Licence	**PL-195**
Drilling permit	**L-1063**
Completion Date	**21.07.2003**

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WELL SUMMARY

Well 35/8-5 was drilled by Norsk Hydro Production AS, on behalf of PL195, during June 2003 – July 2003.

The primary objective of the exploration well 35/8-5 S was to prove commercial hydrocarbon resources in Oxfordian turbidite sandstones of the Viking Group within the J10 Prospect in blocks 35/8 and 35/9.

The secondary objective was to prove commercial hydrocarbon resources in the Brent Group sandstones within the J10 Prospect, also in blocks 35/8 and 35/9.

The well was drilled in the W-segment of the J10 Prospect.

In case of discovery in either the primary Oxfordian target or the secondary Brent target, the C-segment of the J10 Prospect was to be sidetracked after conventional coring and wireline logging.

All depths in this report have reference to RKB (RKB elevation is 29 m) unless otherwise stated.

License owners

Production License 195 was awarded by Royal Decree of 4 June 1995 with Norsk Hydro ASA as the operator

The licensee's percentage share of PL195 at the time of drilling of well 35/8-5 S is as follows:

Hydro ASA(operator)	40 %
RWE Dea	25 %
Petoro AS	35 %

Summary of Well Data

LOCATION:	Geo: 61°22'40,50" N 03°39'13,22" E UTM: 6 805 219.60 mN 534 935.00 mE ED 50, UTM Zone31, CM 03°E
OPERATOR: RIG: CONTRACTOR:	Norsk Hydro ASA Deepsea Delta Odfjell Drilling
KB ELEVATION(to MSL): WATER DEPTH (MSL):	29m 369m
START OF OPERATION: WELL SPUDDED: REACHED TD: OFF LOCATION: STATUS: FORMATION AT TD:	31.05.2003 01.06.2003 11.07.2003 21.07.2003 Plugged and abandoned Rannoch Formation
TD DRILLER(mRKB): TD LOGGER(mRKB):	4000m MD 4009.5m MD
Drilling depths (MD):	36" 399 m to 458 m 26" 458 m to 555 m 17" 461 m to 1326 m 12 ¼" 1326 m to 3265 m 8 ½" 3265 m to 4000 m
Casing / Liner depths:	30" 395.8 m to 458 m 20" 394.2 m to 550 m 13 3/8" 395.1 m to 1320 m 9 5/8" 395.6 m to 3258.5 m

OBJECTIVES AND RESULTS

Objectives

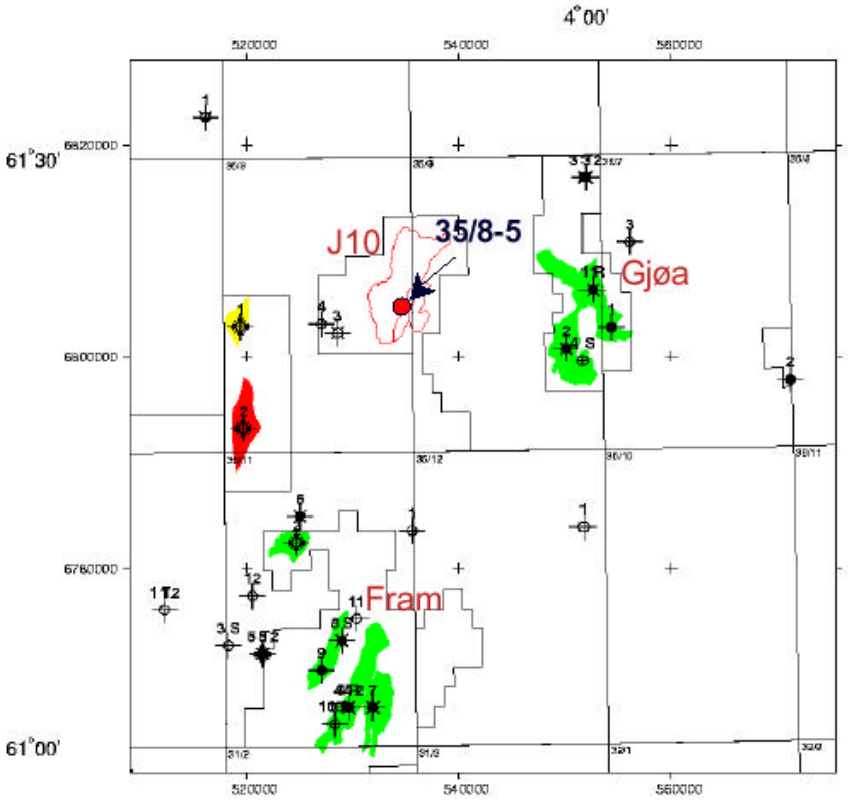
The main objective of exploration well 35/8-5S was to test the presence and type of hydrocarbons in Oxfordian turbidites in the J10 Prospect.

A secondary objective of the well was to test the hydrocarbon potential of the Brent Group sandstones

The well was targeted in the W-segment of the J10 Prospect, close to the eastern boundary fault, in order to enable a possible sidetrack towards east and into the C-segment. To meet these criteria, the well was designed as a deviation well to follow the dip of the eastern boundary fault plane of the W-segment in a proper distance from the fault.

Sidetracking was only to be performed in case of discovery in either the primary or the secondary target.

Location map



Results

The well was spud 01st June 2003 and reached a total depth of 4000 m MD RKB in the Rannoch Fm.11th July 2003. It was discovered after spud that the spud position of the well was placed 105 m east of the planned spud location. This was unfortunately caused by an error in the Operator's routines for quality control. The incident has been reported to NPD and the Operator has updated internal routines for control of this kind of operations. The deviaton was adjusted during drilling and the reservoir was penetrated within the planned target tolerance.

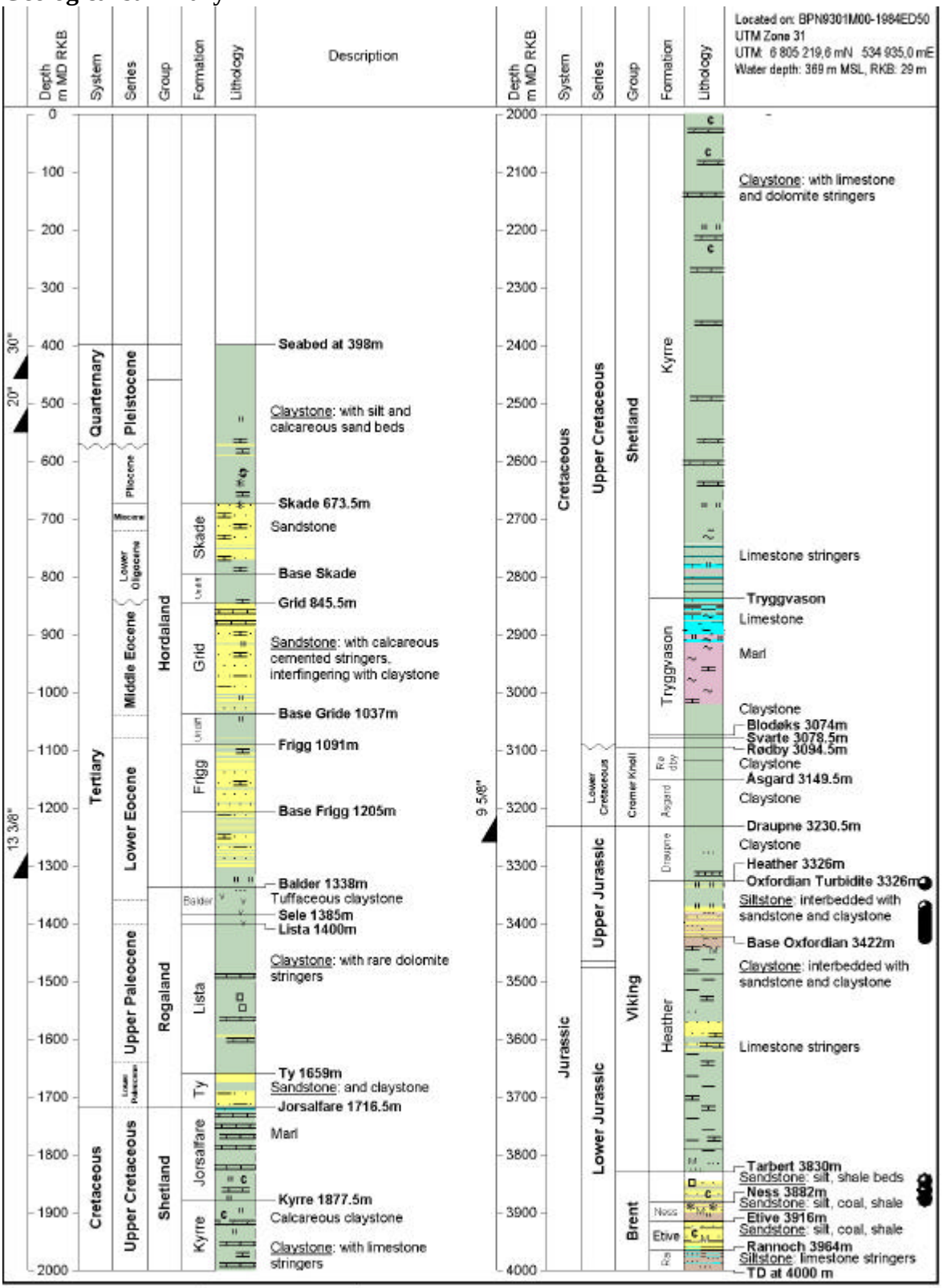
The drilling objectives were not met as no commercial hydrocarbons were proven. Therefore, no sidetrack of the well into the C-segment was performed.

The wireline logging programme was reduced as no commercial discovery was made. The CMR, MSCT, OBMI-DSI and VSP log in the 8 ½" section was not included. The well was permanently plugged and abandoned as a dry well on the 21st July 2003.

The well did not prove any commercial hydrocarbons, although good oil shows were obtained. The Oxfordian reservoir was encountered within the defined reservoir interval, but the reservoir quality was much poorer than expected. The Brent Group reservoir was found as prognosed, but was water bearing.

There were taken 6 conventional cores, 4 in the Oxfordian sandstone and 2 in the Brent Group sandstone. Cores of the Oxfordian reservoir showed very poor reservoir quality, according to both grain size and cementation.

Geological summary



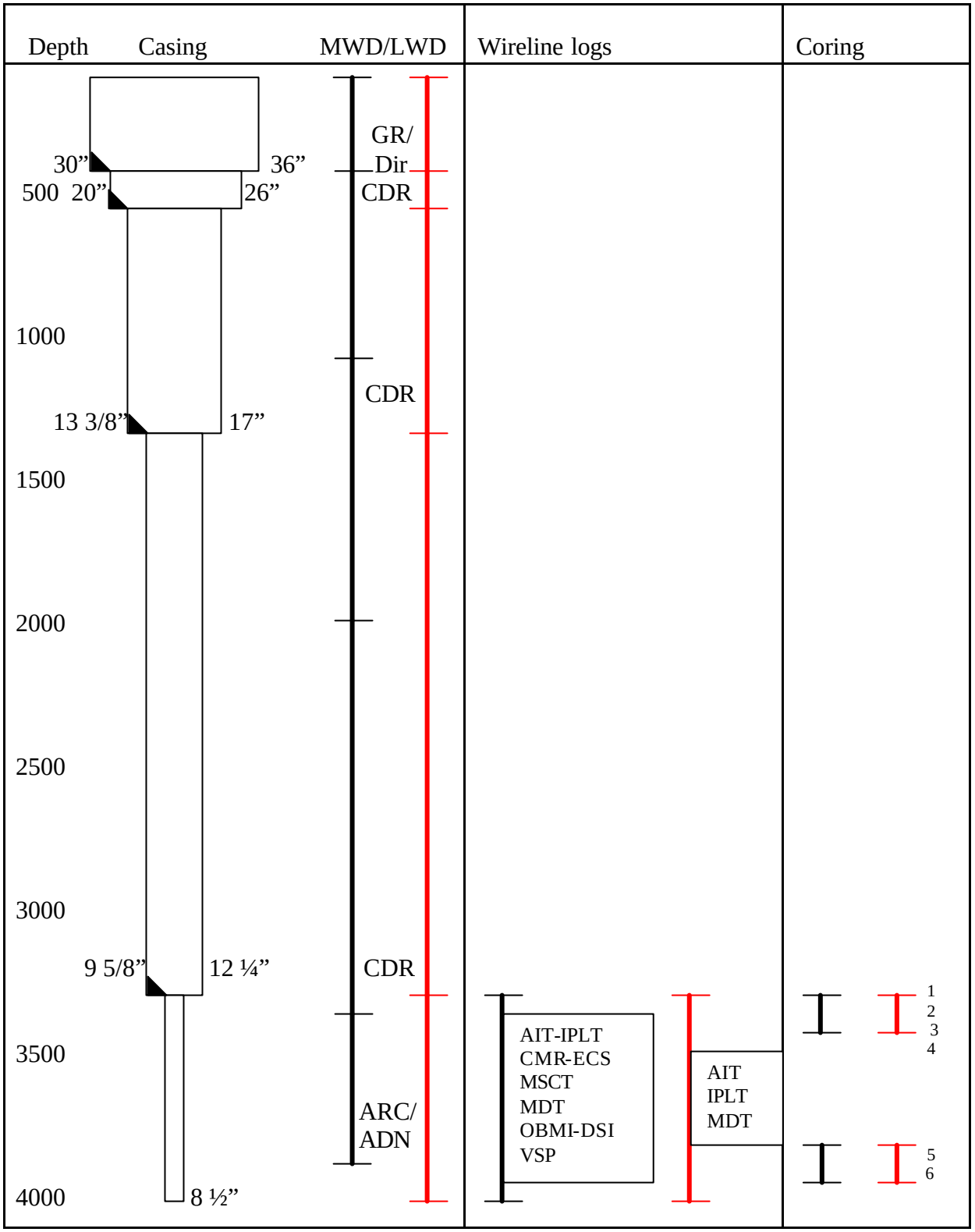
Final Well Report 35/8-5 S	Revision: 1.0	Geological Well Summary 35/8-5 S

SECTION A: GEOLOGY, GEOPHYSICS AND PETROPHYSICS.

1 DATA ACQUISITION

1.1 Data acquisition overview figure.

Planned: Actual:



1.2 Lithostratigraphy.

This summary is compiled predominantly from ditch cuttings and core descriptions.

Wireline and MWD logs were used to aid lithological interpretation and the placement of formation boundaries.
The well was drilled with returns to seabed from the sea floor at 398 m to 561 m before setting 20" casing at 550 m. For details on sampling descriptions see attached Composite log. The lithology interpretation is based on MWD logs, cuttings and core descriptions.

Nordland Group (398 – 673.5 m MD)

Sandy and silty clay

Hordaland Group (673.5 – 1338 m MD)

Skade Formation (673.5 – 794 m MD) – Sandstone
Undifferentiated (794 – 845.5 m MD) – Claystone
Grid Formation (845.5 – 1037 m MD) – Sandstone with calcareous cemented stringers, interfingering with claystones.
Undifferentiated (1037 – 1091 m MD) – Claystone
Frigg Formation (1091-1205 m MD) - Sandstone, interfingering with claystones

Rogaland Group (1338 – 1716.5 m MD)

Balder Formation (1338 – 1385 m MD) – Tuffaceous claystone
Sele Formation (1385 – 1400 m MD) – Claystone
Lista Formation (1400 – 1659 m MD) – Claystone with rare dolomite stringers
Ty Formation (1659 – 1716.5 m MD) – Sandstone with dolomite cemented top, interfingering with claystone.

Shetland Group (1716.5 – 3094.5 m MD)

Jorsalfare Formation (1716.5 – 1877.5 m MD) – Calcareous claystone
Kyrre Formation (1877.5 – 2838 m MD) – Claystone with limestone stringers
Tryggvason Formation (2838 – 3074 m MD) – Limestone, marl and claystone
Blodøks Formation (3074 – 3078.5 m MD) – Claystone
Svarte Formation (3078.5 – 3094.5 m MD) – Claystone

Cromer Knoll Group (3094.5 – 3230.5 m MD)

Rødby Formation (3094.5 – 3149.5 m MD) – Claystone with limestone stringers
Åsgard Formation (3149.5 – 3230.5 m MD) – Claystone with limestone stringers

Viking Group (3230.5 – 3830 m MD)

Draupne Formation (3230.5 – 3326 m MD) – Claystone
Oxfordian turbidite (3326 – 3422 m MD) – Interbedded sandstone, siltstone and Claystone
Heather Formation (3326 – 3830 m MD) – Interbedded sandstone, siltstone and Claystone

Brent Group (3830 – 4000 m MD)

Tarbert Formation (3830 – 3882 m MD) – Sandstone with shale and siltstone beds
Ness Formation (3882 – 3916 m MD) – Sandstone with shale, silt and coal beds.
Etive Formation (3916 – 3964 m MD) - Sandstone with shale, silt and coal beds.
Rannoch Formation (3964 – 4000 m MD) – Siltstone with limestone stringers

1.3 Hydrocarbon shows description table.

INTERVAL (mRKB)	SOURCE	LITHOLOGY	SHOWS DESCRIPTION
3327-3338	Cuttings	Sandstone	spty wk yel brn dir Fluor, slo strmg blmg wk bl wh Fluor cut, wh vis res
3371-3381	Cuttings	Sandstone	20-50% pl yel brn dir Fluor, v slo strmg mod-wk wh-bl wh blmg-strmg Fluor cut, wk wh-bl wh blmg vis crsh cut, wk wh-bl wh Fluor Res, v pl-no vis Res
3381-3382	Core	Siltstone	no pet od, No vis oil stn, fr pch wk viol-bl wh dir fluor, v slo blmg bl wh-viol fluor cut, no vis res, v fnt fluor res
3382-3383	Core	Siltstone	no pet od, No vis oil stn, ex mott yel wh dir fluor, inst blmg wh-bl wh fluor cut, no vis res, strg yel wh fluor res ring
3383-3386	Core	Siltstone	10% spty-pch, occ mott, yel-brn dir Fluor, slo-v slo strmg-blmg bl-wh-pl vi Fluor cut, no vis Res
3386-3392	Core	Sandstone	20-30% spty, occ mott, yel diir Fluor, mod-slo, occ v slo tsrmg-blmg bl wh-pl vi Fluor cut, else a.a.
3392-3395	Core	Sandstone	wk pet od, 30-50% mott dull brn O stn, 30-50% pch-mott brt yel dir Fluor, fst-mod, occ slo-v slo strmg-blmg bl wh-pl vi Fluor cut, else a.a.
3395-3398	Core	Sandstone	10% dull yel dir Fluor, no-v slo strmg bl wh-pl vi Fluor cut, no-v wk bl wh Fluor Res, no vis Res
3398-3402	Core	Sandstone	wk od, Tr spty dull brn O stn, brt yel dir Fluor, mod-slo, occ v slo strmg-blmg bl wh-pl vi Fluor cut, else a.a.
3404-3406	Core	Sandstone	wk pet od, pch brt wh-yel wh dir fluor, inst blmg, stng wh - bl wh fluor cut, no vis cut, strg bl wh fluor res.
3407-3410	Core	Sandstone	wk yel-yel brn dir fluor, v slo stmg pl yel wh-bl wh fluor cut, Tr slo wk bl wh stmg crsh cut, fnt bl wh fluor res
3412-3413	Core	Sandstone	pch pl yel dir fluor, v slo strmg bl wh fluor cut, slo wk pl wh fluor crsh cut, wk bl wh fluor res ring
3415-3420	Core	Sandstone	pch yel-yelwh dir fluor cut, v v slo strmg pr fnt pch bl wh fluor cut, fnt bl wh fluor res ring.
3420-3421	Core	Sandstone	no dir fluor, v slo strmg mod bl wh fluor cut, pch mod bl wh fluor res, no vis res.
3421-3425	Core	Sandstone	no dir fluor, v slo strmg pr bl wh fluor cut, pch pr bl wh fluor res ring, no vis res.
3834-3843	Cuttings	Sandstone	no od, no stn, pch mod bl wh dir fluor, no vis fluor, sl cldy-strmg, mod bl wh fluor cut, inst stng bl wh crush cut, bl wh fluor res, no vis res.
3843-3845	Cuttings	Sandstone	no od, no stn, pch mod bl wh dir fluor, no vis fluor, sl strmg, mod bl wh fluor cut, brt bl wh crush dir fluor, inst-mod fst cldy bl wh-wk yel cut & crush cut, bl wh fluor res, no vis res.
3845-3852	Core	Sandstone	wk pet od, no stn, Tr spk brt yel, also fr spty fnt viol dir fluor, v slo strmg/blmg bl wh fluor cut, pch pl bl wh-wh fluor res occ ring, no vis res.
3854-3860	Core	Sandstone	no-v vk od, no stn, fr abd yel wh-bl wh dir Fluor, slw cldy-strmg wk bl wh-yel wh Fluor cut, no vis cut, v wk yel wh Fluor cut res, no vis res
3860-3870	Core	Sandstone	fr-gd HC od, no stn, brt yel dir Fluor, slw strmg brt strg yel bl Fluor cut, no vis cut, spt-ring bl wh Fluor res, no vis res
3874-3878	Core	Sandstone	fr HC od, wk brn O stn, mod spk yel dir Fluor, slw strmg yel wh Fluor cut, no vis cut, wk spt bl wh Fluor res, no vis res

1.4 Logging table. MWD / LWD / Wireline.

Run	Log type	Interval	Comments:
1	MWD: DIR	398 - 458 m	36”
2	MWD: GR-RES-DIR-PRES	458 - 683 m	12 ¼” Pilot hole
3	MWD: GR-RES-DIR-PRES	683 - 683 m	12 ¼” Pilot hole
4	MWD: GR-RES-DIR-PRES	683 - 683 m	12 ¼” Pilot hole
5	MWD: GR-RES-DIR-PRES	683 - 683 m	12 ¼” Pilot hole
6	MWD: GR-RES-DIR-PRES	683 - 683 m	12 ¼” Pilot hole
7	MWD: GR-RES-DIR-PRES	683 - 683 m	12 ¼” Pilot hole
8	MWD: GR-RES-DIR-PRES	461-555	26” hole opening
9	MWD: GR-RES-DIR-PRES	550 - 1326 m	17”
10	MWD: GR-RES-DIR-PRES-SONIC	1326 - 2962 m	12 ¼”
11	MWD: GR-RES-DIR-PRES-SONIC	2900 - 3265 m	12 ¼”
12	LWD: GR-RES-DIR-SONIC-DEN-NEU	3265 - 3381 m	8 ½”
13	LWD: GR-RES-DIR-SONIC-DEN-NEU	3381 - 3845 m	8 ½”
14	LWD: GR-RES-DIR-SONIC-DEN-NEU	3845 - 4000 m	8 ½”
1A	Wireline: IPLT-MDT	3258 – 4000 m	
1B	Wireline: IPLT-MDT	3258 – 4000 m	
1B	Wireline: IPLT-MDT	3258 – 3986 m	

1.5 Sidewall coring table.

No sidewall core was collected for this well.

1.6 Conventional Coring table.

Core no.	Top [m MD RKB]	Bottom [m MD RKB]	Recovery (%)	Formations
1	3381	3382,5	60,0	Oxfordian
2	3383,5	3401,6	100,0	Oxfordian
3	3401,6	3415,0	96,4	Oxfordian
4	3415,5	3443,3	100,0	Oxf.-Heather
5	3845,1	3856,3	100,0	Brent Sst
6	3856,3	3883,5	100,0	Brent Sst

Depths refer to LWD depth, recorded while drilling and coring.

For core depth shifts to wireline depths see Table 3-3.

2 GEOLOGICAL AND GEOPHYSICAL EVALUATION

2.1 Geological and Geophysical Results

The J10 Prospect is divided by faults into W-, C- and E-segments, where the W-segment was assumed to comprise the largest hydrocarbon accumulation. Well 35/8-5 S was targeted in the W-segment. In case of discovery in either the primary Oxfordian or the secondary Brent targets, the C-segment was to be sidetracked after conventional coring of pay zone and wireline logging. As no discovery was made in the W-segment, the sidetrack was not drilled. The well path is illustrated schematic in Figure 2.1-1.

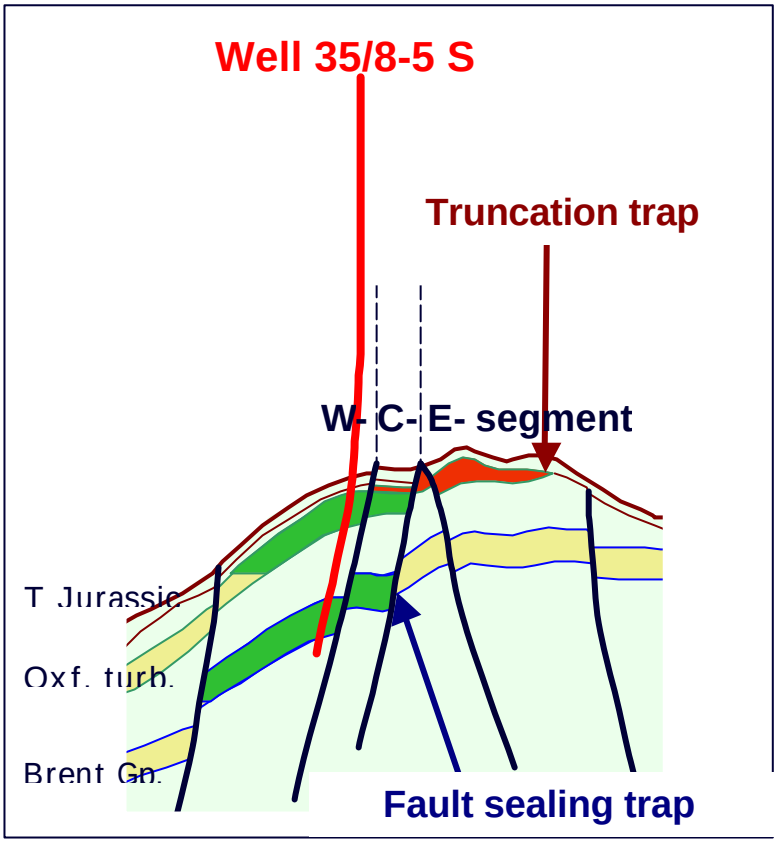


Figure 2.1-1 Schematic well path 35/8-5

The well was located close to the bordering fault to the east to enable sidetracking into the C-segment. Due to the fault-plane inclination, directional drilling in the Jurassic succession was necessary to keep a proper distance from the fault. Both the top Draupne Formation and top Brent Group were penetrated shallower than prognosed. As a consequence, the actual well-path intersection at top Draupne was located about 45m to the east of the prognosed penetration point and similarly, the top Brent Group was penetrated about 42m further to the east than prognosed (Figure

2.1-2). In spite of this, the well path kept a proper distance from the main fault to the east and penetrated both the Oxfordian and Brent sequences where the seismic character was similar as in prognosis.

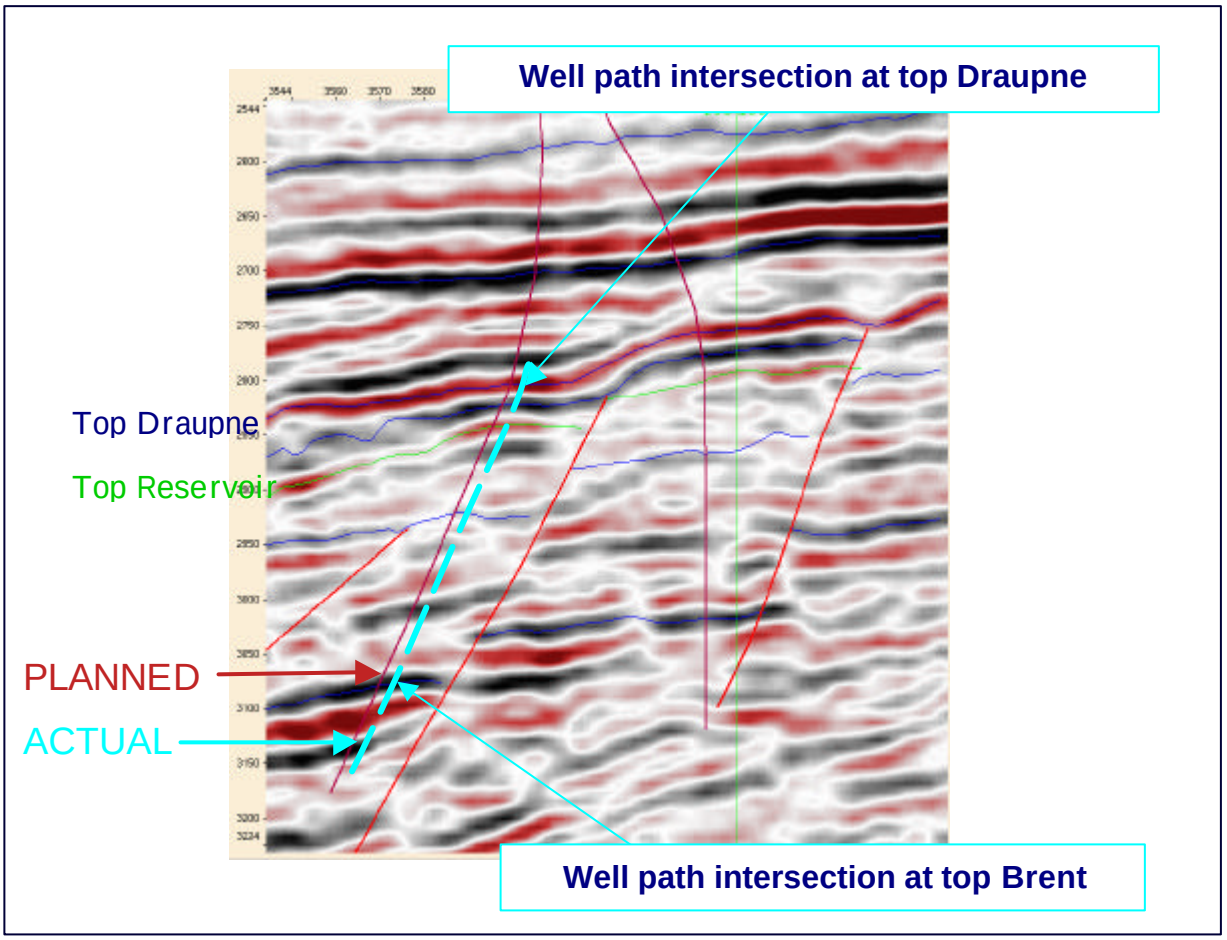


Figure 2.1-2 Well 35/8-5 deviation, actual vs. prognosed.

The prognosed and actual time/depth relations in well 35/8-5 S are shown in Table 2.1-1, where actual depth refers to LWD depth. Sea bed, Quaternary and intra-Tertiary picks were based on the site survey interpretation, while other formation tops were prognosed by interpretation of the 3D survey BPN9301M00, inline 1984. Base Cretaceous and key reservoir horizons were depth converted by using regionally well calibrated stacking velocities, while Well 35/8-3 was used for estimation of interval velocities for individual formations.

The differences between prognosed depths and actual depths show a consistent trend. The actual depths are generally shallower than the prognosed. All true vertical depths are, however, well within the expected uncertainty range. If the prognosed depths were compared with wireline depths, the difference would be somewhat smaller, as wireline depths are consistently shallower in the order of 9m.

The trend differences between prognosed and actual depths are explained by inaccuracy in velocity estimation from the stacking velocities. Especially the Tryggvason Formation (Upper Cretaceous) was prognosed with too high interval velocities (as it was less calcareous than prognosed). The top Rødby Formation was inaccurately picked on seismic, but the top Draupne Formation (correctly picked) was penetrated 97m shallower than prognosed as a consequence of the drift in velocity estimation.

FORMATION TOPS	DEPTH (m TVD MSL)		ERROR (m)	
	Prognosi	Actual	Prognosi	Actual
Sea bed	369	369	+/- 3	0
Top Grid Fm (Eocene sand)	851	816	+/- 30	- 34
Top Balder Fm	1343	1308	+/- 52	- 35
Top Tryggvason Fm	2841	2792	+/- 119	- 49
Top Rødby Fm	3108	3048	+/- 127	- 60
Top Draupne Fm (Top Jurassic)	3275	3178	+/- 133	- 97
Top Oxfordian turbidites *Top Oxfordian turbidites updated*	3320 *3245*	3258 3258	+/- 134 *+/- 24*	- 62 *- 13*
Base Oxfordian turbidites *Base Oxfordian turbidites updated*	3464 *3379*	3335 3335	+/- 153 *+/- 39*	- 129 *- 44*
Top Brent Group *Top Brent Group updated*	3739 *3662*	3665 3665	+/- 169 *+/- 56*	- 74 *+ 3*

Table 2.1-1 Formation tops vs. prognosed (based on LWD depths).

The prognosis was updated after penetration of the top Draupne Formation. The Oxfordian turbidite sequence was according to reservoir model prognosed to represent 80 m net sand, and this unit, although with poor reservoir qualities, was encountered within the seismically defined Oxfordian turbidite unit (Figure 2.1-3). The Oxfordian turbidite unit is a fining upward unit with a sharp base and poorly defined top. The base of the unit represents the clearest seismic signal, deriving from an abrupt reduction in acoustic impedance.

The top Brent Group was penetrated similarly as prognosed. The strongest seismic signal is related to the occurrence of coal beds within the Brent Group (Figure 2.1-4).

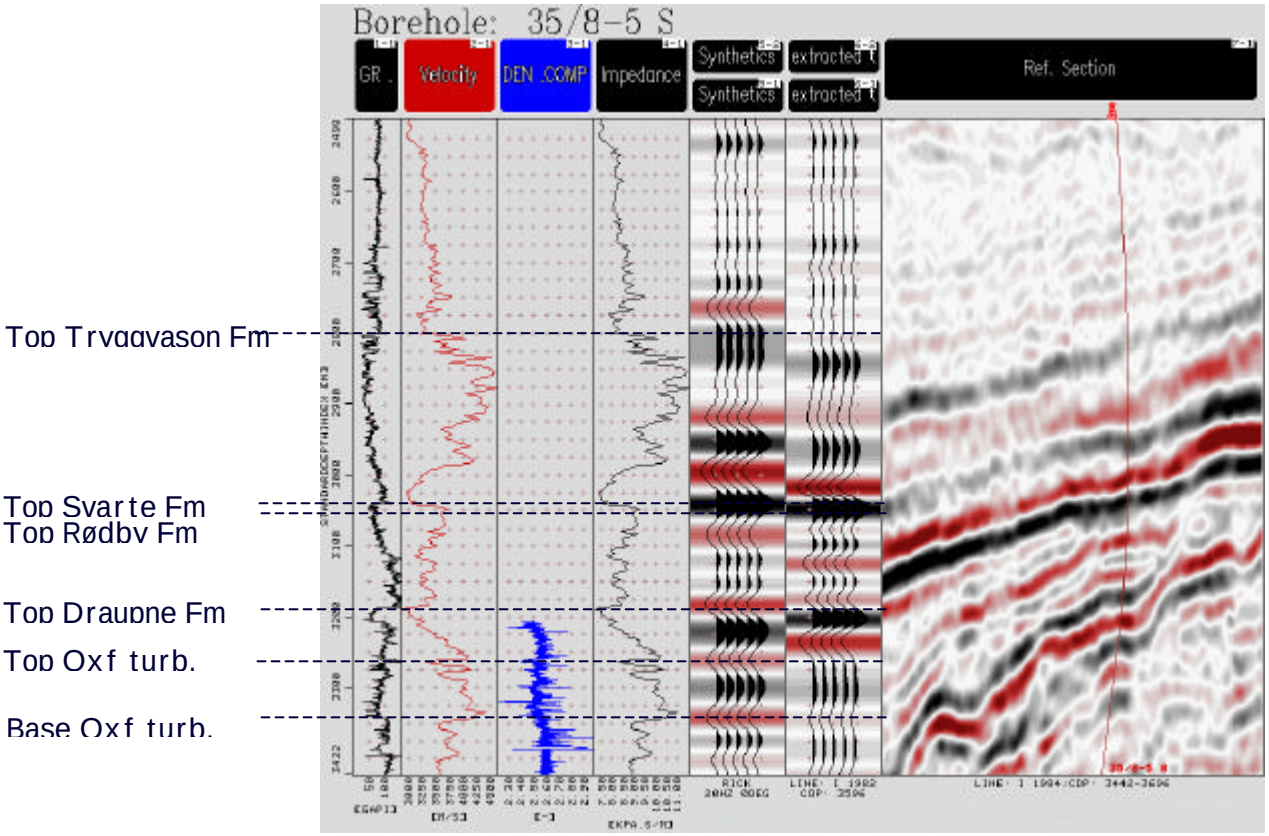


Figure 2.1-3. Well tie 35/8-5 for Lower Cretaceous and Upper Jurassic. (Wireline log depth.)

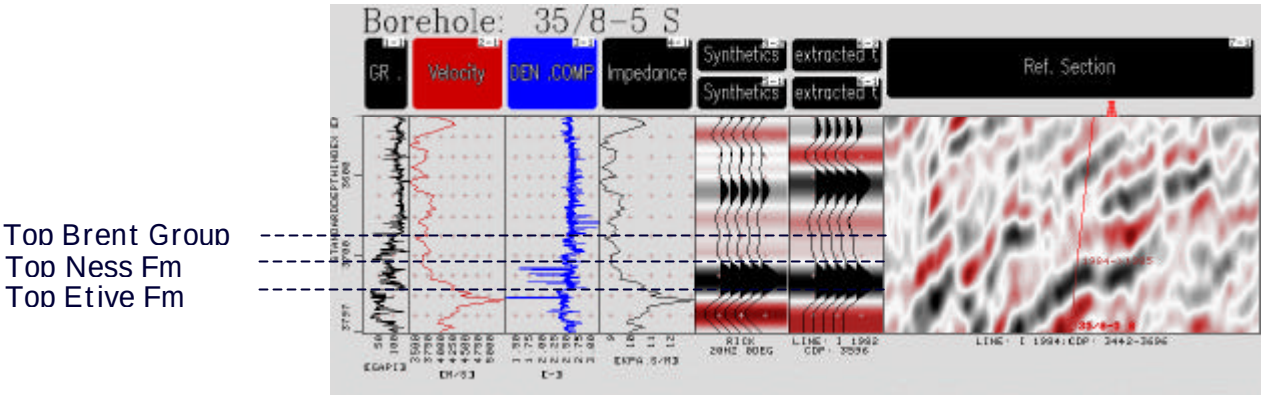


Figure 2.1-4. Well tie 35/8-5 for the Brent Group. (Wireline log depth.)

2.2 Discussion

A drilling hazard was given due to possible water flow from over-pressured sand interval in the Skade Formation (prognosed as an Utsira sandstone). The sand containing interval was considerably thicker than prognosed. There was no overpressure in the prognosed interval, but in two thinner sands above, at 570m and 590m, where water flow occurred. As a result, the 20" casing was set at 550 m instead of at 1100 m as planned for, and this in turn led to a revision of the casing programme in general.

Actual formation tops were as a rule penetrated shallower than in prognosis. The observed trend was recognized as most likely being caused by a local deviation from the regional stacking velocity trend. At the top Draupne Formation level, an updated prognosis corrected for the deviation trend under operation.

The Oxfordian turbidite sequence was encountered within the defined potential reservoir interval. The turbidite sequence had similar thickness as in prognosis. The reservoir quality was, however, poorer than in prognosis, both according to grain size and cementation. By-pass of the course grain fragments is the most likely explanation of the poor reservoir quality. The hydrocarbon fill supports a confirmation of the trap model, an up-dip reservoir truncation.

An about 20 m thick Callovian turbidite sequence was encountered. This was not prognosed. The pre-drilling Callovian depositional model implied a maximum progradation of the Fensfjord deltaic system at the crest of the Ryggsteinen Ridge, immediately to the east of Well 35/8-5. The well results show that the Callovian sand sequence extended further to the east than originally assumed according to the regional geological model.

The Brent Group reservoir quality was found similar as in 35/8-3 and as in prognosis. The Brent Group was found water bearing. It is uncertain if the lack of hydrocarbon discovery is due to failure in up-dip fault seal or due to a migration failure.

2.3 Biostratigraphy

A biostratigraphical evaluation of the interval 720m-3999 mMD RKB in well 35/8-5S, was carried out by Ichron Ltd. Micropaleontological and palynological analyses, carried out on ditch cuttings and core material, form the basis for the biostratigraphic interpretation. A total of 207 ditch cuttings and 22 core samples were analysed for palynology; 176 ditch cuttings and 22 core samples were analysed for micropalaeontology. The results are documented in the report: A Biostratigraphical Evaluation of the Oligocene to Middle Jurassic Interval in Exploration Well 35/8-5S, NOCS.

Tables 2.4.1 and 2.4.2 show summarised geochronologic and lithostratigraphic subdivisions of the well. The interpretation is in accordance with Norsk Hydro's standard zonation of the area. All depths are in m MD RKB from LWD logs. Due to large discrepancy in depth between LWD and wireline logs, both depths are presented in tab. 3.1b.

2.3.1 Main results

- The youngest analysed sediments at 720m (Hordaland Group) are of Early Oligocene age.

- The oldest analysed sediments at 3999m are of Early Bajocian age

- The Rogaland Group was penetrated at 1338m

- The Shetland Group was penetrated at 1716,5m

- The Cromer Knoll Group was penetrated at 3094,5m

- The Viking Group was penetrated at 3230,5m

- The Brent group was penetrated at 3830m

Three major breaks were observed in the well; the uppermost occurred within the Hordaland Group, where sediments of Late Eocene are missing, and two within the Cromer Knoll Group.
The upper unconformity in the Cromer Knoll Group occurs between the Rødby and Åsgard Formations where sediments of Middle-Early Albian and Late Aptian age are missing; the lower within the Åsgard Formation where the Valanginian interval is absent. A possible break is also registered within the Shetland Group where sediments of Cenomanian age appear to be missing.

2.3.2 Biostratigraphic summary of the sand units

Several sand units were penetrated in the well.
Within the Hordaland Group the Skade Formation (673,5-794m) of Oligocene age, the Grid Formation (845,5m-1037m) of Middle Eocene age, and the Frigg Formation (1091m-1205m) from the Early Eocene were encountered.

Within the Rogaland Group the Ty sand (1659m-1716,5m) was encountered. This sand was assigned to palyno subzone PTC-1 of Early Paleocene age.

The main sandstone unit within the Viking Group is the Oxfordian Sandstone Member (3326m-3422m), assigned to palyno subzones PJ6C2-PJ6B, Late- Early Oxfordian age. Another thin sand unit within the Viking Group occupies the interval 3570m-3597m and is assigned to palyno subzone PJ5C-PJ5B and micro zone MJ8C-MJ8B, of earliest Early Callovian-Late Bathonian age.

Within the Brent Group, the better reservoir sands are observed in the Tarbert and Etive Formations. The sand identified as Tarbert Formation (3830m-3882m) is assigned to palynosub zone PD4E/D of Late Bajocian age. The Etive Formation sand (3916m-3964m) is assigned to palyno subzone J4B-PJ4A of Early Bajocian age.

2.4 FIGURES

Figure list

2.4.1 Formation tops table.

GROUP	FORMATION	MEMBER	DEPTH, m MD RKB based on LWD logs	DEPTH, m TVD RKB based on LWD	DEPTH, m MD based on wireline logs
Rogaland			398	398	388
Hordaland	Skade		673,5-794	673,3- 793,8	682,5- 803
	Grid		845,5-1046	845,2	854,5
	Frigg		1091-1205	1090,6 -1204,5	1100 - 1214
Rogaland	Balder		1338	1337,5	1347
	Sele		1385	1384,4	1394
	Lista		1400	1399,4	1409
	Ty		1659	1658,3	1666,5
Shetland	Jorsalfar		1716,5	1715,9	1725,5
	Kyrre		1877,5	1876,9	1886,5
	Trygvason		2838	2821,5	2847,5
	Blodøks		3074	3056,4	3083
	?Svarte		3078,5	3060,8	3087,5
Cromer Knoll	Rødby		3094,5	3076,7	3104
	Åsgård		3149,5	3130,5	3158,5
Viking	Draupne		3230,5	3206,7	3239,5
	Heather		3326	3286,9	3335
		Oxfordian Sandstone	3326-3422	3286,9-3364	3334,5- 3431,5
Brent	Tarbert		3830	3693,5	3840
	Ness		3882	3735,9	3893
	Etive		3916	3763,7	3926
	Rannoch		3964	3802,7	3975,5
TD			4000	3831,8	

2.4.2 Biostratigraphic table

SAMPLE DEPTH m	PERIOD	AGE	Palyno Zone	Mikro Zone
720 (top not seen	EARLY OLIGOCENE	Rupelian	PT7A-2	
		----UNCONFORMITY----		
920	MIDDLE EOCENE	Lutetian	PT5	
1080	EARLY EOCENE	Ypresian	PT3C-3	
1360	EARLIEST EOCENE	earliest Ypresian	PT3A-2	
1400	LATE PALEOCENE	Thanetian	PT2C	
1520		Selandian	PT2A-4	
1680	EARLY PALEOCENE	Danian	PT1C-2	
1720	LATE CRETACEOUS	Late Maastrichtian	PK9B-5	
1840		Early Maastrichtian	PK9A	
1920		Late Campanian	PK8C-2	
1960		Middle Campanian	PK8B-2	
2060		Early Campanian	PK8B-1	
2100		Late -Middle Santonian	PK8A-3	MK10
2300		Early Santonian	PK8A-2	
2480		Coniacian	PK8A-1- PK7	MK9
2640		?Late Turonian	?PK7A	
2800		Late-Middle Turonian	PK7A	
3080		Early Turonian-?Cenomanian	PK6B-3	
		----?UNCONFORMITY----		
3120	EARLY CRETACEOUS	Late Albian	PK5-3C	MK6
		----UNCONFORMITY----		
3160		Middle- Early Aptian	PK4B-1	
3180		Barremian	PK3D	MK3B
3200		Hautervian		MK2C
		----UNCONFORMITY----		
3220		?Ryazanian	?PK1C	
3240	LATE JURASSIC	Late- Middle Volgian	PJ9-PJ8	
3273		Kimmeridgian-Late Oxfordian	PJ7B-PJ6D	
3291		Late Oxfordian	PJ6D-PJ6C2	
3357		Middle Oxfordian	PJ6C1	
3423,8 (core)		Early Oxfordian	PJ6B1	
3477	MIDDLE JURASSIC	Late - Middle Callovian	PJ6A	
3501		Early Callovian	PJ5C	
3573		Late- Middle Bathonian	PJ5B	
3732		Early Bathonian	PJ5A	
3804		Late Bajocian	PJ4D/E	
3845 (core)		Early Bajocian	PJ4C	
4000 TD			PJ4A	

3 PETROPHYSICAL EVALUATION

The petrophysical evaluation covers the Oxfordian, Callovian and Brent Group and the petrophysical interpretation is based on available log, core and formation pressure data collected during drilling of this well.

The difference between wireline and LWD depths is considerable. In the petrophysical interpretation all depths refer to wireline depths and the all the LWD logs have been depth shifted to match the wireline logs.

3.1 Petrophysical Results

The 35/8-5S well encountered oil in the Oxfordian turbidite, while the Callovian turbidite and Brent Group were water bearing. All three reservoirs are dominated by poor reservoir properties.

- The Oxfordian turbidite reservoir is highly laminated and the logs do not give a clear picture of the true reservoir properties due to inadequate vertical resolution. However the core data proved oil in the laminated sands
- From wireline logs the Callovian turbidite is proved to be water bearing
- In the Brent Group both the formation pressure analysis together with logs and cores confirm that the Brent Group was water bearing.

The related net reservoir properties are documented in the Table 3-5

3.2 Discussion

The Oxfordian reservoir is highly laminated and the logs do not give a clear picture of the true reservoir properties due to inadequate vertical resolution, however, the cores confirm oil in the Oxfordian. The UV core photo shows some invasion of oil based mud into the cores and a large contrast in the UV response in the center of the core, which is related to the reservoir oil.

The reservoir properties are generally of poor quality in all reservoir sections, apart from a 0.75meter zone in the Oxfordian where both the wire line logs and the conventional core data shows excellent reservoir properties.

Due to the uncertainty in the cut off criteria, 3 different porosity cut-offs are used and the related net reservoir properties are documented in the Table 3-5

3.3 CPI input data

LOG		Interval [m]
CDR – VISION Resistivity	LWD	458 - 4000
CDR-VISION-ISONIC	LWD	1326-4000
VISION Service (GR/RES/DENS/NEUT)	LWD	3265-4000
AIT-IPLT (LDS-APS-HNGS)	W/L	3265-4000
MDT-CQG	W/L	3265-4000

Table 3-1 LWD and Wireline tools run in well 35/8-5 S

The composite log is generated based on input from two logs:

- VISION-ISONIC-ADN (merged composite MWD/LWD)
- HNGS_APS_LDS(Run 1A, Raw) as provided by Schlumberger.

The dept shifting is described under chapter 1.3.1. The composite log was generated in Recall.

During logging of the HNGS_APS_LDS (Run 1A, Raw), the tool got stuck and the caliper was closed. This affected the density and neutron logs and these curves are replaced with corresponding LWD curves in the interval 3480.0 to 3500.0 m.

Wellbore 35/8-5S							
Composite log			Source log & curve				
Curve name	Curve type	Curve service	Source log from Recall (Tool combination)	Run	Curve Name	v.	Interval (m MD RKB)
AC	SONIC	AC.SLO.	VISION_ISONIC_ADN	MERGED	DTBC	1	1310.0-3985.3
BS	BITSIZ	BIT.SIZ	HNGS_APS_LDS	1A	BS	1	3261.1-4009.7
CALI	CALI	CAL.	HNGS_APS_LDS	1A	CALI	1	3250.0-4005.0
DEN	DENS	DEN.	HNGS_APS_LDS VISION_ISONIC_ADN HNGS_APS_LDS	1A MERGED 1A	RHOM ROBB RHOM	1 1 1	3221.8-3480.0 3480.0-3500.0 3500.0-4021.9
DENC	DENCOR	DEN.CRN	HNGS_APS_LDS	1A	DRH	1	3221.8-4121.9
GR	GAMMA	GR.	HNGS_APS_LDS	1A	HSGR	1	470.1-3998.0
K	GRSPEC	ELE.K.	HNGS_APS_LDS	1A	HFK	1	3221.8-3998.0
NEU	NEUT	NEU.	HNGS_APS_LDS VISION_ISONIC_ADN HNGS_APS_LDS	1A MERGED 1A	APLC TNPH APLC	1 1 1	3263.5-3480.0 3480.0-3500.0 3500.0-4002.1
PEF	PEF	PEF.	HNGS_APS_LDS	1A	HPEF	1	3263.5-4004.9
RDEP	DEPRES	RES.DEP.	VISION_ISONIC_ADN	MERGED	ATR P34H	1 1	474.9-3245.9 3245.9-3999.2
RMED	MEDRES	RES.MED.	VISION_ISONIC_ADN	MERGED	PSR P16H	1 1	474.9-3245.9 3245.9-3999.2
ROP	ROP	ROP.	VISION_ISONIC_ADN	MERGED	ROP5_R	1	474.9-4009.7
TENS	TENS	TENS.	HNGS_APS_LDS	1A	TENS	1	3221.8-4022.0
TH	GRSPEC	ELE.TH.	HNGS_APS_LDS	1A	HTHO	1	3221.8-3998.0
U	GRSPEC	ELE.U.	HNGS_APS_LDS	1A	HURA	1	3221.8-3998.0
SHIFT2	SHIFT	-	Generated in Recall	-	-	1	3261.4-3993.9

Table 3-2 Composite log (hybrid), well 35/8-5 S

3.3.1 Log quality

MDT

A large number of pretests were attempted (68). Of these, 44 tests are considered to be dry tests with no significant pressure response after draw-down. One test was lost seal. The remaining 23 tests are of generally poor quality and are more or less all affected by supercharging and low permeability. No gradients can be established from pressure points in any of the three reservoirs.

LWD and Wireline logs
Both the LWD- and w/l-logs are of good quality. The density logs from LWD and w/l are in good agreement. During logging of the HNGS_APS_LDS (Run 1A, Raw), the tool got stuck and the caliper was closed. This affected the density and neutron logs and these curves are replaced with corresponding LWD curves in the interval 3480.0 to 3500.0 m. The w/l neutron log was run without a bowspring for decentralization, and hence some uncertainty is associated with this measurement.

A considerable depth discrepancy between driller's depth and logger's depth was observed. No obvious reason was identified after a thorough investigation was carried out. The depth difference is in the range 6,5 – 10,5 meters (maximum at TD). W/l depth control was monitored carefully at the well site, and standard procedures were followed. The depth correction is described in the curve SHIFT2 included in the COMPOSITE log. Above the 9 5/8" casing shoe, the MWD-logs are block shifted +9.0 meters. This was observed during the first w/l run, and was later confirmed with the subsequent MDT log.

The ISONIC DT suffered from weak coherence during logging and was later reprocessed by Schlumberger DCS resulting in a great improvement. The log is of good quality from TD to 1700 m. Shallower than this depth, the coherence is weak and the log quality is worse, however the resulting DT over most of the 1300-1700 m. interval is useable.

3.3.2 Corrections

LWD logs are all bore hole compensated, and VISION is also environmentally corrected. ADN porosity is corrected for tool size, bit size, mud salinity and mud HI. CDR GR is corrected for mud weight, bit size and tool size. ISONIC DT is reprocessed by Schlumbeger DCS.

The w/l neutron log is caliper corrected.

3.4 Evaluation Method

Petrophysical methodology

The petrophysical interpretation of the 8 ½" section is based on the porosity logs from w/l and the resistivity log from LWD. The petrophysical interpretation is integrated with the core analysis for verification of log interpretation.

OBM was used for the 8 ½" interval, and no micro-resistivity device was run. Therefore, no hydrocarbon correction is applied to the porosity interpretation.

Bottom hole temperature
The two logging runs provide measurements of bottom hole temperature through the use of maximum recording thermometers.

Circulation stopped at 5:00 AM 9th July 2003 after 2 hours duration. First logging run reached bottom at 3:30 AM 10th July and recorded 126 deg C. Second logging run (MDT) reached bottom at 6:40 PM 10th July and recorded 127^{o}C. From charts, static bottom hole temperature was estimated to be 128,5^{o}C.

Shale Volume

As stated before, logs are of good quality. The GR gives a good response to the shale volume, and sand bodies are readily identified from the GR. No additional information was identified from other associated curves like the Potassium and Thorium curves.

GR has been used for estimation of shale volume for all three reservoirs encountered. Parameters like GRclean and GRshale are identified from visual inspection of logs as well as histograms.

Due to the finely laminated nature of the Oxfordian, parameters have been adjusted to give a better representation of core observations with identified layers of Net Reservoir within the laminated sequence. See figure below.

A shale volume cutoff of 0.40 has been applied.

A 'manual' count of Net Reservoir from inspection of core is recommended as none of the logs available can identify this.

Porosity

For all of the three reservoirs, the density log is used for porosity interpretation. Selections of input parameters are based on visual inspection of logs and from core analysis (grain density). The density log is of high quality over the reservoir intervals and in good agreement with the LWD density.

Effective porosity, corrected for shale volume, is estimated and compared to core analysis (Helium porosity). Good agreement between logs and core analysis has been achieved apart from in the

laminated interval of the Oxfordian. Here, the logs do not pick up the details, and the log interpreted porosity show a mere average.

For the Callovian the input parameters used for Brent are used, due to lack of core data

In the Brent Group, the log and core porosities show good agreement over the cored interval, which is limited to the upper part of the Brent Group. Calcite cemented layers and coal strings are discriminated and porosity is set to 0.

Based on experience, an overburden correction of 0,95 has been applied to the core porosities for comparison with the w/l-interpreted porosity.

Water saturation

The deep resistivity curve P34H from the LWD service VISION has been used for Rt input to the model. As the reservoirs encountered are shale / sand sequences, the Indonesia equation has been used for determination of water saturation in order to correct for clay volume.

Dean&Stark analyses have been carried out for certain core plugs and are valid for the Oxfordian and the data confirm the log interpretation. However, the absolute values are somewhat different. This is most likely caused by the poor vertical resolution of the resistivity logs. The observed resistivity values are too low, giving too high water saturations. For volumetrics of the Oxfordian it might be advisable to use the results from the D&S analyses instead of the log interpreted saturation.

The log interpretation confirms the water bearing Callovian and Brent.

No fluid samples are collected from this well, so no measurement of Rw can be carried out. Rw is determined from the Rwa-method over Callovian and Brent. The result is approx. Rw=0.09 @ 128,5 ^{o}C for both reservoirs in question. This is also in agreement with the interpretation of the nearby 35/8-3 well and gives an indication of a regional aquifer.

Net Reservoir

For the Oxfordian, a porosity cutoff is hard to pick as the plugs are drilled on a regular spacing through the laminated sequence. The plugs will include a varying amount of shale, and this affects the permeability measurements considerably. There is poor correlation between permeability and porosity from core analysis and no obvious porosity cutoff can be identified. However, a porosity cutoff of 10% has been chosen to be the most representative value for a corresponding permeability cutoff at 1 mD.

No cores are cut in the Callovian, and the same cutoff has been applied as for the Oxfordian; PHIE=10%.

Two cores were cut in the upper part of the Brent Group. This part of the Brent consists of poor reservoir quality compared to the deeper part of the Brent. The cores are therefore not representative for the lower Brent containing the best reservoir quality. The available core data does not give a good correlation between porosity and permeability, and the selection of a representative cutoff value is not obvious. However, a porosity cutoff of 12% has been chosen to be the most representative for the Brent group.

Cores

A total of six cores were cut, four in the Oxfordian, and two in the Brent Group and conventional core analysis, including He-porosity, air permeability and grain density and the analysis were carried out by Reslab, and additionally Dean&Stark were performed on a selection of plugs. The cores are depth matched to the reference log, the first w/l run.

Core no.	Zone	Drillers depth rec.	Depth shifts	W/l depth rec.
Core #1	Oxfordian	3381.0-3382.5	+8.4 m	3388.4-3390.9
Core #2	Oxfordian	3383.5-3401.6	+8.0 m	3391.5-3409.6
Core #3	Oxfordian	3401.6-3415.0	+8.1 m	3409.7-3423.1
Core #4	Oxfordian	3415.5-3443.3	+8.1 m	3423.6-3451.3
Core #5	Brent	3845.1-3856.3	+10.3 m	3855.4-3866.6
Core #6	Brent	3856.3-3883.5	+10.4 m	3866.7-3893.9

Table 3-3 Core depth Shifts, well 35/8-5 S

3.5 Fluid System

3.5.1 Formation pressure analysis

The CQG gauges were both operational during the entire job and the evaluation is based on the CQG gauges. The strain gauge (SG) data are not discussed, as they are not considered to add any additional information.

For the Callovian and Brent, water gradients of 0.099 bar/m have been established by using the water density derived from log interpretation. The pre-tests are not of sufficient quality to give any conclusive gradients directly. The gradient estimated from log interpretation is drawn through the best pre-test available in each of the two reservoirs (tests # 64 and #50 respectively), in this situation considered to be the best possible option. No conclusive results can be made regarding formation pressure in the Oxfordian. None of the pre-tests in the Oxfordian are of sufficient quality to quantify the formation pressure or pressure gradient. The formation pressures show that the Callovian and the Brent Group have different absolute pressures regimes. Brent formation pressures are approximately 38 bar higher than what is measured in the Callovian.

3.5.2 Fluid Contacts

In this well, no fluid contacts are encountered. The Oxfordian is oil-filled while the Callovian and Brent are entirely water bearing. The gradients and absolute pressures are not of sufficient quality to make any proper estimations of possible contacts levels w.r.t. the oil column identified in the Oxfordian.

3.5.3 Fluid Sampling

No fluid sampling was carried out with MDT in this well.

3.6 Pressure and temperature summary.

3.6.1 Pressure

The pore pressure-, fracture -, and overburden gradients are presented graphically in figure B-4. All depths are in meters true vertical depth TVD, relative to rotary table.
Air gap 23 m and water depth 372 m RKB. The pore pressure-, fracture -, and overburden gradient are given in Equivalent Mud Density, g/cm^3 or sg. Data to interpretet the pore pressure includes MDT pressure points, MWD logs, gas data and drilling parametres.

3.6.2 Pore pressure gradient

Shallow gas was not observed but it was observed water flow in the Nordland Group sand above the Utsira Fm.
Drilled 12 1/4" pilot hole from 461m to 683m due to waterflow experience in the area. Drilled through two thin sand stringers at 570m and 590m. Flow checked well due to indication on drill break at 681m. Observed well flowing. Displaced well to 1.30 sg mud and killed well. At this time it was assumed that the Utsira sand itself was flowing but the preseeding operations confirms flow from the shallower sands as experienced in other wells in this area. Lubricated and pulled out of hole with 12 ¼" BHA. Rigged up cement stand and ran in hole to 683m. Displaced hole to 1.22sg NaCl mud and flow checked, negative. Displaced hole back to 1.30sg mud. Pumped 15m3 of 1.30sg spacer and 7.6m3 of 1.90sg gastight cement. Displaced cement with 1.30sg slurry and pulled out of hole. Ran in hole with 12 ¼" BHA and tagged soft cement at 594m. Drilled 4m soft cement to 598m. Observed well flowing when flow checking prior to connection. Circulated with seawater and washed down to 677m. The well continued flowing. Drilled hard cement from 677m to 680m. Displaced well to 1.30sg mud, well stable, pulled out of hole. Made up cement stand and ran in hole to 680m. Displaced well to 1.15sg mud, well was stable. Displaced to 1.30sg mud. Pumped 15m3 of 1.30sg spacer, 12m3 of 1.90sg gastight cement and displaced with 1100 l of 1.30sg spacer and 2800 l seawater. Pulled out of hole. Observed well. Made up 12 ¼" BHA and ran in hole to 555m. Washed down to 600m in soft cement and circulated bottoms up with seawater. Flow checked well, well was flowing. Continued washing down to hard cement at 675m. Spotted 4.1m3 of 1.50sg kill pill from 675m to 590m and flow checked well. Well still flowing, from the shallow sands. Displaced well to 1.30sg mud and flow checked for 30 minutes. Well static. Lubricated and pulled out of hole. Ran in hole with 5" open end drill pipe to 675m. Pumped 12m3 1.30sg spacer, 15.2m3 of 1.50sg cement slurry and displaced cement with 700 l 1.30sg spacer and 2800 l seawater. Pulled out of hole and observed well. Waited on cement to set up. Made up and ran in hole with 12 ¼" BHA to 555m to check for cement. No cement observed, pulled back to 454m and continued waiting for cement to set up. Washed down from 454m and tagged soft cement at 658m. Pumped 4m3 1.3sg pill and circulated bottoms up with seawater. Well stable. Displaced well to 1.30sg mud. Pulled out of hole. Made up parabow with setting tool on 3 ½" drillpipe to 207m. Continued to run in hole with 5" drillpipe to 656m. Pulled back to 630m and pumped 10m3 of 1.30sg mud. Dropped ball, installed cement stand and pumped ball down to launch parabow. Pulled back to 627m. Pumped 10m3 of 1.30sg spacer, 11.8m3 of 1.95sg cement slurry and displaced cement with 700 l of 1.30sg spacer and 3000 l seawater. Pulled out of hole, flushed cement stinger with seawater and ran back into hole waiting for cement to set up. Pulled out of sea with cement stinger. Waited on cement, and ran in hole with 12 ¼" BHA. Tagged firm cement at 570.5m. Circulated bottoms up with seawater and flow checked well for 30min. Well stable. Displaced well to 1.30sg mud and pulled out of hole. Changed to 5" handling equipment and ran in hole with 5" drillpipe to 568m. Spotted 5m3 of 1.30sg LCM pill. Pumped 12m3 of 1.30sg spacer, 7.6m3 of 1.95sg cement slurry and displaced cement with

500 l of 1.30sg spacer and 2800 l seawater. Pulled out of hole, flushed cement stinger with seawater and ran back into hole waiting for cement to set up. Made up 12 ¼" BHA and waited for cement to set up. Ran in hole with 12 ¼" BHA and tagged firm cement at 513m. Drilled to 558m, and circulated bottoms up with seawater. Flow checked well for 30min, well stable. Pulled out of hole, the water flow was killed. The Pore pressure of the shallow sands are uknown but based upon the fact that the well was stable with 1,30sg mud the pore pressure had to be below 1,13sg and most likely in the range of 1,035 to 1,05sg. The mechanism behind this water pressure is still uknown, but glacial overcompaction has been suggested.
The pore pressure was else interpreted to stay at 1,03sg from top Utsira into top Trygvason. A pressure build-up as prognosed was observed before running the 9 5/8" casing. When drilling / coring the Oxfordian reservoir sand trip gases and increased background gas was observed. No tight hole or pressure cavings were observed. One attempt to perform a POG was done, but no conclusive POG trend was established. Based on the gas development it was decided to raise the mudweight in case the well was close to balance.
The pore pressure could not be determined in the Oxfordian by MDT due to cementation, but the sonic log did support a steady pore pressure increase from 1,20sg in the Oxfordian to 1,40sg at the base of the Heather Fm, but the pore pressure in Oxfordian remains uncertain. The MDT pressure point taken in the Brent Group gave a reservoir pressure of 1,40sg.

3.6.3 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 taken in reference wells. There was no mudlosses to the formation in this well. The 20" casing shoe was tested with a FIT to 1,25sg. The 13 3/8" casing was drilled out and a LOT was performed. The formation did not leak off but gave a minifrac at a pressure equal to 2,06sg. This was much higher than prognosed (1.5 sg), indicating that the cement had been tested (pressure 120bar = 1740 psi 29 hours after cementing , cement plot 1950 psi after 27 timer). Drilled therefore additional 2 m and performed a FIT with 59 bar (just below the stabilizing pressure from the LOT) to verify formation strength. This was OK and gave a value of 1.58sg. Minimum strength for further drilling was 1.50sg.
The 9 5/8" casing shoe was tested with a FIT to 1,80sg.

3.6.4 Overburden gradient

Overburden gradient is based on the prognosis.

3.6.5 Temperature gradient

The temperature gradient (fig B-5) is based on the Horner plot giving 132^0 C at 3700m. An average formation temperature gradient of $3,93^0$ C / 100m TVD gives a static bottom hole temperature of $138,6^0$ C, assuming 4^0C at seafloor.

3.7 Figures and Tables

LIST OF TABLES AND FIGURES

3.7.1 Petrophysical Input Parameters

Parameter	Symbol	Unit	Sources	Oxfordian	Callovian	Brent
Formation Top		m MD RKB	Report	3334,5	3579,0	3840,0
Formation Bottom		m MD RKB	Report	3431,5	3632,0	3984,0
Formation temperature	T	Deg C	Logs / equation	128,5		
Depth of form. temp.		mTVDMSL		3800		
Apparent hydrocarbon density (invaded zone)	$RHO_{hc,a}$	g/cm^3	Estimated	1,00		
Formation water density	RHO_{water}	g/cm^3	Calculated	0,97		
Formation water resist. at form. temp.	R^w	ohm.m	Calculated	0.09		
Shale density	RHO_{sh}	g/cm^3	LOG	2,60	2,65	2,65
Shale resistivity	R_{sh}	ohm.m	LOG	4.0	6.0	15.0
Sand: GRmin	GR_{min}	API	LOG	45	30	35
Sand: GRmax	GR_{max}	API	LOG	130	120	135
Matrix density	RHO_{ma}	g/cm^3	CORE	2.68	2.68	2.68
Archie factor	a		Estimated	1,0		
Cementation exponent	m		Estimated	2,2		
Saturation exponent	n		Estimated	2,0		
Indonesia parameter	I_{silt}		Estimated	0		
Indonesia parameter	C_{vsh}		Estimated	1		

Table 3-4 Input parameters to the log interpretation

3.7.2 Reservoir zonal averages

Reservoir Zone	Top mRKB	Bottom mRKB	Gross Thickness	Net Thickness	Net/ gross	Phie Cut-off	Vsh Cut-off	Phie frac	Swe frac
Oxfordian	3334.5	3431.5	97.0		0.016 0.035 0.075	0.14 0.12 0.10	0.40 0.40 0.40	0.192 0.156 0.130	0.21 0.25 0.30
Callovian Sands	3579.0	3632.0	53.0		0.170 0.210 **0.267**	0.14 0.12 **0.10**	0.40 0.40 0.40	0.166 0.159 **0.148**	0.87 0.88 **0.89**
Brent Group	3840.0	3984.0	144.0		0.201 0.266 **0.341**	0.14 0.12 0.10	0.40 0.40 0.40	0.165 0.157 0.146	0.91 0.90 0.91

Table 3-5 Net reservoir averages well 35/8-5 S (Remarks all depths refer to wire-line depths in mRKB)

3.7.3 Formation Pressure table

File No.	Test No.	SSDP m	MD m	FMP BAR	Mud Before BAR	Mud After BAR	DD Mob. md/cp	Comment	Packer Probe	Gauge Name
131	1	3339,1	3427,2		549,22	548,95		Dry Test	Conv. Pr.	BQP1
142	10	3291,4	3367,5		539,6	539,56		Dry Test	Conv. Pr.	BQP1
156	15	3791,4	3986,0		623,59	623,46		Dry Test	Conv. Pr.	BQP1
157	16	3782,1	3974,5		621,14	620,99		Dry Test	Conv. Pr.	BQP1
160	18	3761,5	3949,0		616,11	616		Dry Test	Conv. Pr.	BQP1
176	32	3703,1	3877,5		605,58	605,58		Dry Test	Conv. Pr.	BQP1
190	45	3747,7	3932,0	517,89	612,8	612,87	1,9	DD pretest	Conv. Pr.	BQP1
191	46	3745,2	3929,0	517,24	612,38	612,45	1,5	DD pretest	Conv. Pr.	BQP1
192	47	3743,6	3927,0	517,10	612,14	612,17	3,7	DD pretest	Conv. Pr.	BQP1
193	48	3705,2	3880,0		605,49	605,58		Dry Test	Conv. Pr.	BQP1
194	49	3704,3	3879,0		605,4	605,48		Dry Test	Conv. Pr.	BQP1
195	50	3703,1	3877,5		605,24	605,24		Dry Test	Conv. Pr.	BQP1
196	51	3702,3	3876,5		605,11	605,14		Dry Test	Conv. Pr.	BQP1
199	52	3748,9	3933,5	517,72	614,62	614,24	0,9	DD pretest	Conv. Pr.	BQP1
200	53	3747,3	3931,5	517,69	613,81	613,55	2,9	DD pretest	Conv. Pr.	BQP1
205	56	3502,9	3629,5		572,21	572,24		Dry Test	Conv. Pr.	BQP1
208	59	3495,7	3620,5		571,06	571,06		Dry Test	Conv. Pr.	BQP1
133	2	3339,1	3427,2		548,93	548,57		Dry Test	L-A Packer	BQP2
134	3	3338,9	3426,9		548,43	548,24		Dry Test	L-A Packer	BQP2
136	4	3334,6	3421,5		547,13	546,95		Dry Test	L-A Packer	BQP2
137	5	3325,4	3410,0		544,99	544,87		Superch.	L-A Packer	BQP2
138	6	3319,2	3402,2	466,04	543,71	543,89		Superch.	L-A Packer	BQP2
139	7	3306,3	3386,0		541,76	541,87		Dry Test	L-A Packer	BQP2
140	8	3298,3	3376,0		540,47	540,58		Dry Test	L-A Packer	BQP2
141	9	3291,4	3367,5		539,47	539,53		Lost Seal	L-A Packer	BQP2
143	11	3285,4	3360,0		538,51	538,54		Dry Test	L-A Packer	BQP2
144	12	3273,7	3345,5		536,61	536,7		Dry Test	L-A Packer	BQP2
146	13	3266,4	3336,5		535,55	535,56		Dry Test	L-A Packer	BQP2
147	14	3257,0	3325,0		533,99	534,05		Dry Test	L-A Packer	BQP2
158	17	3780,2	3972,1		620,60	620,39		Dry Test	L-A Packer	BQP2
161	19	3759,4	3946,5	519,29	615,66			DD pretest	L-A Packer	BQP2
162	20	3757,9	3944,6	518,88	615,25	615,26	0,6	DD pretest	L-A Packer	BQP2
165	21	3747,7	3932,0	517,44	613,12	613,07	4,1	DD pretest	L-A Packer	BQP2
166	22	3745,2	3929,0	517,22	612,66	612,73	434,7	DD pretest	L-A Packer	BQP2
167	23	3743,6	3927,0	517,10	612,42	612,46	1,5	DD pretest	L-A Packer	BQP2
168	24	3730,1	3910,5		610,33	610,29		Dry Test	L-A Packer	BQP2
169	25	3726,0	3905,5		609,48	609,54		Dry Test	L-A Packer	BQP2
170	26	3725,2	3904,5		609,39	609,42		Dry Test	L-A Packer	BQP2
171	27	3721,7	3900,2		608,57	608,67		Dry Test	L-A Packer	BQP2
172	28	3705,1	3879,9		605,75	605,9		Dry Test	L-A Packer	BQP2
173	29	3704,7	3879,4		605,86	605,89		Dry Test	L-A Packer	BQP2
174	30	3703,1	3877,5		605,54	605,56		Dry Test	L-A Packer	BQP2
175	31	3701,5	3875,5		605,32	605,35		Dry Test	L-A Packer	BQP2
177	33	3699,5	3873,1		605,01	605,03		Dry Test	L-A Packer	BQP2
178	34	3687,5	3858,5		602,80	602,91		Dry Test	L-A Packer	BQP2
179	35	3684,2	3854,5		602,32	602,38		Dry Test	L-A Packer	BQP2
180	36	3680,9	3850,5		601,78	602,80		Dry Test	L-A Packer	BQP2

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File No.	Test No.	SSDP m	MD m	FMP BAR	Mud Before BAR	Mud After BAR	DD Mob. md/cp	Comment	Packer Probe	Gauge Name
181	37	3672,8	3840,5		601,03	600,91		Dry Test	L-A Packer	BQP2
183	38	3777,7	3969,0	521,33	620,58	620,22		Superch.	L-A Packer	BQP2
184	39	3776,1	3967,0	520,98	619,76	619,35	0,2	DD pretest	L-A Packer	BQP2
185	40	3772,4	3962,5	520,15	618,47	618,25	0,6	DD pretest	L-A Packer	BQP2
186	41	3767,9	3957,0	519,87	617,31	617,06	0,2	DD pretest	L-A Packer	BQP2
187	42	3765,5	3954,0	519,80	616,35	616,11	0,1	DD p retest	L-A Packer	BQP2
188	43	3759,8	3947,0	518,91	615,01	615,12	0,3	DD pretest	L-A Packer	BQP2
189	44	3747,7	3932,0	517,49	612,83	612,98	6,9	DD pretest	L-A Packer	BQP2
202	54	3502,9	3629,5		572,11	572,30		Dry Test	L-A Packer	BQP2
204	55	3501,3	3627,5		571,86	571,91		Dry Test	L-A Packer	BQP2
206	57	3495,7	3620,5		570,94	571,04		Dry Test	L-A Packer	BQP2
207	58	3494,1	3618,5		570,75	570,78		Dry Test	L-A Packer	BQP2
209	60	3482,3	3604,0		568,74	568,91		Dry Test	L-A Packer	BQP2
210	61	3479,1	3600,0		568,28	568,36		Dry Test	L-A Packer	BQP2
211	62	3475,0	3595,0		567,74	567,78		Superch.	L-A Packer	BQP2
212	63	3469,9	3588,7		567,40	566,93		Dry Test	L-A Packer	BQP2
213	64	3468,1	3586,5	452,74	566,69	566,73	0,6	DD pretest	L-A Packer	BQP2
214	65	3466,5	3584,5	456,19	566,43	566,47	0,1	DD pretest	L-A Packer	BQP2
215	66	3462,9	3580,0		565,77	565,81		Dry Test	L-A Packer	BQP2
218	67	3495,9	3620,8	457,44	573,03	572,50	0,5	DD pretest	L-A Packer	BQP2
219	68	3493,8	3618,2	457,27	572,28	571,90	0,4	DD pretest	L-A Packer	BQP2
131	1	3339,1	3427,2		549,37	549,14		Dry Test	Conv. Pr.	BSG1
142	10	3291,4	3367,5		539,64	539,64		Dry Test	Conv. Pr.	BSG1
156	15	3791,4	3986,0		623,59	623,39		Dry Test	Conv. Pr.	BSG1
157	16	3782,1	3974,5		621,12	620,95		Dry Test	Conv. Pr.	BSG1
160	18	3761,5	3949,0		616,11	615,97		Dry Test	Conv. Pr.	BSG1
176	32	3703,1	3877,5		605,43	605,50		Dry Test	Conv. Pr.	BSG1
190	45	3747,7	3932,0	517,81	612,76	612,74	1,9	DD pretest	Conv. Pr.	BSG1
191	46	3745,2	3929,0	517,13	612,26	612,32	1,5	DD pretest	Conv. Pr.	BSG1
192	47	3743,6	3927,0	517,01	612,02	612,03	3,7	DD pretest	Conv. Pr.	BSG1
193	48	3705,2	3880,0		605,36	605,48		Dry Test	Conv. Pr.	BSG1
194	49	3704,3	3879,0		605,28	605,37		Dry Test	Conv. Pr.	BSG1
195	50	3703,1	3877,5		605,11	605,14		Dry Test	Conv. Pr.	BSG1
196	51	3702,3	3876,5		605,00	605,04		Dry Test	Conv. Pr.	BSG1
199	52	3748,9	3933,5	517,65	614,50	614,10	0,9	DD pretest	Conv. Pr.	BSG1
200	53	3747,3	3931,5	517,62	613,70	613,41	2,9	DD pretest	Conv. Pr.	BSG1
205	56	3502,9	3629,5		572,14	572,20		Dry Test	Conv. Pr.	BSG1
208	59	3495,7	3620,5		570,97	571,02		Dry Test	Conv. Pr.	BSG1
133	2	3339,1	3427,2		547,14	546,74		Dry Test	L-A Packer	BSG2
134	3	3339,0	3427,0		547,64	547,42		Dry Test	L-A Packer	BSG2
136	4	3334,6	3421,5		546,34	546,15		Dry Test	L-A Packer	BSG2
137	5	3325,4	3410,0		543,23	543,06		Dry Test	L-A Packer	BSG2
138	6	3319,2	3402,2	464,55	541,92	542,07	0,2	Superch.	L-A Packer	BSG2
139	7	3306,3	3386,0		539,96	540,08		Dry Test	L-A Packer	BSG2
140	8	3298,3	3376,0		538,93	539,01		Dry Test	L-A Packer	BSG2
141	9	3291,4	3367,5		537,92	537,98		Lost Seal	L-A Packer	BSG2
143	11	3285,4	3360,0		536,96	537,00		Dry Test	L-A Packer	BSG2
144	12	3273,7	3345,5		535,09	535,17		Dry Test	L-A Packer	BSG2
146	13	3266,4	3336,5		534,01	534,04		Dry Test	L-A Packer	BSG2
147	14	3257,0	3325,0		532,50	532,54		Dry Test	L-A Packer	BSG2
158	17	3780,2	3972,1		618,98	618,70		Dry Test	L-A Packer	BSG2

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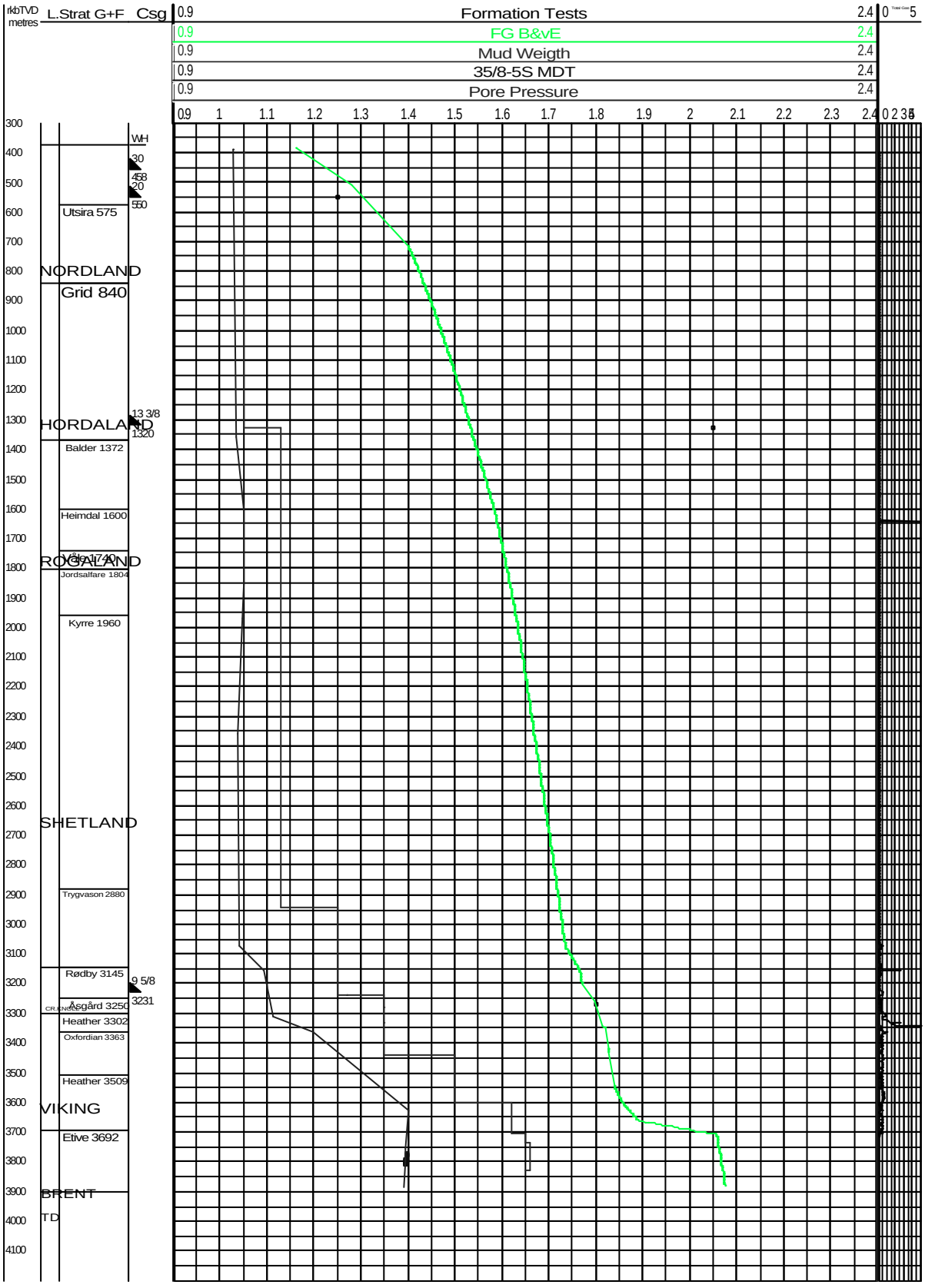
File No.	Test No.	SSDP m	MD m	FMP BAR	Mud Before BAR	Mud After BAR	DD Mob. md/cp	Comment	Packer Probe	Gauge Name
161	19	3759,4	3946,5	517,93	613,99			DD pretest	L-A Packer	BSG2
162	20	3757,9	3944,6	517,56	613,56	613,57	0,6	DD pretest	L-A Packer	BSG2
165	21	3747,7	3932,0	516,14	611,42	611,36	4,1	DD pretest	L-A Packer	BSG2
166	22	3745,2	3929,0	515,93	610,97	611,02	0,6	DD pretest	L-A Packer	BSG2
167	23	3743,6	3927,0	515,79	610,74	610,76	1,5	DD pretest	L-A Packer	BSG2
168	24	3730,1	3910,5		608,62	608,58		Dry Test	Conv. Pr.	BSG2
169	25	3726,0	3905,5		607,79	607,83		Dry Test	L-A Packer	BSG2
170	26	3725,2	3904,5		607,70	607,73		Dry Test	L-A Packer	BSG2
171	27	3721,7	3900,2		606,90	606,97		Dry Test	L-A Packer	BSG2
172	28	3705,1	3879,9		604,08	604,23		Dry Test	L-A Packer	BSG2
173	29	3704,7	3879,4		604,20	604,22		Dry Test	L-A Packer	BSG2
174	30	3703,1	3877,5		603,88	603,89		Dry Test	L-A Packer	BSG2
175	31	3701,5	3875,5		603,64	603,68		Dry Test	L-A Packer	BSG2
177	33	3699,5	3873,1		603,35	603,38		Dry Test	L-A Packer	BSG2
178	34	3687,5	3858,5		601,16	601,26		Dry Test	L-A Packer	BSG2
179	35	3684,2	3854,5		600,62	600,72		Dry Test	L-A Packer	BSG2
180	36	3680,9	3850,5		600,14	601,15		Dry Test	L-A Packer	BSG2
181	37	3672,8	3840,5		599,38	599,24		Dry Test	L-A Packer	BSG2
183	38	3777,7	3969,0	519,71	618,61	618,17		Superch.	L-A Packer	BSG2
184	39	3776,1	3967,0	519,36	617,75	617,31	0,2	DD pretest	L-A Packer	BSG2
185	40	3772,4	3962,5	518,73	616,66	616,43	0,6	DD pretest	L-A Packer	BSG2
186	41	3767,9	3957,0	518,42	615,51	615,24	0,2	DD pretest	L-A Packer	BSG2
187	42	3765,5	3954,0	518,33	614,55	614,29	0,1	DD pretest	L-A Packer	BSG2
188	43	3759,8	3947,0	517,47	613,21	613,31	0,3	DD pretest	L-A Packer	BSG2
189	44	3747,7	3932,0	516,12	611,04	611,18	7	DD pretest	L-A Packer	BSG2
202	54	3502,9	3629,5		570,07	570,25		Dry Test	L-A Packer	BSG2
204	55	3501,3	3627,5		569,83	569,88		Dry Test	L-A Packer	BSG2
206	57	3495,7	3620,5		568,93	569,03		Dry Test	L-A Packer	BSG2
207	58	3494,1	3618,5		568,75	568,77		Dry Test	L-A Packer	BSG2
209	60	3482,3	3604,0		567,79	567,93		Dry Test	L-A Packer	BSG2
210	61	3479,1	3600,0		566,30	566,32		Dry Test	L-A Packer	BSG2
211	62	3475,0	3595,0		565,74	565,82		Superch.	L-A Packer	BSG2
212	63	3469,9	3588,7		565,48	564,94		Dry Test	L-A Packer	BSG2
213	64	3468,1	3586,5	451,30	564,69	564,74	0,6	DD pretest	L-A Packer	BSG2
214	65	3466,5	3584,5	454,70	564,43	564,46	0,1	DD pretest	L-A Packer	BSG2
215	66	3462,9	3580,0		563,79	563,78		Dry Test	L-A Packer	BSG2
218	67	3495,9	3620,8	456,11	571,19	570,71	0,5	DD pretest	L-A Packer	BSG2
219	68	3493,8	3618,2	455,94	570,44	570,07	0,4	DD pretest	L-A Packer	BSG2

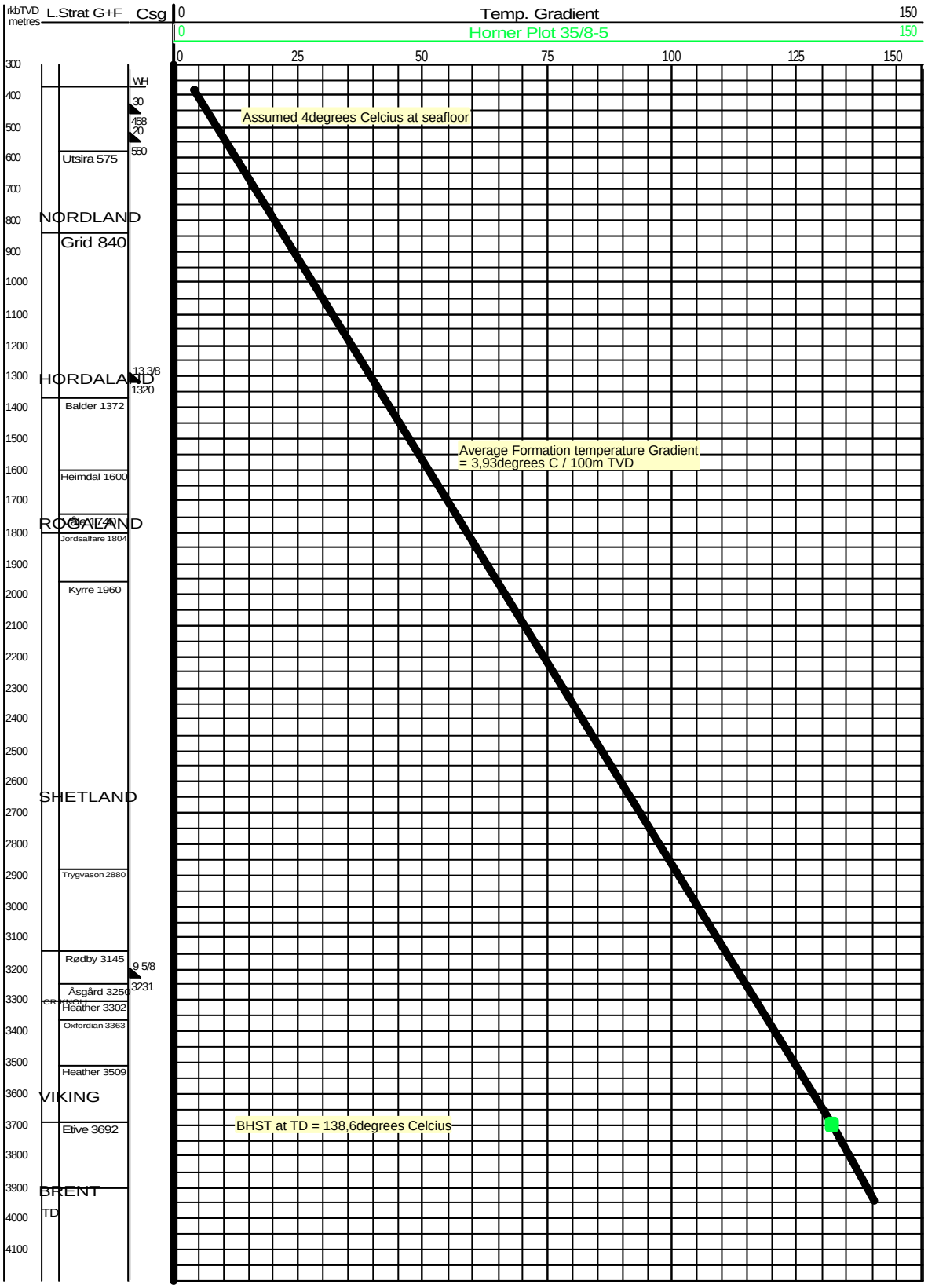
3.7.4 Formation Pressure, Overburden- and Fracture Pressure plot

Well: 35/8-5 Fig.B-4



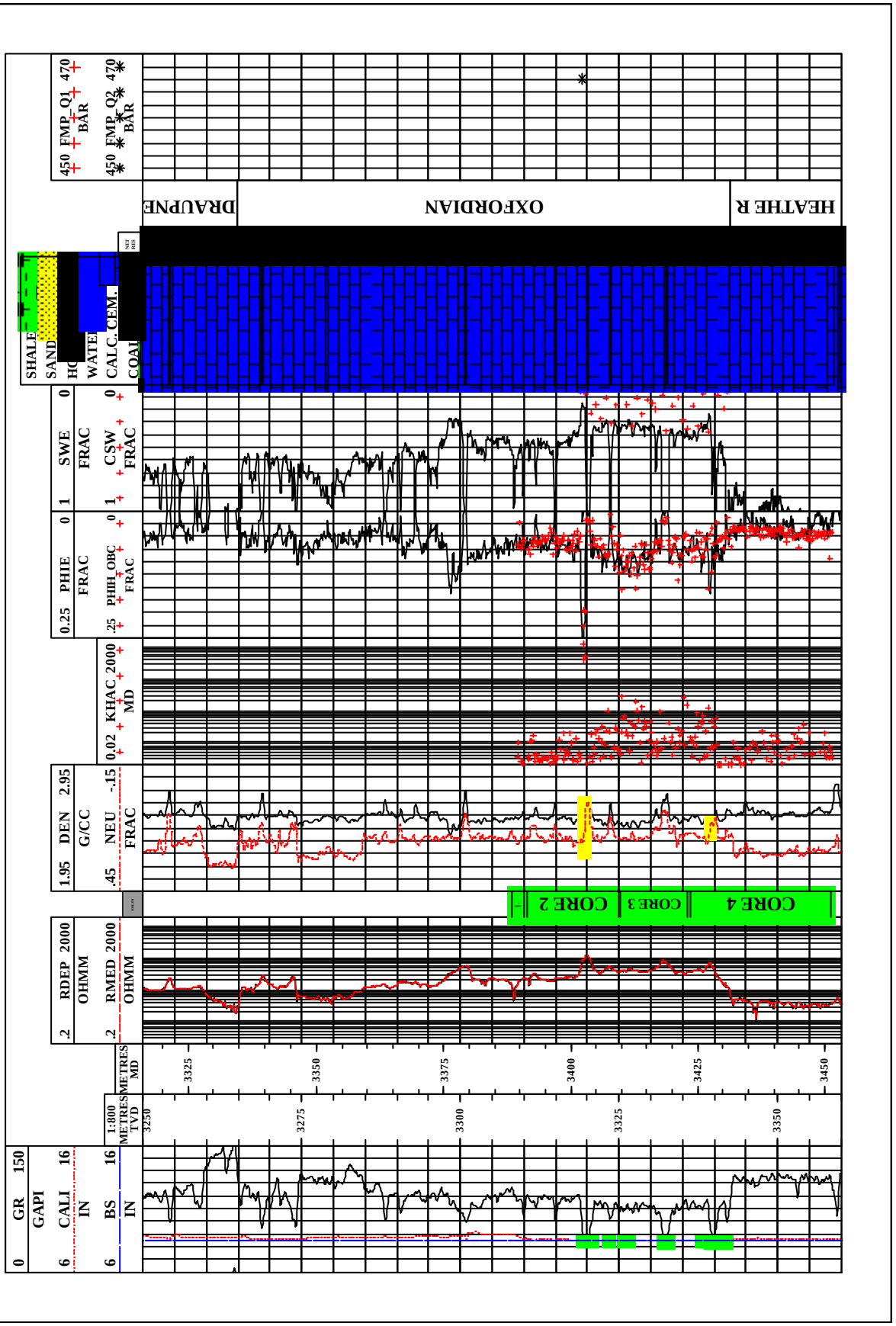
3.7.5 Formation Temperature plot

Well: 35/8-5 Fig.B-5

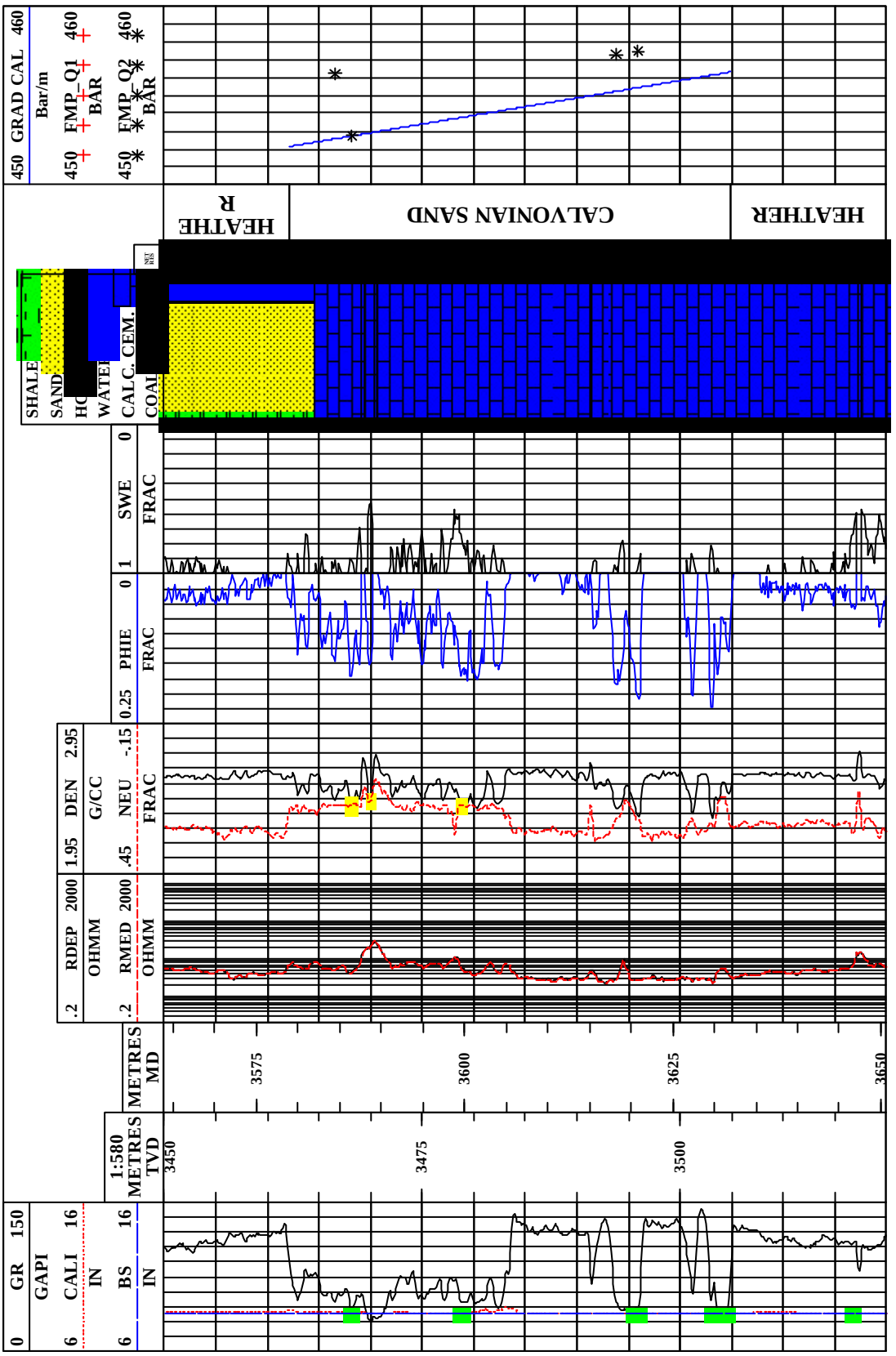


3.7.6 CPI plots

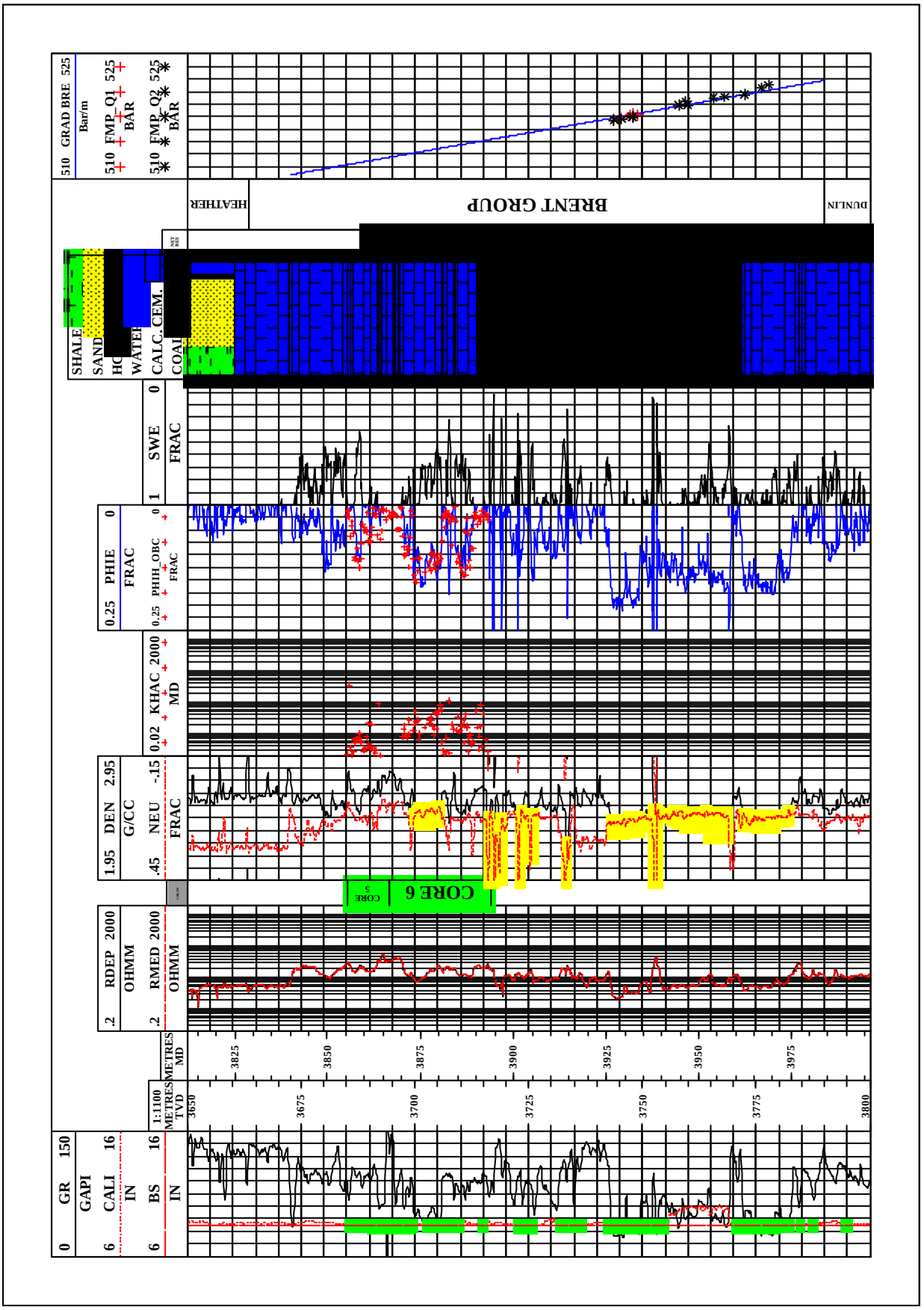
3.7.6.1 CPI Oxfordian



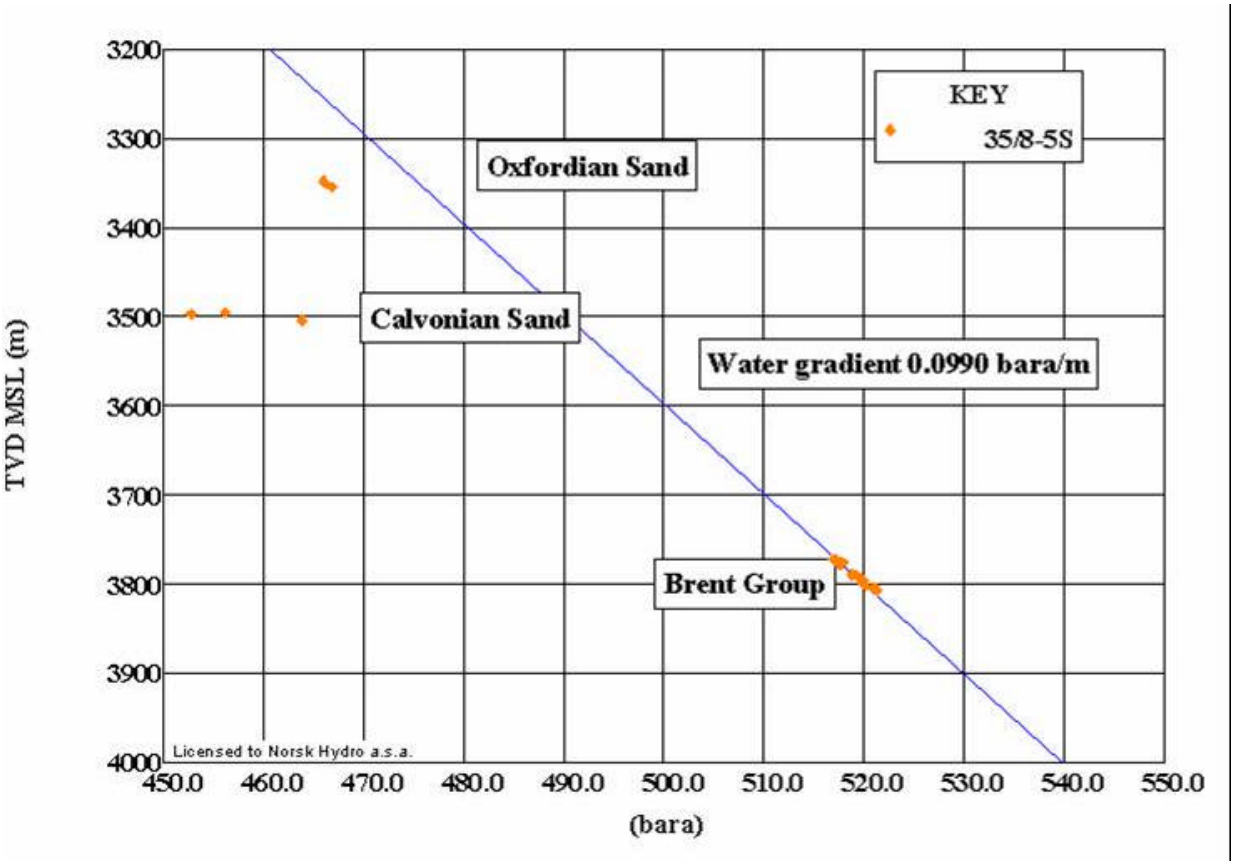
3.7.6.2 CPI Callovian



3.7.6.3 CPI Brent



3.7.7 Formation Pressure Plot



4 POST SITE SURVEY

4.1 Introduction

This memo contains the Post Site Survey Report for Well 35/8-5 S. The results are based on:

- 2D high-resolution reflection seismic (NH0357)
- 3D reflection seismic (BPN9301M00 Full and Near Offset)
- 3D reflection seismic (NH8902R97 Full Offset)
- Site Survey at Location 35/8-5 S (NH-00151471)
- LWD logs (resistivity and gamma)
- Drilling results from 13 exploration wells (35/8-1, 35/8-2, 35/8-3, 35/8-4, 35/9-1, 35/9-2, 35/9-3, 35/9-3 T2, 35/9-4 SX, 35/11-1, 35/11-6, 36/7-1 & 36/7-2).

4.2 Well Data

1	**Distance from rig floor to sea level:**	29 m
2	**Water depth (MSL):**	369.5 m
3a	**Setting depth for conductor (m RKB):**	458 m
3b	**Leak Off / Formation Integrity Test (g/cc):**	N/A
4a	**Setting depth (m RKB TVD) for casing on which BOP mounted:**	549.9 m
4b	**Formation Integrity Test (g/cc):**	1.25 sg (at 561 m RKB TVD)

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

Seabed:	398.5 m *	(503 ms)
Base Unit 1:	404 m *	(509 ms)
Base Unit 2:	420 m *	(522 ms)
Base Unit 3:	452 m *	(556 ms)
Base Unit 4:	493 m	(599 ms)
Base Unit 5:	527.5 m	(646 ms)
Base Pleistocene:	571.5 m	(689 ms)
Base Pliocene:	663 m	(789 ms)
Base Miocene:	673 m	(799 ms)
Base Oligocene:	845 m	(964 ms)
Top Balder Fm:	1337.5 m	(1391 ms)
Top Sele Fm:	1384 m	(1443 ms)
Top Lista Fm:	1399 m	(1457 ms)
Top Ty Fm:	1658 m	(1720 ms)
Base Tertiary:	1716 m	(1782 ms)

* Formation depths are based on the Site Survey Report as no LWD logs were acquired in the 30" section (i.e. above 458 m RKB). Two-way-times are based on the Site Survey Report.

Note:

The well is drilled with returns to seabed above 680 m RKB TVD. Still, cutting description from spot samples was performed between 560 m and 680 m RKB. Mud logging commenced at 680 m RKB. The interpretation above 560 m is based on reflection seismic character, LWD logs (below 458 m RKB) and previous work.

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 containing gas:

Pleistocene Interval:

567.5 m – 571.5 m

Pliocene Interval:

586.5 – 588.5 m

Oligocene Interval:

673 m – 794 m

Eocene Interval:

845 m – 1037 m
1091 m – 1204.5 m

7 By what means is the presence of gas proven:

No data exists on background gas levels from seabed down to approximately 560 m (20" casing shoe). However, no gas-related incidents were reported when drilling this interval.

Below 560 m RKB TVD gas analyses were accomplished using the gas log from the LWD assemblages. Below 680 m RKB TVD gas analyses were performed using flame ionisation detectors (FID) with gas measured as percentage methane (C1) equivalent in air, and chromatographic analyses expressed in parts per million.

8 Composition and origin of gas:

Methane (C1)

9 Describe all measurements taken in gas bearing layers:

N/A

4.3 Seismic data

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

No anomalies have been found within the Quaternary sequence, either within the survey area or along the tie-line towards the 35/8-3 well location. Two levels of anomalies have been identified in the upper Tertiary sequence, 1) Miocene Utsira Formation and 2) Oligocene interval.

The 35/8-5 S Well Location was interpreted as being free of shallow gas hazards. The closest visible anomaly occurs approximately 320 metres to the north at a depth of 721 m ± 5 m MSL. All of the high amplitude areas observed have been assigned a low gas risk as they exhibit high amplitude alone, with no other gaseous characteristics. It should be noted that these anomalies may represent a coarsening of sediments only.

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 shallow gas was anticipated and no shallow gas was observed in the well.

12b Shallow Water Flow:

Previous drilling in the Gjøa and Fram areas has occasionally encountered shallow water flow (e.g., 35/9-4SX, 35/11-1 and 35/11-11). Caution was therefore advised for the following intervals:

- Miocene deposits: 689-700 m RKB
- Top Eocene: 880 m RKB
- Lista Fm: 1429-1674 m RKB

A 12 ¼" pilot hole was drilled down to 683 m RKB. The well was then flow-checked due to indications of drilling break, and the well was flowing. The well was killed using 1.30 Sg mud. However, several attempts to re-enter the hole failed due to continuous flow. Finally the 20" casing was entered and ran down to 550 m RKB, followed by installation of BOP and riser. A formation integrity test to 1.25 Sg was performed at 516 m RKB, and several subsequent flow checks proved the well to be stable.

12c Sand Bodies:

Thin intra-Pleistocene/Pliocene sands were anticipated, but their exact position was not confirmed.

The Oligocene sand was not predicted. Instead, thin Utsira sands covering an extensive Oligocene silt- and claystone was predicted.

A thick Eocene sand package was predicted. Two sand units were observed on the LWD logs, but the total thickness is less than anticipated.

12d Boulders:

Boulder beds were predicted in the shallow section at 420 m and 537 m RKB, and scattered boulders were predicted within the glacially deposited stratigraphic intervals (units II to VI), from 420 m to 581 m RKB. However, no boulders were encountered.

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

Horizon	Prognosis, P (m)	Observation, O (m)	O-P (m)
Base Pleistocene	581 ± 3	571.5	- 9.5 m (deeper)
Base Pliocene	689 ± 5	663	- 26 m (shallower)
Base Miocene	700 ± 5	673	- 27 m (shallower)
Base Oligocene	880 ± 30	845	- 35 m (shallower)
Top Balder Fm	1372 ± 52	1337.5	- 34.5 m (shallower)
Top Lista Fm	1429 ± 60	1399	- 30 m (shallower)
Base Tertiary	1804 ± 71	1716	- 88 m (shallower)

The differences between the anticipated and observed depths to different formation tops were not within the uncertainty limits, except for Top Balder and Top Lista Formations. The large differences suggest that the depth conversion was based on generally too high velocities and not erroneous seismic picks.

12e Correlation to Nearby Wells:

Wells 35/9-4 SX, 35/11-1 and 35/11-11 experienced shallow water flow. Well 35/11-1 experienced an uncontrolled shallow water flow within Miocene sands of the Utsira Formation (equivalent to the shallow-water level in well 35/8-5 S), while well 35/9-4SX encountered shallow water flow within the Lista Formation and at the level of the Top Eocene, where sandstones are immediately overlain by an effective claystone seal.

SECTION B

DRILLING OPERATION SUMMARY

WELL 35/8-5 S

Prepared by: Verified by: Approved by:

LIST OF CONTENTS

TABLES

FIGURES

1 OPERATION SUMMARY

1.1 Mobilizing:

Rig on contract 31.05.03 at 07:00
Anchored 150 m off programmed surface location. No consequences related to the drilling operation

Planned AFE days : 2.8
Actual days : 2,5

Operation efficiency : 99 %

1.2 36" section:

Drilled 36 hole from 399-458 M m and cemented 30" conductor
Hole drilled to obtain vertical angle less than 0.5 deg
Bolders reduced ROP to 2 m/hr (409-421 m) bolder not anticipated from site survey.

30" conductor cement in place. The Titus top-up job system was used as secondary cement system to qualify cement to surface.

Planned AFE days : 1.9
Actual days : 2.4

Operation efficiency : 93 %
Lost time : 4.5 hrs

1.3 12 ¼" Pilot hole & 26" section:

Attempted to drill 12 1/2" pilot hole from 458-1100 m
Stopped at 683 m due to waterflow from interval 681 m and 575 m
Stopped the water flow with 1,22 SG mudweight
Pumped 5 cement plugs from 683m to 550 m
Opener up the pilot hole to 26" from 458 – 555 m
Ran 20" casing and cemented same

Planned AFE days : 8.2
Actual days : 9.2

Operation efficiency : 54 %
Lost time :104 hrs

1.4 17 ” section:

Drilled 17” hole from 550m to 1321 m The 17” hole was drilled due to the 20” casing had a hanger possibility for 16” liner
To prevent losses the mud weight had to be cut back from 1.25 to 1.10 SG
The Hole cleaning during drilling had a strong contribution to success.
13 3/8” casing run and cement with no losses during the cement job.

Planned AFE days: 6.5
Actual days : 5.4

Operation efficiency: 92 %
Lost time: 15 hrs

1.5 12 ¼”section:

Drilled 12 ¼” hole from 1321 m –3265 m MD (3237 m TVD)
Formation Integrity Test taken at 1325 m MD gave an EMW of 1.58 SG
Bit change was required at 2962 m i Trygvason formation.
In addition the Sonic log washed out and had to be changed.
Ran 9 5/8” casing to 3258 m MD, and cemented same.

Planned AFE days: 10.5
Actual days : 9.5.

Operation efficiency: 99 %
Lost time: 2,5 hrs

1.6 8 1/2”section

Drilled 8 ½” hole from 3265 m to 4000 m MD(3832 M TVD)
Increased mudweight from 1,35 SG to 1,50 SG due to gas increase (38%)
Cut four cores in Oxfordian from 3381 m to 3443 m
Increased mudweight from 1,50- to 1,65 SG prior to drill into Brent
Cut two cores in Brent from 3845 m to 3831 m.

Logging total 3 runs:
–*Run#1* MDTP-IPLT misrun
–*Run#2* IPLT.
–*Run#3* MDT pressures

Planned AFE *days: 21.0 (Revised)
Actual days : 14.7

Operation efficiency : 88%
Lost time: 42 hrs

1.7 Permanent Abandonment

Set balanced cement plug from 4000 to 3158 m .
Set 9 5/8" Bridge plug at 3047 m and pressure tested to 2150 bar.

Set cement plug from 3047 to 2847 m .
Cut 9 5/8" casing at 697 and and pulled casing and seal assy.
Set 13 3/8" bridge plug at 650 m, and pressure tested to 175 bar
Cut 13 3/8" casing at 540 m and and pulled casing and seal assy.
Set cement plug from 540 to 340 m
Pulled BOP and cut wellhead 5 m below seabed,

Rig off contract 21.07.02 at 23:00 hrs.

Planned AFE days	: 5.8
Actual days	: 7.9
Operation efficiency	: 91 %
Lost time	: 17 hrs

2 Experience

2.1 Well design:

The well design is based on “shallow water design” with shallow 20” and 16” casing/liner as a contingency. No changes required

2.2 Operation:

2.2.1 36” section:

Boulders not anticipated from site survey.
The length of the section was reduced with 12 m. The amount of casing joints should be evaluated if boulders are expected.

2.2.2 12 ¼” Pilot hole & 26” section:

Attempted to drill 12 1/2” pilot hole from 458-1100 m
Stopped at 683 m due to waterflow from depth 681 m and 575 m
All sand sections in potential waterbearing zones should be flow checked to reduce the flow area and to limit the section to be cemented back

2.2.3 17 ” section:

Drilled 17” hole from 550m to 1321 m
To prevent losses the mud weight had to be cut back from 1.25 to 1.10 SG
The hole cleaning during drilling had a strong contribution to success. Extreme high dilution factor of the drilling fluid was required.

2.2.4 12 ¼”section:

None, The operation went as planned.

2.2.5 8 ½ ”section:

Drilled 8 ½” hole from 3265 m to 4000 m MD(3832 M TVD)
Increased mudweight from 1,35 SG to 1,50 SG due to gas increase (38%)
Increased mudweight from 1,50- to 1,65 SG prior to drill into Brent
The pore pressure estimated was lower than actual, resulting in well control situations and in time consuming increasing in mudweight .

GENERAL INFORMATION

Well : 35/8-5 S **PO** : 1

Field : UNDEFINED **Country** : NORWAY
Licence : 195 **Installation** : DEEPSEA DELTA
UTM zone : 31 **Central Median** : 3' E **Horiz. Datum:** ED50

Location coordinates:		**Surface**	**Target**
UTM	**North [m]:**	6805219.6	
UTM	**East [m]:**	534935	
Geographical	**North :**	61 22'40.50"	
Geographical	**East :**	03 39'13.22"	

Water Depth: 369.0 **m** **Reference Point Height:** 29.0 **m**
Formation at TD: RANNOCH at 3964 m MD

Operators: NORSK HYDRO PRODUKSJON A/S **Share:** 40.00 **%**

Partners: PETORO **Share:** 35.00 **%**
RWE-DEA 25.00 **%**

Total depth (RKB) : 4000.0 **m MD** 3831.9 **m TVD**

TIME SUMMARY
Start Time : 2003-05-31 07:00:00
Spudding date : 2003-06-01
Abandonment date :

Main operation	**Hours**	**Days**	**%**
MOBILIZATION	60.5	2.5	4.9
DRILLING	603.5	25.1	48.7
FORMATION EVALUATION MWD	6.0	0.3	0.5
FORMATION EVALUATION LOGGING	36.5	1.5	2.9
FORMATION EVALUATION CORING	170.0	7.1	13.7
PLUG AND ABANDONMENT	162.0	6.8	13.1
DOWNTIME DRILLING	136.0	5.7	11.0
DOWNTIME FORM. EVAL. LOGGING	28.5	1.2	2.3
DOWNTIME FORM. EVAL. CORING	9.0	0.4	0.7
DOWNTIME PLUG AND ABANDONMENT	28.0	1.2	2.3
Sum:	**1240.0**	**51.7**	

Hole and casing record

Hole	**Track**	**Depth [m MD]**	**Casing/Tubing**	**Track**	**Depth [m MD]**
36"		458.0	30"		458.0
26"		555.0	20"		550.0
17"		1326.0	13 3/8"		1320.5
12 1/4"		3265.0	9 5/8"		3258.5
8 1/2"		4000.0			

Well status:

CONTRACTORS:

Bit Supplier :	SMITH INTERNATIONAL A/S
Casing Equipment Supplier :	MITSUI
Cement Contractor :	BJ SERVICES
Centralizer Supplier :	WEATHERFORD NORGE A/S
Completion Eq. Contractor :	HALLIBURTON OILFIELD SERVICES NORWAY INC.
Completion Eq. Contractor :	ROXAR
Directional Drilling Contractor :	BAKER HUGHES INTEQ
Liner Hanger Equipment Supplie :	BAKER OIL TOOLS
Mud Contractor :	MI NORGE
Other Supplier :	KVÆRNER OILFIELD PRODUCTS

GENERAL INFORMATION

CONTRACTORS:

Other Supplier :	SCHLUMBERGER WIRELINE & TESTING
Other Supplier :	WEIR HOUSTON
Rig Contractor :	ODFJELL DRILLING BERGEN A/S

DAILY REPORT

Well: 35/8-5 S **PO:** 1

Daily report no : 1 **Date:** 2003-05-31
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0.00 sg

Stop time	Description
07:00	No activity on well 35/8-5 S. Activities logged on well 35/11-A-24 AH.
18:30	Rig in transit to well 35/8-5 S.
23:59	Anchor handling. Northern Admiral lowered anchor no. 9 at 18:30 hrs. Torm Heron lowered anchor no. 10 at 20:30 hrs. Northern Admiral lowered anchor no. 8 at 01:24 hrs. Vidar Viking lowered anchor no. 4 at 21:50 hrs. Far Scout lowered anchor no3 at 23:30 hrs.

Daily report no : 2 **Date:** 2003-06-01
Midnight depth : 412 m MD **Estimated PP:** sg **Mud weight:** 1.25 sg

Stop time	Description
09:00	Continued anchor handling. All anchors test tensioned up to 200 bars. Torm Heron lowered anchor no. 11 at 00:19 hrs. Vidar Viking lowered anchor no. 5 at 00:49 hrs. Far Scout lowered anchor no. 2 at 02:35 hrs. Vidar Viking lowered anchor no. 6 at 07:25 hrs. Far Scout lowered anchor no. 1 at04:40 hrs. Torm Heron lowered anchor no. 12 at 06:56 hrs. Northern Admiral lowered anchor no. 7 at 07:08 hrs.
12:30	Ballasted rig.
13:30	Made up and ran in sea with 36" bottom hole assembly to 242 m.
14:00	Ran in sea with bottom hole assembly on 5" drill pipe from 242 m to 389 m.
18:00	Unloaded mud from boat and prepared mud prior to spudding.
18:30	Ran i sea with bottom hole assembly and tagged seabed at 398 m RKB MSL.
20:00	Troubleshot on tool joint breaker.
20:30	Tagged bottom with 2 T and verified seabed depth at 398 m. Washed and drilled down to 403 m.
21:00	Took two surveys to confirm verticality of drill string.
23:59	Drilled 36" hole from 403 m to 412 m.

Daily report no : 3 **Date:** 2003-06-02
Midnight depth : 458 m MD **Estimated PP:** sg **Mud weight:** 1.25 sg

Stop time	Description
13:00	Continued drilling 36" hole from 412 m to 453 m
14:30	Reamed interval from 453 m to 435 m in order to reduce inclination below 1,0 deg.
18:00	Continued drilling 36" hole from 453 m to 458 m.
23:00	Reamed interval from 458 m to 422 m several times in order to reduce inclination. Final survey on TD: 0,79 deg.
23:59	Pumped 30 m3 high viscous pill around and performed wipertrip to 412 m and back to TD.

Daily report no : 4 **Date:** 2003-06-03
Midnight depth : 458 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.25 sg

Stop time	Description
00:30	Displaced hole to 1,30 Sg mud.
01:00	Pulled out of hole from 458 m to 412 m. ROV positioned two marker bouys diagonally across spud location.
02:30	Pulled out and racked 36" bottom hole assembly in derrick.
03:30	Made up running tool for 30" housing and racked in derrick.
05:00	Rigged up for running 30" conductor.
07:00	Ran shoe, 3 joints 30" conductor and housing.
09:00	Installed running tool to housing and landed 30" housing in PGB in moonpool. Released running tool and racked back.
09:30	Ran cement stinger inside 30" conductor and made up stinger to 30" running tool. Landed running tool in housing and made up.
10:30	Installed Titus hose and filled casing with seawater.

Well: 35/8-5 S **PO:** 1

Daily report no : 4 **Date:** 2003-06-03

Midnight depth : 458 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.25 sg

Stop time	Description
12:00	Ran in sea with 30" conductor to 395 m.
12:30	Positioned rig and stung in with 30" conductor.
13:00	Ran in hole with 30" conductor on landing string to bottom of 36" hole at 458 m.
13:30	Picked conductor off bottom, closed valve on running tool with ROV and circulated 10 m3 seawater prior to cement job. ROV observed valve, and checked for leakage.
14:30	Pressure tested surface lines to 100 bar. Mixed and pumped 18 m3 of 1,56 Sg lead slurry and 20 m3 of 1,95 Sg tail slurry. Displaced cement with cement pumps.
15:00	Checked for backflow and sat down weight of conductor. ROV opened valve on running tool and checked stick-up (2 m) and bullseye (0,5 deg FWD).
17:30	Opened kelly cock on cement stand and dropped Titus dart. Pressured up down landing string to 86 bar, and sheared out for pumping through Titus hose. Pumped through with 800 lpm and two times annulus volume from Titus ring to seabed. Pumped a few strokes every 15 minutes to keep lines open while waiting for cement to set up.
18:00	Mixed and pumped 5 m3 of 1,95 Sg slurry through Titus sustem for top-up job.
19:00	Released running tool and pulled out with landing string.
20:00	Laid down 30" running tool and pulled out with inner string.
23:00	Rigged down casing equipment and laid down 36" bottom hole assembly and cement stand.
23:59	Picked up new cement head from deck.

Daily report no : 5 **Date:** 2003-06-04

Midnight depth : 683 m MD **Estimated PP:** 1.06 sg **Mud weight:** 1.25 sg

Stop time	Description
00:30	Prepared and racked cement stand back in derrick.
03:00	Picked up 5" HWDP from deck and racked in derrick.
06:00	Made up 12 1/4" pilot hole assembly and racked back in derrick.
07:30	Made up 26" clean out assembly.
08:00	Ran in sea with bottom hole assembly on 5" HWDP and stung into well at 396 ml.
10:00	Ran in hole and tagged top of cement at 453 m. Drilled out cement, shoe and new formation to 461 m. Pumped 25 m3 high viscous pill around to clean hole.
10:30	Pulled out with 26" assembly to 86 m.
11:00	Racked back bottom hole assembly in derrick.
12:00	Made up and ran in sea with 12 1/4" pilot hole assembly to 253 m.
12:30	Stung into well at 396 m and continued running in hole to 461 m.
21:00	Drilled 12 1/4" hole from 461 m to 683 m.
21:30	Flowchecked well due to indications of drilling break. Observed well flowing.
22:00	Displaced well to 1,30 Sg mud and killed well.
23:59	Flowchecked well.

Daily report no : 6 **Date:** 2003-06-05

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.25 sg

Stop time	Description
02:00	Lubricated out of hole from 660 m and pulled out of well to 253 m.
03:00	Pulled out with bottom hole assembly and racked in derrick.
04:00	Made up cement stand and racked in derrick.
05:00	Ran in sea with 5" open ended drill pipe to 390 m. Stung into well and continued running in hole to 682 m.
06:00	Displaced hole to 1,22 Sg NaCl mud. Flowchecked well - negative. Meanwhile pressure tested surface lines to 100 bar for 5 minutes and held pre-job meeting prior to cement job.
06:30	Displaced hole back to 1,30 Sg mud.
07:30	Pumped 15 m3 of 1,30 Sg spacer and mixed and pumped 7,6 m3 of 1,90 sg cement. Displaced cement with 1600 l 1,30 Sg spacer and 3000 l seawater.
09:00	Pulled out of cement plug and out of well. Flushed drill pipe with seawater and stung back into well.
13:30	Waited on cement to cure, while observing with ROV.
14:00	Pulled out of with 5" drill pipe and racked in derrick.
15:30	Made up 26" hole opener assembly and racked in derrick.

Well: 35/8-5 S **PO:** 1

Daily report no : 6 **Date:** 2003-06-05

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.25 sg

Stop time	Description
16:30	Laid down 26" clean out assembly.
19:00	Picked up 5" drill pipe from deck and racked in derrick.
19:30	Laid down cement stand.
20:30	Ran in sea with 12 1/4" bottom hole assembly to 253 m.
21:30	Ran in sea with bottom hole assembly on 5" drill pipe and stung into well at 396 m. Continued running in hole and tagged possible top of cement at 594 m.
22:00	Broke circulation and drilled soft cement from 594 m to 598 m.
22:30	Observed well flowing when flowchecking prior to connection. Circulated bottoms up with seawater from 598 m.
23:00	Flowchecked well at 598 m for 30 minutes with seawater. Well continued flowing. No reduction in flow observed.
23:30	Washed down from 598 m to 677 m. Drilled hard cement from 677 m to 680 m.
23:59	Circulated bottoms up and displaced hole to 1,30 sg mud.

Daily report no : 7 **Date:** 2003-06-06

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.25 sg

Stop time	Description
00:30	Flowchecked well for 30 minutes. Well stabile.
02:30	Pulled out with 12 1/4" bottom hole assembly and racked in derrick.
03:00	Made up cement stand and racked in derrick.
04:30	Ran in hole with 5" open end drill pipe to 679 m.
05:30	Displaced well to 1,15 Sg mud and flowchecked well. Well stabile. Displaced hole back to 1,30 Sg mud.
07:00	Pumped 15 m3 of 1,30 Sg spacer. Mixed and pumped 12 m3 of 1,90 Sg cement slurry and displaced with 1100 l of 1,30 Sg spacer and 2800 l seawater.
08:00	Pulled out of cement plug and out of well.
08:30	Flushed drill pipe with sea water and pulled out of sea with cement stinger.
16:30	Picked up 5" drill pipe and racked in derrick.
21:00	Waited for cement. Meanwhile greased and serviced top drive. Changed out wash pipe and pressure tested same.
22:30	Made up and ran in sea with 12 1/4" bottom hole assembly. Stung into well at 396 m and continued running in to 555 m.
23:59	Washed down from 555 m to 600 m and circulated bottoms up from 600 m.

Daily report no : 8 **Date:** 2003-06-07

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.30 sg

Stop time	Description
00:30	Flowchecked well at 600 m. Well flowing.
02:00	Continued washing down from 600 m to 675 m. Tagged top of cement at 675 m.
03:00	Spotted 4,1 m3 of 1,50 Sg kill pill from 675 m to 590 m and flowchecked well. Well still flowing.
04:00	Displaced well to 1,30 Sg mud and flowchecked well for 30 minutes. Well static.
04:30	Lubricated out of hole from 675 m to 396 m.
05:30	Pulled out of sea with bottom hole assembly and racked in derrick.
06:30	Ran in sea with 5" open end drill pipe to 396 m. Stung into well and continued running in to 674 m.
07:00	Held pre-job meeting prior to cement job. Pressure tested surface lines to 100 bar for 5 minutes.
08:00	Pumped 12 m3 of 1,30 Sg spacer. Mixed and pumped 15,2 m3 of 1,50 Sg cement slurry and displaced cement with 700 l 1,30 Sg spacer and 2800 l seawater.
09:00	Pulled out of cement plug and out of well at 396 m. Flushed drill pipe with seawater.
16:00	Stung back into well and observed well while cement setting up.
16:30	Pulled out of sea with cement stinger.
18:30	Waited for cement to set up.
20:30	Picked up 3 1/2" drill pipe from deck.
23:59	Waited for cement to set up.

Well: 35/8-5 S **PO:** 1

Daily report no : 9 **Date:** 2003-06-08

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.30 sg

Stop time	Description
05:30	Waited for cement to set up.
07:00	Made up and ran in sea with 12 1/4" bottom hole assembly and stung into well at 396 m.
08:00	Ran slowly in hole to 555 m to check for cement. No cement observed.
19:00	Pulled back to 454 m and continued waiting for cement to set up.
21:00	Washed down from 454 m with 1500 lpm, and tagged soft cement at 658 m.
21:30	Pumped 4 m3 1,30 Sg pill and circulated bottoms up with seawater.
22:00	Flowchecked well at 655 m. Well stabile.
22:30	Displaced hole to 1,30 Sg mud.
23:59	Pulled out with 12 1/4" bottom hole assembly and racked in derrick.

Daily report no : 10 **Date:** 2003-06-09

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.30 sg

Stop time	Description
00:30	Made up Parabow with setting tool and ran in sea with 3 1/2" drill pipe to 207 m.
01:00	Changed to 5" handling equipment and ran in sea on 5" drill pipe to 380 m.
01:30	Stung into well at 396 m and continued running in hole on 5" drill pipe to 656 m.
02:00	Spotted 8,5 m3 1,30 Sg LCM pill on bottom.
03:00	Pulled back to 630 m and pumped 10 m3 of 1,30 Sg mud. Dropped ball, installed cement stand and circulated ball down to launch parabow. Pulled back to 627 m.
03:30	Held pre-job meeting prior to cement job. Pumped 7 m3 of 1,30 Sg spacer with rig pumps.
05:00	Pumped 3 m3 of 1,30 Sg spacer with cement pumps. Mixed and pumped 11,8 m3 of 1,95 Sg cement slurry. Displaced cement with 700 l of 1,30 Sg spacer and 3000 l seawater.
06:00	Pulled out of cement plug and out of well. Flushed cement stinger with seawater.
12:30	Stung back into well and waited for cement to set up. Observed with ROV.
13:00	Pulled out of sea with cement stinger.
17:00	Waited on cement.
19:30	Ran in sea with 12 1/4" bottom hole assembly. Stung into well at 396 m and continued running in hole to 490 m. Washed down with 500 lpm and tagged firm cement at 570,5 m.
20:30	Circulated bottoms up with seawater and flowchecked well for 30 minutes. Well stabile.
23:00	Displaced well to 1,30 Sg mud and pulled out and racked back 12 1/4" bottom hole assembly.
23:59	Made up divertor sub to 3 1/2" drill pipe and ran in sea to 120 m.

Daily report no : 11 **Date:** 2003-06-10

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.30 sg

Stop time	Description
01:00	Changed to 5" handling equipment and ran in sea to 396 m. Stung into well and continued running in hole to 568 m.
01:30	Spotted 5 m3 of 1,30 Sg LCM pill on bottom. Pumped 12 m3 of 1,30 Sg spacer with rig pumps.
03:00	Mixed and pumped 7,6 m3 of 1,95 Sg cement slurry. Displaced cement with 500 l of 1,30 Sg spacer and 2800 l seawater.
04:00	Pulled out of cement plug and out of well. Flushed drill pipe with seawater and stung back into well.
09:30	Waited on cement to set up. ROV observed wellhead.
10:30	Pulled out of sea with cement stinger.
12:00	Made up and ran in sea with 12 1/4" bottom hole assembly. Stung into well at 396 m.
16:00	Waited on cement to set up.
17:30	Washed down and tagged firm cement at 513 m. Drilled down to 558 m.
18:30	Circulated to clean hole from 558 m. Displaced well to seawater.
19:30	Flowchecked well at 558 m. Well stabile.
21:00	Pulled out with 12 1/4" bottom hole assembly.
22:30	Laid down 12" stabilizer, MWD tools and motor.
23:59	Ran in sea with 26" hole opener assembly. Stung into well at 396 m and continued running in hole to 461 m.

Well: 35/8-5 S **PO:** 1

Daily report no : 12 **Date:** 2003-06-11

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.30 sg

Stop time	Description
05:00	Drilled and opened 12 1/4" pilot hole to 26" from 461 m to 555 m.
06:30	Circulated to clean hole from 555 m. Reamed interval from 508 m to 555 m.
08:00	Displaced well to seawater and flowchecked well at 555 m for 30 minutes. Well stabile.
08:30	Displaced well to 1,30 Sg mud.
10:00	Pulled out of hole from 555 m and out of well. Washed and reamed interval from 508 m to 479 m due to 10 T overpull at 508 m.
11:00	Washed wellhead and PGB with seawater.
12:00	Pulled out of sea waith 26" hole opener assembly and racked in derrick.
14:30	Rigged up for running 20" casing. Held pre.job meeting with involved personnel.
17:00	Picked up shoe, float and adapter joint, and continued running 20" casing to 146 m.
18:30	Changed to 5" handling equipment. Picked up 18 3/4" wellhead with running tool and made up to casing string.
20:30	Ran 20" casing on landing string from 146 m to 390 m.
21:00	Stung into well with casing string and displaced casing to 1,30 Sg mud.
22:30	Continued running 20" casing on landing string from 420 m to 550 m. Landed wellhead in 30" housing and sat down casing weight. Performed 50 T overpull test - ok.
23:00	Pressure tested surface lines to 150 bar for 5 minutes and held pre-job meeting prior to cement job.
23:59	Pumped 3 m3 of seawater ahead, and mixed and pumped 20 m3 of 1,56 Sg lead slurry and 20 m3 of 1,95 Sg tail slurry. Dropped dart and displaced cement with 3000 l from cement unit.

Daily report no : 13 **Date:** 2003-06-12

Midnight depth : 683 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.30 sg

Stop time	Description
00:30	Continued displacing cement with rig pumps. Pumped plug and pressured up to 35 bar. Lined back to cement unit and pressure tested casing to 69 bar for 10 minutes. Checked for backflow - negative.
02:00	Released running tool and pulled out of sea with landing string. Laid down running tool.
02:30	Reloaded cement stand.
04:00	Laid down 26" hole opener assembly from derrick.
04:30	Broke out kelly cock and side entry sub from cement stand.
05:00	Cleaned and tidy rig floor.
05:30	Rigged up for running BOP and riser.
07:00	Made up and ran 2 marine riser joints.
08:30	Held pre-job meeting. Skidded BOP below rotary and made up to riser joint. Ran in sea with guidewires.
20:30	Ran BOP and marine riser to 365 m. Established guidewires.
21:00	Made up slip joint and landing joint.
23:30	Installed kill and choke lines. Installed support ring and saddles.
23:59	Landed BOP and performed 30 tons overpull test.

Daily report no : 14 **Date:** 2003-06-13

Midnight depth : 629 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.10 sg

Stop time	Description
01:00	Laid down landing joint and picked up diverter.
02:30	Rigged down riser handling equipment.
03:30	Pressure tested surface equipment to 35 / 345 bar, 5 / 10 min.
04:00	Programmed MWD on deck.
05:30	Made up MWD and stabalizer. Racked back in derrick.
06:30	Made up 17" bottom hole assembly to 31 m. Made up 17" bit. Set scrab line.
08:30	Ran in hole with 16" bottom hole assembly from 31 m to 510 m. Installed diverter element.
09:00	Function tested BOP on blue pod from drillers panel. Function tested BOP on yellow pod from tool pushers office.
10:30	Washed down from 510 m to top of cement at 535 m.
11:00	Performed choke drill.
12:00	Drilled float and shoetrack from 535 m to 547 m.
15:00	Circulated while mixing mud.

Well: 35/8-5 S **PO:** 1

Daily report no : 14 **Date:** 2003-06-13

Midnight depth : 629 m MD **Estimated PP:** 1.04 sg **Mud weight:** 1.10 sg

Stop time	Description
16:00	Displaced well to 1,11 sg glydril mud.
17:00	Drilled shoetrack and shoe from 447 m to 550 m. Drilled hard cement from 550 m to 553 m. Drilled soft cement in rathole from 553 m to 558 m. Drilled 3m new formatioin from 558 m to 561 m.
18:00	Spotted 6 m3 LCM-pill on bottom. Lubricated out of hole from 561 m to 512 m. Performed formation integrity test to 1,25 sg.
21:00	Ran in hole from 512 m to 561 m. Drilled 17" hole from 561 m to 600 m.
21:30	Flowchecked well for 30 min. Well static.
22:30	Drilled 17" hole from 600 m to 617 m.
23:00	Circulated hole clean while changing screens on shakers.
23:59	Drilled 17" hole from 617 m to 629 m.

Daily report no : 15 **Date:** 2003-06-14

Midnight depth : 944 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.11 sg

Stop time	Description
03:00	Drilled 17" hole from 629 m to 697 m.
03:30	Pulled out of hole from 697 m to 666 m. Flowchecked well while cleaning shakers.
05:00	Ran in hole from 666 m to 697 m. Observed possible loss while circulating at 3500 lpm. Pumped with reduced circulation rate while evaluating situation.
10:00	Drilled 17" hole from 697 m to 802 m.
11:00	Circulated hole clean.
11:30	Flowchecked well for 30 min after drilling through Utsira formation. Well Static.
13:30	Drilled 17" hole from 802 m to 846 m.
14:00	Observed drilling break at 846 m. Drilled from 846 m to 851 m. Flowchecked well for 30 min at 851 m. Well Static.
23:59	Drilled 17" hole from 851 m to 944 m.

Daily report no : 16 **Date:** 2003-06-15

Midnight depth : 1311 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.11 sg

Stop time	Description
00:30	Drilled 17" hole from 944 m to 959 m.
01:00	Circulated with reduced flow while cleaning shakers.
03:00	Drilled 17" hole from 959 m to 1003 m.
04:00	Circulated hole clean.
11:30	Drilled 17" hole from 1003 m to 1152 m.
12:00	Circulated with reduced flow while cleaning shakers. Pulled back to 1125 m.
13:30	Circulated hole clean.
15:00	Ran back to 1152 m. Drilled 17" hole from 1152 m to 1180 m.
16:00	Circulated with reduced flow while cleaning shakers.
19:30	Drilled 17" hole from 1180 m to 1241 m.
20:00	Circulated with reduced flow while cleaning shakers.
20:30	Welded broken bracket for sliding rail on shaker.
23:59	Drilled 17" hole from 1241 m to 1311 m.

Daily report no : 17 **Date:** 2003-06-16

Midnight depth : 1326 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.13 sg

Stop time	Description
00:30	Drilled 17" hole from 1311 m to 1320 m with reduced circulation rate due to overflow on shakers.
01:30	Circulated hole clean.
02:00	Drilled 17" hole from 1320 m to TD at 1326 m.
04:00	Circulated hole clean. Racked back one stand after 1 hrs.
04:30	Flow checked well for 30 min. Well stable.
06:30	Pulled out of hole from 1300 m to 540 m.

Well: 35/8-5 S **PO:** 1

Daily report no : 17 **Date:** 2003-06-16

Midnight depth : 1326 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.13 sg

Stop time	Description
07:30	Ran in hole from 540 m to 1289 m.
08:00	Filled pipe. Broke circulation and washed down from 1289 m to 1326 m.
11:00	Circulated hole clean. Racked back one stand after 1,5 hrs.
13:00	Ran back to 1326 m. Circulated while increasing KCl content and mud weight. Racked back one stand after 1/2 hrs.
13:30	Flow checked well for 30 min. Well stable.
16:00	Pulled out of hole from 1300 m to 540 m. Flow checked well for 15 min. Well stable.
16:30	Pulled out of hole from 540 m to 253 m.
18:30	Racked back 17" BHA.
20:30	Ran in hole with jetsub, 5" DP stand and multi purpose tool to 380 m.
21:00	Washed through BOP and well head area. Pulled bore protector with 8 tons overpull.
23:00	Pulled out of hole and laid down bore protector, multi purpose tool and jet sub.
23:30	Strapped landing string for casing running.
23:59	Rigged up for running 13 3/8" casing.

Daily report no : 18 **Date:** 2003-06-17

Midnight depth : 1326 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.13 sg

Stop time	Description
02:00	Rigged up for running 13 3/8" casing. Held pre-job meeting.
03:00	Made up shoe and intermediate joint.
04:00	Attempted to make up float joint without success. Casing tong did not fit float collar. Dressed up manual rig tongs. Made up float joint with casing tong against flush mounted spider.
11:30	Ran 13 3/8" casing from 37 m to 550 m.
15:00	Ran 13 3/8" casing from 550 m to 921 m.
16:00	Changed to drill pipe elevator. Made up 13 3/8" casing hanger.
18:00	Ran 13 3/8" casing on 5" HWDP landing string from 928 m to 1307 m.
18:30	Broke circulation. Ran in and landed 13 3/8" casing hanger with shoe at 1320,5 m.
19:00	Circulated prior to cementing.
20:00	Lost suction on mud pump # 2. Stopped circulation and flowchecked well. Well stable. Found pop off released on mud pump #1. Changed pop off. Lined up to mud pump # 1 and 2. Pressure tested mud pumps to 200 bar / 5 min.
21:00	Circulated and conditioned mud.
22:00	Pumped 12 m3 1,15 sg spacer using rig pumps. Dropped ball for lower plug. Mixed and pumped 25,2 m3 of 1,90 sg cement slurry.
23:00	Dropped dart and displaced cement with 3 m3 fresh water from cement unit. Lined over to rig pumps and continued displacing cement with 1,13 sg mud. Bumped plug.
23:30	Pressure tested casing from cement unit to 210 bar for 10 min. Bled back pressure and checked for backflow.
23:59	Sat seal assembly by turning 6 right hand turns. Performed final setting by pressuring up against upper pipe ram to 360 bar.

Daily report no : 19 **Date:** 2003-06-18

Midnight depth : 1329 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.13 sg

Stop time	Description
00:30	Pressure tested seal assembly to 360 bar for 10 min.
02:30	Pressure tested BOP on blue pod from drillfloor to 35 / 345 bar for 5 / 10 minutes. Pressure tested upper annular preventer on blue pod from drillfloor to 35 / 245 bar for 5 / 10 minutes.
03:00	Function tested BOP on yellow pod from tool pusher office. Function tested upper pipe ram on accoustic.
03:30	Released casing hanger running tool with 30 tons overpull. Landed casing hanger running tool in casing hanger and sat down 10 tons. Pressure tested seal assembly to 360 bar for 5 min.
05:00	Racked back cement stand and pulled out of hole with casing hanger running tool. Laid down casing hanger running tool.
06:00	Changed bails. Rigged down casing running equipment.
07:30	Made up wear bushing to wear bushing running tool.
08:00	Ran in hole with wear bushing on wear bushing running tool. Washed well head area. Installed wear bushing.
08:30	Pressure tested middle pipe ram to 35 / 210 bar for 5 / 10 minutes.

Well: 35/8-5 S **PO:** 1

Daily report no : 19 **Date:** 2003-06-18

Midnight depth : 1329 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.13 sg

Stop time	Description
10:00	Pulled out of hole and laid down wear bushing running tool.
11:30	Laid down 17" BHA.
12:00	Reloaded cement head.
13:30	Pressure tested kelly hose to 35 / 345 bar, 5 / 10 min. Pressure tested manual and auto kelly kock to 35 / 210 bar, 5 / 10 min.
15:00	Made up 12 1/4" BHA to 31 m.
15:30	Surface tested Power Drive and MWD.
16:30	Made up and ran in with 12 1/4" BHA from 31 m to 229 m.
18:00	Ran in hole with 12 1/4" BHA on 5" drill pipe from 229 m to 1264 m.
18:30	Washed down from 1264 m to top of cement at 1292 m.
19:30	Performed choke drill with both crews.
20:00	Drilled cement from 1292 m to 1293 m.
20:30	Circulated with reduced rate due to overflow on shakers.
22:30	Drilled float from 1293 m to 1294 m.
23:00	Drilled shoetrack from 1294 m to 1320 m.
23:30	Drilled 13 3/8" shoe at 1320 m. Washed soft cement in rat hole from 1320 m to 1326 m.
23:59	Drilled 3 m new formation from 1326 m to 1329 m. Circulated and conditioned mud.

Daily report no : 20 **Date:** 2003-06-19

Midnight depth : 1437 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.25 sg

Stop time	Description
01:30	Circulated and conditioned mud.
03:00	Pulled into casing and performed leak off test to 2,05 sg.
04:30	Slipped and cut 115 ft drilling line.
05:00	Drilled 2 m new formation from 1329 m to 1331 m. Pulled into casing.
05:30	Confirmed formation integrety after leak off test by performing formation integrety test to 1,58 sg.
18:00	Waited on weather for backloading mud to boat prior to displcaing to oil based mud.
19:00	Pumped 10 m3 oil based hi-visc pill. Displaced well to 1,25 sg oil based mud.
20:30	Circulated with reduced rate due to overflow on shakers.
23:59	Drilled 12 1/4" hole from 1331 m to 1437 m.

Daily report no : 21 **Date:** 2003-06-20

Midnight depth : 2127 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.20 sg

Stop time	Description
10:30	Drilled 12 1/4" hole from 1437 m to 1748 m.
11:30	Flowchecked well for 10 min. at 1748 m. Well stable. Observed 30 bar pressure increase indicating additional one plugged nozzle. Circulated and rotated string until normal pressure achieved.
23:59	Drilled 12 1/4" hole from 1748 m to 2127 m.

Daily report no : 22 **Date:** 2003-06-21

Midnight depth : 2772 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.20 sg

Stop time	Description
23:59	Drilled 12 1/4" hole from 2127 m to 2772 m.

Daily report no : 23 **Date:** 2003-06-22

Midnight depth : 2918 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.20 sg

Stop time	Description
23:59	Drilled 12 1/4" hole from 2772 m to 2918 m.

Well: 35/8-5 S **PO:** 1

Daily report no : 24 **Date:** 2003-06-23

Midnight depth : 2962 m MD **Estimated PP:** 1.03 sg **Mud weight:** 1.25 sg

Stop time	Description
14:00	Drilled 12 1/4" hole from 2918 m to 2962 m.
15:00	Flowchecked well and pulled out of hole from 2962 m to 2810 m.
16:30	Stopped operation and investigated dropped object from derrick to setback area. Checked derrick and held safety meeting with involved personel.
19:30	Pulled out of hole from 2810 m to 1292 m. Flowchecked well. Well stable.
20:00	Pulled out of hole from 1292 m to 631 m.
21:00	Flowchecked well prior to pulling BHA through BOP. Well stable. Pulled out of hole from 631 m to 89 m.
22:00	Removed diverter element. Racked back BHA from 89 m to 31 m.
22:30	Dumped memory from sonic log. Observed washout in sonic tool. Dumped memory from CDR.
23:59	Laid down 12 1/4" BHA.

Daily report no : 25 **Date:** 2003-06-24

Midnight depth : 3205 m MD **Estimated PP:** 1.10 sg **Mud weight:** 1.25 sg

Stop time	Description
01:30	Made up new 12 1/4" BHA to 32 m.
02:00	Function tested Power Drive and MWD / LWD.
02:30	Made up 12 1/4" BHA from 32 m to 89 m.
04:30	Ran in hole with 12 1/4" BHA from 89 m to 1320 m.
07:00	Ran in hole with 12 1/4" BHA from 1320 m to 2930 m.
08:00	Broke circulation and relogged isonic log from 2930 m to 2962 m.
08:30	Drilled 12 1/4" hole from 2962 m to 2963 m.
09:30	Changed saver sub and drilling pup due to wash out.
18:00	Drilled 12 1/4" hole from 2963 m to 3106 m.
18:30	Downlinked Power Drive.
21:30	Drilled 12 1/4" hole from 3106 m to 3181 m.
22:00	Downlinked Power Drive.
23:59	Drilled 12 1/4" hole from 3181 m to 3205 m.

Daily report no : 26 **Date:** 2003-06-25

Midnight depth : 3265 m MD **Estimated PP:** 1.10 sg **Mud weight:** 1.27 sg

Stop time	Description
04:30	Drilled 12 1/4" hole from 3205 m to TD at 3265 m.
08:00	Circulated hole clean. Performed check survey.
08:30	Flowchecked well for 30 min. Well stable.
11:30	Pulled out of hole with 12 1/4" BHA from 3245 m to 1300 m.
13:00	Flowchecked well for 15 min. Well stable. Pulled out of hole with 12 1/4" BHA from 1300 m to 160 m.
14:00	Removed diverter element. Pulled out of hole with 12 1/4" BHA from 160 m to 89 m.
15:30	Laid down 12 1/4" BHA.
16:00	Changed to 10 000 psi cement hose on cement stand. Racked cement stand back in derrick.
18:30	Made up Multi Purpose Tool and ran in hole. Picked up 10 singles 5" HWDP while running in. Pulled 13 3/8" wear bushing.
20:00	Pulled out of hole with 13 3/8" wear bushing. Laid down wear bushing and Multi Purpose Tool.
22:00	Rigged up for running 9 5/8" casing. Held pre-job meeting.
23:00	Made up 9 5/8" shoetrack to 49 m.
23:59	Ran 9 5/8" casing from 49 m to 145 m.

Daily report no : 27 **Date:** 2003-06-26

Midnight depth : 3265 m MD **Estimated PP:** 1.10 sg **Mud weight:** 1.27 sg

Stop time	Description
08:00	Ran 9 5/8" casing from 145 m to 1320 m.
19:00	Continued running 9 5/8" casing to 2859 m.

Well: 35/8-5 S **PO:** 1

Daily report no : 27 **Date:** 2003-06-26

Midnight depth : 3265 m MD **Estimated PP:** 1.10 sg **Mud weight:** 1.27 sg

Stop time	Description
20:00	Made up 9 5/8" casing hanger and changed to 5" handling equipment.
21:30	Ran 9 5/8" casing on 5" HWDP landing string to 3247m.
22:00	Made up the cementhead stand, broke circulation and landed the 9 5/8" casing. Slacked off the complete casingweight and another 10 MT.
23:59	Circulated the casing annulus volume.

Daily report no : 28 **Date:** 2003-06-27

Midnight depth : 3265 m MD **Estimated PP:** 1.10 sg **Mud weight:** 1.35 sg

Stop time	Description
00:30	Continued circulating the casing annulus volume.
01:00	Pumped 3 m3 baseoil, followed by 10 m3 1.45sg spacer, with rigpumps.
02:00	Mixed and pumped 22m3 1.56sg lead slurry, followed by 8 m3 1.90sg tailslurry.
04:30	Dropped the dart and displaced the cementslurry. Bumped the plug and pressuretested the plugs, floatcollar and casing to 430bar. Bled off the pressure and verified no backflow.
05:30	Set the sealassembly and pressuretested to 465bar/10min, 35bar/5min, against upper pipe ram.
06:00	Released the running tool, flushed the casinghanger/seal assembly, relanded the running tool and verified the sealassembly installation by retesting to 150bar. Broke and racked the cement head stand.
07:30	Pulled out with the landingstring. Laid out the casinghanger running tool. Cleared and cleaned the rigfloor.
08:00	Made up the wearbushing runningtool and attached the wearbushing.
08:30	Dismantled the rotators on the BX-elevator.
09:00	Ran in on 5" HWDP and set the wearbushing.
12:00	Pressuretested the BOP on the blue pod to 35/465bar for 5/10min, upper annular to 35/241bar.Function tested the BOP from the yellow pod.
13:00	Pulled the running tool free from the wearbushing with 15MT overpull, pulled out and laid out the running tool.
15:00	Pressuretested the IBOP's on the topdrive to 35/465 bar, and the mudhose to 35/345bar.
23:59	Performed planned maintenance prior to starting 8 1/2" section.

Daily report no : 29 **Date:** 2003-06-28

Midnight depth : 3315 m MD **Estimated PP:** 1.10 sg **Mud weight:** 1.35 sg

Stop time	Description
01:30	Continued the planned rig maintenance prior to start up of 8 1/2" section.
03:30	Made up the 8 1/2" BHA consisting of: 8 1/2" bit-PD Xceed-Vision 675-Powerpulse MWD-8 1/8" ILS Stab-Isonic-ADN.
04:00	Functiontested the PD Xceed and the MWD/LWD tools.
04:30	Troubleshot unknown signalresponse from Xceed tool.
05:00	Installed the radioactive sources in the ADN tool. Made up 6 1/2" NMDC.
06:00	Picked up from deck and made up 5 ea 6 1/2" DC's and 6 1/2" jar.
06:30	Ran in 5 ea stands 5" HWDP.
08:00	Picked up from deck and made up 21 ea jts 5" DP.
12:00	Ran in to 3202m, filling string every 500m.
12:30	Tagged wiperplugs at 3218m. Performed chokedrill with crew.
14:00	Drilled through wiperplugs and floatcollar.
14:30	Washed down to 3223m, before drilling cement to 3228m.
15:00	Stopped drilling while checking the topdrive, due to abnormal noise.
16:00	Drilled cement inside the shoetrack to 3256m. Drilled through the shoe at 3257m and washed the stand down to 3259m. Circulated 15min and wiped string across shoearea once, prior to making connection.
16:30	Washed down to the bottom of 12 1/4" hole. The hole packed off with bit at 3264m, and the string stalled. Worked to free the string. The string came free by downwards jarring action. Circulated 10min to clean the rathole.
17:00	Drilled 3m new formation, prior to lining up for FIT test.
17:30	Performed FIT to 1.80sg equivalent MW.
22:30	Drilled 8 1/2" hole to 3304m. Flowchecked drilling break at 3274m, negative.
23:00	Circulated while reprogramming Xceed tool to change setting to neutral.
23:59	Drilled 8 1/2" hole to 3315m. Flowchecked drilling break at 3315m, negative.

Well: 35/8-5 S **PO:** 1

Daily report no : 30 **Date:** 2003-06-29

Midnight depth : 3381 m MD **Estimated PP:** 1.10 sg **Mud weight:** 1.35 sg

Stop time	Description
06:30	Drilled 8 1/2" hole from 3315m to 3381m, flowchecking drilling breaks at 3328m and 3333m, negative.
08:30	Circulated bottoms up for samples.
09:30	Flowchecked the well.
10:00	Pulled out to 9 5/8" casingshoe.
14:30	Pulled out until ADN in rotary.
15:00	Recovered the radioactive sources from the LWD tool.
16:00	Racked back the MWD/LWD tools and the XCeed motor.
18:30	Picked up from deck and made up 180' corebarrel.
19:30	Made up the rest of the BHA and ran in to 255m.
23:00	Continued running in on 5" DP to 3333m.
23:59	Washed down the last 2 stands, tagging bottom at 3381m.

Daily report no : 31 **Date:** 2003-06-30

Midnight depth : 3384 m MD **Estimated PP:** 1.20 sg **Mud weight:** 1.35 sg

Stop time	Description
01:00	Continued circulating bottoms up prior to starting coring. Maximum recorded gas level was 37.8%.
01:30	Dropped the ball and circulated until ball landed in seat. Recorded SCR's.
02:00	Cut core from 3381m to 3382.5m.
03:30	Attempted to continue cutting the core, without success.
05:00	Broke the core with 15MT overpull. Attempted to restart the coring action, without success.
05:30	Flowchecked the well and pumped the slug.
06:00	Pulled out of the open hole and inside the 9 5/8" casing shoe.
11:30	Pulled out until top 180' corebarrel in rotary.
12:30	Broke safety joint and recovered the 1.5m core.
15:30	Racked back the corebarrel upper section. Checked the bit and redressed the 180' corebarrel. Ran in to 116m.
20:00	Pulled out the BHA, rearranged the corebarrel assembly from 180' to 60' and ran in with the BHA to 78m.
22:30	Ran in the hole to 980m. Laid out 8" jar and 2 x 8" DC's from derrick.
23:59	Cut and slipped the drilline.

Daily report no : 32 **Date:** 2003-07-01

Midnight depth : 3402 m MD **Estimated PP:** 1.42 sg **Mud weight:** 1.50 sg

Stop time	Description
03:30	Continued running in with 60' coreassembly to 3351m.
04:00	Washed down the last stand to TD.
05:00	Circulated bottoms up.
06:30	Continued circulating bottoms up. Raised the mudweight to 1.40sg.
07:00	Tagged bottom at 3383.5m, before dropping the ball and circulating until the ball landed in the ballseat. Recorded SCR's.
09:00	Cut core #2 from 3383.5m to 3401.5m.
12:00	Stopped coring and broke core with 37MT overpull. Continued circulating for bottoms up from cored interval.
14:30	Circulated while raising the mudweight to 1.50sg.
15:00	Flowchecked the well and verified the triptank being stable.
17:00	Circulated bottoms up. Flowchecked the well, ok.
18:00	Pumped the slug, before pulling out to 3286m. Verified the well stable.
20:00	Pulled out to 1425m.
21:00	Changed leaking hose on intermediate racking arm.
23:59	Pulled out to 46m.

Well: 35/8-5 S **PO:** 1

Daily report no : 33 **Date:** 2003-07-02

Midnight depth : 3416 m MD **Estimated PP:** 1.42 sg **Mud weight:** 1.50 sg

Stop time	Description
00:30	Pulled out the last stand until top of the 60' corebarrel sitting in rotary.
01:30	Recovered the core. Laid out the 2 ea innerbarrels.
03:00	Made up the 90' corebarrel. Pulled out the corebarrel and verified the corehead ok for rerun. Ran back in with the corebarrel.
08:00	Ran in with the 90' corebarrel to 3361m.
08:30	Washed down and tagged bottom at 3401.5m.
10:00	Circulated bottoms up to check for gas levels in return. Max gas readings from bottoms up: 0.7%.
10:30	Dropped the ball and circulated until the ball landed in the ball seat. Recorded SCR's.
12:30	Cut core #3 from 3401.5m to 3415.5m, where parameters indicated core was jammed inside the core catcher. Attempted to get the coring restarted, but without success. Pulled upwards and broke the core with 10MT overpull.
13:30	Flowchecked the well, pumped the slug, and pulled out to 9 5/8" casing shoe.
14:00	Pulled out to 2641m.
14:30	Stopped the operation while replacing a malfunctioning BX-elevator.
19:00	Continued pulling out with core #3, until top of 90' corebarrel sitting in the rotary.
20:00	Recovered core #3, 13.4m recovered out of 14 m cored (96% recovery).
21:00	Redressed the core barrel, making up and installing 3 ea innerbarrel sections. Inspected the corehead and the float, and reran the 90' corebarrel and the bottom hole assembly to 217m.
23:59	Ran in with the 90' corebarrel to 2530m.

Daily report no : 34 **Date:** 2003-07-03

Midnight depth : 3443 m MD **Estimated PP:** 1.42 sg **Mud weight:** 1.50 sg

Stop time	Description
01:30	Continued running in with the 90' corebarrel to 3250m.
02:00	Ran in with the 90' corebarrel through the 8 1/2" open hole to 3390m.
02:30	Washed down the last stand and tagged bottom at 3415.5m. Continued circulating 3000stk, until bottoms up from last cored interval had been recovered.
03:00	Spaced out and dropped the ball. Circulated until ball landed in seat. Recorded SCR's.
05:00	Cut core #4 from 3415.5m to 3443m. Pulled up and broke the core with 15MT overpull, when the 90' corebarrel was estimated filled.
05:30	Continued circulating until gas level was recorded from start of the cored interval.
06:00	Racked back drilling stand, replaced a pupjoint used for space-out with a single DP, and flowchecked well, prior to pumping the slug.
07:00	Pulled out of the open hole to 3245m. Flowchecked the well.
12:00	Pulled out with the 90' corebarrel.
13:30	Laid out 3 ea core innerbarrels. Recovered 27.8m core (100%+ recovery).
14:00	Evaluated the samples from core #4.
14:30	Pulled out the 90' outerbarrel, broke the bit and racked the stand in the derrick.
16:00	Ran in with the Xceed/MWD/LWD assembly. Verified the logging tools and functiontested ok.
17:00	Prepared to install the radioactive sources in neutron/density tool. Observed lock for source in transport container being stuck. Worked to release the source lock.
17:30	Installed the radioactive sources in the LWD tool.
21:00	Ran in with the 8 1/2" drilling assembly to 2494m, filling the string every 300m, due to the Xceed specifications.
21:30	Tightened the washpipe connection, due to indications of very minor leak.
22:30	Ran in to 3380m, filling the string every 300m.
23:59	Broke circulation and increased to 1500lpm, before starting to ream the cored interval, primarily for MWD logging purposes.

Daily report no : 35 **Date:** 2003-07-04

Midnight depth : 3713 m MD **Estimated PP:** 1.50 sg **Mud weight:** 1.62 sg

Stop time	Description
01:30	Reamed to TD at 3443m, to obtain realtime MWD logs across the cored interval.
06:30	Drilled 8 1/2" hole from 3443m to 3494m.
07:00	Reprogrammed the Xceed tool.

Well: 35/8-5 S **PO:** 1

Daily report no : 35 **Date:** 2003-07-04
Midnight depth : 3713 m MD **Estimated PP:** 1.50 sg **Mud weight:** 1.62 sg

Stop time	Description
07:30	Drilled 8 1/2" hole to 3499m.
08:00	Reprogrammed the Xceed tool.
23:59	Drilled 8 1/2" hole to 3713m. Raised the mudweight in 4 steps from 1.50sg to 1.65sg.

Daily report no : 36 **Date:** 2003-07-05
Midnight depth : 3845 m MD **Estimated PP:** 1.50 sg **Mud weight:** 1.65 sg

Stop time	Description
13:30	Continued drilling 8 1/2" hole to 3845m.
16:00	Circulated bottoms up for samples.
17:30	Flowchecked the well and pulled out to the 9 5/8" casingshoe.
19:00	Function tested the BOP on both pods. Meanwhile flowchecking the well, negative.
22:30	Pulled out to 37m.
23:00	Removed the radioactive sources from the tool and laid out the neutron/density sub.
23:30	Dumped the memories in the MWD/LWD tool. Checked the bit, before racking the stand in the derrick.
23:59	Tidied the rigfloor, before making up the corehead and running the 90' outerbarrel through the rotary.

Daily report no : 37 **Date:** 2003-07-06
Midnight depth : 3856 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
01:00	Made up the 90' innerbarrel and redressed the corebarrel for running.
03:00	Ran in with the 90' coring assembly to 1666m.
06:30	Performed planned maintenance stop.
08:00	Ran in with the 90' coreassembly to the 9 5/8" casing shoe.
08:30	Continued running in to 3816m.
09:00	Washed down last stand, tagging bottom at 3845m.
11:00	Circulated bottoms up, maximum gas recorded: 0.6%.
11:30	Dropped the ball and circulated until the ball was landed in the ball seat. Recorded SCR's.
18:00	Cut core #5 from 3845m to 3856m. Maximum recorded gas from3847m: 0.9%. No progress last hour. Broke core with 12 MT overpull.
18:30	Flowchecked the well and verified static, prior to pumping the slug.
20:30	Pulled out to the 9 5/8" casing shoe. Flowchecked the well.
23:59	Continued pulling out with the 90' corebarrel to 300m.

Daily report no : 38 **Date:** 2003-07-07
Midnight depth : 3883 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.66 sg

Stop time	Description
01:30	Pulled out last 300m with reduced pulling speed, until top of 90' corebarrel sitting in rotary.
02:30	Laid out the innerbarrel, recovered 11.25m of core (100+% recovery). Pulled out outerbarrel and broke corehead.
03:30	Made up new 7 bladed corehead, ran in the 90' outerbarrel and dressed with new innerbarrels. Verified space-out ok.
04:00	Ran in with the 90' corebarrel.
04:30	Relief valve for frame on automatic slips malfunctioned. Checked same prior to changing to back-up slips.
08:00	Ran in with 90' corebarrel to 3245m.
09:30	Cut and slipped 70 m of drilline.
10:30	Ran in with the 90' corebarrel to 3820m.
11:30	Washed down from 3828m to bottom at 3856m. Circulated 15 min on bottom.
12:00	Dropped the ball and circulated until the ball landed in the ballseat. Recorded SCR's.
16:00	Cut core #6 from 3856m to 3883m. Broke core with 25MT overpull when the corebarrel had presumably been filled up. Coring parameters: 1000lpm/118bar, 70rpm, 4-10MT, 5-14kftlbs. ROP varied between: 2m/hr and 30m/hr.
18:30	Flowchecked the well prior to pumping the slug and pulling out to the 9 5/8" casing shoe.
21:30	Verified the well stable prior to continuing pulling out to 660m.

Well: 35/8-5 S **PO:** 1

Daily report no : 38 **Date:** 2003-07-07

Midnight depth : 3883 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.66 sg

Stop time	Description
23:59	Flowchecked the well prior to pulling the bottomhole assembly through the BOP. Continued pulling out, with reduced pulling speed from 300m.

Daily report no : 39 **Date:** 2003-07-08

Midnight depth : 3972 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
01:30	Recovered the core and laid out the innerbarrels.
02:00	Pulled out the 90' corebarrel, broke the corehead, and racked the outerbarrel in the derrick.
03:30	Changed the bit on the Xceed tool and ran in to 36m. Functiontested the Xceed and the MWD/LWD tools.
04:00	Installed the radioactive sources in the neutron/density tool.
04:30	Ran in with rest of the bottomhole assembly to 238m.
05:00	Installed the rotators on the BX elevator.
06:00	Picked up 15 ea joints of 5" DP and ran in to 381m. Filled the string. Ran in to 408m.
07:30	Pulled out to remove 2nd float/floatsub that had unintendedly been run on top of the non magnetic pony DC. Laid out the floatsub, before running back in to 408m.
12:30	Continued running in to 3245m. Removed the rotators on the BX elevators.
13:00	Ran in through the open hole section to 3845m.
13:30	Reamed across the cored interval to 3883m, for logging purposes.
14:30	Circulated off bottom while setting Xceed tool up for holding mode.
17:00	Drilled 8 1/2" hole to 3891m with the Xceed tool set for holding mode.
17:30	Circulated off bottom while setting Xceed tool to 30% build.
23:59	Drilled oriented as per original well plan to 3972m.

Daily report no : 40 **Date:** 2003-07-09

Midnight depth : 4000 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
03:00	Continued drilling the 8 1/2" hole to TD at 4000m.
05:00	Circulated to clean the hole prior to logging operation.
07:00	Flowchecked the well, prior to pumping the slug and pulling out to 3200m. Flowchecked the well, ok.
10:30	Pulled out to 36m. Laid out the non magnetic pony DC.
11:00	Removed the radioactive sources from the neutron/density tool.
12:00	Laid out the various sections of the LWD/MWD tool. Laid out the Xceed tool after breaking the bit.
13:30	Tidied the rigfloor and rigged up for wireline logging.
15:00	Picked up the logging tools from the deck and made up the toolstring. Installed the radioactive sources. The toolstring consisted of (from top): GR - Neutron (Porosity) - Density - MDT.
22:30	Ran in with the logging string at 1510hrs, tagged TD at 4000m and started logging upwards. Logged the complete openhole section. Started pulling out with toolstring from 9 5/8" casing shoe at 2045hrs. The toolstring was back at surface at 2230hrs.
23:30	Inspected the logging tool string, before laying out the various tools.
23:59	Made up the back-up logging tool string.

Daily report no : 41 **Date:** 2003-07-10

Midnight depth : 4000 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
00:30	Continued making up the new logging string. Installed the radioactive sources.
09:00	Ran in with the logging tool string at 0030hrs. Started logging the main log, from 4000m TD at 0330hrs. Out with tool string at 0905 hrs.
11:30	Made up tool string no.3; MDT-GR, and tested tool.
23:59	Ran in hole with tool string no. 3 and logged for pressure points. Tool at 3957 m at midnight.

Well: 35/8-5 S **PO:** 1

Daily report no : 42 **Date:** 2003-07-11

Midnight depth : 4000 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
03:00	Continued taking pressure points.
04:00	Repaired broken chain on wireline unit.
10:00	Continued taking pressure points.
12:30	Tool stuck while attempting for pressure point at 3597 m. Attempted to work string free without success. Activated electrical weak point, and detatched wire from tool.
13:30	Pulled out of hole with wire.
14:00	Rigged down wireline equipment from rig floor.
15:30	Made up fishing assembly and ran in hole to 152 m.
19:30	Ran in hole with fishing assembly on 5" drill pipe from 152 m to 3545 m.
21:00	Circulated bottoms up from 3570 m.
21:30	Washed down with 300 lpm from 3570 m to 3602 m, and attempted to engage fish. No indications of engagement observed.
22:00	Continued running in hole on 5" drill pipe from 3602 m to 3976 m.
22:30	Broke circulation at 3976 m and washed down with 300 lpm. Took weight at 3987,6 m and sat down 4 T on top of fish. Picked up to neutral weight and rotated string 5 turns to left. Sat down 9 T.
23:59	Pulled out of hole with fishing assembly on 5" drill pipe from 3987 m to 2998 m.

Daily report no : 43 **Date:** 2003-07-12

Midnight depth : 4000 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
03:00	Continued pulling out of hole with fishing assembly on 5" drill pipe form 2998 m to 152 m.
04:00	Racked back fishing assembly in derrick. Laid down jar.
05:00	Disconnected fish and laid down recovered MDT tool.
06:00	Laid down core barrels from derrick.
07:00	Laid down cement stand from derrick. Cleaned and cleared rig floor.
07:30	Made up new cement stand and racked in derrick.
09:30	Picked up BOP wash tool and ran in hole on 2 stands 6 1/2" drill collars. Made up BOP test tool and ran in hole on 5" drill pipe to 394 m. Washed wellhead and BOP with 2500 lpm (100 bar).
11:00	Not able to pass wearbushing with wash tool. Pulled out and removed wash tool. Ran back in and landed BOP test tool in wellhead.
15:00	Flushed lines and pressure tested BOP on yellow pod from drill floor to 35/465 bar for 5/10 minutes (upper annular to 241 bar). Function tested BOP on blue pod from toolpusher office and from acoustic panel.
16:30	Pressure tested surface eqiupment to 35/465 bar for 5/10 minutes.
18:00	Pulled out of hole and laid down BOP test tool.
19:00	Installed divertor element and changed to 3 1/2" handling equipment. Ran in hole with 3 1/2" drill pipe to 294 m. Picked up 9 joints from deck.
23:59	Changed to 5" handling equipment and ran in hole on 5" drill pipe from 294 m to 4000 m. Tagged bottom with 3 T.

Daily report no : 44 **Date:** 2003-07-13

Midnight depth : 4000 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
01:30	Circulated hole clean prior to cement job with 2000 lpm (304 bar). Held pre-job meeting with involved personnel.
03:00	Troubleshoot on failure in HPU unit.
04:00	Sat a balanced cement plug from 4000 m to 3720 m.
04:30	Displaced cement with 1,65 sg mud using mud pumps.
05:30	Pulled out of cement plug to 3720 m.
07:00	Circulated bottoms up from 3720 m with 2070 lpm (300 bar)
07:30	Installed cement stand and pumped 9 m3 of 1,70 sg spacer with mud pumps. Pressure tested surface lines to 200 bar for 5 minutes.
08:00	Sat a ballanced cement plug from 3720 m to 3440 m.
08:30	Displaced the cement with 1,65 sg mud using rig pumps.
09:30	Pulled out of cement plug to 3440 m.

Well: 35/8-5 S **PO:** 1

Daily report no : 44 **Date:** 2003-07-13

Midnight depth : 4000 m MD **Estimated PP:** 1.52 sg **Mud weight:** 1.65 sg

Stop time	Description
11:00	Circuated bottoms up from 3440 m with 2100 lpm (300 bar).
11:30	Dropped wiper in string and circulated down to clean pipe.
12:00	Pumped 9 m3 of 1,70 Sg spacer with rig pumps and pressure tested surface lines to 200 bar for 5 minutes.
12:30	Sat a ballanced cement plug from 3440 m to 3150 m.
13:30	Pulled out of cement plug to 3080 m.
15:00	Circulated bottoms up from 3080 m with 2190 lpm (294 bar).
15:30	Dropped wiper in string and circulated down to clean pipe.
16:00	Flowchecked well and pumped slug.
18:30	Pulled out of hole on 5" drill pipe from 3080 m to 294 m.
19:00	Changed to 3 1/2" handling equipment and pulled out of hole with 3 1/2" stinger.
20:30	Made up 9 5/8" casing scraper assembly and ran in hole to 152 m.
23:30	Ran in hole on 5" drill pipe to 3008 m.
23:59	Washed down to 3040 m and scraped interval from 3040 m to 3060 m. Circulated with 2500 lpm (304 bar).

Daily report no : 45 **Date:** 2003-07-14

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.65 sg

Stop time	Description
01:00	Continued scraping setting area for bridge plug and circulated bottoms up with 2500 lpm (304 bar).
03:30	Pulled out of hole with 9 5/8" casing scraper assembly on 5" drill pipe from 3060 m to 152 m.
04:00	Pulled out with scarper assembly. Laid down jar and casing scraper.
05:00	Made up 9 5/8" bridge plug and ran in hole on 3 1/2" drill pipe to 294 m.
10:30	Changed to 5" handling equipment and ran in hole on 5" drill pipe from 294 m to 3047 m.
11:30	Dropped ball and circulated down with 320 lpm (33 bar). Pressured up to 223 bar when ball landed in ball seat to set bridge plug. Pulled free from plug.
12:00	Pressure tested bridge plug to 120 bar for 15 minutes.
12:30	Racked back one stand and installed cement stand. Held pre-job meeting prior to cement job.
13:00	Pumped 10 m3 of 1,70 sg spacer with rig pumps and pressure tested surface lines to 200 bar for 5 minutes.
13:30	Sat a ballanced cement plug from 3047 m to 2847 m.
14:00	Displaced cement with 1,65 sg mud using rig pumps.
15:30	Pulled out of cement plug to 2470 m.
16:00	Circulated one string volume with 1500 lpm (137 bar) to flush pipe. Pumped slug.
17:30	Slipped and cut drilling line.
19:30	Continued pulling out of hole on 5" drill pipe from 2470 m to 294 m.
20:30	Changed to 3 1/2" handling equipment and pulled out of hole on 3 1/2" drill pipe from 294 m. Laid down equalizer sub and running tool .
21:30	Ran in hole with 5" open ended drill pipe to 730 m.
22:30	Displaced well to 1,27 sg OBM from 730 m.
23:59	Flowchecked well, pumped slug and pulled out of hole on 5" drill pipe from 730 m.

Daily report no : 46 **Date:** 2003-07-15

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.27 sg

Stop time	Description
02:00	Made up wearbushing retrieval tool and ran in hole and retrieved wearbushing. Pulled out of hole and laid down running tool and wearbushing.
03:00	Made up 9 5/8" casing cutter and ran in hole on 5" drill pipe to 304 m.
06:00	Made up marine swivel and annular swivel and continued running in hole on 5" drill pipe to 697 m (cutter depth). Filled pipe and landed marine swivel in wellhead.
06:30	Closed upper annular around annular swivel and cut 9 5/8" casing at 697 m.
08:00	Flowchecked well, opened annular and pulled out of hole on 5" drill pipe to 304 m.
09:00	Racked back marine- and annular swivel and continued pulling out of hole on 5" drill pipe. Racked back 9 5/8" casing cutter assembly.
10:00	Made up 9 5/8" spear assembly.

Well: 35/8-5 S **PO:** 1

Daily report no : 46 **Date:** 2003-07-15

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.27 sg

Stop time	Description
11:00	Ran in hole with spear assembly on 5" HWDP to 396 m. Landed of stop ring in wellhead.
12:00	Closed upper annular and pulled 9 5/8" casing free. Pumped one annulus volume up choke line. Opened annular and circulated bottoms up with 2400 lpm (95 bar).
13:30	Attempted to pull 9 5/8" casing hanger through BOP, but hung up on lower annular. Several attempts to pull through, but no go. Landed off 9 5/8" casing hanger in wellhead and released spear.
14:30	Pulled out of hole with spear assembly and racked in derrick.
17:00	Performed drift run through BOP with multi purpose tool. Flushed BOP area and pulled out with tool.
19:30	Rearranged 9 5/8" spear assembly and ran in hole to 396 m. Engaged spear to 9 5/8" casing.
20:00	Pulled casing free and through BOP.
21:00	Slugged pipe and pulled out of hole with 9 5/8" casing on 5" HWDP. Released spear and racked back spear assembly in derrick.
22:30	Rigged up casing handling equipment.
23:59	Pulled 9 5/8" casing and laid down.

Daily report no : 47 **Date:** 2003-07-16

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.27 sg

Stop time	Description
00:30	Rigged down casing handling equipment.
01:30	Made up 13 3/8" casing scraper assembly and ran in hole to 660 m.
03:00	Scraped interval from 640 m to 660 m while circulating bottms up. Pulled out with scraper assembly and racked in derrick.
04:30	Made up 13 3/8" bridge plug and equalizer sub, and ran in hole on 3 1/2" drill pipe to 291 m.
06:00	Changed to 5" handling equipment and ran in hole on 5" drill pipe from 291 m to 650 m.
06:30	Sat 13 3/8" bridge plug at 650 m. Confirmed plug set with 10 T down weight.
07:00	Pulled out of hole with running tool on 5" drill pipe to 291 m.
08:00	Changed to 3 1/2" handling equipment and pulled out of hole with 3 1/2" drill pipe. Laid down running tool.
08:30	Ran in hole with 5" open ended drill pipe to 300 m.
09:30	Performed mandatory training with manual pipe handling equipment.
10:00	Continued running in hole on 5" drill pipe to 650 m.
11:30	Displaced well to 1,15 sg water based mud from 650 m.
12:00	Pulled out of hole with 5" drill pipe.
14:30	Rearranged spear assembly in derrick.
15:30	Made up multipurpose tool and ran in hole on 5" drill pipe to 396 m.
16:00	Landed multipurpose tool in wellhead and sat down 15 T to engage seal assembly. Picked up and circulated annulus volume over choke.
17:00	Pulled out with running tool. Seal assembly not engaged.
18:00	Ran in hole with multipurpose tool on 5" drill pipe to 396 m.
19:00	Sat down 18 T on top of seal assembly. Rotated with 10 RPM to right and engaged to seal asembly.
20:00	Pulled out of hole with seal assembly and running tool on 5" drill pipe. Laid down seal assembly and running tool.
21:00	Made up 13 3/8" casing cutter assembly and ran in hole to 145 m.
21:30	Installed marine swivel and annular swivel and continued running in hole to 540 m (cutter depth).
22:00	Landed off marine swivel in wellhead and took torque readings. Closed upper annular around annular swivel.
22:30	Checked tallies due to discrepancy between actual and theoretical depth for landing off marine swivel in wellhead.
23:30	Filled pipe and cut 13 3/8" casing at 540 m.
23:59	Opened annular and flowchecked well - ok.

Daily report no : 48 **Date:** 2003-07-17

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.16 sg

Stop time	Description
01:30	Pulled out of hole with 13 3/8" casing cutter assembly and racked in derrick.
02:30	Made up 13 3/8" spear assembly and ran in hole on 5" HWDP to 396 m.
04:30	Engaged spear to 13 3/8" casing and pulled casing free. Pulled out of hole with 13 3/8" casing on 5" HWDP from 540 m to 145 m.

Well: 35/8-5 S **PO:** 1

Daily report no : 48 **Date:** 2003-07-17

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.16 sg

Stop time	Description
06:30	Rigged up for pulling casing. Released spear from casing and racked back.
08:30	Laid down casing hanger and pulled out with retrieved 13 3/8" casing.
10:00	Rigged down casing equipment.
10:30	Made up divertor tool and ran in hole on 3 1/2" drill pipe to 295 m.
11:00	Changed to 5" handling equipment and ran in hole on 5" drill pipe from 295 m to 640 m.
11:30	Installed cement stand and tagged 13 3/8" bridge plug at 650 m.
12:00	Broke circulation in steps to 2500 lpm (43 bar). Held pre-job meeting prior to cement job.
12:30	Pressure tested surface lines to 200 bar for 5 minutes. Pumped 10 m3 of 1,32 Sg spacer with rig pumps.
13:00	Sat a ballanced cement plug from 650 m to 440 m.
13:30	Displaced cement with 1,15 sg mud using rig pumps.
14:30	Pulled out of cement plug to 415 m.
15:00	Circulated bottoms up from 415 m. Dropped drill pipe wiper and circulated down.
15:30	Continued pulling out of hole on 5" drill pipe from 415 m to 295 m.
16:00	Changed to 3 1/2" drill pipe and pulled out of hole with 3 stands 3 1/2" drill pipe and racked in derrick.
16:30	Flowchecked well on trip tank. Indications on well flowing. Closed shear ram and monitored well.
17:00	Continued pulling out with 3 1/2" drill pipe while laying down pipe.
19:30	Laid down spear and casing cutter assemblies from derrick.
21:00	Made up 20" x 30" casing cutter assembly and racked in derrick.
23:59	Waited on cement to set up.

Daily report no : 49 **Date:** 2003-07-18

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.16 sg

Stop time	Description
01:00	Made up 8 1/2" bit and ran in hole on 5" HWDP to 370 m. Opened shear ram and monitored well on trip tank - well stabile.
02:00	Continued waiting for cement to set up.
02:30	Ran in hole and tagged top of cement at 530 m with 10 T.
03:30	Pumped slug and pulled out of hole with 8 1/2" bit on 5" HWDP and 5" drill pipe.
04:00	Changed to 3 1/2" handling equipment. Made up divertor tool and ran in hole on 3 1/2" drill pipe to 90 m.
04:30	Changed to 5" handling equipment and ran in hole on 5" drill pipe from 90 m to 528 m.
05:00	Broke circulation in steps to 2500 lpm. Pressure tested surface lines to 100 bar for 5 minutes and pumped 10 m3 seawater with rig pumps.
06:00	Sat a ballanced cement plug from 528 m to 430 m.
06:30	Pulled out of cement plug to 415 m.
07:30	Circulated bottoms up from 415 m with 3500 lpm (37 bar). Dropped drill pipe wiper and circulated down.
08:30	Pulled out of hole with cement stinger.
17:00	Waited on cement to set up.
18:00	Ran in hole with 8 1/2" bit and tagged top of cement at 436 m with 10 tons.
18:30	Broke circulation in steps and displaced kill and choke lines to seawater. Emptied trip tank.
19:30	Displaced well to seawater with 3000 lpm (55 bar).
20:00	Pulled out of hole and laid down bit.
23:59	Made up and ran in hole with wash tool and brushes. Washed and brushed riser. Washed BOP and circulated two times bottom up from above BOP.

Daily report no : 50 **Date:** 2003-07-19

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.16 sg

Stop time	Description
00:30	Pulled out of hole and laid down wash tool and brush.
03:30	Rigged up for pulling BOP and marine riser.
04:30	Pulled divertor and laid down. Picked up handling joint.
05:00	Collapsed slip joint and pulled BOP clear off guide posts.
07:30	Disconnected guide wires and removed kill and choke lines. Moved rig off location.
08:00	Held pre-job meeting with new crew prior to pulling BOP and riser.

Well: 35/8-5 S **PO:** 1

Daily report no : 50 **Date:** 2003-07-19

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.16 sg

Stop time	Description
08:30	Inspected and laid down slip joint.
14:30	Pulled BOP and marine riser. Landed BOP on fork.
15:30	Secured BOP on fork and removed guide wires from BOP.
16:00	Skidded BOP to parking position and laid out two remaining riser joints.
18:30	Rigged down BOP equipment.
20:00	Made up 20" x 30" casing cutting and retrieving assembly and installed guide rope.
21:00	Ran in sea with assembly and landed of catcher in wellhead. Connected catcher to wellhead and performed 20 T overpull test.
23:59	Sat down 10 T down weight and cut 20" and 30" casing at 403 m.

Daily report no : 51 **Date:** 2003-07-20

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.16 sg

Stop time	Description
00:30	Catcher released from wellhead when motor stalled out during cutting of 20" casing. Attempted to reconnect to wellhead.
02:00	Not able to reconnect catcher to wellhead due to tool packed off with metal spoon. Pulled out of sea and cleaned tool.
04:00	Ran back in and connected catcher to wellhead. Performed 20 T overpull test.
10:00	Continued cutting 20" x 30" casing at 403 m.
10:30	Pulled PGB with 20" and 30" casing free with 20 T overpull
12:00	Pulled PGB and casing to surface and landed on skid in moonpool.
14:00	Secured PGB on skid and released casing from PGB. Then released catcher from wellhead and pulled out and laid down casing cutter assembly.
16:00	Made up 18 3/4" wellhead running tool and ran in and connected to wellhead. Pulled out with casing and laid down casing with running tool installed.
23:00	Deballasted rig/Anchor handling. Northern Challenger started on anchor no. 1 at 11:15hrs. Pennant delivered to rig at 21:00hrs Far Scout started on anchor no. 6 at 11:00 hrs. Pennant delivered to rig at 17:34 hrs. Lady Astrid started on anchor no. 7 at 11:16 hrs. Pennant delivered to rig at 02:47 hrs. Olympic Hercules started on anchor no. 12 at 11:15 hrs. Pennant delivered to rig at 18:40 hrs. Olympic Hercules started on anchor no. 11 at 19:26 hrs. Pennant delivered to rig at 06:32 hrs.
23:59	Anchor handling.

Daily report no : 52 **Date:** 2003-07-21

Midnight depth : 4000 m MD **Estimated PP:** sg **Mud weight:** 1.16 sg

Stop time	Description
12:00	Anchor handling. Lady Astrid started on anchor no. 8 at 03:54hrs. Pennant back to rig at 08:50hrs Far Scout started on anchor no. 5 at 02:58hrs. Pennant back to rig at 10:00hrs Northern Challenger started on anchor no. 2 at 05:25hrs. Pennant back to rig at 10:20hrs
23:00	Anchor handling. Far Scout started on anchor no. 4 at 10:35hrs. Anchor on deck at 18:09hrs. Prepared for tow. Northern Challenger started on anchor no. 3 at 04:35 hrs. Anchor on deck at 21:20 hrs. Prepared for tow. Olympic Hercules started on anchor no. 10 at 10:50hrs. Anchor on bolster at 22:13hrs. Lady Astrid started on anchor no. 9 at 10:13hrs. Anchor on bolster at 23:15hrs
23:59	No activity on well 35/8-5 S. Activities logged on well 30/8-A-13 H.

Norsk Hydro

2004-01-29

HOLE DEVIATION

Well: 35/8-5 S **PO:** 1 **Reference point:** RKB ; 29.0 **m** ABOVE MSL
Waterdepth: 369.0 **m** **Vertical to:** 397.9 **m** **Total Depth:** 4000.0 **m MD**
Utm zone: 31 **Central Median:** 3° E **Horizontal datum:** ED50
Template Centre Coordinates, UTM: **North :** **m,** **East :** **m**
Wellhead Coordinates, UTM: **North :** 6805219.60 **m,** **East :** 534935.00 **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]
399.82	0.25	215.81	SSHO		399.82	0.00	0.00	0.00	0.00	0.00	0.00
409.01	0.06	0.00	MWD		409.01	-0.01	-0.01	0.02	0.98	-0.62	470.70
442.34	0.79	0.00	MWD		442.34	0.24	-0.01	0.24	0.66	0.66	0.00
466.54	1.49	6.60	MWD		466.53	0.72	0.02	0.72	0.88	0.87	8.18
495.96	1.81	5.32	MWD		495.94	1.56	0.11	1.56	0.33	0.33	-1.31
525.39	2.61	5.47	MWD		525.35	2.69	0.22	2.70	0.82	0.82	0.15
541.63	2.67	3.61	MWD		541.57	3.43	0.28	3.44	0.19	0.11	-3.44
573.77	2.33	0.38	MWD		573.68	4.83	0.33	4.84	0.34	-0.32	-3.01
602.42	2.25	359.70	MWD		602.31	5.98	0.33	5.99	0.09	-0.08	-0.71
632.04	2.31	358.37	MWD		631.91	7.16	0.31	7.16	0.08	0.06	-1.35
661.08	2.26	358.93	MWD		660.92	8.31	0.28	8.32	0.06	-0.05	0.58
690.26	2.16	348.57	MWD		690.08	9.43	0.16	9.43	0.42	-0.10	-10.65
718.73	2.21	344.78	MWD		718.53	10.48	-0.09	10.48	0.16	0.05	-3.99
746.53	2.11	343.83	MWD		746.31	11.49	-0.37	11.50	0.11	-0.11	-1.03
775.90	2.11	345.46	MWD		775.66	12.54	-0.66	12.55	0.06	0.00	1.66
804.57	2.23	345.79	MWD		804.31	13.59	-0.93	13.62	0.13	0.13	0.35
833.20	2.27	344.27	MWD		832.92	14.67	-1.22	14.72	0.07	0.04	-1.59
862.03	2.15	347.62	MWD		861.73	15.75	-1.49	15.82	0.18	-0.12	3.49
890.49	1.98	353.74	MWD		890.17	16.76	-1.66	16.84	0.29	-0.18	6.45
918.07	1.95	358.16	MWD		917.73	17.70	-1.72	17.79	0.17	-0.03	4.81
946.89	1.88	5.97	MWD		946.54	18.66	-1.69	18.74	0.28	-0.07	8.13
977.43	1.79	9.10	MWD		977.06	19.63	-1.56	19.69	0.13	-0.09	3.07
1006.59	1.68	12.90	MWD		1006.21	20.50	-1.39	20.55	0.16	-0.11	3.91
1035.64	1.59	13.79	MWD		1035.24	21.31	-1.20	21.34	0.10	-0.09	0.92
1064.70	1.66	16.68	MWD		1064.29	22.10	-0.99	22.12	0.11	0.07	2.98
1091.50	1.79	20.07	MWD		1091.08	22.87	-0.73	22.88	0.18	0.15	3.79
1121.35	1.86	20.93	MWD		1120.92	23.76	-0.40	23.76	0.08	0.07	0.86
1149.71	1.72	22.87	MWD		1149.26	24.58	-0.07	24.58	0.16	-0.15	2.05
1179.72	1.74	24.42	MWD		1179.26	25.41	0.29	25.41	0.05	0.02	1.55
1208.02	1.88	26.95	MWD		1207.54	26.21	0.68	26.22	0.17	0.15	2.68
1237.09	1.75	29.58	MWD		1236.60	27.02	1.12	27.05	0.16	-0.13	2.71
1265.15	1.74	25.85	MWD		1264.65	27.78	1.52	27.82	0.12	-0.01	-3.99
1294.07	1.85	27.42	MWD		1293.55	28.59	1.92	28.65	0.12	0.11	1.63
1334.49	2.37	32.99	MWD		1333.94	29.87	2.68	29.99	0.41	0.39	4.13
1350.00	2.37	32.99	MWD		1349.44	30.41	3.03	30.56	0.00	0.00	0.00
1362.91	2.39	34.34	MWD		1362.34	30.85	3.32	31.03	0.14	0.05	3.14

Norsk Hydro

2004-01-29

HOLE DEVIATION

Well: 35/8-5 S **PO:** 1 **Reference point:** RKB ; 29.0 **m** ABOVE MSL

Waterdepth: 369.0 **m** **Vertical to:** 397.9 **m** **Total Depth:** 4000.0 **m MD**

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

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

Wellhead Coordinates, UTM: **North :** 6805219.60 **m,** **East :** 534935.00 **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]
1379.71	2.39	34.34	MWD		1379.13	31.43	3.72	31.65	0.00	0.00	0.00
1391.67	2.23	30.56	MWD		1391.08	31.84	3.98	32.09	0.55	-0.40	-9.48
1408.59	2.23	30.56	MWD		1407.98	32.40	4.31	32.69	0.00	0.00	0.00
1420.26	0.32	326.14	MWD		1419.65	32.63	4.41	32.92	5.43	-4.91	-165.60
1448.85	0.24	258.31	MWD		1448.24	32.68	4.31	32.96	0.34	-0.08	-71.18
1477.77	0.13	301.98	MWD		1477.16	32.69	4.22	32.96	0.18	-0.11	45.30
1506.18	0.18	278.44	MWD		1505.57	32.71	4.15	32.97	0.08	0.05	-24.86
1534.83	0.20	266.46	MWD		1534.22	32.71	4.05	32.96	0.05	0.02	-12.54
1563.97	0.09	288.90	MWD		1563.36	32.72	3.98	32.96	0.13	-0.11	23.10
1593.01	0.12	319.60	MWD		1592.40	32.75	3.94	32.98	0.06	0.03	31.71
1621.62	0.15	27.29	MWD		1621.01	32.80	3.94	33.04	0.16	0.03	70.98
1650.76	0.15	27.87	MWD		1650.15	32.87	3.97	33.11	0.00	0.00	0.60
1680.61	0.09	24.04	MWD		1680.00	32.93	4.00	33.17	0.06	-0.06	-3.85
1709.10	0.13	319.79	MWD		1708.49	32.97	3.99	33.21	0.13	0.04	-67.66
1737.40	0.18	285.19	MWD		1736.79	33.01	3.93	33.24	0.11	0.05	-36.68
1766.30	0.24	96.09	MWD		1765.69	33.02	3.94	33.25	0.43	0.06	177.40
1794.90	0.24	353.19	MWD		1794.29	33.07	3.99	33.31	0.39	0.00	-107.94
1823.75	0.14	159.12	MWD		1823.14	33.10	4.00	33.34	0.39	-0.10	172.54
1852.48	0.24	112.78	MWD		1851.87	33.04	4.07	33.29	0.18	0.10	-48.39
1880.90	0.12	188.84	MWD		1880.29	32.99	4.12	33.24	0.25	-0.13	80.29
1906.67	0.11	297.32	MWD		1906.06	32.97	4.09	33.22	0.22	-0.01	126.29
1938.80	0.12	326.33	MWD		1938.19	33.01	4.05	33.26	0.05	0.01	27.09
1967.90	0.21	155.31	MWD		1967.29	32.99	4.05	33.24	0.34	0.09	-176.31
1996.70	0.12	214.20	MWD		1996.09	32.92	4.06	33.17	0.19	-0.09	61.34
2025.50	0.18	286.98	MWD		2024.89	32.91	4.00	33.15	0.19	0.06	75.81
2054.84	0.17	204.59	MWD		2054.23	32.88	3.93	33.11	0.24	-0.01	-84.24
2083.11	0.13	140.69	MWD		2082.50	32.82	3.94	33.05	0.17	-0.04	-67.81
2111.53	0.10	133.12	MWD		2110.92	32.77	3.98	33.02	0.03	-0.03	-7.99
2140.32	0.22	25.96	MWD		2139.71	32.81	4.02	33.05	0.28	0.13	-111.66
2169.18	0.19	242.57	MWD		2168.57	32.84	4.00	33.08	0.40	-0.03	-149.05
2198.04	0.15	214.79	MWD		2197.43	32.78	3.94	33.02	0.09	-0.04	-28.88
2227.33	0.11	100.12	MWD		2226.72	32.75	3.94	32.98	0.23	-0.04	-117.45
2255.48	0.13	323.83	MWD		2254.87	32.77	3.95	33.00	0.24	0.02	-145.25
2284.47	0.38	103.41	MWD		2283.86	32.77	4.02	33.02	0.50	0.26	144.44
2313.14	1.92	111.84	MWD		2312.52	32.57	4.56	32.89	1.62	1.61	8.82
2343.83	4.13	106.04	MWD		2343.17	32.07	6.10	32.65	2.18	2.16	-5.67

Norsk Hydro

2004-01-29

HOLE DEVIATION

Well: 35/8-5 S **PO:** 1 **Reference point:** RKB ; 29.0 **m** ABOVE MSL
Waterdepth: 369.0 **m** **Vertical to:** 397.9 **m** **Total Depth:** 4000.0 **m MD**
Utm zone: 31 **Central Median:** 3° E **Horizontal datum:** ED50
Template Centre Coordinates, UTM: **North :** **m,** **East :** **m**
Wellhead Coordinates, UTM: **North :** 6805219.60 **m,** **East :** 534935.00 **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]
2371.46	5.32	105.84	MWD		2370.70	31.45	8.29	32.52	1.29	1.29	-0.22
2400.18	7.24	105.81	MWD		2399.25	30.59	11.31	32.62	2.01	2.01	-0.03
2428.86	8.98	106.95	MWD		2427.64	29.45	15.19	33.14	1.83	1.82	1.19
2457.50	11.21	106.92	MWD		2455.83	27.99	19.99	34.39	2.34	2.34	-0.03
2486.38	13.27	110.58	MWD		2484.06	26.00	25.78	36.62	2.29	2.14	3.80
2515.26	14.52	110.63	MWD		2512.09	23.56	32.28	39.96	1.30	1.30	0.05
2542.74	16.54	109.00	MWD		2538.57	21.07	39.20	44.50	2.26	2.21	-1.78
2571.64	18.17	109.24	MWD		2566.15	18.25	47.34	50.74	1.69	1.69	0.25
2600.18	19.71	106.79	MWD		2593.14	15.39	56.15	58.22	1.82	1.62	-2.58
2630.64	21.34	104.35	MWD		2621.67	12.54	66.44	67.61	1.81	1.61	-2.40
2658.11	20.11	103.17	MWD		2647.36	10.22	75.88	76.57	1.42	-1.34	-1.29
2687.20	17.95	102.08	MWD		2674.86	8.14	85.14	85.52	2.26	-2.23	-1.12
2716.13	16.35	101.39	MWD		2702.50	6.41	93.49	93.71	1.67	-1.66	-0.72
2745.24	14.47	96.99	MWD		2730.57	5.15	101.11	101.25	2.28	-1.94	-4.53
2773.79	12.34	92.90	MWD		2758.34	4.57	107.70	107.80	2.45	-2.24	-4.30
2802.26	10.89	87.62	MWD		2786.23	4.52	113.43	113.52	1.89	-1.53	-5.56
2831.34	9.19	83.34	MWD		2814.86	4.91	118.48	118.58	1.91	-1.75	-4.42
2859.20	7.93	78.89	MWD		2842.41	5.54	122.58	122.70	1.53	-1.36	-4.79
2887.47	5.80	73.58	MWD		2870.48	6.31	125.86	126.02	2.36	-2.26	-5.63
2916.07	3.92	54.30	MWD		2898.97	7.29	128.04	128.25	2.59	-1.97	-20.22
2945.13	3.64	33.82	MWD		2927.97	8.64	129.36	129.65	1.42	-0.29	-21.14
2973.89	3.77	19.67	MWD		2956.67	10.29	130.19	130.59	0.96	0.14	-14.76
3002.95	3.60	331.95	MWD		2985.68	11.99	130.08	130.63	3.08	-0.18	-49.26
3031.84	5.02	308.06	MWD		3014.49	13.57	128.66	129.37	2.35	1.47	-24.81
3061.29	6.56	289.15	MWD		3043.79	14.92	126.05	126.93	2.48	1.57	-19.26
3088.87	9.25	282.36	MWD		3071.11	15.91	122.40	123.43	3.09	2.93	-7.39
3119.28	11.39	276.85	MWD		3101.02	16.79	117.03	118.23	2.32	2.11	-5.44
3146.83	13.97	268.97	MWD		3127.90	17.06	111.00	112.30	3.38	2.81	-8.58
3175.95	16.77	262.69	MWD		3155.98	16.46	103.32	104.62	3.35	2.88	-6.47
3205.05	21.56	263.42	MWD		3183.46	15.31	93.84	95.08	4.94	4.94	0.75
3233.61	26.63	265.01	MWD		3209.52	14.15	82.24	83.45	5.37	5.33	1.67
3250.24	29.58	265.61	MWD		3224.19	13.52	74.43	75.65	5.35	5.32	1.08
3267.35	32.97	267.44	MWD		3238.81	12.98	65.57	66.84	6.17	5.94	3.21
3296.49	35.58	268.30	MWD		3262.89	12.38	49.17	50.71	2.73	2.69	0.89
3324.70	35.57	268.29	MWD		3285.83	11.89	32.77	34.86	0.01	-0.01	-0.01
3353.92	36.33	265.55	MWD		3309.49	10.96	15.64	19.10	1.83	0.78	-2.81

Norsk Hydro

2004-01-29

HOLE DEVIATION

Well: 35/8-5 S **PO:** 1 **Reference point:** RKB ; 29.0 **m** ABOVE MSL
Waterdepth: 369.0 **m** **Vertical to:** 397.9 **m** **Total Depth:** 4000.0 **m MD**
Utm zone: 31 **Central Median:** 3° E **Horizontal datum:** ED50
Template Centre Coordinates, UTM: **North :** **m,** **East :** **m**
Wellhead Coordinates, UTM: **North :** 6805219.60 **m,** **East :** 534935.00 **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]
3382.34	36.87	263.75	MWD		3332.30	9.38	-1.23	9.46	1.27	0.57	-1.90
3410.36	37.07	264.55	MWD		3354.69	7.67	-17.99	19.56	0.56	0.21	0.86
3439.43	36.64	263.73	MWD		3377.95	5.89	-35.34	35.82	0.67	-0.44	-0.85
3468.59	36.06	264.22	MWD		3401.44	4.07	-52.52	52.68	0.67	-0.60	0.50
3498.13	33.89	265.82	MWD		3425.64	2.60	-69.39	69.44	2.39	-2.20	1.62
3526.47	36.43	267.78	MWD		3448.81	1.69	-85.68	85.70	2.94	2.69	2.07
3554.90	36.50	266.89	MWD		3471.67	0.91	-102.56	102.56	0.56	0.07	-0.94
3583.46	35.86	267.14	MWD		3494.73	0.03	-119.40	119.40	0.69	-0.67	0.26
3612.62	36.22	267.00	MWD		3518.31	-0.85	-136.53	136.53	0.38	0.37	-0.14
3641.65	36.27	266.38	MWD		3541.72	-1.84	-153.67	153.68	0.38	0.05	-0.64
3670.76	36.12	264.64	MWD		3565.21	-3.18	-170.80	170.83	1.07	-0.15	-1.79
3702.17	36.16	265.07	MWD		3590.58	-4.84	-189.25	189.31	0.25	0.04	0.41
3727.00	36.56	265.61	MWD		3610.57	-6.04	-203.92	204.01	0.62	0.48	0.65
3756.72	36.49	266.67	MWD		3634.46	-7.23	-221.57	221.69	0.64	-0.07	1.07
3785.85	36.41	267.09	MWD		3657.89	-8.17	-238.85	238.99	0.27	-0.08	0.43
3813.40	36.47	266.44	MWD		3680.05	-9.10	-255.19	255.35	0.43	0.07	-0.71
3842.07	35.48	264.58	MWD		3703.25	-10.41	-271.98	272.18	1.54	-1.04	-1.95
3869.34	35.14	264.50	MWD		3725.51	-11.91	-287.67	287.91	0.38	-0.37	-0.09
3898.85	34.63	265.00	MWD		3749.71	-13.46	-304.47	304.77	0.59	-0.52	0.51
3929.19	35.71	266.79	MWD		3774.52	-14.70	-321.90	322.24	1.48	1.07	1.77
3959.03	35.96	265.18	MWD		3798.71	-15.93	-339.33	339.70	0.98	0.25	-1.62
3981.18	35.99	264.33	MWD		3816.63	-17.12	-352.29	352.70	0.68	0.04	-1.15

Norsk Hydro

2004-01-29

MAIN CONSUMPTION OF CASING/TUBING

Well: 35/8-5 S **PO:** 1

Size	Casing string	Grade	Weight [kg/m]	Weight [lb/ft]	Threads type	Length [m]	No. of joints
30"	CONDUCTOR	X-52	460.86	309.70	SL-60	62.2	5
20"	SURFACE	X-56	197.92	133.00	E60MT	155.8	12
13 3/8"	INTERMEDIATE	L-80	107.14	72.00	NS-CC	925.4	77
9 5/8"	INTERMEDIATE	P-110	79.61	53.50	NS-CC	2862.9	238

Norsk Hydro

2004-01-29

B I T R E C O R D

Well: 35/8-5 S **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		MITO	17.50	SMIT	MGSSH+2	LW9922	115	15,18,18,18	0.918	1	458	59	17.89	3.3	21/77	57632	0/59	470/4549	5.6/141.5	1 - 1 - WT - A - 0	I	NO	TD
		HO	36.00					12,12,12,12,12,1	1.325	1	458	59		0.0	21/77		0/59	470/4549	5.6/141.5				
2		MITO	26.00	SMIT	MSDSSHC	LW6136	115		0.000	2	461	3		0.0									TD
3		MITO	12.25	SMIT	FGXI	MM3702	117	16,18,20,20	1.058	3	683	222	5.30	41.9	72/234	63654	10/88	3148/4538	109/172.1	1 - 1 - NO - A - E	I	NO	TD
4		MITO	17.00	SMIT	MSDGHC	MJ6670	135S	16,22,24,24	1.451	4	1326	771	31.47	24.5	174/220	393510	0/137	2258/4253	49.5/138	2 - 2 - WT - A - E	I	NO	TD
5		PDC	12.25	SMIT	MRS74PX	JS9847	M223	13,13,13,14,14,1	0.840	5	2918	1592	57.25	27.8	85/149	456396	10/216	1615/3205	119/235.2				SIH
6		BIT	12.25	SMIT	MRS74SPX	JS9846A		13,13,13,14,14,1	0.840	6	3265	303	14.69	20.6	70/182	146759	0/167	520/3228	39.1/308.8	1 - 1 - WT - A -	I	NO	TD
7		PDC	8.50	SMIT	MRS68EPX	JS7054	M423	11,11,11,11,11,1	0.557	12	3381	116	9.99	11.6	130/146	96405	10/98	1430/1996	1.4/235.2	1 - 1 - NO - A -	I	NO	CP
8		CORE	8.50	SDBS	FC284LI	7020365	M433		0.000	13	3384	3	1.10	2.3	97/97	4607	78/78	964/964	87.5/87.5				
8		CORE	8.50	SDBS	FC284LI	7020365	M433		0.000	14	3402	18	2.00	9.0	38/84	9483	10/69	514/1022	46.9/83.8				
8		CORE	8.50	SDBS	FC284LI	7020365	M433		0.000	15	3416	14	1.70	8.2	71/95	8415	20/98	981/1295	90.8/109.3				
9		CORE	8.50	SDBS	FC284LI	7020365	M433		0.000	16	3443	28	1.70	16.2	95/95	8415	49/49	987/987	91.3/91.3	1 - 1 - NO - A - X	I	NO	NC
7		PDC	8.50	SMIT	MRS68EPX	JS7054	M423	11,11,11,11,11,1	0.557	17	3845	402	25.08	16.0	63/185	172738	59/157	1823/1908	276.6/297.8	1 - 1 - NO - A - X	1	NO	CP
8	4	CORE	8.50	SDBS	FC284LI	7020365	M433		0.000	18	3856	11	6.49	1.7	76/85	33479	39/108	979/988	107/108.8				
9		CORE	8.50	SDBS	FC274LI	7020363	M432		0.000	19	3883	27	4.40	6.1	73/94	19877	29/88	980/992	111.2/114.2				
10		PDC	8.50	SMIT	MRS68EPX	JS5576A	M423	11,11,11,11,11,1	0.557	20	4000	117	9.19	12.7	62/140	61398	29/147	1259/1894	186.9/307.2	1 - 2 - WT - I - X	I	NO	TD

BOTTOM HOLE ASSEMBLIES

Well: 35/8-5 S **PO: 1**

BHA no. 1: No. / Element / OD(in) / Length(m) Depth In: 399 m MD Out: 458 m MD

1	MGSSH+2	17.5	0.45	7	DRILL COLLAR STEEL	8.0	35.79
2	HOLE OPENER	36.0	4.32	8	JAR	8.25	9.65
3	NON MAG. COLLAR	9.5	4.30	9	DRILL COLLAR STEEL	8.0	18.07
4	MEASUREMENT WHILE DRILLING	8.25	8.90	10	X-OVER	8.0	1.06
5	DRILL COLLAR STEEL	9.5	27.78	11	HWDP	5.5	131.01
6	X-OVER	9.5	1.09				

Reason pulled: TOTAL DEPTH/CASING DEPTH Total Length: 242.42 m

BHA no. 2: No. / Element / OD(in) / Length(m) Depth In: 458 m MD Out: 461 m MD

1	MSDSSHC	26.0	0.65	6	DRILL COLLAR STEEL	8.0	35.79
2	BIT SUB	9.44	0.96	7	JAR	7.625	9.65
3	DRILL COLLAR STEEL	9.5	9.12	8	DRILL COLLAR STEEL	8.0	18.07
4	DRILL COLLAR STEEL	9.5	9.33	9	X-OVER	7.625	1.06
5	X-OVER	9.25	1.09				

Reason pulled: TOTAL DEPTH/CASING DEPTH Total Length: 85.72 m

BHA no. 3: No. / Element / OD(in) / Length(m) Depth In: 461 m MD Out: 683 m MD

1	FGXI	12.25	0.33	8	DRILL COLLAR STEEL	8.12	18.81
2	DOWNHOLE MOTOR	10.8	8.30	9	DRILL COLLAR STEEL	8.0	35.70
3	FLOAT SUB	8.0	0.92	10	JAR	8.25	9.65
4	STEEL STAB	12.12	2.56	11	DRILL COLLAR STEEL	8.0	18.07
5	LOGGING WHILE DRILLING TOOL	8.12	6.59	12	X-OVER	8.0	1.06
6	MEASUREMENT WHILE DRILLING	8.12	8.90	13	HWDP	5.0	139.62
7	STEEL STAB	12.0	2.45				

Reason pulled: TOTAL DEPTH/CASING DEPTH Total Length: 252.96 m

BHA no. 4: No. / Element / OD(in) / Length(m) Depth In: 555 m MD Out: 1326 m MD

1	MSDGHC	17.0	0.42	8	X-OVER	9.0	0.87
2	DOWNHOLE MOTOR	11.25	8.43	9	NON MAG. COLLAR	8.12	18.81
3	FLOAT SUB	9.0	1.53	10	DRILL COLLAR STEEL	8.0	35.70
4	STEEL STAB	16.75	2.24	11	JAR	7.62	9.65
5	COMPENSATED DUAL RESISTIVITY	9.62	7.07	12	DRILL COLLAR STEEL	8.0	18.07
6	MEASUREMENT WHILE DRILLING	8.12	8.41	13	X-OVER	7.87	1.06
7	STEEL STAB	16.75	1.95	14	HWDP	5.0	139.62

Reason pulled: TOTAL DEPTH/CASING DEPTH Total Length: 253.83 m

BHA no. 5: No. / Element / OD(in) / Length(m) Depth In: 1326 m MD Out: 2918 m MD

1	MRS74PX	12.25	0.24	8	NON MAG. STAB	12.0	2.08
2	POWER DRIVE	12.25	4.46	9	DRILL COLLAR STEEL	8.0	27.04
3	NON MAG. STAB	12.12	1.78	10	JAR	7.62	9.65
4	FLEX SUB	6.37	2.89	11	DRILL COLLAR STEEL	8.0	18.07
5	MEASUREMENT WHILE DRILLING	8.37	8.42	12	X-OVER	7.87	1.06
6	COMPENSATED DUAL RESISTIVITY	8.37	6.26	13	HWDP	5.0	139.62
7	LOGGING WHILE DRILLING TOOL	8.25	7.49				

Total Length: 229.06 m

BOTTOM HOLE ASSEMBLIES

Well: 35/8-5 S **PO: 1**

BHA no. 6: No. / Element / OD(in) / Length(m) Depth In: 2962 m MD Out: 3265 m MD

1	MRS74SPX	12.25	0.23	8	LOGGING WHILE DRILLING TOOL	12.0	2.08
2	POWER DRIVE	12.25	4.46	9	DRILL COLLAR STEEL	8.0	27.04
3	NON MAG. STAB	12.12	1.71	10	JAR	7.62	9.66
4	FLEX SUB	8.25	2.92	11	DRILL COLLAR STEEL	8.0	18.07
5	MEASUREMENT WHILE DRILLING	8.37	8.42	12	X-OVER	7.87	1.06
6	COMPENSATED DUAL RESISTIVITY	9.0	6.27	13	HWDP	5.0	139.62
7	LOGGING WHILE DRILLING TOOL	9.0	7.41				

Reason pulled: TOTAL DEPTH/CASING DEPTH Total Length: 228.95 m

BHA no. 12: No. / Element / OD(in) / Length(m) Depth In: 3265 m MD Out: 3381 m MD

1	MRS68EPX	8.5	0.33	7	LOGGING WHILE DRILLING TOOL	6.87	6.21
2	POWER DRIVE	6.75	7.62	8	NON MAG. COLLAR	6.81	5.01
3	LOGGING WHILE DRILLING TOOL	6.75	5.72	9	DRILL COLLAR STEEL	6.5	46.45
4	MEASUREMENT WHILE DRILLING	6.75	8.36	10	JAR	6.75	9.65
5	STEEL STAB	6.75	0.94	11	HWDP	5.0	139.62
6	LOGGING WHILE DRILLING TOOL	6.87	8.26				

Reason pulled: CORE POINT Total Length: 238.17 m

BHA no. 13: No. / Element / OD(in) / Length(m) Depth In: 3381 m MD Out: 3384 m MD

1	FC284LI	8.5	0.36	5	STEEL STAB	8.25	1.93
2	CORE BARREL	6.75	57.47	6	DRILL COLLAR STEEL	6.5	37.07
3	FLOAT SUB	6.5	0.47	7	JAR	6.75	9.65
4	DRILL COLLAR STEEL	6.5	9.38	8	HWDP	5.0	139.62

Total Length: 255.95 m

BHA no. 14: No. / Element / OD(in) / Length(m) Depth In: 3384 m MD Out: 3402 m MD

1	FC284LI	8.5	0.36	4	DRILL COLLAR STEEL	6.5	46.45
2	CORE BARREL	6.75	20.97	5	JAR	6.75	9.65
3	FLOAT SUB	6.5	0.47	6	HWDP	5.0	139.62

Total Length: 217.52 m

BHA no. 15: No. / Element / OD(in) / Length(m) Depth In: 3402 m MD Out: 3416 m MD

1	FC284LI	8.5	0.36	4	DRILL COLLAR STEEL	6.5	46.45
2	CORE BARREL	6.75	30.05	5	JAR	6.75	9.65
3	FLOAT SUB	6.5	0.47	6	HWDP	5.0	139.62

Total Length: 226.60 m

BHA no. 16: No. / Element / OD(in) / Length(m) Depth In: 3416 m MD Out: 3443 m MD

1	FC284LI	8.5	0.36	5	JAR	6.75	9.65
2	CORE BARREL	6.75	30.05	6	HWDP	5.0	139.62
3	FLOAT SUB	6.5	0.47	7	DRILL PIPE	5.0	28.77
4	DRILL COLLAR STEEL	6.5	46.45				

Reason pulled: NEW CORE/FULL BARREL Total Length: 255.37 m

BHA no. 17: No. / Element / OD(in) / Length(m) Depth In: 3443 m MD Out: 3845 m MD

1	MRS68EPX	8.5	0.33	7	LOGGING WHILE DRILLING TOOL	6.87	6.21
2	MEASUREMENT WHILE DRILLING	6.75	7.62	8	NON MAG. COLLAR	6.81	5.01
3	LOGGING WHILE DRILLING TOOL	6.75	5.72	9	DRILL COLLAR STEEL	6.5	46.45
4	MEASUREMENT WHILE DRILLING	6.75	8.36	10	JAR	6.75	9.65
5	STEEL STAB	6.75	0.94	11	HWDP	5.0	139.62
6	LOGGING WHILE DRILLING TOOL	6.87	8.26				

Reason pulled: CORE POINT Total Length: 238.17 m

Norsk Hydro 2004-01-29

BOTTOM HOLE ASSEMBLIES

Well: 35/8-5 S **PO: 1**

BHA no. 18: No. / Element / OD(in) / Length(m) Depth In: 3845 m MD Out: 3856 m MD

1	FC284LI	8.5	0.36	4	DRILL COLLAR STEEL	6.5	46.45
2	CORE BARREL	6.75	30.05	5	JAR	6.75	9.65
3	FLOAT SUB	6.5	0.47	6	HWDP	5.0	139.62

Total Length: 226.60 m

BHA no. 19: No. / Element / OD(in) / Length(m) Depth In: 3856 m MD Out: 3883 m MD

1	FC274LI	8.5	0.36	4	DRILL COLLAR STEEL	6.5	46.45
2	CORE BARREL	6.75	30.05	5	JAR	6.75	9.65
3	FLOAT SUB	6.5	0.47	6	HWDP	5.0	139.62

Total Length: 226.60 m

BHA no. 20: No. / Element / OD(in) / Length(m) Depth In: 3883 m MD Out: 4000 m MD

1	MRS68EPX	8.5	0.33	7	LOGGING WHILE DRILLING TOOL	6.87	6.21
2	MEASUREMENT WHILE DRILLING	6.75	7.62	8	NON MAG. COLLAR	6.81	5.01
3	LOGGING WHILE DRILLING TOOL	6.75	5.72	9	DRILL COLLAR STEEL	6.5	46.45
4	MEASUREMENT WHILE DRILLING	6.75	8.36	10	JAR	6.75	9.65
5	STEEL STAB	6.75	0.94	11	HWDP	5.0	139.62
6	LOGGING WHILE DRILLING TOOL	6.87	8.26	12	DRILL PIPE	5.0	28.77

Reason pulled: TOTAL DEPTH/CASING DEPTH Total Length: 266.94 m

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS

Well: 35/8-5 S **PO:** 1

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2003-06-01	412	412	SPUD MUD	0.0	1.25		0	0	0	0	0	0	0	0					

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2003-06-04	412	412	SPUD MUD	0.0	1.25		0	0	0	0	0	0	0	0					
2003-06-05	458	458	NACL/POLYMER MU	0.0	1.25		0	0	0	0	0	0	0	0					
2003-06-06	682	682	NACL/POLYMER MU	0.0	1.25		0	0	0	0	0	0	0	0					
2003-06-07	682	682	NACL/POLYMER MU	0.0	1.30		0	0	0	0	0	0	0	0					
2003-06-08	682	682	NACL/POLYMER MU	0.0	1.30		0	0	0	0	0	0	0	0					
2003-06-09	682	682	NACL/POLYMER MU	0.0	1.30		0	0	0	0	0	0	0	0					
2003-06-10	682	682	NACL/POLYMER MU	0.0	1.30		0	0	0	0	0	0	0	0					
2003-06-11	682	682	NACL/POLYMER MU	0.0	1.30		0	0	0	0	0	0	0	0					
2003-06-12	537	537	SPUD MUD	0.0	1.30		0	0	0	0	0	0	0	0					
2003-06-13	629	629	KCL/POLYMER	80.0	1.10	18.0	44	33	28	21	0	0	8	7	50.0	11.0	11.0	8.0	10.0

Hole section : 17" **WATER BASED SYSTEM**

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2003-06-14	946	946	KCL/POLYMER	106.0	1.11	15.0	57	43	35	26	0	0	10	8	50.0	14.0	14.5	8.0	10.0
2003-06-15	1285	1284	KCL/POLYMER	104.0	1.11	18.0	66	49	41	31	0	0	11	9	50.0	17.0	16.0	11.0	12.0
2003-06-16	1326	1325	KCL/POLYMER	0.0	1.13	16.5	59	42	36	26	0	0	10	8	50.0	17.0	12.5	5.0	7.0
2003-06-17	1326	1325	KCL/POLYMER	105.0	1.13	17.0	61	45	37	28	0	0	10	9	50.0	16.0	14.5	5.0	8.0
2003-06-18	1329	1328	KCL/POLYMER	104.0	1.13	18.0	61	46	37	29	0	0	10	9	50.0	15.0	15.5	5.0	9.0

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2003-06-19	1331	1330			1.25	23.0	72	46	35	25	0	0	12	11	50.0	26.0	10.0	8.0	10.0

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS

Well: 35/8-5 S **PO:** 1

Hole section : 12 1/4" **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]
2003-06-20	2014	2013	VERSAVERT	81.0	1.20	31.0	68	45	36	27	0	0	14	13	50.0	23.0	11.0	8.0	10.0
2003-06-21	2773	2758	VERSAVERT	69.0	1.20	35.0	70	47	39	29	0	0	14	13	50.0	23.0	12.0	8.0	10.0
2003-06-22	2903	2886	VERSAVERT	65.0	1.20	47.0	75	51	42	32	0	0	15	13	50.0	24.0	13.5	8.5	10.5
2003-06-23	2962	2945	VERSAVERT	64.0	1.25	53.0	75	51	42	31	0	0	15	14	50.0	24.0	13.5	9.0	10.5
2003-06-24	3154	3135	VERSAVERT	63.0	1.25	46.0	78	52	42	31	0	0	15	13	50.0	26.0	13.0	9.0	10.5
2003-06-25	3265	3237	VERSAVERT	61.0	1.27	50.0	80	54	44	33	0	0	15	14	50.0	26.0	14.0	9.0	11.0
2003-06-26	3265	3237	VERSAVERT	61.0	1.27		80	54	44	33	0	0	15	14	50.0	26.0	14.0	9.0	11.0
2003-06-27	3265	3237	VERSAVERT		1.35		82	55	44	32	0	0	14	13	50.0	27.0	14.0	8.0	10.0
2003-06-28	3315	3278	VERSAVERT	73.0	1.35		85	56	45	33	0	0	15	14	50.0	29.0	13.5	8.0	10.0

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]
2003-06-29	3381	3331	VERSAVERT		1.35		86	58	46	34	0	0	15	14	50.0	28.0	15.0	8.5	10.0
2003-06-30	3382	3332	VERSAVERT	86.0	1.35		86	57	45	33	0	0	15	13	50.0	29.0	14.0	8.0	10.0
2003-07-01	3402	3348	VERSAVERT	81.0	1.50	40.0	104	68	54	39	0	0	17	16	50.0	36.0	16.0	9.5	11.0
2003-07-02	3402	3348	VERSAVERT	90.0	1.50	33.0	103	67	54	39	0	0	17	16	50.0	36.0	15.5	9.0	11.0
2003-07-03	3443	3381	VERSAVERT	89.0	1.50		107	69	56	41	0	0	19	16	50.0	38.0	15.5	10.0	11.0
2003-07-04	3684	3576	VERSAVERT	82.0	1.62	42.0	123	79	63	45	0	0	20	18	50.0	44.0	17.5	9.0	12.0
2003-07-05	3845	3706	VERSAVERT	82.0	1.65		131	83	67	47	0	0	20	18	50.0	48.0	17.5	10.0	13.0
2003-07-06	3856	3715	VERSAVERT	82.0	1.65	35.0	133	84	66	46	0	0	19	17	50.0	49.0	17.5	9.0	13.0
2003-07-07	3883	3737	VERSAVERT	94.0	1.66	30.0	133	82	65	44	0	0	18	16	50.0	51.0	15.5	10.0	12.0
2003-07-08	3939	3782	VERSAVERT	87.0	1.65	44.0	123	77	60	42	0	0	17	15	50.0	46.0	15.5	8.5	10.0
2003-07-09	4000	3832	VERSAVERT		1.65	32.0	125	78	62	43	0	0	18	16	50.0	47.0	15.5	8.5	10.0
2003-07-10	4000	3832	VERSAVERT	78.0	1.65	30.0	126	79	62	43	0	0	18	16	50.0	47.0	16.0	8.5	10.0
2003-07-11	4000	3832	VERSAVERT	76.0	1.65	30.0	126	79	62	43	0	0	18	16	50.0	47.0	16.0	8.5	10.0
2003-07-12	4000	3832	VERSAVERT	76.0	1.65	30.0	126	79	62	43	0	0	18	16	50.0	47.0	16.0	8.5	10.0

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]
2003-07-13	4000	3832	VERSAVERT	76.0	1.65	30.0	126	79	62	43	0	0	18	16	50.0	47.0	16.0	8.5	10.0
2003-07-14	4000	3832	VERSAVERT	76.0	1.65	30.0	126	79	62	43	0	0	18	16	50.0	47.0	16.0	8.5	10.0
2003-07-15	4000	3832	VERSAVERT		1.27		70	43	34	24	0	0	9	8	50.0	27.0	8.0	4.5	6.5

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DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS

Well: 35/8-5 S **PO:** 1

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]
2003-07-16	4000	3832	VERSAVERT		1.27		70	43	34	24	0	0	9	8	50.0	27.0	8.0	4.5	6.5

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2003-07-17	4000	3832	SPUD MUD	80.0	1.16		0	0	0	0	0	0	0	0					
2003-07-18	4000	3832	SPUD MUD	80.0	1.16		0	0	0	0	0	0	0	0					
2003-07-19		0	SPUD MUD				0	0	0	0	0	0	0	0					

DAILY MUD PROPERTIES : OTHER PARAMETERS

Well: 35/8-5 S **PO:** 1

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2003-06-01	412	412	SPUD MUD	1.25					/																

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2003-06-04	412	412	SPUD MUD	1.25					/																
2003-06-05	458	458	NACL/POLYMER M	1.25					/																
2003-06-06	682	682	NACL/POLYMER M	1.25					/																
2003-06-07	682	682	NACL/POLYMER M	1.30					/																
2003-06-08	682	682	NACL/POLYMER M	1.30					/																
2003-06-09	682	682	NACL/POLYMER M	1.30					/																
2003-06-10	682	682	NACL/POLYMER M	1.30					/																
2003-06-11	682	682	NACL/POLYMER M	1.30					/																
2003-06-12	537	537	SPUD MUD	1.30					/																
2003-06-13	629	629	KCL/POLYMER	1.10	3.0		1		/	9.5	0.5	0.1	1.0		43000	20000	0	0	0	6.0	1.0	0.2	14	3.0	76

Hole section : 17" **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]
2003-06-14	946	946	KCL/POLYMER	1.11	4.0		1		/	8.5	0.2	0.0	0.4		21000	24000	0		0	5.0	1.0	1.0	14	3.2	56
2003-06-15	1285	1284	KCL/POLYMER	1.11	3.8		1		/	8.0	0.0	0.0	0.4		25000	32000	0		0	5.0	1.0	1.4	14	3.6	29
2003-06-16	1326	1325	KCL/POLYMER	1.13	3.2		1		/	8.0	0.0	0.0	0.4		32000	37000	0		0	6.0	1.0	1.8	14	3.6	33
2003-06-17	1326	1325	KCL/POLYMER	1.13	3.2		1		/	8.0	0.0	0.0	0.4		32000	37000	0		0	6.0	1.0	1.8	14	3.6	33
2003-06-18	1329	1328	KCL/POLYMER	1.13	3.2		1		/	9.0	0.0	0.0	0.4		32000	32000	0		0	6.0	1.0	1.5	14	3.6	36

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2003-06-19	1331	1330		1.25		4.8		1	/ 121							21000				14.0	63.0	0.2		3.6	137

DAILY MUD PROPERTIES : OTHER PARAMETERS

Well: 35/8-5 S **PO:** 1

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]
2003-06-20	2014	2013	VERSAVERT	1.20	3.2	1	/ 121	629		154	76/ 24	11.5	67.0	0.3	3.8	77
2003-06-21	2773	2758	VERSAVERT	1.20	3.8	1	/ 121	787		164	76/ 24	12.5	66.5	0.3	3.5	130
2003-06-22	2903	2886	VERSAVERT	1.20	3.6	1	/ 121	888		157	75/ 25	13.0	65.0	0.2	3.4	160
2003-06-23	2962	2945	VERSAVERT	1.25	3.6	1	/ 121	850		157	75/ 25	13.0	65.0	0.3	3.8	79
2003-06-24	3154	3135	VERSAVERT	1.25	4.0		/ 121	858		171	74/ 26	15.0	64.0	0.2	3.5	153
2003-06-25	3265	3237	VERSAVERT	1.27	4.0	1	/ 121	882		172	76/ 24	15.0	65.0	0.2	3.6	133
2003-06-26	3265	3237	VERSAVERT	1.27	4.0	1	/ 121	882		172	76/ 24	15.0	65.0	0.2	3.6	133
2003-06-27	3265	3237	VERSAVERT	1.35	3.2	1	/ 121	874		179	76/ 24	18.0	62.0	0.3	3.5	184
2003-06-28	3315	3278	VERSAVERT	1.35	3.0	1	/ 121	868		171	75/ 25	17.0	62.0	0.3	3.7	132

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]
2003-06-29	3381	3331	VERSAVERT	1.35	3.0	1	/ 121	859		171	75/ 25	17.5	61.5	0.2	3.6	160
2003-06-30	3382	3332	VERSAVERT	1.35	3.2	1	/ 121	867		171	75/ 25	17.5	61.5	0.3	3.6	160
2003-07-01	3402	3348	VERSAVERT	1.50	3.0	1	/ 121	787		172	75/ 25	21.0	59.0	0.3	3.9	105
2003-07-02	3402	3348	VERSAVERT	1.50	3.8	1	35 / 121	840		157	73/ 27	21.0	58.0	0.3	3.9	108
2003-07-03	3443	3381	VERSAVERT	1.50	4.0	1	35 / 121	830		164	74/ 26	20.0	59.0	0.3	4.0	53
2003-07-04	3684	3576	VERSAVERT	1.62	4.0	1	35 / 121	930		173	75/ 25	24.0	57.0	0.4	3.5	266
2003-07-05	3845	3706	VERSAVERT	1.65	3.7	1	/ 121	1010		172	73/ 27	25.0	55.0	0.3	4.0	80
2003-07-06	3856	3715	VERSAVERT	1.65	3.8	1	35 / 121	920		181	75/ 25	25.0	56.0	0.5	4.0	77
2003-07-07	3883	3737	VERSAVERT	1.66	3.8	1	35 / 121	870		178	75/ 25	25.5	56.0	0.3	4.0	87
2003-07-08	3939	3782	VERSAVERT	1.65	4.0	1	35 / 121	908		181	75/ 25	25.0	56.0	0.3	4.0	77
2003-07-09	4000	3832	VERSAVERT	1.65	4.0	1	35 / 121	910		178	76/ 25	25.5	56.0	0.4	3.9	103
2003-07-10	4000	3832	VERSAVERT	1.65	4.0	1	35 / 121	923		190	76/ 24	26.0	56.0	0.4	3.9	128
2003-07-11	4000	3832	VERSAVERT	1.65	4.0	1	35 / 121	923		190	76/ 24	26.0	56.0	0.3	3.9	128
2003-07-12	4000	3832	VERSAVERT	1.65	4.0	1	/ 121	923		190	75/ 25	26.0	56.0	0.3	3.9	128

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]
2003-07-13	4000	3832	VERSAVERT	1.65	4.0	1	35 / 121	923		190	76/ 24	26.0	56.0	0.3	3.9	128
2003-07-14	4000	3832	VERSAVERT	1.65	4.0	1	35 / 121	923		190	76/ 24	26.0	56.0	0.3	3.9	128

DAILY MUD PROPERTIES : OTHER PARAMETERS

Well: 35/8-5 S **PO:** 1

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]
2003-07-15	4000	3832	VERSAVERT	1.27			/				/					
2003-07-16	4000	3832	VERSAVERT	1.27			/			2	/				1.3	4749

Hole section : P&A **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]
2003-07-17	4000	3832	SPUD MUD	1.16					/											4.0	4.0				
2003-07-18	4000	3832	SPUD MUD	1.16					/											4.0	4.0				
2003-07-19		0	SPUD MUD						/																

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TOTAL CONSUMPTION OF MUD ADDITIVES

Well: 35/8-5 S **PO:** 1

Section	Product/ Additive	Unit	Total Amount Used
36"	BARITE	kg	30000.00
	CMC EHV	kg	900.00

Section	Product/ Additive	Unit	Total Amount Used
26"	BARITE	kg	182000.00
	CELPOL ESL	kg	2250.00
	CMC EHV	kg	3625.00
	DUOTEC NS	kg	750.00
	MICA COARSE	kg	325.00
	MICA FINE	kg	775.00
	MICA MEDIUM	kg	775.00
	NUTPLUG F	kg	100.00
	NUTPLUG M	kg	775.00
	POTASSIUM CARBONATE	kg	25.00
	SODA ASH	kg	100.00

Section	Product/ Additive	Unit	Total Amount Used
17"	BARITE	kg	30000.00
	CELPOL ESL	kg	11150.00
	CMC EHV	kg	650.00
	DUOTEC NS	kg	4500.00
	GLYDRIL MC	l	6900.00
	KCL BRINE	l	179000.00
	MICA FINE	kg	625.00
	MICA MEDIUM	kg	700.00
	NUTPLUG F	kg	875.00
	NUTPLUG M	kg	575.00
	SODA ASH	kg	75.00

Section	Product/ Additive	Unit	Total Amount Used
12 1/4"	BARITE	kg	116000.00
	BENTONE 128	kg	4825.00
	CALCIUM CHLORIDE	kg	12000.00
	EDC 95/11	l	170000.00
	LIME	kg	5600.00
	VERSAVERT F	l	1000.00
	VERSAVERT PE	l	5000.00
	VERSAVERT SE	l	2500.00

Section	Product/ Additive	Unit	Total Amount Used
8 1/2"	BARITE	kg	281000.00
	EDC 95/11	l	17000.00
	KCL BRINE	l	11000.00
	LIME	kg	4800.00
	VERSAVERT F	l	1000.00
	VERSAVERT PE	l	4000.00
	VERSAVERT SE	l	2500.00

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TOTAL CONSUMPTION OF MUD ADDITIVES

Well: 35/8-5 S **PO:** 1

Section	Product/ Additive	Unit	Total Amount Used
P&A	BARITE	kg	77000.00
	BENTONE 128	kg	100.00
	CMC EHV	kg	1475.00
	DUOTEC NS	kg	125.00
	EDC 95/11	l	13000.00
	SAFE SURF E	l	800.00

Norsk Hydro

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CEMENT SLURRY REPORT

Well: 35/8-5 S **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]
2003-06-03	30"	CASING CEMENTING	LEAD	17.00	1.56	8.00	129.56	A-3L	l	3.50	
								FP16LG	l	0.10	
			SALTWATER	6.50	1.03	8.00					
			TAIL SLURRY	21.00	1.95	8.00	74.71	A-7L	l	3.50	
								FP16LG	l	0.10	
			DISPLACEMENT			8.00					
2003-06-05	30"	PLUG IN OPEN HOLE	SPACER	15.00	1.30	15.00		GW-22	kg		75.00
			SPACER	1.30	1.30	15.00					
			SALTWATER	3.00	1.03	15.00					
			TAIL SLURRY	6.70	1.90	15.00	82.36	BA-58L	l	1000.00	
								CD-31L	l	390.00	
								FL45LN	l	870.00	
								FP16LG	l	150.00	
			DISPLACEMENT			15.00					
2003-06-06	30"	PLUG IN OPEN HOLE	SPACER	15.00	1.30	15.00		GW-22	kg		50.00
								SODAA	kg		25.00
			TAIL SLURRY	12.00	1.90	15.00	82.36	BA-58L	l	1700.00	
								CD-31L	l	175.00	
								FL45LN	l	1080.00	
								FP16LG	l	60.00	
			DISPLACEMENT			15.00					
2003-06-07	30"	PLUG IN OPEN HOLE	TAIL SLURRY	15.20	1.50	15.00	174.65	A-3L	l	175.00	
								BA-58L	l	3550.00	
								CD-31L	l	120.00	
								FL45LN	l	880.00	
								FP16LG	l	150.00	
			DISPLACEMENT			15.00					
2003-06-09	30"	PLUG IN OPEN HOLE	TAIL SLURRY	11.40	1.95	15.00	76.91	BA-58L	l	1250.00	
								CD-31L	l	250.00	
								FL45LN	l	820.00	
								FP16LG	l	40.00	
			DISPLACEMENT			15.00					
2003-06-10	30"	PLUG IN OPEN HOLE	TAIL SLURRY	7.60	1.95	15.00	76.91	BA-58L	l	900.00	

Norsk Hydro

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CEMENT SLURRY REPORT

Well: 35/8-5 S **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]
2003-06-10	30"	PLUG IN OPEN HOLE	TAIL SLURRY	7.60	1.95	15.00	76.91	CD-31L	l	130.00	
								FL45LN	l	650.00	
								FP16LG	l	20.00	
			DISPLACEMENT			15.00					
2003-06-11	20"	CASING CEMENTING	LEAD	20.00	1.56	15.00	152.25	A-7L	l	290.00	
								BA-58L	l	6900.00	
								CD-31L	l	200.00	
								D-19LG	l	2500.00	
								FP16LG	l	160.00	
			SALTWATER	3.00	1.03	15.00					
			SALTWATER	3.00	1.03	15.00					
			TAIL SLURRY	20.00	1.95	15.00	76.91	BA-58L	l	2300.00	
								CD31LN	l	300.00	
								D-19LG	l	1500.00	
								FP16LG	l	140.00	
			DISPLACEMENT			15.00					
2003-06-17	13 3/8"	CASING CEMENTING	SPACER	10.00	1.15	36.00		FP16LG	l		10.00
								GW-22	kg		3.00
								MCS-J	l		52.00
								SODAA	kg		8.00
			TAIL SLURRY	26.50	1.90	36.00	76.68	FP16LG	l	0.10	
								R-12L	l	0.50	
			DISPLACEMENT	3.00	1.00	36.00					
			DISPLACEMENT			36.00					
			DISPLACEMENT	68.50	1.13	36.00					
2003-06-27	9 5/8"	CASING CEMENTING	BASEOIL	3.00	0.82	95.00					
			LEAD	22.00	1.56	95.00	126.91	FP16LG	l	0.20	
								R-12L	l	1.70	
			SPACER	10.00	1.45	95.00		FP16LG	l		10.00
								GW-22	kg		1.80
								MCS-J	l		104.00
								SODAA	kg		8.00
			TAIL SLURRY	8.00	1.90	95.00	81.83	BA-58L	l	11.00	

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CEMENT SLURRY REPORT

Well: 35/8-5 S **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]
2003-06-27	9 5/8"	CASING CEMENTING	TAIL SLURRY	8.00	1.90	95.00	81.83	CD31LN	l	0.80	
								FL45LN	l	6.75	
								FP16LG	l	0.20	
								R-12L	l	1.25	
			DISPLACEMENT	3.00	1.00	95.00					
			DISPLACEMENT	105.00	1.27	95.00					
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	SPACER	9.00	1.70	120.00		FP16LG	l		107.00
								GW-22	kg		19.00
								MCS-J	l		1109.00
								SODAA	kg		30.00
			SPACER	1.10	1.70	120.00					
			TAIL SLURRY	12.30	1.90	120.00	108.19	BA-58L	l	1800.00	
								CD31LN	l	215.00	
								D-8	kg	1600.00	
								FL-63L	l	315.00	
								FP16LG	l	60.00	
								R-15L	l	160.00	
			DISPLACEMENT	30.60	1.65	120.00					
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	SPACER	9.00	1.70	120.00		FP16LG	l		107.00
								GW-22	kg		19.00
								MCS-J	l		1109.00
								SODAA	kg		30.00
			SPACER	1.10	1.70	120.00					
			TAIL SLURRY	12.30	1.90	120.00	108.19	BA-58L	l	1800.00	
								CD31LN	l	200.00	
								D-8	kg	1600.00	
								FL-63L	l	320.00	
								FP16LG	l	65.00	
								R-15L	l	160.00	
			DISPLACEMENT	28.00	1.65	120.00					
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	SPACER	9.00	1.70	110.00		FP16LG	l		106.00
								GW-22	kg		20.00
								MCS-J	l		1110.00

Norsk Hydro

2004-01-29

CEMENT SLURRY REPORT

Well: 35/8-5 S **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]
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	SPACER	9.00	1.70	110.00		SODAA	kg		30.00
			SPACER	1.10	1.70	110.00					
			TAIL SLURRY	12.30	1.90	110.00	108.02	BA-58L	l	1720.00	
								CD31LN	l	200.00	
								D-8	kg	15000.00	
								FL-63L	l	305.00	
								FP16LG	l	25.00	
								R-15L	l	100.00	
			DISPLACEMENT	25.40	1.65	110.00					
2003-07-14	9 5/8"	PLUG IN CASED HOLE	SPACER	10.00	1.70	88.00		FP16LG	l		140.00
								GW-22	kg		37.00
								MCS-J	l		1456.00
								SODAA	kg		135.00
			SPACER	1.40	1.70	88.00					
			TAIL SLURRY	7.40	1.90	88.00	78.16	BA-58L	l	570.00	
								CD31LN	l	28.00	
								FP16LG	l	35.00	
								R-12L	l	153.00	
			DISPLACEMENT	22.40	1.65	88.00					
2003-07-18	20"	PLUG IN CASED HOLE	SPACER	0.50	1.03	12.00					
			SPACER	10.00	1.03	12.00					
			TAIL SLURRY	17.50	1.92	12.00	76.87	A-7L	l	700.00	
								FP16LG	l	40.00	
			WATER BASED MUD SPACER (WEIGHTED)	3.00	1.65	12.00					
			DISPLACEMENT			12.00					

CEMENT CONSUMPTION PER JOB

Well: 35/8-5 S **PO:** 1

Date	CsgSize	Job Type	Cement/ Additive	Description	Unit	Actual Amount Used
2003-06-03	30"	CASING CEMENTING	G	API CLASS G	MT	42
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	90
			A-7L	ACCELERATOR: LIQUID CACL2	l	1000
			A-3L	EXTENDER: LIQUID LODENSE	l	450
2003-06-05	30"	PLUG IN OPEN HOLE	G	API CLASS G	MT	100
			FL45LN	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	870
			CD-31L	DISPERSANT: CD-31L LIQUID	l	390
			GW-22	GW-22 VISCOSIFIER	kg	75
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	150
			BA-58L	BA-58L ANTI-GAS	l	1000
2003-06-06	30"	PLUG IN OPEN HOLE	G	API CLASS G	MT	15000
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	60
			GW-22	GW-22 VISCOSIFIER	kg	50
			BA-58L	BA-58L ANTI-GAS	l	1700
			CD-31L	DISPERSANT: CD-31L LIQUID	l	175
			FL45LN	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	1080
			SODAA	SODA ASH	kg	25
2003-06-07	30"	PLUG IN OPEN HOLE	G	API CLASS G	MT	10
			BA-58L	BA-58L ANTI-GAS	l	3550
			A-3L	EXTENDER: LIQUID LODENSE	l	175
			CD-31L	DISPERSANT: CD-31L LIQUID	l	120
			FL45LN	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	880
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	150
2003-06-09	30"	PLUG IN OPEN HOLE	G	API CLASS G	MT	13
			CD-31L	DISPERSANT: CD-31L LIQUID	l	250
			FL45LN	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	820
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	40
			BA-58L	BA-58L ANTI-GAS	l	1250
2003-06-10	30"	PLUG IN OPEN HOLE	G	API CLASS G	MT	13
			CD-31L	DISPERSANT: CD-31L LIQUID	l	130
			BA-58L	BA-58L ANTI-GAS	l	900
			FL45LN	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	650
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	20
2003-06-11	20"	CASING CEMENTING	G	API CLASS G	MT	42
			BA-58L	BA-58L ANTI-GAS	l	9200
			FL45LN	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	4000
			A-7L	ACCELERATOR: LIQUID CACL2	l	290
			CD31LN	DISPERSANT: CD-31LN LIQUID	l	500
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	300
2003-06-17	13 3/8"	CASING CEMENTING	G	API CLASS G	MT	39

Well: 35/8-5 S **PO:** 1

Date	CsgSize	Job Type	Cement/ Additive	Description	Unit	Actual Amount Used
2003-06-17	13 3/8"	CASING CEMENTING	R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	220
			GW-22	GW-22 VISCOSIFIER	kg	38
			MCS-J	MCS-J	l	650
			SODAA	SODA ASH	kg	75
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	776
2003-06-27	9 5/8"	CASING CEMENTING	G	API CLASS G	MT	28
			SODAA	SODA ASH	kg	90
			MCS-J	MCS-J	l	2050
			GW-22	GW-22 VISCOSIFIER	kg	30
			BA-58L	BA-58L ANTI-GAS	l	1200
			CD31LN	DISPERSANT: CD-31LN LIQUID	l	85
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	440
			FL45LN	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	700
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	310
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	G	API CLASS G	MT	16
			MCS-J	MCS-J	l	1109
			BA-58L	BA-58L ANTI-GAS	l	1800
			CD31LN	DISPERSANT: CD-31LN LIQUID	l	215
			R-15L	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DEGC	l	160
			GW-22	GW-22 VISCOSIFIER	kg	19
			FL-63L	FL-63L	l	315
			SODAA	SODA ASH	kg	30
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	167
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	G	API CLASS G	MT	12
			BA-58L	BA-58L ANTI-GAS	l	1800
			CD31LN	DISPERSANT: CD-31LN LIQUID	l	200
			R-15L	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DEGC	l	160
			GW-22	GW-22 VISCOSIFIER	kg	19
			FL-63L	FL-63L	l	320
			MCS-J	MCS-J	l	1109
			SODAA	SODA ASH	kg	30
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	172
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	G	API CLASS G	MT	15
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	131
			SODAA	SODA ASH	kg	30
			FL-63L	FL-63L	l	305
			BA-58L	BA-58L ANTI-GAS	l	1720
			CD31LN	DISPERSANT: CD-31LN LIQUID	l	200
			R-15L	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DEGC	l	100
			GW-22	GW-22 VISCOSIFIER	kg	20

Well: 35/8-5 S **PO:** 1

Date	CsgSize	Job Type	Cement/ Additive	Description	Unit	Actual Amount Used
2003-07-13	9 5/8"	PLUG IN OPEN HOLE	MCS-J	MCS-J	l	1110
2003-07-14	9 5/8"	PLUG IN CASED HOLE	G	API CLASS G	MT	11
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	175
			BA-58L	BA-58L ANTI-GAS	l	570
			CD31LN	DISPERSANT: CD-31LN LIQUID	l	28
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEG	l	153
			GW-22	GW-22 VISCOSIFIER	kg	37
			SODAA	SODA ASH	kg	135
			MCS-J	MCS-J	l	1456
2003-07-18	20"	PLUG IN CASED HOLE	G	API CLASS G	MT	23
			FP16LG	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	40
			A-7L	ACCELERATOR: LIQUID CACL2	l	700

TOTAL CONSUMPTION OF CEMENT ADDITIVES

Well: 35/8-5 S **PO:** 1

Section	Cement/Additive	Unit	Total Amount Used
36"	EXTENDER: LIQUID LODENSE	l	450.00
	ACCELERATOR: LIQUID CACL2	l	1000.00
	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	90.00
	API CLASS G	MT	42.00

Section	Cement/Additive	Unit	Total Amount Used
26"	ACCELERATOR: LIQUID CACL2	l	290.00
	BA-58L ANTI-GAS	l	9200.00
	DISPERSANT: CD-31LN LIQUID	l	500.00
	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	4000.00
	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	300.00
	API CLASS G	MT	42.00

Section	Cement/Additive	Unit	Total Amount Used
17"	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	776.00
	API CLASS G	MT	39.00
	GW-22 VISCOSIFIER	kg	38.00
	MCS-J	l	650.00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	220.00
	SODA ASH	kg	75.00

Section	Cement/Additive	Unit	Total Amount Used
12 1/4"	EXTENDER: LIQUID LODENSE	l	175.00
	BA-58L ANTI-GAS	l	9600.00
	DISPERSANT: CD-31L LIQUID	l	1065.00
	DISPERSANT: CD-31LN LIQUID	l	85.00
	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	5000.00
	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	730.00
	API CLASS G	MT	15164.00
	GW-22 VISCOSIFIER	kg	155.00
	MCS-J	l	2050.00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	440.00
	SODA ASH	kg	115.00

Section	Cement/Additive	Unit	Total Amount Used
P&A	ACCELERATOR: LIQUID CACL2	l	700.00
	BA-58L ANTI-GAS	l	5890.00
	DISPERSANT: CD-31LN LIQUID	l	643.00
	FL-63L	l	940.00
	SPECIAL ADDITIVE: DEFOAMER FP-16LG	l	685.00
	API CLASS G	MT	77.00
	GW-22 VISCOSIFIER	kg	95.00
	MCS-J	l	4784.00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	153.00
	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DEGC	l	420.00
	SODA ASH	kg	225.00

DOWNTIME REPORT All installations

Installation: DSD **Well:** 35/8-5 S **PO:** 1

Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
2003-06-01	1	1.5	Equipment failure	ODFJELL DRILLING BERGEN A/S	MARITIME HYDRAULICS A/S	Tool joint breaker did not release grip on drill pipe after make up. Not able to rotate pipe.	DRILL FLOOR EQUIPMENT/SYS	DRILLING	DRILLING CONTRACTO	317.00	Other Drill Floor Eq./Syst.	
2003-06-05	2	4.5	Waiting for cement to cure	NORSK HYDRO A/S				DRILLING				
2003-06-05	3	106.0	Other	NORSK HYDRO A/S		Cement plug set over zone with shallow water flow. Did not find cement when running in for dressing off cement.		DRILLING				
2003-06-15	4	0.5	Equipment failure	ODFJELL DRILLING BERGEN A/S	THULE UNITED LTD.	Welded broken bracket for sliding rail on shaker #2.	MUD AND BULK SYSTEMS	DRILLING	DRILLING CONTRACTO	326.00	Mud Solids Control	
2003-06-17	5	1.0	Other	ODFJELL WELL SERVICES		Attempted to make up float joint without success. 13 3/8" casing tong did not fit float collar. Dressed up manual rig tongs. Made up float joint with casing tong against flush mounted spider.		CASING				
2003-06-17	6	1.0	Equipment failure	ODFJELL DRILLING BERGEN A/S	NATIONAL OILWELL	Lost suction on mud pump # 2. Stopped circulation and flowchecked well. Well stable. Found pop off released on mud pump #1. Changed pop off. Lined up to mud pump # 1 and 2. Pressure tested mud pumps to 200 bar / 5 min.	MUD AND BULK SYSTEMS	CEMENTING	DRILLING CONTRACTO	325.00	Mud Supply(incl. HP mudpumps)	
2003-06-19	7	12.5	Waiting on weather					DRILLING				

DOWNTIME REPORT All installations

Installation: DSD **Well:** 35/8-5 S **PO:** 1

Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
2003-06-23	8	1.5	Other	ODFJELL DRILLING BERGEN A/S		Stopped operation and investigated dropped object from derrick to setback area. Checked derrick and held safety meeting with involved personel.		DRILLING				
2003-06-24	9	1.0	Equipment failure	ODFJELL DRILLING BERGEN A/S	ODFJELL WELL SERVICES	Changed saver sub and drilling pup due to wash out.	DRILLSTRING/DO EQUIPMENT	DRILLING	DRILLING CONTRACTOI	357.07	Other Drilling/Downh Equipment	
2003-06-28	10	0.5	Equipment failure	ANADRILL	ANADRILL	Unknown signal response received from PD Xceed during functiontesting of same. Continued circulating and cycled the pumps while checking validity of signal with BHI Xceed expertise.	DRILLSTRING/DO EQUIPMENT	DRILLING	DRILLSTRING MOTOR	357.01	Drillstring Motor	
2003-06-28	11	0.5	Equipment failure	ODFJELL DRILLING BERGEN A/S	MARITIME HYDRAULICS A/S	Unusual noise was heard from the topdrive. The operation was stopped to check the noise and inspect the topdrive for potential problems. No findings were made. The operation was restarted and eventually the noise disappeared.	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOI	313.02	Top Drive	

DOWNTIME REPORT All installations

Installation: DSD **Well:** 35/8-5 S **PO:** 1

Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
2003-06-28	12	0.5	Other	NORSK HYDRO A/S		The hole packed off an the string stalled and got stuck, while washing down the rathole below the 9 5/8" casing shoe. The string was freed after 2 jar blows downwards, in combination with righthand torque being applied to the string. This method was applied after first having attempted to free string by upwards jarring, without success.		DRILLING				
2003-06-28	13	0.5	Equipment failure	ANADRILL	ANADRILL	The drilling was temporarily aborted while reprogramming Xceed tool to change setting to neutral mode. It had first been attempted to send the commands while drilling, but due to lack of tool-response on these, another attempt was made, while lifting off bottom and circulating. It was in this process observed that too small pumprate variations had been utilised on the first attempt for the pressurevariations to become sufficiently high for the tool to interpret signalpulses as definite commands.	DRILLSTRING/DO EQUIPMENT	DRILLING	DRILLSTRING MOTOR	357.08	Rotating Steerable System	

DOWNTIME REPORT All installations

Installation: DSD **Well:** 35/8-5 S **PO:** 1

Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
2003-06-30	14	4.5	Other	NORSK HYDRO A/S		Due to the poor coring progress on the previous run, and based on the findings whe the core had been recovered, it was decided to rebuild the coring assembly from 180' to 60'.		CORING				
2003-07-01	15	1.0	Equipment failure	ODFJELL DRILLING BERGEN A/S	MARITIME HYDRAULICS A/S	A hydraulic hose on the intermediate racking arm bursted. Replaced the hose.	PIPE HANDLING EQUIPMENT/SYS	CORING	DRILLING CONTRACTO	341.00	Vertical Pipe Handling	
2003-07-02	16	0.5	Equipment failure	ODFJELL DRILLING BERGEN A/S	VARCO BJ OIL TOOLS	The BX elevator in use did not work properly due to malfunctioning lock. It was therefore replaced and set up for service.	PIPE HANDLING EQUIPMENT/SYS	CORING	DRILLING CONTRACTO	345.00	Elevator	
2003-07-03	17	1.0	Equipment failure	ANADRILL	ANADRILL	When bringing transport container for radioactive sources onto drillfloor, for installation of sources in ADN tool, the locking device on the container was observed stuck. spent 1hr before problems was solved and the source container could be opened.	DRILLSTRING/DO EQUIPMENT	DRILLING	OTHER	357.02	MWD/LWD	
2003-07-03	18	0.5	Equipment failure	ODFJELL DRILLING BERGEN A/S	MARITIME HYDRAULICS A/S	The washpipe had been changed prior to drilling out of the 9 5/8" casing. Due to indications of "sweating" bullets around connection it was required to retighten same..	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTO	313.02	Top Drive	

DOWNTIME REPORT All installations

Installation: DSD **Well:** 35/8-5 S **PO:** 1

Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
2003-07-04	19	0.5	Equipment failure	ANADRILL	ANADRILL	Due to drop in hole inclination while in holding mode it was required to reset the tool to manual building mode before drilling any further.	DRILLSTRING/DO EQUIPMENT	DRILLING	DRILLSTRING MOTOR	357.08	Rotating Steerable System	
2003-07-04	20	0.5	Equipment failure	ANADRILL	ANADRILL	The manual 30% build setting did not have the intended effect. It was therefore required to reprogram the tool to 60% build setting prior to drilling ahead.	DRILLSTRING/DO EQUIPMENT	DRILLING	DRILLSTRING MOTOR	357.08	Rotating Steerable System	
2003-07-07	21	0.5	Equipment failure	ODFJELL DRILLING BERGEN A/S	VARCO BJ OIL TOOLS	The relief valve on the frame for theautomatic drillpipe slips malfunctioned while tripping in. Attempted first to refunction, but ended up changing to back-up slips while repairing primary one.	PIPE HANDLING EQUIPMENT/SYS	CORING	DRILLING CONTRACTO	344.00	Slips and Spider	
2003-07-08	22	1.5	Equipment failure	ODFJELL DRILLING BERGEN A/S		The floatsub w/float used on the coring run, was unintendedly run as 2nd float on the drilling assembly. This was discovered when bit had been run through the BOP, resulting in a NPT roundtrip from this depth.		DRILLING				

DOWNTIME REPORT All installations

Installation: DSD **Well:** 35/8-5 S **PO:** 1

Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
2003-07-08	23	1.0	Equipment failure	ANADRILL	ANADRILL	The programming of the Xceed tool was done while circulating. The original intention was that the programming would be possible while drilling ahead. The tool was programmed for hold mode, which was the same setting the tool had been in on former run. The programming had to be repeated as the first set of instructions were not interpreted correctly by the tool.	DRILLSTRING/DO EQUIPMENT	DRILLING	DRILLSTRING MOTOR	357.08	Rotating Steerable System	
2003-07-08	24	0.5	Equipment failure	ANADRILL	ANADRILL	The drilling had to be stopped to set the Xceed tool to 30% build. The intention with the tool was that it would be possible to drill ahead, while changing the tool setting, but due to the dropping hole angle tendency, this was not possible.	DRILLSTRING/DO EQUIPMENT	DRILLING	DRILLSTRING MOTOR	357.08	Rotating Steerable System	
2003-07-09	25	10.0	Equipment failure	SCHLUMBERGI WIRELINE & TESTING	SCHLUMBERG WIRELINE & TESTING	Density tool on the tool string failed.	SERVICE EQUIPMENT/SYS	LOGGING	ELECTRIC LOGGING	374.01	Electric Logging Eq. in General	
2003-07-11	27	1.0	Equipment failure	SCHLUMBERGI WIRELINE & TESTING	SCHLUMBERG WIRELINE & TESTING	Chain for wireline winch broke.	SERVICE EQUIPMENT/SYS	LOGGING	ELECTRIC LOGGING	374.14	Electric/braide wire/coiled tbg. cable	
2003-07-11	26	17.5	Other	NORSK HYDRO A/S		Got stuck with MDT-GR logging string while attempting for pressure points. Activated weak point and pulled out with wire. Fished tool on drill pipe.		LOGGING				

DOWNTIME REPORT All installations

Installation: DSD **Well:** 35/8-5 S **PO:** 1

Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
2003-07-12	28	1.5	Other	ODFJELL DRILLING BERGEN A/S		Attempted to run BOP wash tool through wearbushing, but OD of wash tool to large.		BOP INSTALLATIOI AND TESTING				
2003-07-13	29	1.5	Equipment failure	ODFJELL DRILLING BERGEN A/S	MANNESMANN RORHEN-WER A.G.	Failure in PLS switch for HPU unit.	MISCELLANEOUS EQUIPMENT/SYS	PLUG AND ABANDONMEI	DRILLING CONTRACTOI	385.00	Hydraulic/Pnei Power Pack	
2003-07-15	30	7.5	Other	NORSK HYDRO A/S		Not able to pull 9 5/8" casing hanger through BOP. Casing hanger hung up on lower annular.		PLUG AND ABANDONMEI				
2003-07-16	31	2.5	Other	NORSK HYDRO A/S		Not able to recover seal assembly on first attempt.		PLUG AND ABANDONMEI				
2003-07-16	32	0.5	Other	ODFJELL DRILLING BERGEN A/S		Wrong space-out caliculations.		PLUG AND ABANDONMEI				
2003-07-17	33	4.0	Waiting for cement to cure	NORSK HYDRO A/S				PLUG AND ABANDONMEI				
2003-07-18	34	8.5	Waiting for cement to cure	NORSK HYDRO A/S				PLUG AND ABANDONMEI				
2003-07-20	35	3.5	Other	SMITH RED BARON		Catcher in 20" x 30" casing cutting and retrieving assembly released from wellhead due to motor stalled out during cutting. Not able to reconnect due to tool packed off with metal spoon.		PLUG AND ABANDONMEI				
Sum:		201.5										
Total Sum:		201.5										

TIME DISTRIBUTION

Well: 35/8-5 S **PO:** 1 **Rig:** DEEPSEA DELTA **Depth:** 4000.0 **m MD**

All sections

Operations	Hours	%	Hours	%	Acc. total
MOBILIZATION					
MOVING	11.5	0.93			
MOORING; RUNNING ANCHORS	18.0	1.45			
MOORING; PULLING ANCHORS	31.0	2.50			
Sum.			60.5	4.88	60.5
DRILLING					
BHA HANDLING/TESTING	37.0	2.98			
EQUIPMENT TEST	3.0	0.24			
MWD HANDLING/TESTING/SURVEYING	0.5	0.04			
TRIPPING IN CASED HOLE	21.5	1.73			
TRIPPING IN OPEN HOLE	42.0	3.39			
DRILLING	240.5	19.40			
OTHER	10.0	0.81			
UNDERREAMING	5.0	0.40			
WELLHEAD EQUIPMENT INSTALLATION	6.0	0.48			
REAMING	6.5	0.52			
CIRC. AND COND. MUD/HOLE	39.0	3.15			
WIPER TRIP	10.0	0.81			
CASING HANDLING/TESTING	22.0	1.77			
RUNNING CASING IN CASED HOLE	18.5	1.49			
RUNNING CASING IN OPEN HOLE	31.5	2.54			
DRILLING OUT OF CASING	3.0	0.24			
PRIMARY CEMENTING	23.5	1.90			
TRIPPING FOR CEMENT JOB	3.0	0.24			
DRILLING OUT CEMENT PLUG	9.5	0.77			
FORMATION STRENGTH TESTING	4.0	0.32			
BOP HANDLING	6.0	0.48			
BOP RUNNING/RETRIEVING	19.0	1.53			
BOP TESTING	15.0	1.21			
WELLHEAD EQUIPMENT HANDLING	9.5	0.77			
SET CEMENT PLUG	2.5	0.20			
RIG MAINTENANCE	14.0	1.13			
SLIP AND CUT DRILLING LINE	1.5	0.12			
Sum.			603.5	48.67	664.0
FORMATION EVALUATION MWD					
MWD HANDLING/TESTING/SURVEYING	1.5	0.12			
LOGGING WITH MWD	4.5	0.36			
Sum.			6.0	0.48	670.0
FORMATION EVALUATION LOGGING					
LOGGING	8.5	0.69			
LOGGING EQUIPMENT HANDLING/TESTING	5.5	0.44			
FORMATION TESTER	22.5	1.81			
Sum.			36.5	2.94	706.5
FORMATION EVALUATION CORING					
CIRCULATING FOR SAMPLE	4.5	0.36			
MWD HANDLING/TESTING/SURVEYING	6.5	0.52			
TRIPPING IN CASED HOLE	76.0	6.13			
CORING EQUIPMENT/CORE HANDLING	21.0	1.69			
TRIPPING IN OPEN HOLE	13.5	1.09			
OTHER	3.0	0.24			

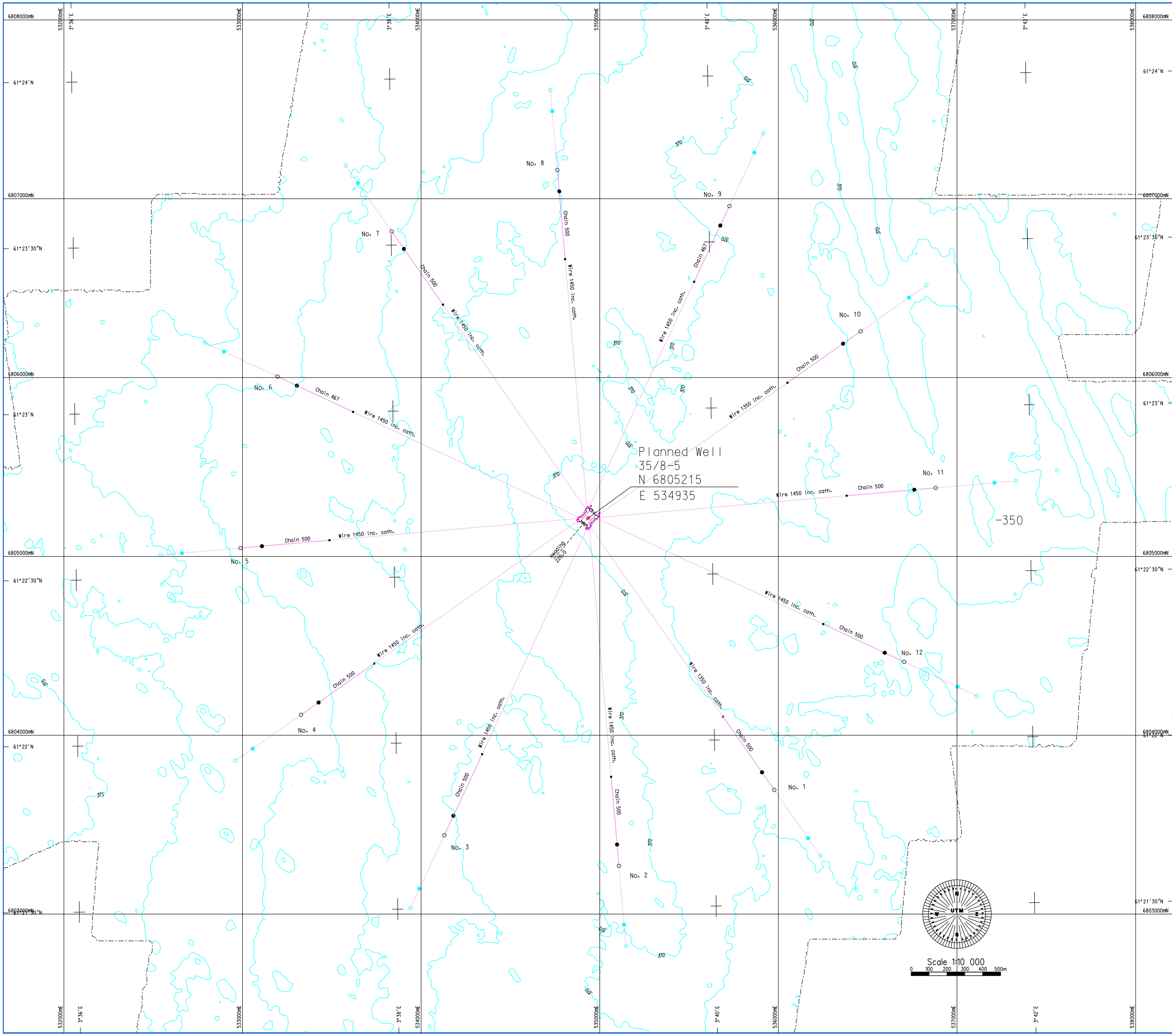
TIME DISTRIBUTION

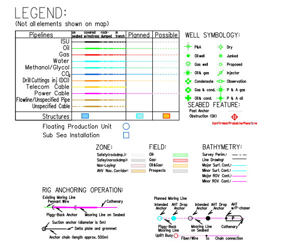
Well: 35/8-5 S **PO:** 1 **Rig:** DEEPSEA DELTA **Depth:** 4000.0 **m MD**

All sections

Operations	Hours	%	Hours	%	Acc. total
FORMATION EVALUATION CORING					
CORING	20.0	1.61			
CIRC. AND COND. MUD/HOLE	22.5	1.81			
SLIP AND CUT DRILLING LINE	3.0	0.24			
Sum.			170.0	13.71	876.5
PLUG AND ABANDONMENT					
BHA HANDLING/TESTING	10.0	0.81			
TRIPPING IN CASED HOLE	22.5	1.81			
OTHER	5.5	0.44			
WELLHEAD EQUIPMENT INSTALLATION	2.0	0.16			
CIRC. AND COND. MUD/HOLE	8.0	0.65			
CASING HANDLING/TESTING	3.5	0.28			
TRIPPING FOR CEMENT JOB	22.0	1.77			
BOP HANDLING	5.5	0.44			
BOP RUNNING/RETRIEVING	12.5	1.01			
SET CEMENT PLUG	18.5	1.49			
SET MECHANICAL PLUG	8.5	0.69			
TRIPPING OF CASING CUTTING EQUIPMENT	7.5	0.60			
CUT CASING/WELLHEAD	15.0	1.21			
CASING RETRIEVING	19.5	1.57			
SLIP AND CUT DRILLING LINE	1.5	0.12			
Sum.			162.0	13.06	1038.5
DOWNTIME DRILLING					
EQUIPMENT FAILURE AND REPAIR	8.5	0.69			
WAITING	17.0	1.37			
CEMENTING	106.0	8.55			
STICKING/GOING STUCK WITH EQUIPMENT	0.5	0.04			
OTHER	4.0	0.32			
Sum.			136.0	10.97	1174.5
DOWNTIME FORM. EVAL. LOGGING					
EQUIPMENT FAILURE AND REPAIR	11.0	0.89			
STICKING/GOING STUCK WITH EQUIPMENT	2.5	0.20			
FISHING	15.0	1.21			
Sum.			28.5	2.30	1203.0
DOWNTIME FORM. EVAL. CORING					
EQUIPMENT FAILURE AND REPAIR	3.0	0.24			
OTHER	6.0	0.48			
Sum.			9.0	0.73	1212.0
DOWNTIME PLUG AND ABANDONMENT					
EQUIPMENT FAILURE AND REPAIR	1.5	0.12			
WAITING	12.5	1.01			
OTHER	14.0	1.13			
Sum.			28.0	2.26	1240.0
Reported time (100.0 % of well total 1240.0 hours) :					1240.0

	Current period	Year to date	AFE	Accum. cost
Employee relat. costs	34.375	7.443.991		7.443.991
Employee relat. costs	**34.375**	**7.443.991**		**7.443.991**
Rig costs		43.086.399		43.086.399
Rig costs		**43.086.399**		**43.086.399**
Rig support costs		3.035.310		3.035.310
Rig support costs		**3.035.310**		**3.035.310**
Fuel/luboil	-911.525	5.559.908		5.559.908
Bits		554.245		554.245
Casing/casing equipment		4.230.859		4.230.859
Wellhead	-10.303	1.854.971		1.854.971
Cement/cement addit.	-81.213	1.771.092		1.771.092
Mud/mud chemicals	-747.378	576.912		576.912
Consumable costs	**-1.750.419**	**14.547.986**		**14.547.986**
Other transport		1.214		1.214
Standby vessel		3.457.251		3.457.251
Helicopter transport		2.460.701		2.460.701
Supplyboat		9.909.472		9.909.472
Transportation costs		**15.828.638**		**15.828.638**
Coring		572.725		572.725
Drilling		1.291.015		1.291.015
Cutting of casing		509.299		509.299
Completion costs		147.126		147.126
MWD-services		7.170.411		7.170.411
Casing operations		616.534		616.534
Mud logging		1.781.134		1.781.134
Cementing/press.test		2.155.379		2.155.379
El.logging		3.606.577		3.606.577
Prod.testing		294.165		294.165
Rov/diving		1.288.179		1.288.179
Misc.rental & op.costs	1.167.168	7.536.220		7.536.220
Service contracts	**1.167.168**	**26.968.764**		**26.968.764**
Site survey	43.441	249.595		249.595
Rig positioning		247.050		247.050
Survey costs	**43.441**	**496.645**		**496.645**
Warehouse costs		4.785.391		4.785.391
Warehouse costs		**4.785.391**		**4.785.391**
Total	**-505.435**	**116.193.124**		**116.193.124**





35/8-5

Deep Sea Delta POSITION

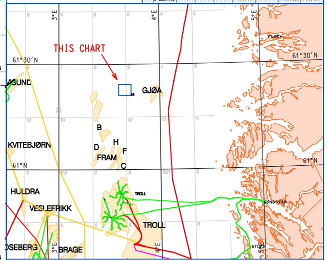
UTM ZONE 31: E 534935.00 N 6805215.00

LAT/LONG: N 61°22'40.35" E 03°39'13.22"

RIG HEADING: 220.0°

DEPTH (L.A.T.): -370.0

No	PLANNED ANCHOR POSITIONS Intend.	Length Hor.	Chain	Head.	AHT position Drop	P-chas.	PIGGY-BACK Intend.	AHT Drop
		Tens.1000 kN		UTM				
1	E 535977 N 6803695	1800	1850	145.0	E 535908 N 6803793	E N	E 536235 N 6803326	E 536166 N 6803424
2	E 535107 N 6803270	1900	1950	175.0	E 535097 N 6803389	E N	E 535147 N 6802821	E 535136 N 6802941
3	E 534130 N 6803441	1900	1950	205.0	E 534181 N 6803550	E N	E 533940 N 6803033	E 533991 N 6803142
4	E 533328 N 6804114	1900	1950	235.0	E 533426 N 6804183	E N	E 532959 N 6803856	E 533057 N 6803925
5	E 532989 N 6805047	1900	1950	265.0	E 533109 N 6805057	E N	E 532541 N 6805008	E 532660 N 6805018
6	E 533196 N 6806006	1867	1917	295.0	E 533305 N 6805955	E N	E 532788 N 6806196	E 532897 N 6806145
7	E 533836 N 6806817	1900	1950	325.0	E 533904 N 6806719	E N	E 533577 N 6807186	E 533646 N 6807088
8	E 534763 N 6807160	1900	1950	355.0	E 534773 N 6807041	E N	E 534723 N 6807609	E 534734 N 6807489
9	E 535726 N 6806959	1867	1917	25.0	E 535675 N 6806850	E N	E 535916 N 6807367	E 535865 N 6807258
10	E 536460 N 6806258	1800	1850	55.0	E 536362 N 6806189	E N	E 536829 N 6806516	E 536731 N 6806448
11	E 536881 N 6805383	1900	1950	85.0	E 536761 N 6805373	E N	E 537329 N 6805422	E 537210 N 6805412
12	E 536704 N 6804410	1900	1950	115.0	E 536595 N 6804461	E N	E 537112 N 6804220	E 537003 N 6804271



04M This revision has the following new information:
This is the original drawing
- Deep Sea Delta entering 35/8-5

Req. TDC	Rev.	Issue	Description	Made by	Chk'd by	Disc. appr.	Proj. appr.	Client appr.
	04M	26.05.03	APPROVED	MC sign.	BH sign.	SiL	ST sign.	
	03	26.05.03	ISSUED FORT IDC	MC sign.	BH sign.	SiL	ST	
	02	13.05.03	ISSUED FORT IDC	BH sign.	MC	SiL	ST	
	01	02.04.03	ISSUED FOR IDC	SES sign.	BH sign.	SiL	ESA	

Pipelines and Marine Operations

HYDRO

Marine Surveys

35/ 8-5

Hydro Technology & Projects (HTP)

Drawing title :

Overview of 35/8-5

Chart information:

Subsea layout and structures

Geo. datum	Area	System	Scale
ED50	U00	00	1:10 000

Projection	Central Mer.	Dwg. format
UTM	3° E	A1

Zone	Vertical ref.	Contour int.
31	MSL	1.0m

Complex	Sub compl.	Orig.	Disc./type	Seq. No.	Sheet	Replaces	Rev.
—	—	—	—	M4301	of		04M

File name: J:\dak\ED50Z31\M4301.she

...35_8_5\charts\m4301she 2003-05-26 1:27:34

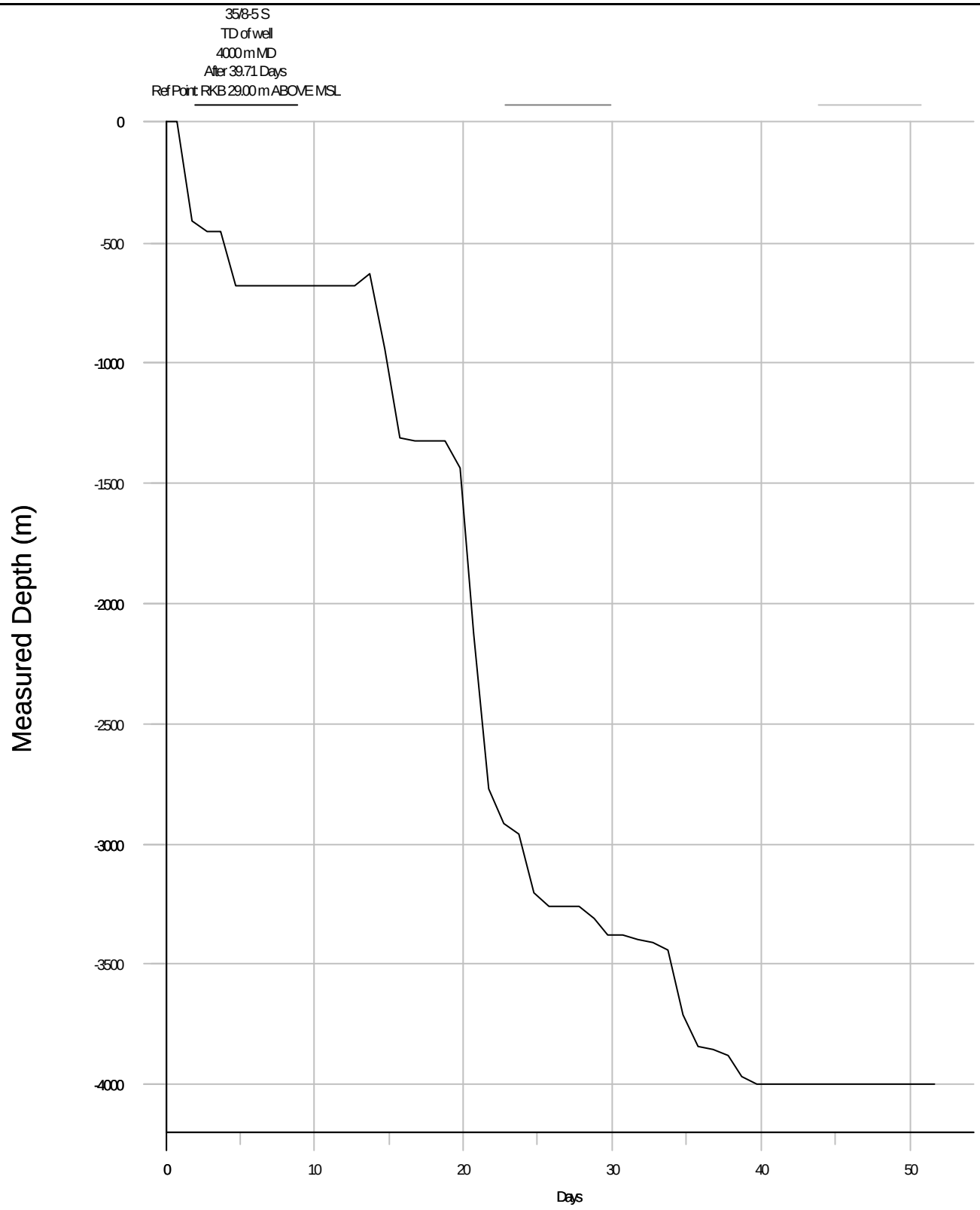


Figure 2		MD Drilling Curve	**HYDRO**

2004-02-19

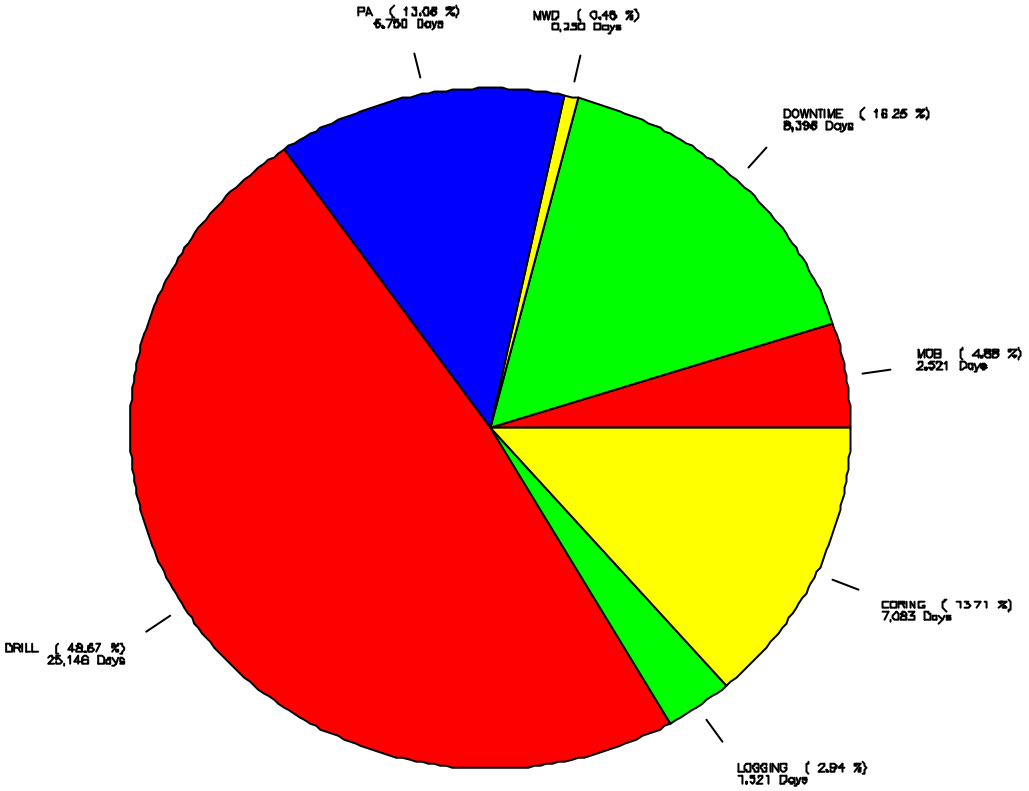
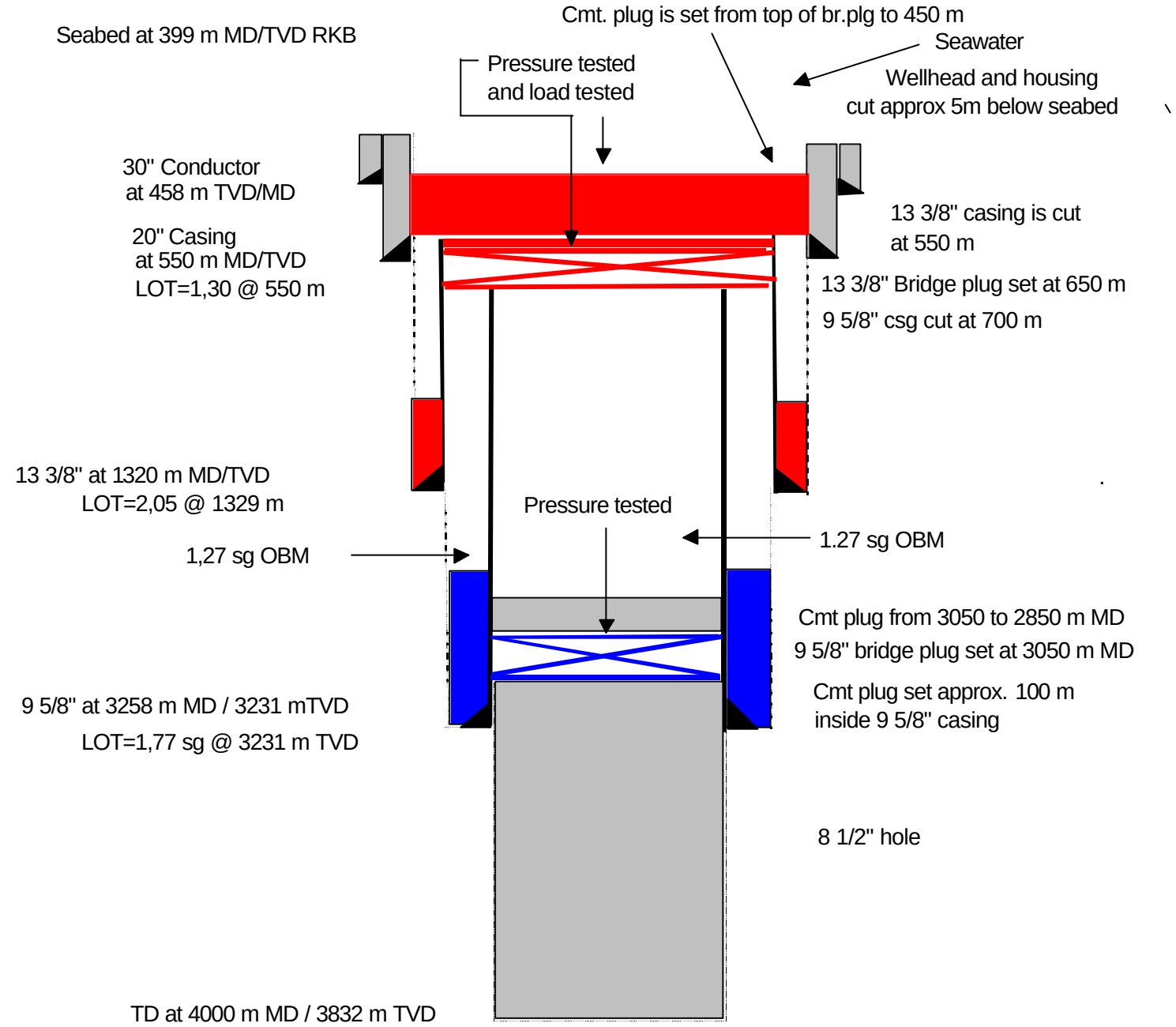


Figure 3		Time Distribution 35/8-5 S	**HYDRO**


Seabed at 399 m MD/TVD RKB
Cmt. plug is set from top of br.plg to 450 m
Seawater
Pressure tested
and load tested
Wellhead and housing
cut approx 5m below seabed
30" Conductor
at 458 m TVD/MD
20" Casing
at 550 m MD/TVD
LOT=1,30 @ 550 m
13 3/8" casing is cut
at 550 m
13 3/8" Bridge plug set at 650 m
9 5/8" csg cut at 700 m
13 3/8" at 1320 m MD/TVD
LOT=2,05 @ 1329 m
Pressure tested
1,27 sg OBM
1.27 sg OBM
Cmt plug from 3050 to 2850 m MD
9 5/8" bridge plug set at 3050 m MD
Cmt plug set approx. 100 m
inside 9 5/8" casing
9 5/8" at 3258 m MD / 3231 mTVD
LOT=1,77 sg @ 3231 m TVD
8 1/2" hole
TD at 4000 m MD / 3832 m TVD

SECTION C

ATTACHMENTS

Completion Log
Core Log
Site Survey Panel