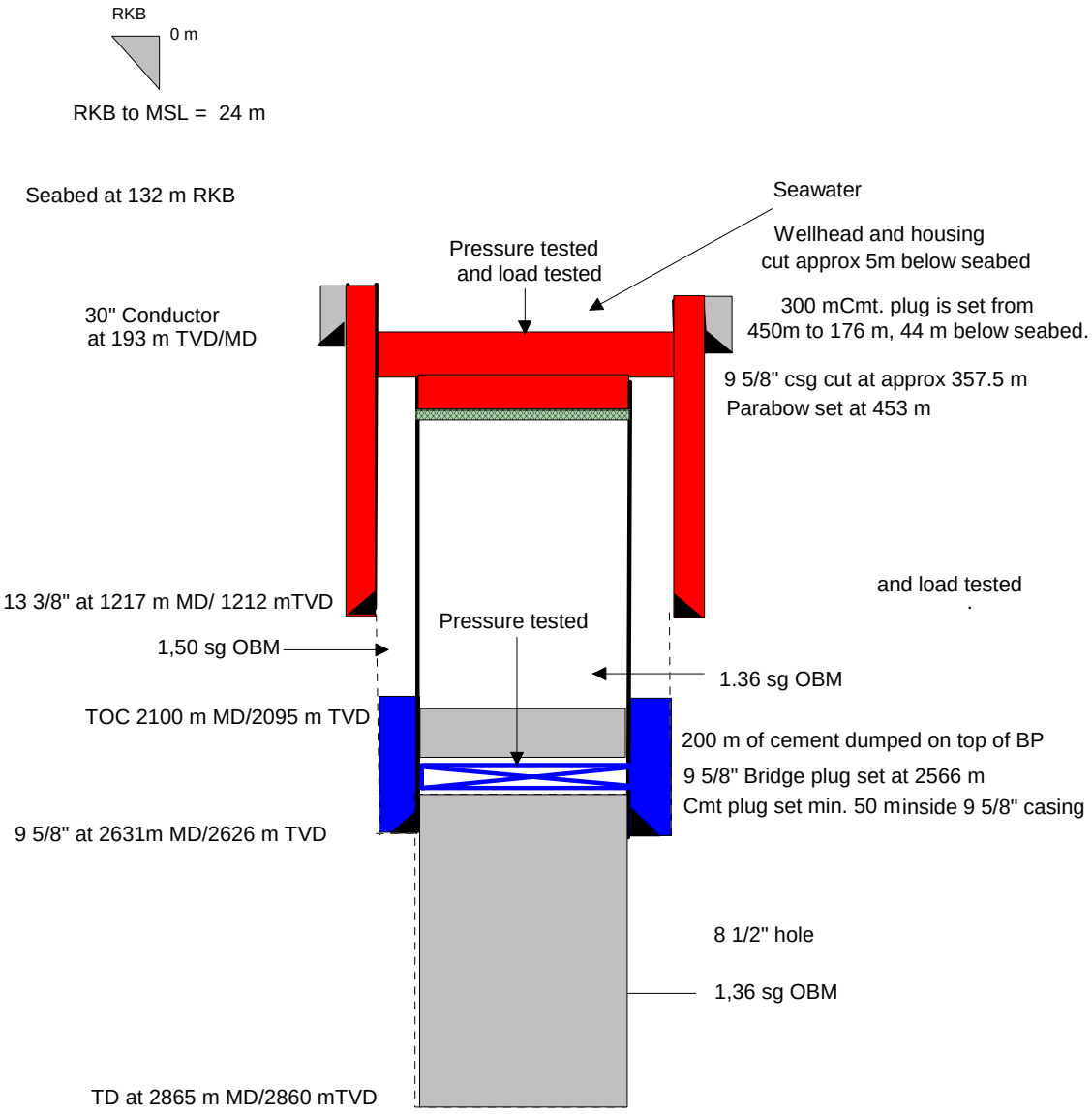
LOGGING INFORMATION ON WELL 30/6-26

Hole size: 8 1/2"

#	Run No.	Logging Company	Logged Bottom [m MD]	Logged Top [m MD]	Log Suite
1	1A		2857.7	2669.2	MDT/GR
2	1A		2860	2050	VSP/DSI
3	1B		2735.5	2716	MDT/GR
4	1C		2735.5	2716	MDT/GR

LEAK OFF TEST ON WELL 30/6-26

m MD RKB/ m TVD RKB	Section	Date	Mudtype	Mudweight SG	LOT SG
1226 / 1221	12,25"	2001-09-22	Seawater	1.03	1,70
2640/ 2635	8.5"	2001-09-26	Oil Base Mud	1.35	FIT 1,5



P & A Program **Well 30/6-26**	**Fig. B-1 .1** **Revision: 0**	**Permanent Plug and Abandonment**

2002-03-08

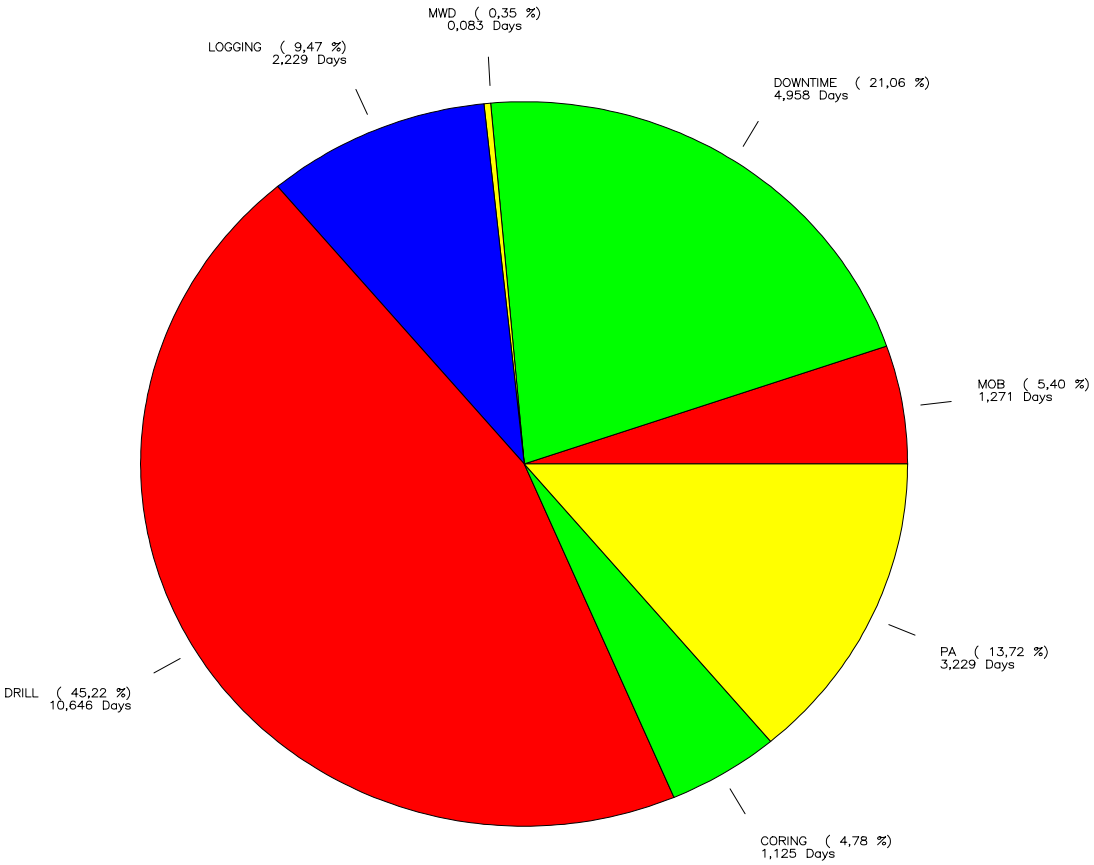
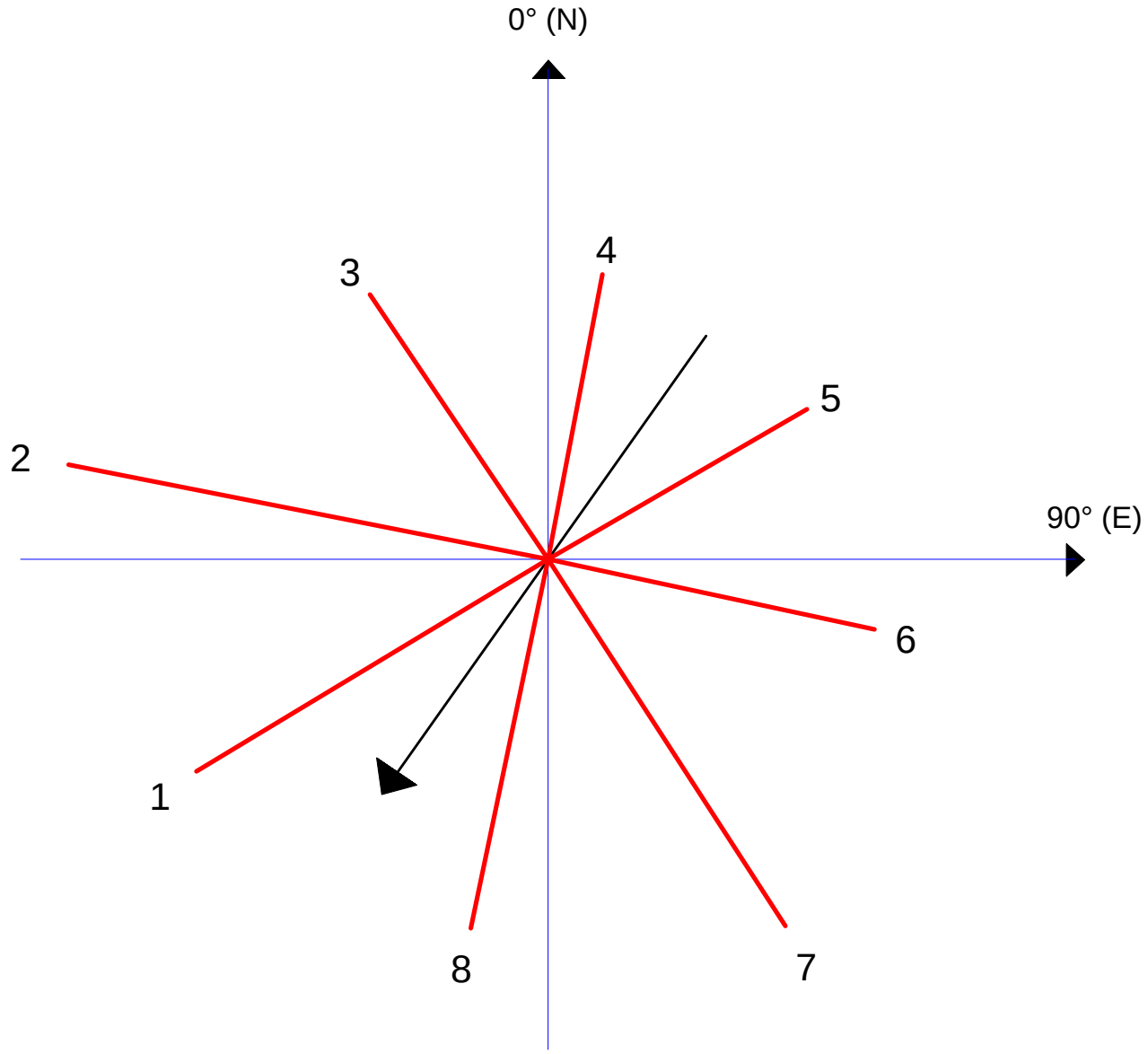


Figure 1,2		Time Distribution 30/6-26	**HYDRO**



RIGHEADING 213 DEG.

ANCHOR NO		DIRECTION (DEG.)		LENGTH (m)	
	1		237		1749
	2		282		2047
	3		328		1403
	4		10		1300
	5		58		1274
	6		103		1398
	7		149		1922
	8		191		1689

Figure 1,3		RIG ANCHORS TRANSOCEAN ARCTIC 30/6-26	**HYDRO**

SECTION C

COMPOSITE LOG

LITHOLOGY LOG

CORE LOG

GAS RATIO LOG

POST SITE SURVEY PANEL