Final Well Report
Well: 30/6-25 S

Oseberg Unit

NORSK HYDRO

FINAL WELL REPORT

WELL 30/6-25 S

June 1999

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FINAL WELL REPORT
WELL 30/6-25 S
LICENCE: OSEBERG UNIT

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PREFACE

Oseberg Unit covers parts of licences PL053 awarded to the Norsk Hydro, Statoil, Elf, Mobil, Saga and Total in 1979, and PL079 awarded to the Norsk Hydro, Statoil, and Saga in 1982, both with Norsk Hydro ASA as the operator.

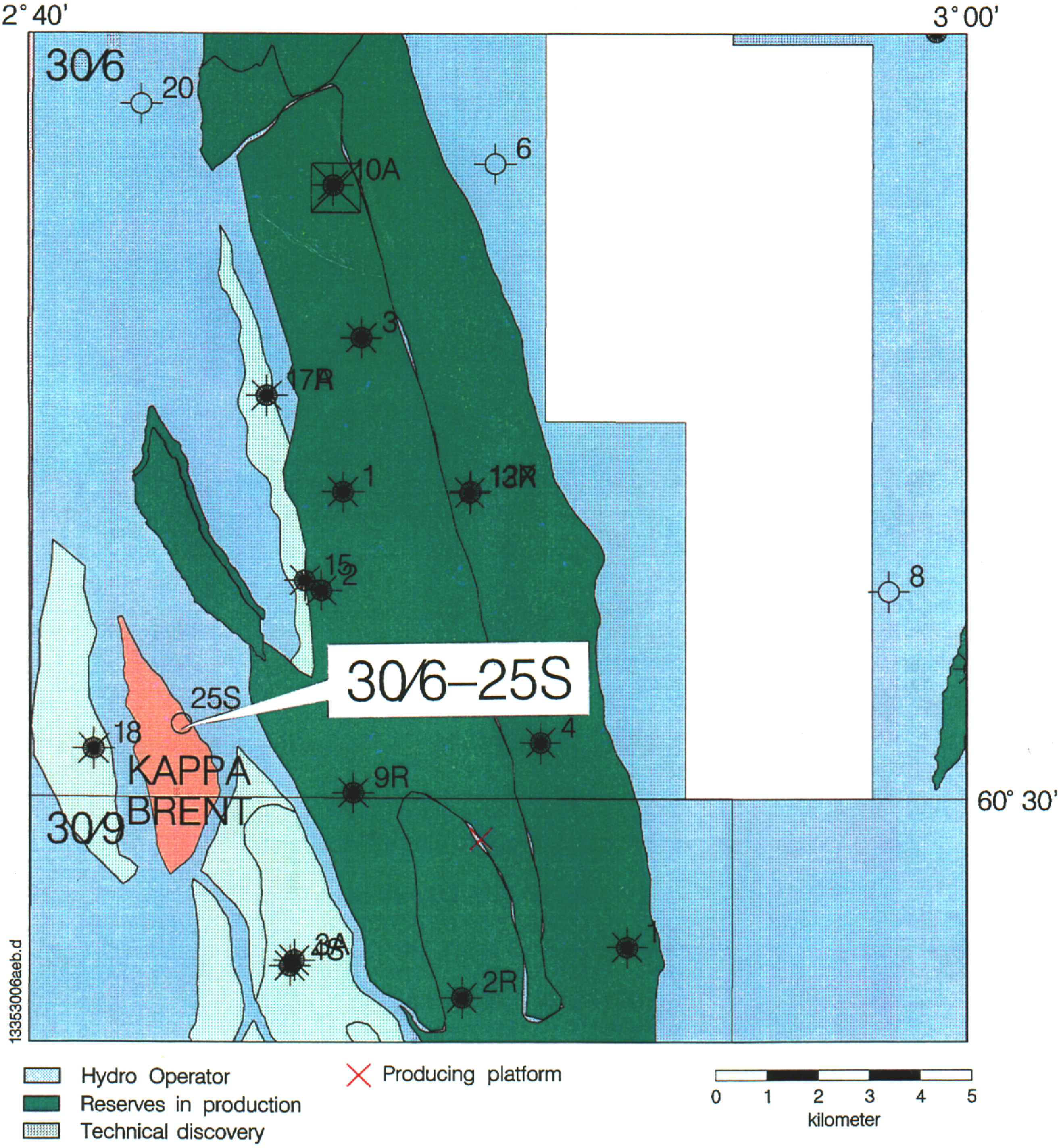
The licensees' percentage share of Oseberg Unit is as follows:

Norsk Hydro Production as (operator)	13.68%
Statoil (SDØE: 50.78%)	64.78%
Elf Petroleum Norge AS	5.77%
Mobil Development Norway AS	4.32%
Saga Petroleum ASA	8.55%
Total Norge AS	2.88%

The well was drilled by Norsk Hydro ASA, on behalf of the license group, during November and December 1998 (see Location Map, page II) .

All depths in this report are in mMD /TVD RKB (RKB elevation is 23.5m) unless otherwise stated.

LOCATION MAP



Location map
Well 30/6-25 S

SUMMARY OF WELL DATA	
LOCATION:	60° 30' 45.16"N 02° 43' 15.85" E 6 708 684.6mN 484 682.5mE ED-50, UTM Zone 31, CM 3°E
OPERATOR:	Norsk Hydro ASA
RIG:	Transocean Leader
CONTRACTOR:	Transocean
RKB ELEVATION (to MSL):	23.5 m
WATER DEPTH (MSL):	104 m
START OF OPERATIONS:	25.11.98
WELL SPUDDED:	26.11.98
REACHED TD ON:	26.12.98
COMPLETED:	06.01.99
STATUS:	Dry well, permanently plugged and abandoned
FORMATION AT TD:	Drake Formation
TD DRILLER (mRKB):	2988 m MD / 2935 m TVD
TD LOGGER (mRKB):	2988.5m
DRILLING DEPTHS:	36" to 193m 8 1/2" to 1038m (Pilothole) 26" to 1044m 12 1/4" to 2575m 8 1/2" to 2988m
CASING DEPTHS:	30" at 189.5 m 20" at 1037m 9 5/8" at 2564 m

SECTION A

GEOLOGY

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SECTION A: LIST OF FIGURES, TABLES AND APPENDICES

1 OBJECTIVES

The well 30/6-25 S was drilled as a deviated well with the semi-submersible drilling vessel "Transocean Leader" to a TD of 2988m MD / 2935m TVD RKB, 63m TVD into the Dunlin Group.

The well tested the Brent Group on the Kappa structure, north of the Omega Nord structure in the Oseberg Sør area. The Kappa structure is located in a downfaulted position to both the Oseberg Gamma and the Omega Nord structures.

The main target was the lower Brent Group, with Oseberg Formation as the main reservoir.

The primary objectives of the well were to:
- Test the potential of the Kappa Brent prospect in an area of good seismic control/quality
- Identify fluid types and distribution in an optimal position in order to balance an updip volume with a downdip down-to scenario
- Confirm the geological model with respect to reservoir quality
- Acquire vital pressure data in order to identify likely pressure cell boundaries

2 RESULTS

Well 30/6-25 S was spudded 26th November 1998 and reached a total depth of 2988m MD / 2935m TVD RKB (driller's depth) 26th December. The well was permanently plugged and abandoned 6th January 1999.

Oil shows were pointed out in the lower part of Tertiary and uppermost part of the Cretaceous. Only weak oil shows were observed in the Brent Group and consequently no movable hydrocarbons were stated in the Brent Group. There are no signs of biodegradation in the investigated sample suite from the Lower Tertiary/Upper Cretaceous or the Brent Group reservoir.

Top Balder, top Sele and top Shetland Group were encountered 80 to 90m TVD deeper than prognosed, Tab. 9-1. This discrepancy is mainly explained by erroneous depth conversion. Base Cretaceous was encountered about 25m TVD deeper than prognosed.

The Brent Group was penetrated twice which reveals that the well penetrates, at least, one fault. The upper (first penetrated) Brent sequence is believed to represent parts of a slide (see Figure 2.1), most possibly moved from north-east towards south-west.

The lower (second penetrated) Brent sequence is believed to have been deposited in-situ. Both Ness and Oseberg Formations were remarkably thinner than expected. Possible reasons for having such a thin Oseberg Formation in the Kappa area could be several. The Kappa area might have formed a palaeoheight during deposition of the Oseberg Formation. Thickness observations from the wells drilled on the crestal parts of the Oseberg Alpha structure may indicate that the structure represented a palaeoheight during deposition of the Oseberg Formation. Thus the Kappa structure could be in a leeward position to the Oseberg Alpha structure during the deposition of the Oseberg fan-delta system. The Ness Formation consists of relatively more sand than compared to observations on the Omega Nord structure. This may indicate less subsidence and amalgamation of channel sands in the Kappa area. The thickness of the Ness Formation in the well may also be influenced by later erosion and possibly faulting.

The formation pressure data indicate a water gradient similar to the gradient in ORELN on northern part of the Omega Nord structure. An approximately similar water gradient is observed in the upper and lower Brent interval in well 30/6-25 S.

Detailed petrophysical evaluation and MDT pressure data are given in Norsk Hydro Report: "Formation Evaluation, Well 30/6-25 S, June 1999".

Structural Model; Kappa Brent

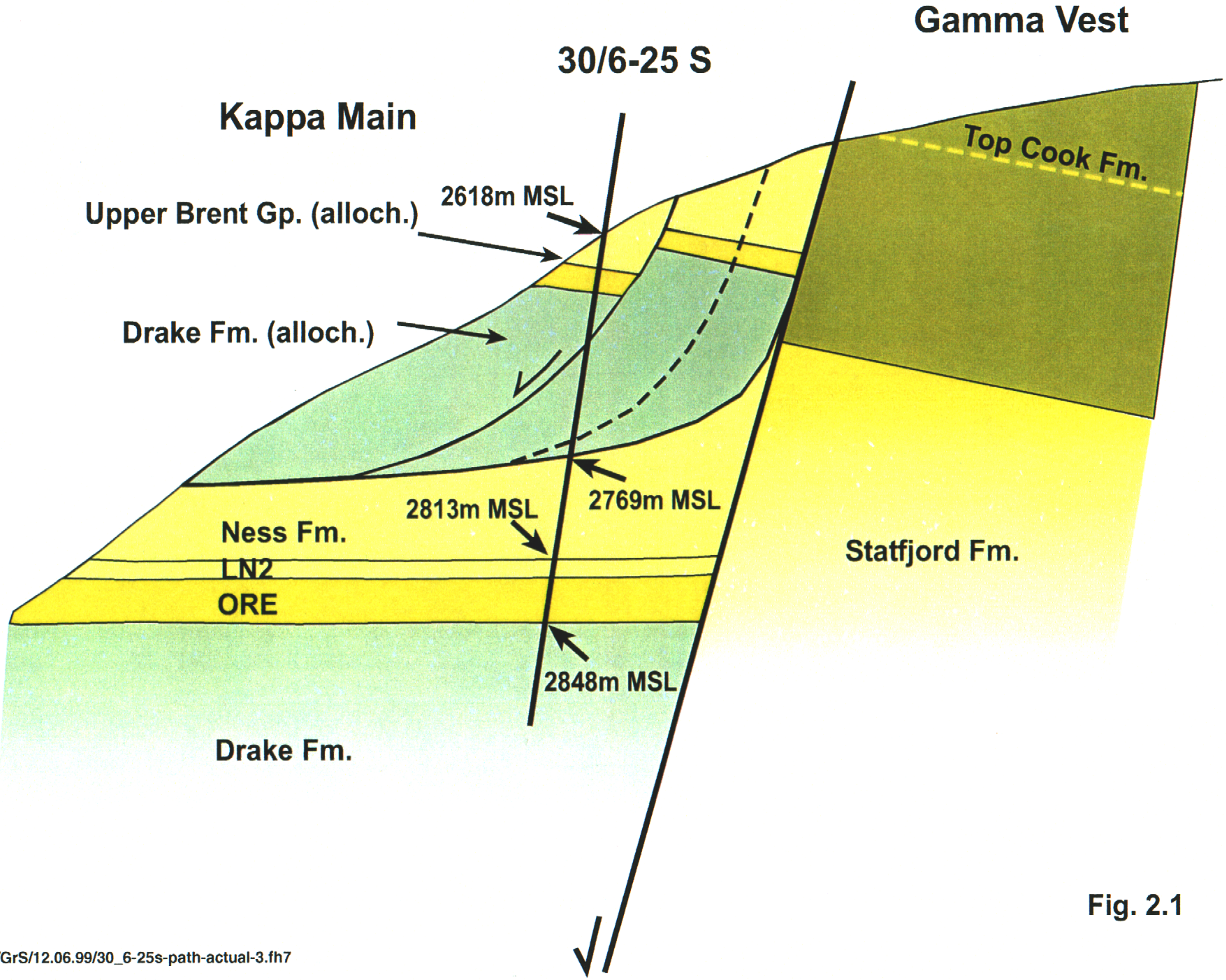


Fig. 2.1

PL 053 Oseberg/GrS/12.06.99/30_6-25s-path-actual-3.fh7

3 BIOSTRATIGRAPHY

The biostratigraphical analysis of well 30/6-25 S was carried out by GeoStrat Ltd. The analysed interval was 1050m - 2990 mRKB MD (TD). The results are documented in the 30/6-25 S Routine Biostratigraphical Report (Norsk Hydro 30/6-25 S, Biostratigraphy of the interval 1050m - 2990m, 29pp, March 1999, GeoStrat Ltd.) The results have further been evaluated and interpreted according to Norsk Hydro internal biozonation system and are presented in Fig.3.1.

The main results of the analysis can be summarized as follows:

- The youngest sediments analysed (at 1050m) are claystones from the Hordaland Group of Late Oligocene age.

- The Late Eocene interval is thin in this well, suggesting a truncation or condensing towards the top of the Eocene.

- There is also a small unconformity at the Cretaceous - Tertiary transition, in that the lowermost biozones of the Paleocene (PT1A, PT1B and PT1C1) are not identified in the well.

- The oldest sediments of the (Late) Cretaceous are of Early Campanian (or possibly Late Santonian) age.

- There is a major unconformity at 2663mRKB MD, where Early Bajocian sediments of the Brent Group / Ness Formation are overlain by the above mentioned Late Cretaceous sediments.

- The interval 2663mRKB MD - 2830mRKB MD is an allochthonous fault block comprising a succession of Early Bajocian - Early Toarcian sediments. Within this sequence, there is a probable fault at 2758mRKB MD where Late Toarcian sits directly on Early Toarcian.

- Another (in situ) section of Early Bajocian - Late Toarcian sediments is penetrated at 2830mRKB MD

- At 2945mRKB MD sediments of Late Toarcian age was reached.

HYDRO

WELL: 30/6-25 S

NB! NOT TO SCALE

DEPTH RKB

ELEVATION KB: 23.5m

ALL DEPTHS IN METERS (mRKB)

CHRONOSTRATIGRAPHY

SYSTEM	SERIES	DEPTH m	THICKNESS m
QUAT.	UNDIFFERENTIATED	1050	
TERTIARY	OLIGOCENE	1630	580
	EOCENE	2150	520
	PALEOCENE	2320	170
CRETACEOUS	LATE CRETACEOUS	2663	343
JURASSIC	MIDDLE JURASSIC (Allochthonous)	2725	62
	EARLY JURASSIC (Allo.)	2830	105
	MIDDLE JURASSIC (IN SITU)	2945	115
	EARLY JURASSIC	2988(TD)	43

LITHOSTRATIGRAPHY

GROUP	FORMATION/ MEMBER
Water depth	127.5
NORDLAND 878	640
	UTSIRA 878
HORDALAND 2028.5	895
	SKADE 917
	BASE SKADE 991
	Top Intra Hordaland Sand 1004
	Base Intra Hordaland Sand 1386
	GRID 1468
	BASE GRID 2028.5
ROGALAND 2320	BALDER 2105.5
	SELE 2148.5
	LISTA 2253
	VÅLE 2320
SHETLAND 2662.5	HARDRÅDE 2336
	JORSALFARE 2526
	KYRRE 2662.5
BRENT (ALLOCHTHONOUS) 2713	NESS 2684
	LOWER NESS 2698.5
	ETIVE 2704
	RANNOCH 2712
	OSEBERG 2713
DUNLIN (Alloc.) 2830	DRAKE 2830
BRENT (IN SITU) 2918	NESS 2879
	LOWER NESS 2 2889
	ETIVE 2904
	RANNOCH 2916
	OSEBERG 2918
DUNLIN (IN SITU)	DRAKE 2988 (TD)

Figure 3.1: Chronostratigraphy vs. lithostratigraphy

4 LITHOSTRATIGRAPHY

All depths are in mMD RKB (RKB is 23.5m) unless otherwise stated.

This summary is compiled predominantly from ditch cuttings descriptions. No cores were cut. Sidewall cores were taken in this well between the interval from 2580m to 2966m. see Table 6.2. 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 seafloor at 127.5m to 1044m before setting 20" casing at 1037m. Lithology interpretation through this interval is based on MWD logs and drilling parameters. The first drill cuttings samples were taken at 1050m.

4.1 Nordland Group 127.5 - 878 m MD RKB

The entire Nordland Group was drilled with returns to seabed.

127.5 - 275m

This interval consists of sand interbedded with clay. Presence of boulders was experienced at 142-147m based on drilling parameters.

275 - 587m

This interval consists of clay with two thin sand beds at 337 and 356m. Presence of boulders was experienced at 280-285m based on drilling parameters.

587 - 625m

This interval consists of sand.

625 - 650m

This interval consists of clay.

Utsira Formation 640m - 878m MD RKB

This interval consists of sand with minor beds of clay.

Age: Undifferentiated Quaternary - Tertiary.

4.2 Hordaland Group 878m - 2028.5 m MD RKB

878m - 895m

This interval consists of claystone.

Skade Formation 895m - 917m

This interval consists of sandstone.

917m - 1045m

This interval consists of claystone interbedded with sandstone.

1045 - 1386m

This interval consists of claystone with minor sandstone.

Claystone:	olive grey - dusky yellow brown, soft - firm, blocky, slightly calcareous, slightly silty, common trace fine - medium sand, trace glauconite, rare mica, rare micropyrite.
Sandstone:	generally loose, clear translucent - milky quartz grains, occasionally medium grey - medium dark grey sandstone aggregats, fine - medium, trace coarse, subrounded - rounded, locally subrounded - subangular, moderate - well sorted, non calcareous, trace glauconite, trace mica.
Age:	Late - Early Oligocene

Grid Formation 1386m - 1468m MD RKB

This formation consists mainly of sandstone.

Sandstone:	clear translucent, rare milky quartz grains, fine - coarse, trace very coarse, rounded - subrounded, moderately sorted, generally loose becoming increasingly sandstone aggregates with white clay matrix downwards, non calcareous, trace glauconite, rare - trace mica, rare carbonaceous matter, rare micropyrite coating.
Age:	Early Oligocene

1468 - 1600m

This interval consists of claystone with minor sandstone and dolomite stringers.

Claystone: olive grey, dusky yellow brown, trace green grey, soft - firm, blocky, slightly calcareous, slightly silty, slight sandy, trace glauconite, trace micromica, trace - locally abundant micropyrite.

Sandstone: clear - translucent - milky quartz, very fine - fine, occasionally medium, subangular - subrounded, well sorted, loose grains, non calcareous, trace glauconite, rare mica.

Dolomite: dark yellow brown, firm - moderate hard, blocky, micro - cryptocrystalline.

1600 - 1880m

This interval consists of claystones with dolomite stringers.

Claystone: dark green grey, trace green black, trace olive black, firm, blocky, fissile, non calcareous, non - slight silty. In part dusky yellow brown, firm, blocky, non - slight calcareous, slightly silty, trace micromica.

Dolomite: dark yellow brown, firm - moderate hard, blocky, micro - cryptocrystalline.

1880 - 1980m

This interval consists of varicolored claystones with limestone stringers.

Claystone: varicolored, dusky yellow brown, olive grey, medium dark grey, becoming trace dark green grey below 1930, light blue grey - medium blue grey, rare dusky red, rare olive black, blocky, commonly subfissile, non calcareous, no - trace micropyrite, trace pyrite nodules, no - trace micromica.

Limestone: white, very light grey, moderate yellow brown, firm, blocky, microcrystalline.

1980 - 2028.5m

This interval consists of claystones with limestone stringers.

Claystone: light to medium blue grey, green grey, trace olive black - brown black, alternating with moderate brown - grey brown,

	firm - soft, blocky - subblocky, non - slight calcareous, earthy.
Limestone:	very light grey, light green grey, pale - dusky yellow brown, firm - soft, occasionally moderate hard, blocky, occasionally argillaceous, microcrystalline, occasionally crystalline.
Age:	Early Eocene

4.3 Rogaland Group 2028.5m - 2320 m MD RKB

The Rogaland Group comprises Balder, Sele, Lista and Våle Formations.

Balder Formation 2028.5 - 2105.5 m MD RKB

This formation consists of claystone, limestone stringers and rare tuff.

Claystone:	predominantly medium blue grey, green grey-green black, trace olive black - brown black, trace dark grey, firm, blocky, moderate - very calcareous, occasionally slightly silty, occasionally glauconitic, rare pyrite, rare micromica.
Tuff:	light grey - medium grey, medium dark grey, subblocky - amorphous, non calcareous, trace micropyrite, slight black speckled.
Limestone:	pale yellow brown, very light grey, white, firm - moderate hard, blocky, microcrystalline.
Age:	Early Eocene - Late Paleocene

Sele Formation 2105.5m - 2148.5 m MD RKB

This formation consists of claystone and abundant limestone and dolomite stringers.

Claystone:	predominantly olive black - dark grey, firm - moderate hard, blocky, non calcareous, rare micropyrite, rare pyrite nodules.
Limestone:	white to light grey, pale yellowish brown, firm to moderate hard, blocky, microcrystalline to cryptocrystalline.
Dolomite:	dusky yellow brown , angular, hard - very hard, cryptocrystalline, locally sucrosic.
Age:	Early Eocene - Late Paleocene

Lista Formation 2148.5m - 2253 m MD RKB

This formation consists predominantly of claystones with minor limestone and sandstone stringers.

Claystone:	dark greensh grey, moderate brown to brown grey, dark grey, becoming medium grey to olive gray, greenish grey, soft to firm to moderate hard, blocky - subblocky, occasionally subfissile, non to slightly calcareous, in part rare micropyrite, rarely carbonaceous, rare pyrite nodules, none - slightly silty.
Limestone:	very light grey, pale yellowish brown, firm to moderate hard, blocky, microcrystalline.
Sandstone:	clear - translucent quartz, rose quartz, fine - very coarse, predominantly medium, rounded - subangular, poorly sorted, as loose grains.
Age:	Late Paleocene

Våle Formation 2253 - 2320 m MD RKB

This formation consists of claystone with minor limestone stringers.

Claystone:	medium dark grey - dark grey , soft - firm, subblocky - blky, calcareous - very calcareous, rare micropyrite,slightly silty.
Limestone:	white, firm, blocky, microcrystalline - cryptocrystalline.
Age:	Late - Early Paleocene

4.4 Shetland Group 2320 - 2662.5 m MD RKB

The Shetland Group comprises Hardråde, Jorsalfare and Kyrre Formations in this well.

Hardråde Formation 2320 - 2336 m MD RKB

This section comprises mainly limestone.

Limestone:	pinkish grey - very pale orange, white, soft - firm, blocky, angular - subangular, microcrystalline.
Age:	Late Maastrichtian

Jorsalfare Formation 2336 - 2526 m MD RKB

This section comprises claystone and limestone stringers with a single sand bed.

Claystone:	medium dark grey - dark grey, olive black, grey black, greenish black, brownish black, blocky - subblocky, occassionally amorphous, soft - moderate hard, sligthly silty, very calcareous, rarely micropyritic, rare pyrite nodules, rare carbonaceous material.
Limestone:	very light grey - pinkish grey, white, soft - firm, occassionally moderate hard, blocky - angular, microcrystalline, rare micropyrite, locally slightly silty.
Sandstone:	translucent - milky quartz, very fine - medium, occassionally coarse, subangular - subrounded, as loose grains.
Age:	Late Maastrichtian - Late Campanian

Kyrre Formation 2526 - 2662.5 m MD RKB

This section comprises claystone with minor limestone, dolomite and sandstone stringers.

Claystone:	olive grey - olive black, medium dark grey - medium grey, rare green grey - dark green grey, blocky - subblocky, firm - moderate hard, generally non calcareous, locally slightly calcareous, slightly silty, rarely micromicaceous, rare pyrite.
Limestone:	pinkish grey - very pale orange, white, soft - firm, occassionally moderate hard, blocky - angular, microcrystalline, rare micropyrite, locally slitly silty.
Dolomite:	dark yellowish brown - dusky yellowish brown, blocky, hard, brittle, microcrystalline - cryptocrystalline
Sandstone	white - clear quartz, generally very fine, loose, also rare medium - coarse, well rounded, hematite stain.
Age:	Late - Early Campanian

4.5 Brent Group (Allochthonous) 2662.5 - 2713 m MD RKB

This upper section of Brent Group is believed to be allochthonous and represents the Ness, Etive, Rannoch and Oseberg Formations.

Ness Formation 2662.5 - 2698.5 m MD RKB

This section comprises sandstone alternating with claystones and coal

Sandstone:	medium light grey - pale yellowish brown, clear quartz, very fine - medium, predominatly fine - medium, trace coarse, subrounded - subangular, generally loose grains, hard, calcareous cemented.
Claystone:	medium grey, olive grey, blocky - subblocky, soft - moderate hard, non - sligthly calcareous, sandy, rarely micaceous, trace micropyritic.
Claystone:	olive black, brown black, blocky - fissile, moderately hard, trace carbonaceous - carbonaceous, trace micropyritic - micropyritic, trace micromicaceous.
Coal:	brownish black - black, blocky - fissile, moderate hard, shiny, argillaceous in part.
Age:	Early Bajocian

Etive Formation 2698.5 - 2704 m MD RKB

This section comprises mainly sandstone and minor coal.

Sandstone:	clear - translucent quartz, very fine - coarse, occasionally very coarse - pebbly, tranlucent - white quartz, subrounded - subangular, as loose grains, poorly sorted, traces mica, traces pyrite.
Coal:	black, platy, hard - brittle, plant remains, occasionally argillaceous grading carbonaceous claystone.
Age:	Early Bajocian

Rannoch Formation 2704 - 2712 m MD RKB

Rannoch Fomation comprises sandstone interbedded with claystone and stringer of limestone.

Sandstone:	clear - translucent quartz, very fine - very coarse, occasionally very coarse - pebbly, tranlucent - white quartz, subrounded - subangular, as loose grains. poorly sorted.
Claystone:	olive black, brown black, blocky - fissile, moderately hard, trace carbonaceous - carbonaceous, trace micropyritic - micropyritic, trace micromicaceous.
Limestone:	white - very light grey, blocky, soft - firm, argillaceous, microcrystalline.
Age:	Early Bajocian

Oseberg Formation 2712 - 2713 m MD RKB

Oseberg Formation consists of a thin sandstone bed in this well.

Sandstone:	clear - translucent quartz, very fine - very coarse, occasionally very coarse - pebbly, tranlucent - white quartz, subrounded - subangular, as loose grains. poorly sorted.
Age:	Early Bajocian

4.6 Dunlin Group (Allochthonous) 2713 - 2830 m MD RKB

This allochthonous section of Dunlin Group comprises Drake Formation in the well.

Drake Formation 2713 - 2830 m MD RKB

This section comprises siltstone and claystones with limestone stringers

Siltstone:	brown grey - olive grey, subplaty, firm, argillaceous, plant remaines, trace micropyrite, occasional pyrite nodules.
Claystone:	dark grey, subplaty, moderately hard, slightly micromicaceous, non calcareous.
Claystone:	olive grey - olive black, subblocky - blocky, soft - firm, non - slightly calcareous, silty - very silty grading to siltstone, occasionally very fine sandy.
Limestone:	medium light grey, very light grey, blocky, soft - firm, argillaceous, rare micropyrite, microcrystalline.
Age:	Aalenian - Early Toarcian

4.7 Brent Group (In-Situ) 2830 - 2918 m MD RKB

This section of Brent Group is In-situ deposited and consists of the Ness, Etive, Rannoch and Oseberg Formations.

Ness Formation 2830 - 2889 m MD RKB

This section comprises sandstones, claystones, coal seams and a minor limestone striger.

Sandstone:	white - light grey, clear - milky - translucent quartz, very fine - medium, occasionally coarse - very coarse, generally loose grains, subrounded, slightly silica cemented, trace calcareous cement, trace mica, moderate visible porosity.
Claystone:	light grey - light olive grey - white, blocky - subblocky, soft - firm, non - slightly calcareous, slightly silty, occasionally kaolinitic.
Claystone:	brown grey - olive grey - dark grey, subplaty, moderate hard, occasional hard grading shale, slightly - non calcareous, slightly silty, trace micromicaceous, slickensides.
Coal:	black, firm - hard - brittle, argillaceous, occasionally grading to carbonaceous claystone, plant remains, occasionally micropyritic.
Limestone:	white, soft, occasionally slightly argillaceous, micro - cryptocrystalline.
Age:	Early Bajocian

Etive Formation 2889 - 2904 m MD RKB

This section comprises mainly sandstone with minor claystone.

Sandstone:	white - light grey, clear - milky - translucent quartz, medium - coarse, trace coarse - pebbly, grading medium to fine with depth, generally loose grains, subangular, poor - moderately sorted, occasionally slightly silica cemented aggregates, occasionally slightly calcareous cemented aggregates, trace mica, trace coal, poor - moderate visible porosity.
Claystone:	light grey - olive grey - olive black - dark grey, firm - soft, blocky - subplaty, non - slightly calcareous, slightly to locally very carbonaceous - occasionally silty, locally micropyritic.
Age:	Early Bajocian

Rannoch Formation 2904 - 2916 m MD RKB

Rannoch Formation comprises sandstone interbedded with claystone and minor limestone.

Sandstone:	white - light grey, clear - milky - translucent quartz, medium - coarse, trace coarse - pebbly, grading medium to fine with depth, generally loose grains, subangular, poor - moderately sorted, occasionally slightly silica cemented aggregates, occasionally slightly calcareous cemented aggregates, trace mica, trace coal, poor - moderate visible porosity.
Claystone:	light grey - olive grey - olive black - dark grey, firm - soft, blocky - subplaty, non - slightly calcareous, slightly to locally very carbonaceous - occasionally silty, locally micropyritic.
Limestone:	white, blocky, soft, occasionally slightly argillaceous, micro - cryptocrystalline.
Age:	Early Bajocian

Oseberg Formation 2916 - 2918 m MD RKB

Oseberg Formation consists of a thin sandstone bed.

Sandstone:	white - light grey, clear - milky - translucent quartz, medium - coarse, trace coarse - pebbly, grading medium to fine with depth, generally loose grains, subangular, poor - moderately sorted, occasionally slightly silica cemented aggregates, occasionally slightly calcareous cemented aggregates, trace mica, trace coal, poor - moderate visible porosity.
Age:	Early Bajocian

4.8 Dunlin Group (In-situ) 2918 - 2988 m MD RKB (Well TD)

This In-situ section of Dunlin Group comprises Drake Formation.

Drake Formation 2918 - 2988 m MD RKB

The Drake Formation comprises siltstone interbedded with claystone.

Siltstone:	olive grey - light olive grey - medium dark grey, becoming dusky yellow brown, blocky - subplaty, minor subfissile, firm - moderate hard, non calcareous, argellaceous, occasionally micromicaceous - micaceous, very carbonaceous - abundant plant remains, occasionally very fine sandy.

Claystone:	dusky yellow brown - brown black - dark grey, subplaty, firm - moderate hard, non calcareous, occasionally silty, micromicaceous, slightly carbonaceous, rare trace plant remains, occasionally trace pyritic
Age:	Aalenian - Late Toarcian

5 HYDROCARBON SHOWS

The evaluation of hydrocarbon shows at the wellsite was carried out in a conventional manner. A standard (Baker Hughes Inteq) hydrocarbon total gas detector system together with a gas chromatograph for automatic and continuous gas analysis, recorded as ppm by volume of C1 through nC4 were used.

The total gas detector system was operational below 1044m down to the TD of the well at 2988m MD. From the interval 1044 to 1482m, the gas chromatograph system failed, and gas analysis has not been performed.

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

5.1 Gas Record

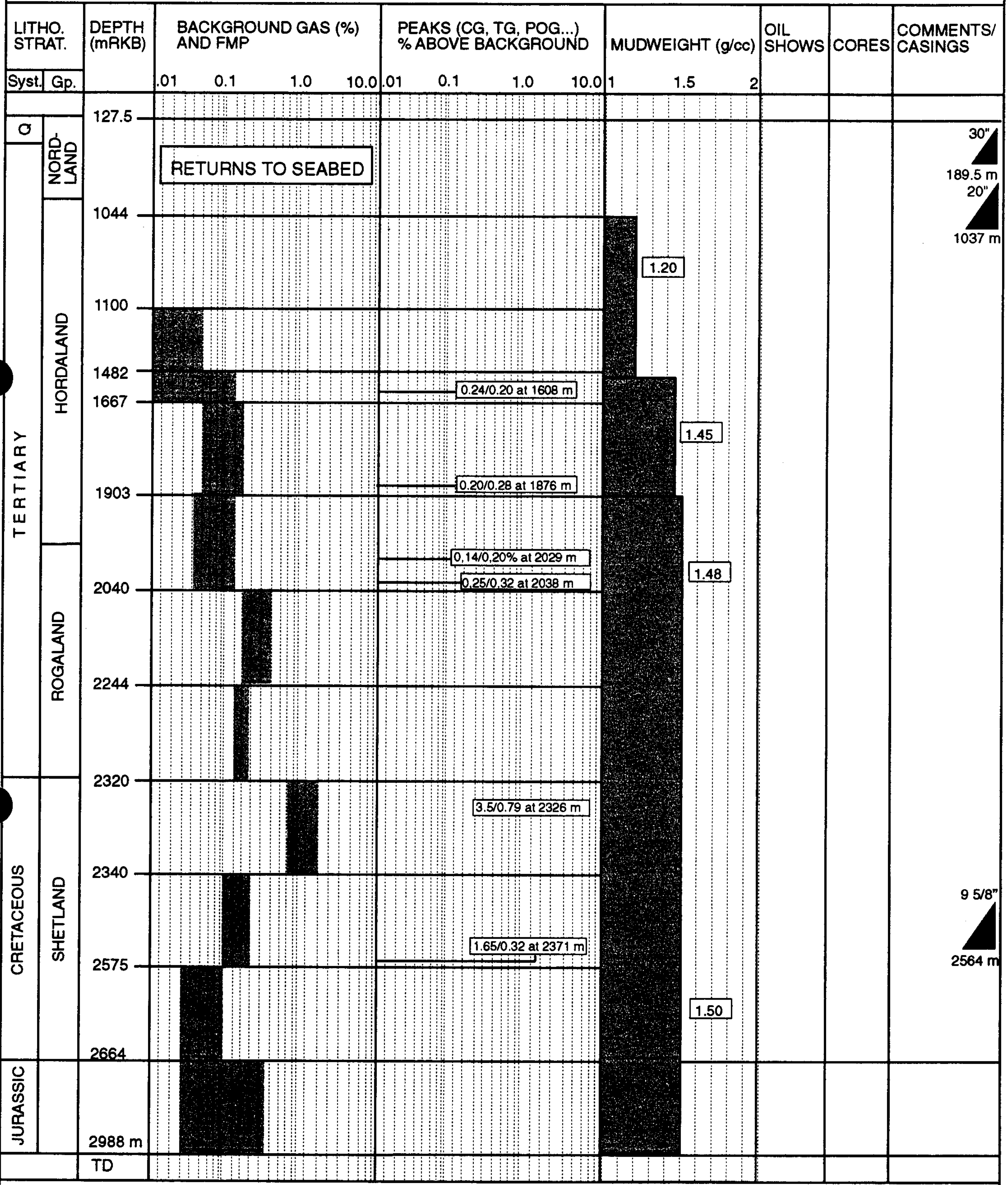
127.5 - 1044 m:

This interval was drilled with returns to sea bed.

1044 - 2988 m:

The gas summary for the well is presented in the Figure 5.1 on the next page.

GAS SUMMARY WELL: 30/6-25 S



NOTE: NOT TO SCALE

Figure 5.1: Gas summary

CG=CONNECTION GAS, TG=TRIP GAS, WTG=WIPER TRIP GAS,
POG=PUMP OFF GAS, SWG=SWABBED GAS, FMP=FORMATION GAS PEAK

5.2 Oil stain and fluorescence

A summary of the observed shows is given in Table 5.1 below:

INTERVAL (mRKB)	SOURCE	LITHOLOGY	SHOWS DESCRIPTION
2330-2350	Cuttings	Limestone	No petroleum odour, good uniform pale cream - yellow direct fluoresence, instant streaming blue white fluoresencent cut, no visible cut, bright blue white - cream even fluoresencent residual, poor yellow visible residual.
2664 - 2680	Cuttings	Sandstone	No petroleum odour, trace yellowish brown oil stain no direct fluoresence, slow streaming - blooming blue white fluoresencent cut, no visible cut, weak even blue white - yellow white fluoresencent residual, no visible residual.
2830 -2851	Cuttings	Sandstone	No petroleum odour, rare dull yellow - orange yellow direct fluoresence, slow blooming yellow white - blue white fluoresencent cut, no visible cut, weak yellow white fluoresencent residual, no visible residual.

Table 5.1. Shows summary

6 CORING

6.1 Conventional cores

No cores were cut.

6.2 Sidewall cores

Sidewall cores were taken from 2580 m to 2966 m. Details of recovery are given in Table 6.1 below.

Descriptions of the sidewall cores can be found in Appendix I, and gross lithology is reported on the Completion Log.

Run	Requested	Misfired	Lost	Empty	Recovered	Rec%
1A	58	4	13	0	41	70,6

Table 6.1: Sidewall cores

7 LOGGING

7.1 Wireline logs

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

Logs	Date	Logged interval (mRKB)	Run
HALS/TLD/HGNS/DSI/GPIT/ACTS	26-27.12.98	2985.5 - 2564	1A
FMI/HNGS/ACTS	27.12.98	2885 - 2574	1A
MDT/GR	27.12.98	2668.5 - 2917.1	1A
VSP/GR	28-29.12.98	2980 - 1800	1A
CST/GR	29.12.98	2966 - 2580	1A

Table 7.1: Wireline logs

7.2 MWD logs

A MWD service (Baker Hughes Inteq) yielding gamma ray, resistivity and survey measurements was run in the following section:

127.5 - 2988 m MD

Detailed MWD results can be found in the report "End of Well Report, MWD, Well 30/6-25 S."

7.3 Bottom hole temperatures from wireline logs

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

Log suite	Run	Depth (mRKB)	Temp ° C	Time since circ.	Circ. time
HALS/TLD/HGNS/DSI/GPIT/ACTS	1A	2 564	96,1	11 hrs 50 min	16 hrs 30 min
FMI/HNGS/ACTS	1A	2 235	102	21 hrs 10min	16 hrs 30 min
MDT/GR	1A	2 917,1	106	27 hrs 20 min	16 hrs 30 min

Table 7.2: Bottom hole temperatures from logs

8 PETROPHYSICAL RESULTS

The objectives of the well were to test the potential of the Kappa Brent prospect in an area of good seismic control/quality. The aim was to identify fluid types and distribution in an optimal position in order to balance an updip volume with downdip down-to scenario. The idea was to confirm the geological model with respect to reservoir quality and acquire vital pressure data in order to identify likely pressure cell boundaries.

No movable hydrocarbons were observed in well 30/6-25 S. The Brent Group was penetrated twice, due to backslided (allochthonous) fault block (see figure 2.1). The Oseberg Formation was thinner and of poorer reservoir quality than expected.

The petrophysical evaluation is based on log data. The log quality is considered to be good. No cores were cut in the well, but 41sidewall cores were recovered with the CST tool.

There is a water gradient of approximately 1 g/cc throughout the Oseberg, Rannoch, Etive and LN2*** (ORELN2) Formations. The relative overpressure in the ORELN2 Formations is around 30 Bar.

The water pressure in the Upper Ness sands is 2-3 bar less than the water gradient interpreted in the ORELN2 Formations. Pressure communication down to the ORELN2 is therefore not likely.

Pressure communication has been interpreted between the ORELN2 Formations in well 30/6-25 S and well 30/9-3 A, see Figure 8.2. In the hydrocarbon filled Upper Ness Sands in well 30/9-3 A the pressure is approximately 10 bar lower than in the ORELN2 Formations and therefore believed to be part of a separate pressure system.

For the in-situ Brent Group there is approxemately 6 and 11 metres of net reservoir sandstone in the LN2 and Etive Formations respectively. Average porosity is slightly above 20 %. The Ness, the Rannoch and the Oseberg Formations are less interesting, due to limited vertical distribution, poor reservoir quality and thin occurence respectively.

The CPI and the pressure interpretation plots are presented in Figure 8.1 and Figure 8.2, while the petrophysical averages are presented in Table 8.1.

For more details regarding the petrophysical interpretations, refer to Norsk Hydro Report: "Formation Evaluation, Well 30/6-25 S, June 1999".

PETROPHYSICAL RESULTS

Formation	Gross [m]	Net Res [m]	N / G	Porosity [%]
Ness*	21,5	6,1	0,28	17,3
LN2*	14,5	10,7	0,74	21,7
Etive *	5,5	2,9	0,53	24,3
Rannoch*	8	2	0,25	16,9
Oseberg*	1	0	-	-
Dunlin Gp.*	117	0	-	-
Ness**	49	22,4	0,46	22,4
LN2**	10	5,9	0,59	24
Etive **	15	10,9	0,73	20,9
Rannoch**	12	2,3	0,19	16,4
Oseberg**	2	1,2	0,61	20,3

Table 8.1: Zonal averages

* *Allochthonous*
** *In-situ deposited*
*** LN2: Lower Ness 2

WELL NAME: 30/6-25 S

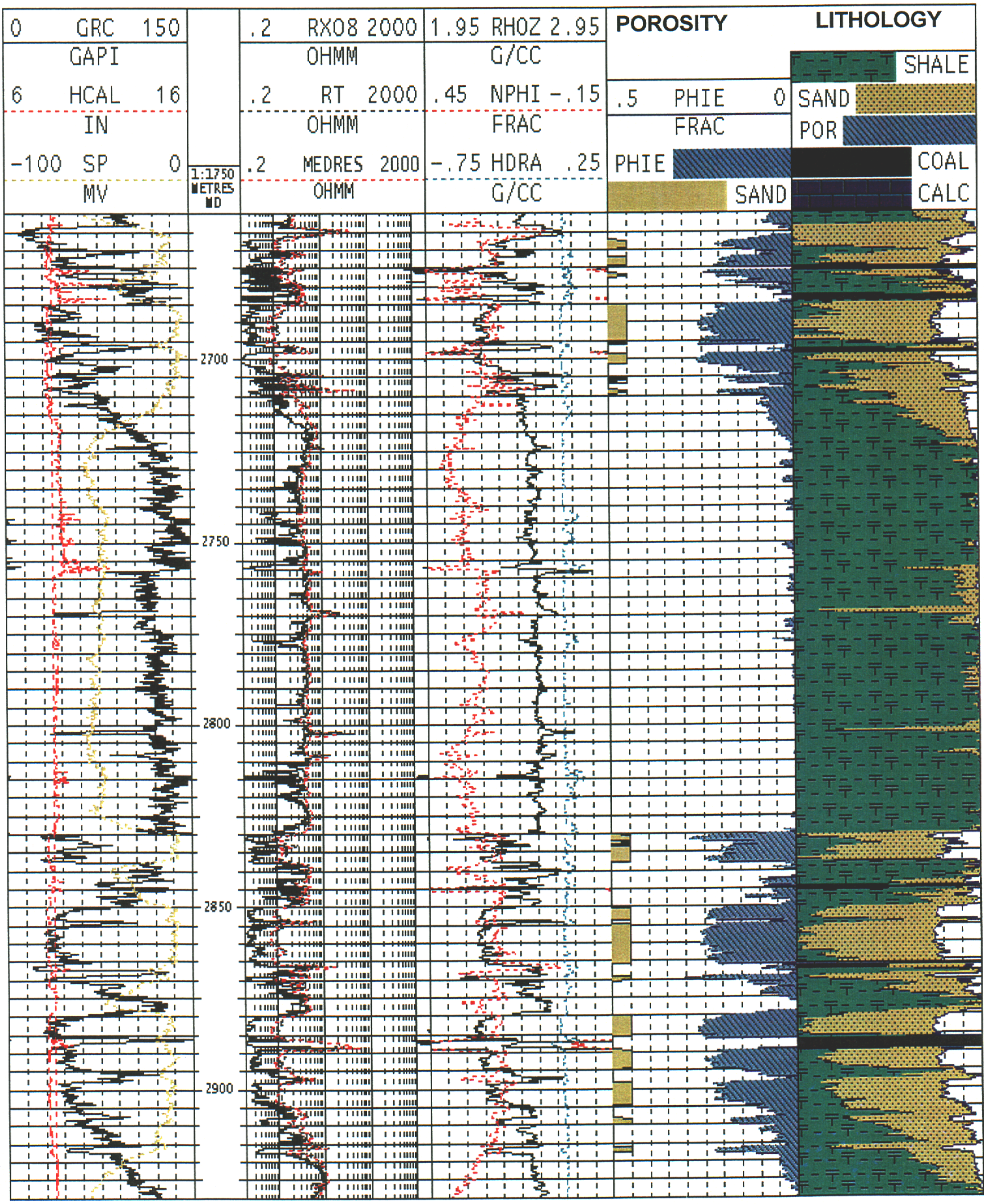
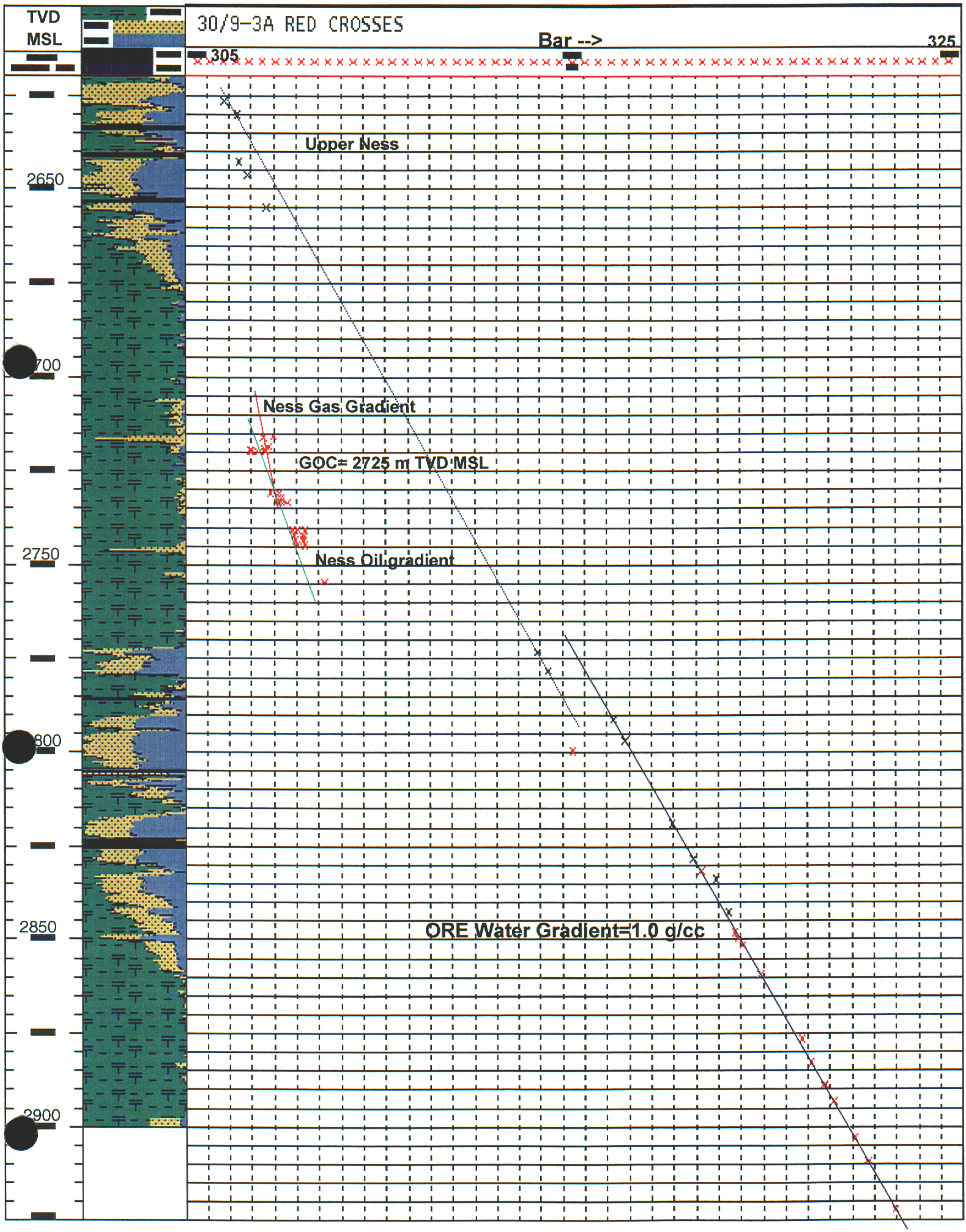


Figure 8.1: CPI plot

WELL NAME: 30/6-25 S

Figure 8.2: Pressure gradients



9 GEOPHYSICAL RESULTS

The depth conversion method used stacking velocities to Base Cretaceous, constant velocity from Base Cretaceous to Top Lower Tarbert Formation and velocity function from Top Lower Tarbert Formation to Base Brent.

Prognosed and actual time, depth and velocity values in well 30/6-25 S are listed in Table 9.1. Base Skade Formation, Top Intra Hordaland Sand, Base Intra Hordaland Sand, Top Balder Formation, Top Sele Formation, Top Shetland Group, Top Lower Ness 2 Unit (in situ), Top Rannoch Formation (in situ) and Top Oseberg Formation (in situ) were not encountered within the given uncertainties.

Base Cretaceous was penetrated about 25m TVD deeper than prognosed. The corrected stacking velocities used in the depth conversion were too low which gave an error of approximately 75m TVD for Base Cretaceous. Furthermore the Base Cretaceous was not well defined on the seismic in the area, and was picked 33ms too deep which correspond to approximately 50m TVD. Isopachs were used from Base Cretaceous to Top Balder Formation. Too low stacking velocities used in the depth conversion explains the error in TVD of 80m to 90m for the overlying Top Balder Formation, Top Sele Formation,Top Shetland Group and the underlying in situ Brent sequence. Furthermore Top Lista Formation and Top Våle Formation are difficult to pick on the seismic. The Sele Formation was 53m thinner than prognosed and the Våle Formation was 49m thicker than prognosed. The well prognosis was formed on the basis of the wells in the near vicinity to 30/6-25 S. Wells 30/6-18 and 30/9-3 are the most important for correlation purpose.

The Brent Group was penetrated twice, which was not expected. The upper Brent sequence is belived to represent a sliding block most possibly moved from north-east towards south-west. The lower sequence is believed to have been deposited in situ (see Figure 2.1). The Ness Formation is thinner than prognosed. Furthermore the clear seismic event interpreted as Top Oseberg Formation (in situ) corresponded most probably to some coal layer in the lowermost part of Ness Formation and the interpreted Oseberg sand was not so thick as expected.

The error in depth is quite constant from Top Balder Formation to Top Shetland Group, but from Base Grid Formation to Top Balder Formation there is a shift from - 81 to + 90.8m TVD. From Seabed to Top Skade Formation the depth conversion of each time pick is performed using interval velocities. The selected velocities are derived from assumed interval velocities in the tie-well 30/6-18. It was difficult to pick Base Skade Formation, the Intra Hordaland sand and the Grid sand from the seismic because of poor resolution. Lateral facies changes of lithology makes it difficult to prognose these sands. Furthermore the Intra Hordaland Sand was remarkable thinner than observed in well 30/6-18.

GEOPHYSICAL RESULTS

	PROGNOSED							ACTUAL					
HORIZON	TWT (ms)	Uncert. (ms)	V. int. (ms)	Uncert. (m/s)	Depth mMD (RKB)	Depth mTVD (MSL)	Uncert. (+/- m)	TWT (ms)	V. int. (ms)	Depth mMD (RKB)	Depth mTVD (RKB)	Depth mTVD (MSL)	Error (TVD)
Seabed	141	2	1 484	5	129	105,5	1			127,5	127,5	104	- 1.5
Base Pleistocene	326	-	1 930	-	304	280,5	17			310	310	286,5	+ 6
Top Intra Pliocene Sand	602	-	2 100	-	584	560,5	29			587	587	563,5	+ 3
Base Intra Pliocene Sand	626	-	2 100	-	609	585,5	30			626	626	602,5	+ 17
Top Utsira Fm.	648	-	2 100	-	632	608,5	32			640	640	616,5	+ 8
Base Utsira Fm.	888	-	2 050	-	878	854,5	44			878	878	854,5	0
Top Skade Fm.	927	-	2 090	-	919	895,5	47			895	895	871,5	- 24
Base Skade Fm.	991	-	2 090	-	986	962,5	56			917	917	893,5	- 69
Top Intra Hord. Sand	1 118	-	1 995	-	1 113	1 089,5	64			991	991	967,5	- 122
Base Intra Hord. Sand	1 310	-	1 995	-	1 304	1 280,5	71			1 004	1 004	980,5	- 300
Top Grid Fm.	1 476	-	1 995	-	1 470	1 446,5	87			1 386	1 386	1 362,5	- 84
Base Grid Fm.	1 555	-	1 995	-	1 549	1 525,5	101			1 468	1 468	1 444,5	- 81
Top Balder Fm.	1 948	10	1 978	140	1 937	1 913,5	60			2 028,5	2 027,8	2 004,3	+ 90.8
Top Sele Fm.	2 020	18	2 300	130	2 020	1 996,5	80			2 105,5	2 104,6	2 081,1	+ 84.6
Top Lista Fm.	2 100	28	2 400	160	2 116	2 092,5	100			2 148,5	2 147,4	2 123,9	+ 31.4
Top Våle Fm.	2 184	10	2 500	100	2 220	2 196,5	100			2 253	2 251,6	2 228,1	+ 31.6
Top Shetland Group	2 198	4	2 500	100	2 238	2 214,5	55			2 320	2 318,6	2 295,1	+ 80.6
Intra Campan	2 317	8	3 050	110	2 429	2 396,5	57						
B. Cretaceous / Top Brent (Ness)	2 446	40	3 050	110	2 631	2593.5	83	2 405	3 062	2 662,5	2 641,4	2 617,9	+ 24.4
Top lower Ness 2 Unit (allochtonous)								2 416	3 164	2 684	2 660,8	2 637,3	
Top Etive Fm. (allochtonous)								2 424	3 021	2 698,5	2 673,8	2 650,3	
Top Rannoch Fm. (allochtonous)								2 427	3 500	2 704	2 678,8	2 655,3	
Top Oseberg Fm. (allochtonous)								2 431	3 500	2 712	2 686	2 662,5	
Top Dunlin Gp. / Drake Fm. (allochtonous)								2 432	3 462	2 713	2 686,9	2 663,4	
Top Brent (Ness) (in-situ)								2 496	3 405	2 830	2 792,7	2 769,2	
Top lower Ness 2 Unit	2 532	4	3 000	100	2 774	2 721,5	84	2 522	3 530	2 879	2 836,9	2 813,4	+ 91.9
Top Etive Fm.	2 543	2	3 000	100	2 794	2 739,5	84	2 528	2 851	2 889	2 845,9	2 822,4	+ 82.9
Top Rannoch Fm.	2 546	2	3 400	100	2 798	2 743,5	84	2 536	3 613	2 904	2 859,3	2 835,8	+ 92.3
Top Oseberg Fm.	2 547	8	3 400	100	2 802	2 746,5	86	2 541	3 475	2 916	2 870,1	2 846,6	+ 100.1
Top Dunlin Gp. / Drake Fm. (In-situ)	2 569	10	3 000	100	2 838	2 779,5	87	2 542	3 470	2 918	2 871,9	2 848,4	+ 68.9
TD	2 597	2	3 182	140	2 888	2 824,5	87			2 988	2 934,7	2 911,2	+ 86.7

Table 9.1: Geophysical summary

10 POST SITE SURVEY REPORT

WELL DATA :

1	**Distance from rig floor to sea level:**	23.5 m
2	**Water depth (MSL):**	104 m
3a	**Setting depth for conductor (m RKB):**	189.5 m
3b	**Leak Off / Formation Integrity Test (g/cc):**	N/A
4a	**Setting depth (m RKB TVD) for casing on which BOP mounted:**	1037 m
4b	**Formation Integrity Test (g/cc):**	1.6 sg

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

R3	: 248 m (268 ms)
R4	: 276 m (300 ms)
Base Pleistocene	: 310 m (326 ms)
Intra Pliocene Anoamly 1(IPAN1)	: 338 m (350 ms)
Intra Pliocene Anoamly 2(IPAN2)	: 356 m (385 ms)
Top Intra Pliocene Sand	: 587 m (602 ms)
Base Intra Pliocene Sand	: 626 m (626 ms)
Top Utsira Sand	: 640 m (648 ms)
Base Utsira Sand	: 878 m (888 ms)
Top Skade	: 895 m
Base Skade	: 917 m (929 ms)
Top Intra Oligocene Sand	: 991 m (991 ms)
Base Intra Oligocene Sand	: 1004 m

Note:

No chronostratigraphic information was collected in the tophole section of the well (from seabed down to 1038 m RKB TVD). Consequently, the interpretation of the different formations in this area is based on the MWD logs, seismic character and previous work. Mud logging commenced at 1038 m. All formation tops are based upon MWD logs and cuttings analysis.

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

Note:

No data exists on background gas levels from seabed down to 1038 m (section drilled with returns to seabed). However, no gas related incidents were reported over this interval.

Pleistocene Interval:

213 m - 228 m
231 m - 236 m
251 m - 254.5 m
257 m - 276 m

Pliocene Interval:

334 m - 338 m
356 m - 357 m
587 m - 626 m

Lower Miocene Interval:

650 m - 878 m

Oligocene Interval:

895 m - 917 m
991 m - 1004 m

7 **By what means is the presence of gas proven:**

A 8 1/2" pilot hole was run with controlled ROP of 30 m/t instantaneous down to 400 m to obtain good log quality in response to potential shallow gas, from 194 - 1038 m. At 710 m the well was flowchecked in response to potential shallow gas identified from log at 356 m. This level corresponds to reflection amplitude anomaly IPAN 2. No flow occurred. Below this level gas analyses were accomplished using flame ionisation detectors (FID) with gas measured as percentage methane (C1) equivalent in air, and chromatographic analyses expressed in parts per million.

No shallow gas was recorded between 1038 m and 1500 m RKB MD.

8 **Composition and origin of gas:** N/A

9 **Describe all measurements taken in gas bearing layers:** N/A

SEISMIC DATA:

10 Given depth (m RKB (TVD) & ms Two Way Time) of unconformities at the well location:

R3 : 248 m (268 ms)
R4 : 276 m (300 ms)
Base Pleistocene : 310 m (326 ms)
IPAN1 : 338 m (350 ms)
IPAN2 : 356 m (385 ms)
Top Intra Pliocene Sand : 587 m (602 ms)
Base Intra Pliocene Sand : 626 m (626 ms)
Top Utsira Sand : 640 m (648 ms)
Base Utsira Sand : 878 m (888 ms)
Top Skade : 895 m
Base Skade : 917 m (929 ms)
Top Intra Oligocene Sand : 991 m (991 ms)
Base Intra Oligocene Sand : 1004 m

11 Given depth (m RKB & ms TWT) and extent of sand layers (communication, continuity, truncation etc.):

Pleistocene Interval:

213 m - 228 m
231 m - 236 m
251 m - 254.5 m
257 m - 276 m

Pliocene Interval:

334 m - 338 m
356 m - 357 m
587 m - 626 m

Lower Miocene Interval:

650 m - 878 m Laterally extensive sand layer.

Oligocene Interval:

895 m - 917 m
991 m - 1004 m

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

Amplitude anomalies indicative of shallow gas were mapped at three levels in the area of 30/6-25S.

IPAN1: 327.5 m ± 20 m TVG RKB, 95 m south-east of the spud location (minor segment)

IPAN2: 361.5 m ± 22 m TVG RKB, 250 m north of the spud location with a minor segment 95 m to south-east.

IPAN3: 434.5 m ± 24 m TVG RKB, 125 m south-east of the spud location.

Based on experiences with 30/5-2 weak gas warnings were given for the horizons IPAN1 and IPAN2 at the planned well 30/6-25S location.

Due to shallow gas warning, a 8 1/2" pilot hole was drilled down to 1038 m. The tophole section of the well was drilled with returns to seabed to 1038 m RKB TVD. Background gas levels were consequently not monitored. At 710 m the well was flowchecked in response to potential shallow gas identified from log at 356 m. This level corresponds to reflection amplitude anomaly IPAN 2. No flow occurred.

13 Note any indication of gas originating from deeper levels. Give description in cases where gas comes from deeper layers: N/A

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

14a Shallow Gas:

Three amplitude anomaly levels were mapped close to the planned well location. Weak gas warnings were given for horizon IPAN1 and IPAN2 based on experiences with well 30/5-2. Due to shallow gas warning, a 8 1/2" pilot hole was drilled down to 1038 m. Log indication of shallow gas was recorded at 356 m RKB TVD which corresponds to IPAN2.

No gas related problems were experienced in the well.

14b Sand Bodies:

The Pleistocene sand layers were predicted but not annotated with exact depth. The encountered sand layers correspond with the interpretation.

Two of three predicted thin sand layers in Pliocene were observed. The thick Intra Pliocene sand layer at 588 m to 626 m appeared 11 m thicker than predicted.

The Utsira Sand occurred as predicted but due to the seismic pick and correlation to tie-well 30/6-18, the Top Utsira Sand is placed 10 m shallower than indicated in the Formation Tops prognoses. These upper 10 m sequence of the Utsira Sand is interpreted as containing a transitional zone with upwards fining and grading into silt and clay as the overlaying sequence is approached.

The sandy Skade Formation is predicted deeper than the logs indicate. The reason for this are probably wrong seismic picks of the formation boundaries.

The sand layer in Oligocene at 991 m to 1004 m was not predicted.

14c Boulders:

Scattered boulders were predicted in the shallow section between 186.5 m - 303.5 m RKB TVD. No boulders layers were observed in the predicted interval, but boulders were encountered in the interval 142 - 147 m RKB TVD.

14d Unconformities (depths in metres RKB (TVD)) :

Horizon		Prognosed	Observed	Difference
Base Pleistocene	:	303.5 ± 17	310	6.5(deeper)
Base Pliocene	:	631.5 ± 32	640	8.5 (deeper)
Lower Miocene	:	877.5 ± 44	878	0.5 (deeper)
Top Skade	:	918.5 ± 47	895	23.5 (shallower)
Base Skade	:	985.5 ± 56	917	68.5 (shallower)

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

14e Correlation to Nearby Wells:

In general, the drilling conditions experienced in well 30/6-25S are as predicted and similar to those encountered in tie-wells 30/5-2 and 30/6-18.

11 STANDARD AND SPECIAL STUDIES

- Norsk Hydro,1999: Petroleum geochemistry, well 30/6-25 S.
- Norsk Hydro,1999: Formation Evaluation, well 30/6-25 S, June 1999.
- Norsk Hydro,1999: Petrographical analysis of sidewall cores, well 30/6-25 S.
- Norsk Hydro 30/6-25 S, Biostratigraphy of the interval 1050m - 2990m, March 1999, GeoStrat Ltd.
- Read Well Services,1999: Final VSP Report well 30/6-25 S.
- Read Well Services,1999: Final Special VSP Report well 30/6-25 S.
- Baker Hughes Inteq,1999: End of Well Report, measurement while drilling, well 30/6-25 S.
- Baker Hughes Inteq,1999: End of Well Report, well 30/6-25 S, Mud Logging.

APPENDIX I

SIDEWALL CORE DESCRIPTIONS

NORSK HYDRO

SIDE WALL CORE DESCRIPTION

WELL: 30/6-25 S
RIG : Transocean Leader

Run: 1A | Date 29.12.98 | Logging Co Schlumberger | Page : 1 of 6
Shot: 58 | Misfired: 4 | Lost: 13 | Empty : 0 | Recoverd 41 | Geologist C.DONS/S.ERIKSON

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
58	2 580	1	Clst: olv gry, frm-fri, sl calc, sl micromic, sl slty						
57	2 588	0	MF						
56	2 606	1,5	Clst: dk grn gry-m dk gry, mod hd, sl calc, sl micromic, sl carb, hom						
55	2 616	2	Clst:pred m dk gry, mod hd, sl calc, sl micromic, sl micropyr, sl carb, hom, gen a/a						
54	2 630,5	0	MF						
53	2 638	1,5	Clst:pred m dk gry-dk gry, mod hd, sl calc, sl micromic, sl micropyr, sl carb, hom, gen a/a						
52	2 643	1	Clst:pred m dk gry-dk gry, mod hd, sl calc, sl micromic, sl micropyr, sl carb, hom, gen a/a						
51	2 649	1	Clst: dk gry-m dk gry, mod hd, sl calc, sl micromic, sl micropyr, tr slty, hom, gen a/a						
50	2 652	1	Clst:dk gry-m dk gry, frm- mod hd, non calc, sl micromic, sl carb hom-lam, gen a/a						
49	2 655	2	Clst:dk gry-m dk gry, frm- mod hd, non calc, sl micromic, sl carb hom-lam, gen a/a						

Tr:Trace M:Medium G:Good

NORSK
HYDRO

SIDE WALL CORE DESCRIPTION

WELL: 30/6-25 S
RIG : Transocean Leader

Run: 1A
Date 29.12.98
Logging Co Schlumberger
Page : 2 of 6
Shot: 58
Misfired: 4
Lost: 13
Empty : 0
Recoverd 41
Geologist C.DONS/S.ERIKSON

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
48	2 660	1,5	Clst:dk gry-m dk gry, frm- mod hd, non calc, sl micromic, sl carb hom-lam, gen a/a						
47	2 670,5	0	LOST						
46	2 673	2,5	Sst: v lt gry, clr-mlky Qtz, f-vf, fri, sbrnd, mod srt, tr calc cmt, mic, tr carb, gen cln, mnr blk arg lam, mod vis por Shows: no petr od, no dir fluor, blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd					X	
45	2 680	2	Sst: lt brn gry-lt gry, clr-mlky Qtz, vf mnr f, fri, sbrnd, mod srt, non calc, mic, tr carb, gen cln-sl arg mtx, pr vis por Shows: no petr od, no dir fluor, slo blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd (weaker)				X		
44	2 688	3	Sst: v lt gry, clr-mlky Qtz, f-vf, fri, sbrnd, mod srt, tr calc cmt, mic, tr carb, gen cln, mnr blk arg lam, r glac, mod vis por Shows: no petr od, no dir fluor, slo blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd (weaker)				X		
43	2 692	2	Sst: lt brn gry-lt gry, clr-mlky Qtz, vf, fri, sbrnd, mod srt, non calc, mic, tr carb, gen cln-sl arg mtx, pr vis por Shows: no petr od, no dir fluor, slo blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd (weak)				X		
42	2 696,5	2	Clst: olv gry, mod hd, non calc, sl micromic, occ carb-coaly frag, loc micropyr, sl slty, occ plt rem						
41	2 702	2	Sst: m lt gry-lt gry, clr-mlky Qtz, f-crs occ v crs, fri-lse, subang, pr srt, non calc, mic, carb, arg +Kao mtx, sl lam, arg lam, pr-mod vis por Shows: no petr od, no dir fluor, slo blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd (weak)				X		
40	2 710,5	2	Sst-Sltst: lt gry-lt brn gry, clr-mlky Qtz, vf grdg Sltst in lam, fri, subrnd, mod srt, frm, non calc, mic-v mic lam, carb+arg lam, occ f sdy lam, pr vis por				X		
39	2 715,5	2	Sltst: m dk gry-brn gry-lt gry lam, frm-mod hd, non loc sl calc in lam, arg+carb 1mm lam, occ vf sdy lam, mic, carb, plnt rem						

Tr:Trace M:Medium G:Good

NORSK HYDRO	**SIDE WALL CORE DESCRIPTION**	**WELL:** 30/6-25 S **RIG** : Transocean Leader

Run: 1A	Date 29.12.98	Logging Co Schlumberger			Page : 3 of 6
Shot: 58	Misfired: 4	Lost: 13	Empty : 0	Recoverd 41	Geologist C.DONS/S.ERIKSON

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
38	2 722,5	2	Clst: brn blk-olv blk, mod hd, non calc, abd micropyr nod, carb, micromic, earthy, sl lam						
37	2 729,5	0	LOST						
36	2 734,5	0	LOST						
35	2 740	2	Clst: olv gry-m dk gry, mod hd, non calc, tr dissem micropyr, tr carb, micromic, sl slty, hom						
34	2 744	2	Clst: olv gry-m dk gry, mod hd, non calc, tr dissem micropyr, tr carb, micromic, sl slty, hom, gen a/a						
33	2 749,5	3	Clst: olv gry-m dk gry, mod hd, non calc, tr dissem micropyr, tr carb, micromic, sl slty, hom, gen a/a						
32	2 755	3	Clst: olv gry-m dk gry, mod hd, non calc, tr dissem micropyr, tr carb, micromic, sl slty, hom, gen a/a						
31	2 759	3	Clst: olv gry-m dk gry, mod hd, non calc, tr dissem micropyr, tr carb, micromic, sl slty, hom, gen a/a						
30	2 766	0	MF						
29	2 772,5	2	Clst: m dk gry-m gry, mod hd, non calc-v sl calc, r dissem micropyr, tr carb, micromic, hom, gen a/a						

Tr:Trace M:Medium G:Good

NORSK HYDRO

SIDE WALL CORE DESCRIPTION

WELL: 30/6-25 S
RIG : Transocean Leader

Run: 1A	Date 29.12.98	Logging Co Schlumberger			Page : 4 of 6
Shot: 58	Misfired: 4	Lost: 13	Empty : 0	Recoverd 41	Geologist C.DONS/S.ERIKSON

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
28	2 778	0	LOST						
27	2 784,5	0	LOST						
26	2 792	0	LOST						
25	2 798	2	Sltst: olv gry, mod hd-fri, non calc, v arg grdg Clst						
24	2 805	0	MF						
23	2 810	0	LOST						
22	2 816	3	Clst: gry blk, mod hd-shly, tr calc, micromic, abd slick, slty						
21	2 821,5	2,5	Clst: dk gry-m dk gry, frm, tr calc, micromic, sl slty, sl carb, hom gen a/a						
20	2 827,5	2	Clst: dk gry-m dk gry, frm, tr calc, micromic, sl slty, sl carb, hom gen a/a						
19	2 837	1,5	Sst: wh-pk gry, clr-mlky Qtz, f-crs also vf+vcrs, fri, occ pyr cmtd, subang, pr srt, non calc, abd dissem pyr, carb+arg+coaly frag, pyr nod, sl mic, mod vis por Shows: no petr od, no dir fluor, blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd				X		

Tr:Trace M:Medium G:Good

NORSK **HYDRO**	**SIDE WALL CORE DESCRIPTION**	**WELL:** 30/6-25 S **RIG** : Transocean Leader

Run: 1A	Date 29.12.98		Logging Co Schlumberger			Page : 5 of 6	
Shot: 58	Misfired: 4	Lost: 13	Empty : 0	Recoverd 41	Geologist C.DONS/S.ERIKSON		

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
18	2 841	2,5	Clst: m lt gry, mod hd, blky, non calc, sl micromic, sl slty, tr carb specs, tr plt rem						
17	2 854	0	LOST						
16	2 860	2,5	Sst: v lt gry-pk gry, clr-mlky Qtz, m mnr crs, fri-lse, subang, mod-pr srt, non calc, gen cln, mic, tr carb specs, mod vis por Shows: no petr od, no dir fluor, blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd				X		
15	2 868	2,5	Sst: v lt gry-pk gry, yel orng stn,clr-mlky Qtz, crs-v crs mnr f-m, fri-lse, subang, pr srt, non calc, abd Kao mtx, mod-pr vis por. Also intraclast of Clst: pl brn, sft, non calc, sl lam, pyr cmt at boundary to Sst Shows: no petr od, no dir fluor, blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd				X		
14	2 878	0	LOST						
13	2 886,5	2	Clst: m dk gry, mod hd, blky, sl calc, tr micromic, hom also lam of Sst f-m						
12	2 892	3	Sst: v lt gry-pk gry, yel orng stn,clr-mlky Qtz, crs-v crs mnr f-m, fri-lse, subang, pr srt, non calc, mnr Kao mtx, mod-pr vis por Shows: no petr od, no dir fluor, blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd				X		
11	2 895,5	0	LOST						
10	2 903,5	2	Sst: m lt gry-lt gry interlam w/ Clst lam+ mica+carb lam w/ plt rem , gen vf grdg slty, non calc Shows: no petr od, no dir fluor, blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd				X		
9	2 907,5	2	Sst: m lt gry-lt gry interlam w/ Clst lam+ mica+carb lam w/ plt rem, gen vf grdg slty, non calc Very similar to sample at 2710.5m						

Tr:Trace M:Medium G:Good

NORSK HYDRO

SIDE WALL CORE DESCRIPTION

WELL: 30/6-25 S
RIG : Transocean Leader

Run: 1A
Date 29.12.98
Logging Co Schlumberger
Page : 6 of 6
Shot: 58
Misfired: 4
Lost: 13
Empty : 0
Recoverd 41
Geologist C.DONS/S.ERIKSON

No.	Depth m RKB	Recoverd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
8	2 912,5	2	Sltst: m dk gry-brn gry-lt gry lam, frm-mod hd, non loc sl calc in lam, arg+carb 1mm lam, occ vf sdy lam, mic, carb, plnt rem						
7	2 917	2	Sst: lt olv gry w/ pk gry stn, clr-mlky Qtz, fri, f-crs occ v crs-pbly, subang, pr srt, non calc ,carb lam, r glauc Shows: no petr od, no dir fluor, blmg yel wh fluor cut, no vis cut, mod bri yel wh fluor res, tr straw vis resd				X		
6	2 922	3							
5	2 927	0	LOST						
4	2 831,5	0	LOST						
3	2 939	0	LOST						
2	2 944	2	Clst: olv gry-m dk gry, mod hd, non calc, tr dissem micropyr also micropyr lam, tr carb, micromic, sl slty, hom Similar to sample at 2740m						
1	2 966	2	Clst: olv gry-m dk gry, mod hd, non calc, tr dissem micropyr also micropyr lam, tr carb, micromic, sl slty, hom, gen a/a						

Tr:Trace M:Medium G:Good

APPENDIX II

WELL SUMMARY

GEOLOGICAL WELL SUMMARY

MDT RESULTS

WELL SUMMARY:

Coord: 60° 30' 45.16"N
02° 43' 15.85"E
UTM: 6 708 684.6 mN
484 682.5 mE
Zone: ED-50, UTM Zone 31, CM 3° E
Line: NH9201, inline 753, x-line 1221
Rig: Transocean Leader
Waterdepth: 127.5 m RKB
Stopped in: Drake Fm.

On location: 25.11.98
Spudded: 26.11.98
At T.D.: 26.12.98
Completed:
T.D. Driller: 2988 m MD/2935 m TVD
T.D. Logger: 2988.5 m MD/2935 m TVD
Wireline Logging: Schlumberger
Mudlogging: Baker Hughes Inteq.

WELL:
30/6-25 S

COUNTRY
Norway

OPERATOR Norsk Hydro **LICENCE**

OWNED BY: Hydro, Statoil, Saga, Mobil, Elf, Total

TARGETS
Primary: Lower Brent, Oseberg Fm.
Secondary: Ness Fm LN2

RESULTS

Dry Well, permanent plugged and abandoned

CASING

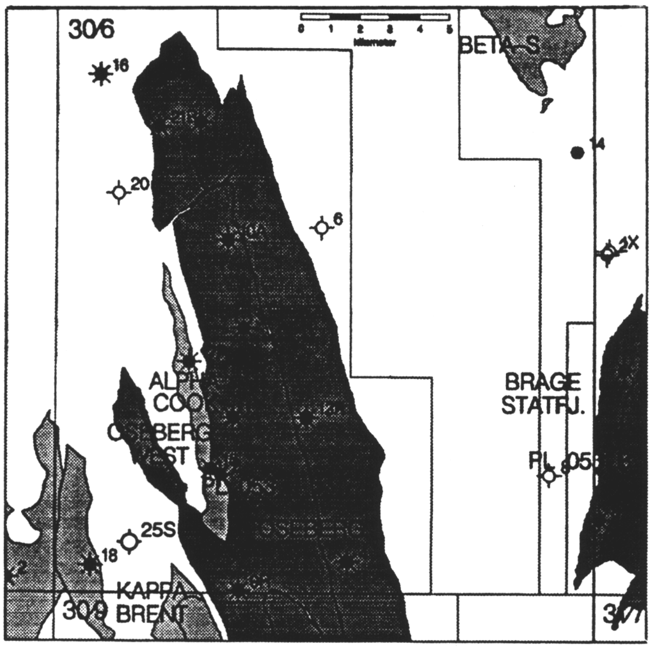
30" at 189.5 m
20" at 1037 m
9 5/8" at 2564 m

CORES

No cores were cut.

GAS RECORD

127.5-1044m: Returns to seabed
1044-1482 m: 0.00 - 0.01% C1
1482-1667 m: 0.01-0.20% C1-C2
1667-1903 m: 0.06-0.42% C1-iC4
1903-2040 m: 0.05-0.20% C1-iC4
2040-2244 m: 0.29-0.63% C1-nC4
2040-2320 m: 0.19-0.36% C1-nC4
2320-2340 m: 0.73-2.79% C1-nC4
2340-2575 m: 0.13-0.35% C1-nC4
2575-2664 m: 0.04-0.55% C1-nC4
2664-2988 m: 0.04-0.55% C1-nC4



LOGS

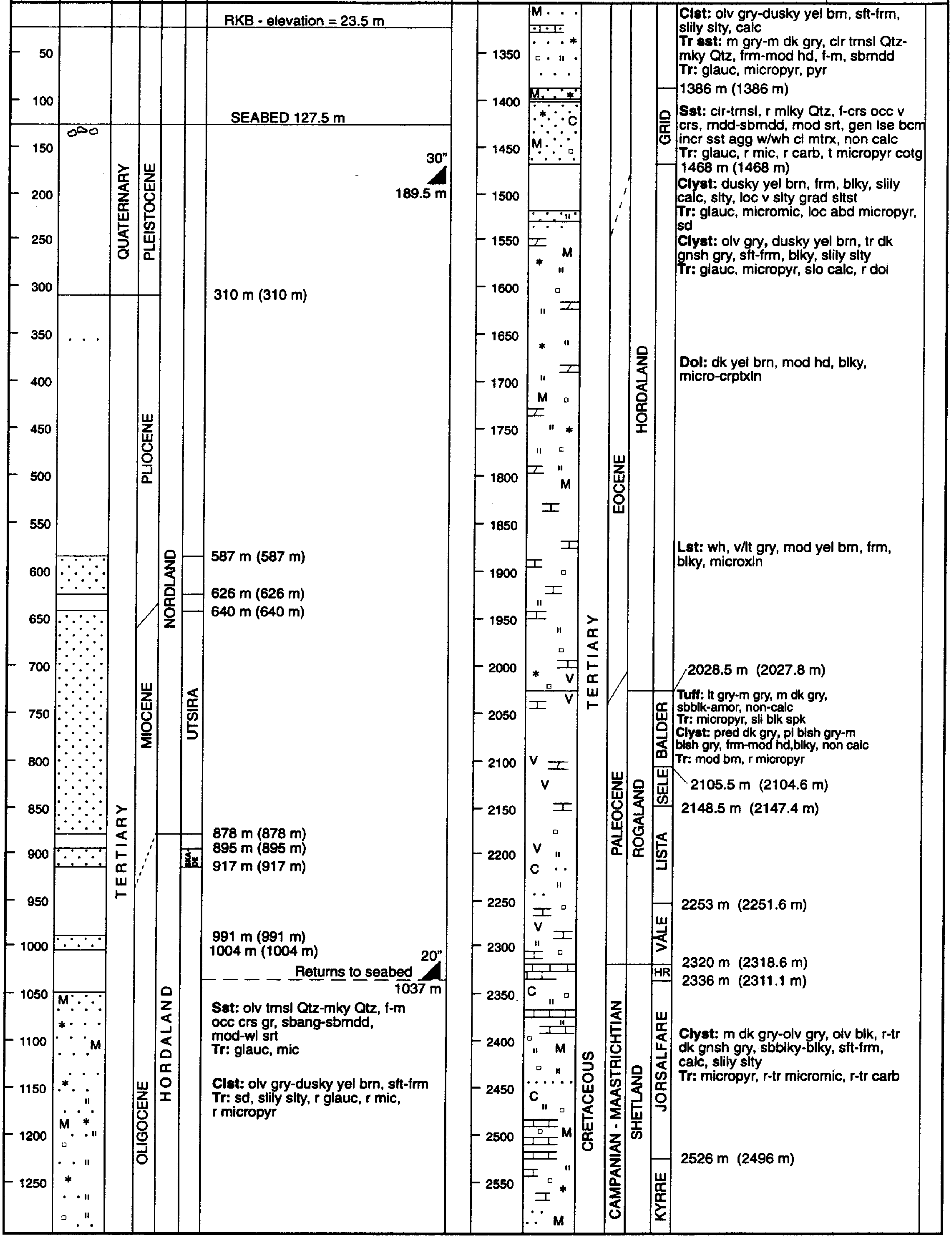
HALS/TLD/HGNS/DSI/ GPIT/ACTS	1A	2564 - 2985.5 m
FMI/HNGS/ACTS	1A	2574.0 - 2884.0 m
MDT/GR/ACTS	1A	2668.5 - 2917.1 m
VSP/GR	1A	2980.0 - 1800.0 m
CST/GR	1A	2966.0 - 2580.0 m

OIL SHOWS

No movable hydrocarbon shows
(Residual oil shows observed on sandstones in intervals: 2664-2680m and 2830-2851m, and on limestone at 2330-2350m)

GEOLOGICAL WELL SUMMARY

DEPTH m MD RKB	LITHO SECTION	SYSTEM	SERIES/STAGE	GROUP	FORMATION	DESCRIPTION All depths in m MD (m TVD RKB)	SHOWS	Located on: 60°30'45.16"N 6708 684.6 mN 02°43'15.85"E 484 682.5 mE Water depth: 104 m MSL 127.5 m RKB	WELL **30/6-25 S**



RKB - elevation = 23.5 m

SEABED 127.5 m

30"
189.5 m

310 m (310 m)

587 m (587 m)

626 m (626 m)

640 m (640 m)

878 m (878 m)

895 m (895 m)

917 m (917 m)

991 m (991 m)

1004 m (1004 m)

20"
Returns to seabed
1037 m

Sst: olv trnsl Qtz-mky Qtz, f-m occ crs gr, sbang-sbrndd, mod-wl srt
Tr: glauc, mic

Clst: olv gry-dusky yel brn, sft-frm
Tr: sd, slily slty, r glauc, r mic, r micropyr

Clst: olv gry-dusky yel brn, sft-frm, slily slty, calc
Tr sst: m gry-m dk gry, clr trnsl Qtz-mky Qtz, frm-mod hd, f-m, sbrndd
Tr: glauc, micropyr, pyr

1386 m (1386 m)

Sst: clr-trnsl, r mlky Qtz, f-crs occ v crs, rndd-sbrndd, mod srt, gen lse bcm incr sst agg w/wh cl mtrx, non calc
Tr: glauc, r mic, r carb, t micropyr cotg

1468 m (1468 m)

Clyst: dusky yel brn, frm, blky, slily calc, slty, loc v slty grad sltst
Tr: glauc, micromic, loc abd micropyr, sd

Clyst: olv gry, dusky yel brn, tr dk gnsh gry, sft-frm, blky, slily slty
Tr: glauc, micropyr, slo calc, r dol

Dol: dk yel brn, mod hd, blky, micro-crptxln

Lst: wh, v/lt gry, mod yel brn, frm, blky, microxln

2028.5 m (2027.8 m)

Tuff: lt gry-m gry, m dk gry, sbblk-amor, non-calc
Tr: micropyr, sli blk spk
Clyst: pred dk gry, pl blsh gry-m blsh gry, frm-mod hd,blky, non calc
Tr: mod brn, r micropyr

2105.5 m (2104.6 m)

2148.5 m (2147.4 m)

2253 m (2251.6 m)

2320 m (2318.6 m)

2336 m (2311.1 m)

Clyst: m dk gry-olv gry, olv blk, r-tr dk gnsh gry, sbblky-blky, sft-frm, calc, slily slty
Tr: micropyr, r-tr micromic, r-tr carb

2526 m (2496 m)

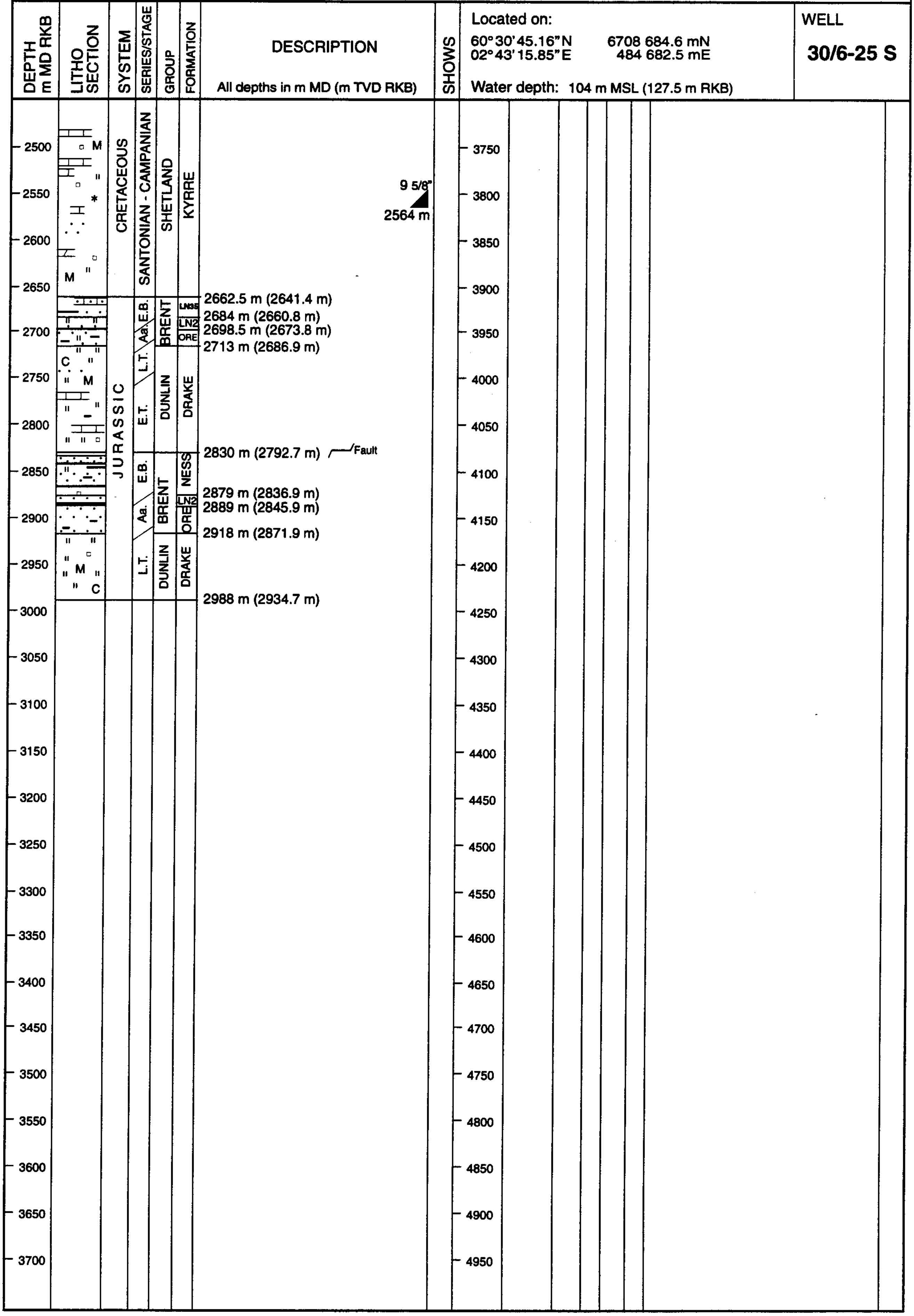
HR = Hardråde Fm.
(analogous to Tor Fm.)

HYDRO

GEOLOGICAL WELL SUMMARY

Located on:
60°30'45.16"N 6708 684.6 mN
02°43'15.85"E 484 682.5 mE
Water depth: 104 m MSL (127.5 m RKB)

WELL
30/6-25 S



FORMATION PRESSURE WORKSHEET

Well Name : 30/6-25 S **Rig : Transocean Leader** **Date : 27.12.98**

Pressure Units : Bars **RKB-MSL : 24 m.** **MSL-SBed: 104 m.** **Witnessed by : S.Eriksson**

Run No./ Test No.	Depth	Depth	itial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time hh:mm		Formation Pressure	Test Temp	Good Data?	Sample Information			Remarks
	mMD RKB	mTVD RKB	Strain	HP	Strain	HP	Strain	HP	Set	Retract	sg EMD	degC	Y/N	Main Fluid Type	HC Gravity g/cc	Sample Vol, cc	
1A/1	2668,5	2646,8	364,5	365,05	291,4	291,79	364,9	364,49	14:00	14:10	1,124	93,6	Y				mob 14,7
1A/2	2672,5	2650,4	365,1	365,50	291,9	292,36	365,0	365,38	14:19	14:25	1,124	94,4	Y				mob 1,7
1A/3	2685,5	2662,1	366,7	367,12	292,0	292,44	366,6	366,97	14:34	14:38	1,120	94,9	Y				mob 140,5
1A/4	2689,5	2665,7	367,2	367,57	292,4	292,84	367,0	367,44	14:44	14:48	1,120	95,4	Y				mob 751,0
1A/5	2700,0	2675,2	368,5	368,90	293,3	293,68	368,3	368,66	14:54	14:58	1,119	95,9	Y				mob 391,1
1A/6	2831,0	2793,6	384,4	384,86	305,4	305,86	384,3	384,73	15:15	15:19	1,116	98,5	Y				mob 108,5
1A/7	2836,5	2798,6	385,0	385,50	305,9	306,35	384,9	385,36	15:26	15:39	1,116	100,1	Y				mob 128,5
1A/8	2851,0	2811,7	386,9	387,33	308,8	309,28	386,7	387,13	15:37	15:40	1,121	101,3	Y				mob 256,5
1A/9	2857,0	2817,1	387,6	388,03	309,4	309,81	387,4	387,44	15:47	15:50	1,121	102,1	Y				mob 310.8
1A/10	2881,5	2839,1	390,8	391,20	311,5	311,95	390,5	390,96	15:58	16:01	1,120	102,9	Y				mob 17,6
1A/11	2892,0	2848,6	392,0	392,45	312,4	312,88	391,8	392,23	16:08	16:13	1,120	103,6	Y				mob 22,7
1A/12	2899,0	2854,9	392,8	393,26	313,0	313,90	392,6	393,05	16:17	16:21	1,121	104,3	Y				mob 34,9
1A/13	2909,0	2863,8	394,1	394,48	314,0	314,45	398,8	394,36	16:28	16:30	1,119	105,0	Y				mob 2,2
1A/14	2917,0	2871,0	395,0	395,43	-0,0	0,00	394,8	395,16	16:32	16:37	0,000	105,7	N				Tight
1A/15	2916,8	2869,9	395,0	395,36	0,0	0,00	394,8	395,22	17:10	17:13	0,000	106,0	N				Tight

NB: Fmtn Press sg calculated from RKB

GENERAL INFORMATION ON WELL 30/6-25 S

Field : OSEBERG **Country:** NORWAY
Licence : OSEBERG UNIT
UTM zone : 31 **Central Median:** 3' E **Horiz. Datum:** ED50

Location coordinates:		Surface	Target
UTM	North [m]:	6708684.7	
UTM	East [m]:	484682.4	
Geographical	North :	60 30'45.16"	
Geographical	East :	02 43'15.85"	

Water Depth: 104.0 m **Reference Point Height:** 23.5 m
Formation at TD: DRAKE at 2918 m MD

Operators:	NORSK HYDRO PRODUKSJON A/S	**Share:**	13.68 %
Partners:	DEN NORSKE STATS OLJESELSKAP A/S	**Share:**	64.78 %
	SAGA PETROLEUM A/S		8.55 %
	ELF PETROLEUM NORGE A/S		5.77 %
	MOBIL EXPLORATION NORWAY INC.		4.33 %
	TOTAL NORGE A/S		2.89 %

Total depth (RKB) : 2988.0 m MD 2934.7 m TVD

TIME SUMMARY

Start Time : 1998-11-19 09:45:00
Spudding date : 1998-11-26
Abandonment date : 1999-01-06

Main operation	Hours	Days	%
MOBILIZATION	147.0	6.1	12.6
DRILLING	520.0	21.7	44.6
FORMATION EVALUATION MWD	8.5	0.4	0.7
FORMATION EVALUATION LOGGING	47.5	2.0	4.1
PLUG AND ABANDONMENT	115.0	4.8	9.9
DOWNTIME MOBILIZATION	49.0	2.0	4.2
DOWNTIME DRILLING	189.5	7.9	16.3
DOWNTIME FORM. EVAL. MWD	25.5	1.1	2.2
DOWNTIME FORM. EVAL. LOGGING	20.0	0.8	1.7
DOWNTIME PLUG AND ABANDONMENT	44.0	1.8	3.8
Sum:	**1166.0**	**48.6**	

Hole and casing record

Hole	Track	Depth [m MD]	Casing/Tubing	Track	Depth [m MD]
36"		193.0	30"		189.5
26"		1044.0	20"		1037.4
12 1/4"		2575.0	9 5/8"		2564.4
8 1/2"		2988.0			

Well status: PERMANENTLY ABANDONED

Rig name: TRANSOCEAN LEADER

LIST OF CONTENT

OPERATIONS SUMMARY

All depths referenced to RKB, 23.5 m above MSL. Seabed was located at 127.5 m.

The semi submersible rig Transocean Leader left the location of well 6305/1-1 at 9:45 hours on November 19th 1998 for drilling of the exploration well 30/6-25 S in the Oseberg area. The rigmove took 6.5 days, compared to the planned 1.5 days. The delay was caused by bad weather.

A total of 48.5 days were spent for rig move, drilling to 2988 m, log and to permanently abandon the well.

1.1 Positioning

The rig arrived at location the 24th of November at 23:30. All anchors were run and tested in 17 hours.

The position / co-ordinates of the wellhead:

60° 30' 45.16" N	2° 43' 15.85" E

1.2 36" section

Total depth of section: 193 m.

Total time used: 59.5 hrs (2.5 days)	Operational time: 50.5 hrs (85%) Downtime: 9 hrs (15%)

Drilling

Spudded the well at 11:30 on November 26. The section was drilled with 17 1/2" bit and 26"x36" hole opener using sea water and viscous pills for hole cleaning. The first drilling attampt was aborted after 10 m due to problems with the MWD surveying. Warped the rig 11 m and respudded.

Conductor

The hole was displaced to 1.20 sg mud before the 30" conductor, 30" conductor housing and guide base was run. After cementing the status of the cement on the outside was tested using the conductor cement stinger. This showed that a grouting job was required, which followed immediately.

1.3 26" section (incl. 8 1/2" shallow gas pilot hole)

Total depth of section: 1044 m.

Total time used: 272 hrs (7.3 days)	Operational time:	174 hrs (63%)
	Downtime:	98 hrs (37%)

Drilling

The conductor was drilled out with a 26" bit. Drilling continued to 1038 m with a 8 1/2" bit. The hole was drilled with sea water and viscous pills for hole cleaning. Flowchecked the well at 710

m. The status of the cement on the outside of the conductor was re-tested with a 3 1/2" stinger, showing the need for an additional top-up cement job, which followed immediately.

Drilled 26" hole from 194 m to 1044 m using sea water and viscous pills for hole cleaning.

Casing

The hole was displaced to 1.3 SG mud (KCl-polymer) before casing running. Casing running progressed as normal and the 20" pipe was cemented back to seabed using a gas tight slurry.

Installed BOP and marine riser. The BOP/wellhead connector pressure test failed. Several attempts with different variants of VX/HX ring gaskets were required before a good pressure test could be obtained.

1.4 12 1/4" section

Total depth of section: 2575 m

Total time used: 317.5 hrs (13.2 days)

Operational time:	237.5 hrs (75%)
Downtime:	80 hrs (25%)

Drilling

The 20" casing was drilled out using a 17 1/2" drillbit and the formation strength was tested (LOT) to 1.6 SG equivalent mud density. The hole was drilled further with a 12 1/4" bottom hole assembly. From 2240 mMD the hole angle was increased from vertical to 26° at TD of the section. Some hole problems were experienced during this hole section. The drillstring became stuck at 2396 m, but was freed after 4 hours.

Casing

The 9 5/8" casing was run and cemented with the shoe at 2565 mMD.

1.5 8 1/2" section

Total depth of section: 2988 m

Total time used: 162 hrs (6.8 days)

Operational time:	114 hrs (70%)
Downtime:	48 hrs (30%)

Drilling

The 9 5/8" casing was drilled out with 8 1/2" bit and the formation strength was tested (ELOT) to 1.77 SG equivalent mud density. The hole was drilled further to TD in two bitruns.

The following logs were run at TD:

- PEX (HALS/TLD/HGNS/DSI/GPIT/ACTS)
- FMI/HGNS/ACTS
- MDT/GR
- VSP/GR
- CST/GR (41 recovered, 13 lost and 4 missfired)

The VSP/GR log became stuck on three occasions, but came free by applying maximum allowed pulling force on the cable.

1.6 Porepressure, formation strength and temperature

Pore pressure:
The pore pressure in well 30/6-25 S is based on DXC, MWD resistivity log and MDT pressure readings. No sonic or density log was run above 2564 m MD. It is difficult to calculate pore pressure in Hordaland and Rogaland Group without wireline logs. Lithological variations make it difficult to estimate pore pressure decrease in Rogaland Group and pressure development over the boundary to Shetland Group. The pore pressure estimated in the claystone is uncertain.

No shallow gas was observed in the upper sediments. Down to 1600m, top Eocene, the pore pressure is normal and increase rapidly to max pore pressure 1,28 sg at 1830m. The pore pressure is estimated to decrease slowly to 1,26 sg at top Shetland Group. The pore pressure decrease down to 1.12 sg, measured by MDT, at the top of Bretnt Group. The Reservoars are water wet and the water gradient is 1,0 bar/m. .

Formation strength:
Extended leak off test was performed to 1,76 sg at 2554m TVD. Normal leak off test was performed to 1,60 sg 1037m TVD, after a cement squeeze. Fracture gradient based on Breckels & van Eekelen formula is adjusted to LOT in the upper part.

Overburden gradient:
Overburden gradient is used same as in the prognosis due to absence of density and sonic log.

Temperature Gradient:
Bottom hole static temperature is extrapolated from MDT measurements.
The temperaure at 2938m TVD RKB, was estimated to 108° C with a gradient of 3,7degC/100m.

1.7 Permanent plug and abandonment

Total time used: 159 hrs (6.6 days)	Operational time: 115 hrs (72%) Downtime: 44 hrs (28%)

Two cement plugs were set; from TD to 2710 mMD and from 2700 to 2400 mMD. The upper plug was load-tested to 10 T and pressure tested to 170 bar. A 9 5/8" permanent bridge plug was installed at 600 mMD before the 9 5/8" casing was cut at 500 mMD and retrieved to surface. A top cement plug was set from 500 to 250 mMD and weight-tested to 10 T. Some time was lost while pressure-testing the plug due to equipmet problems at surface. Pulled BOP and marine riser, cut off the 30" conductor and 20" extension at 132.5 m and retrieved the wellhead.

1.8 Anchor handling

Total time used: 40.5 hrs (1.7 days)	Operational time: 36.5 hrs (90%) Downtime: 4 hrs (10%)

Transocean Leader left the 30/6-25 S location at 23:30 January 6th 1999.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 1 **Date:** 1998-11-19
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
09:30	No activity.
23:59	Rig in transit to new location. Tight tow with Far Grip commenced at 0945 hours. Time on tow to new well totals 14 hours.

Daily report no : 2 **Date:** 1998-11-20
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
10:30	The rig in transit to new location. The rig under tight tow by the vessel Far Grip.
15:30	Ballasted the rig down to 20 meter survival draft on account of bad weather conditions. The rig in transit to new location. The rig under tight tow by the vessel Far Grip.
23:59	The rig under tight tow by the vessel Far Grip. Bad weather conditions stopping further progress.

Daily report no : 3 **Date:** 1998-11-21
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
11:30	Rig hove to while in transit to new location. Rig under tight tow by vessel Far Grip. Bad weather conditions slowing progress toward new location.
14:00	Rig suffered Total Blackout at 1130 hours. Main Power restored at 1137 hours. Control of Thrusters failed to return to Bridge after blackout. Control of Thrusters returned to bridge at 1400 hours.
23:59	Rig hove to while in transit to new location. Rig under tight tow by vessel Far Grip. Bad weather conditions slowing progress toward new location.

Daily report no : 4 **Date:** 1998-11-22
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
12:30	The rig in transit to new location. The rig under tight tow by the vessel Far Grip. Bad weather conditions stopping further progress toward the new location.
13:30	Deballasted the rig to 18.3 m draft. The rig under tight tow by the vessel Far Grip. Bad weather conditions slowing progress toward the new location.
19:30	The rig in transit to new location. The rig under tight tow by the vessel Far Grip. Bad weather conditions slowing progress toward the new location.
23:59	The rig in transit to new location. The rig under tight tow by the vessel Far Grip. Bad weather conditions slowing progress toward the new location.

Daily report no : 5 **Date:** 1998-11-23
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
09:30	The rig in transit to new location. The rig under tight tow by the vessel Far Grip.
10:30	Transfered and reconnected the tow bridle from Far Grip to Viking Titan.
11:00	The rig in transit to new location. The rig under tight tow by the vessel Viking Titan.
12:30	The rig was deballasted to 16.7 m draft while the rig was under tight tow by the vessel Viking Titan.
17:00	The rig in transit to new location. The rig under tight tow by the vessel Viking Titan.
18:00	The rig ballasted down to 18.3 m draft while the rig was under tight tow by the vessel Viking Titan.
23:59	The rig in transit to new location. The rig under tight tow by the vessel Viking Titan. Bad weather conditions slowed the towing progress.

Daily report no : 6 **Date:** 1998-11-24
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
02:00	The rig in transit to new location. The rig under tight tow by the vessel Viking Titan.
02:30	Ballasted the rig down to 20 meter draft while under tight tow by the vessel Viking Titan. Bad weather slowed the towing progress.
11:00	The rig in transit to new location. The rig under tight tow by the vessel Viking Titan.
13:00	Thruster # 2 shut down to repair a hydraulic leak. The rig under tight tow by the vessel Viking Titan.
18:30	The rig in transit to new location. The rig under tight tow by the vessel Viking Titan.

Daily report no : 6 **Date:** 1998-11-24

Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
19:00	Deballasted rig to 18 meter draft while the rig was under tight tow by the vessel Viking Titan.
23:30	The rig in transit to new location. The rig under tight tow by the vessel Viking Titan.
23:59	Commenced deballasting the rig to proposed 8.2 meter transit draft for anchor handling. The rig under tight tow by the vessel Viking Titan.

Daily report no : 7 **Date:** 1998-11-25

Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
04:00	Completed rig move from 6305/1-1 to 30/6-25s location.
05:00	Equipted the boats for anchor handling operations.
12:00	Completed the anchor handling.
19:00	Ballasted down the rig to 23.5 m drilling draft.
21:00	Pretensioned anchors to 200T.
23:30	Picked up 5" DP.
23:59	Commenced pick up 9 1/2" DCs.

Daily report no : 8 **Date:** 1998-11-26

Midnight depth : 145 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
00:30	Picked up 9 1/2" DC stand.
04:30	Made up 18 3/4" well head housing to the running tool and plug assembly then laid out same.
07:30	Pick up 8" DC / Jar stand and 5" HWDP.
11:30	Made up BHA : 17 1/2" bit, 26" x 36" holeopener and MWD assembled, remainder ran from derrick.
14:00	Tagged seabed at 127.5 m. Drilled ahead to 137.5 m while attempting to obtain survey - no success.
18:30	Pulled BHA (repositioned rig 11 m forward for respud). Troubleshoot MWD problem - identified surface pressure transducer problem. Worked on same and completed MWD surface test. Reran BHA.
20:30	Attempt survey prior to spud - no success. Work on pressure transducer setup and obtain check survey.
21:30	Tagged seabed at 127.2 m (uncorrected). ROV positioned 2xbouys and transponder. Washed down to 129 m and completed prespud BHA check survey (0.3 deg).
23:59	Drilled 17 1/2" x 36" hole from 129 m to 145 m.

Daily report no : 9 **Date:** 1998-11-27

Midnight depth : 193 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
00:30	Drilled 17 1/2" x 36" hole from 145 m to 147 m.
03:30	Reamed between 142 m to 147 m in attempt to clean the open hole, remove boulders and reduce survey inclination.
09:30	Drilled from 147 m to 193 m (casing point).
11:00	Displaced the hole to 1.20 sg. Completed a wiper trip to seabed with no problems or fill. Displaced the hole to 1.50sg.
12:30	Pulled out of open hole and racked the BHA.
16:30	Rigged up and ran the 30" casing. Rigged up and ran the 5" cement stinger. Made up the 30" well head running tool to stinger then casing string. Installed the well head bullseye bracket onto the well head.
17:30	Ran the 30" casing on 5" landing string to 190 m.
20:30	Rigged up the cement line. Completed the 30" cement job as per programme : 46m3 lead @ 1.56sg, 20m3 tail @ 1.95sg, cement in place at 2020hrs.
23:59	Waited on the cement.

Daily report no : 10 **Date:** 1998-11-28

Midnight depth : 193 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
03:00	Waited on the cement.
03:30	Released the 30" well head running tool. Checked the 36"x30" annulus, no cement was found down to 9m below seabed.
06:00	Rigged up and completed a top up cement job on the 36"x30" annulus.
08:30	Pulled out with the 5" DP landing string. Laid out the 30" well head running tool and the cement stand.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 10 **Date:** 1998-11-28

Midnight depth : 193 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
11:30	Handle BHA : laid out the 36" holeopener, made up pressure sub onto the MWD, made up the 26" bit and ran the BHA to the 30" well head.
13:00	Made several attempts at entering the 30" well head with no success due to excessive rig movement from poor weather conditions. Pulled out with the BHA.
23:59	Waited on weather.

Daily report no : 11 **Date:** 1998-11-29

Midnight depth : 372 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
01:00	Waited on weather.
03:00	Picked up and racked the 8 1/2" BHA.
04:00	Made up the cement head and racked back same.
06:00	Picked up the 26" BHA. Ran and entered the 30" well head. Tagged the top of cement at 184 m - prepare to drill out same.
09:00	Drilled out the 30" shoetrack from 184 m to 189.5 m, rathole and 1 m new formation to 194 m.
10:30	Pulled out the 26" BHA.
11:00	Picked up the 6 3/4" MWD, bitsub and bit.
13:00	Attempt to initialise the MWD - troubleshooted and resolved the signal problem.
14:30	Ran in hole with the 8 1/2" BHA to 194 m.
23:59	Drilled 8 1/2" pilot hole from 194 m to 372 m.

Daily report no : 12 **Date:** 1998-11-30

Midnight depth : 1027 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
11:30	Drilled 8 1/2" pilot hole from 372 m to 710 m.
12:00	Flowchecked the well - static.
23:59	Drilled 8 1/2" pilot hole from 710 m to 1027 m.

Daily report no : 13 **Date:** 1998-12-01

Midnight depth : 304 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
00:30	Drilled 8 1/2" pilot hole from 1027 m to 1038 m (TD).
01:00	Displaced the open hole and the 30" casing with 60 m3 mud at 1.25 sg.
03:00	Flowchecked (ROV). Pulled out of open hole with no problems.
04:30	Displaced the 30" casing from 150 m with 10 m3 mud at 1.25 sg. Pulled out to the 30" well head and jet same clear.
06:00	Pulled and racked back the 8 1/2" BHA.
08:00	Picked up the 3 1/2" cement stinger. Ran down to the 30" well head and established cement top around wellhead (5 to 9m below seabed). Attempted to complete grout job - failed as stinger plugged.
09:00	Pulled the 3 1/2" cement stinger assembly and laid out the plugged joint. Reran the stinger down to the 30" well head.
11:30	Rigged up and completed a top-up cement job on the 36" x 30" annulus.
18:00	Picked up the 26" BHA : picked up / initialised and surface tested 8-1/4" MWD, made up 26" bit, picked up additional 6 x 8" DC.
18:30	Serviced the topdrive.
19:00	Ran the BHA in cased hole to 194 m.
23:59	Drilled 26" hole from 194 m to 304 m.

Daily report no : 14 **Date:** 1998-12-02

Midnight depth : 1020 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
23:59	Drilled 26" hole from 304 m to 1020 m.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 15 **Date:** 1998-12-03
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
01:00	Drilled 26" hole from 1020 m to 1044 m (20" casing point).
03:30	Displaced the well with 330 m3 of 1.25 sg mud and flowchecked.
05:30	Pulled out with the 5" DP to the 30" casing shoe at 190 m - no open hole problems.
06:00	Serviced the topdrive (rest hole).
07:30	Ran in open hole with 5" DP to 1044 m - no problems or fill.
08:30	Displaced the well with 185m3 of 1.30sg KCL mud. Flowchecked.
10:30	Pulled out with 5" DP to 30" WH at 126 m - no open hole problems.
12:00	Jetted the 30" well head clear of excess cuttings.
13:30	Pulled out with the 26" BHA. Downloaded the MWD and racked back same.
15:00	Rigged up to run the 20" casing.
21:30	Ran the 20" casing to 200 m - took weight. Problem associated to the 20" shoe joint centraliser hanging up at the 30" shoe. All attempts to progress failed.
23:30	Pulled the 20" casing to above the 30" well head, the centraliser on the20" shoe joint was lost (ROV).
23:59	Waited on weather, - cranes down due to high winds.

Daily report no : 16 **Date:** 1998-12-04
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
03:30	Waited on weather, - cranes down due to high winds.
07:00	Pulled the 20" casing - laid out the damaged shoetrack.
07:30	Changeed out the handling equipment (20" csg to 5" DP).
11:30	Ran in with the 26" BHA to 1044 m : no problems were encountered at the 30" shoe - precautionary reamed, took weight 4 m from TD - work through/down same easy.
13:30	Worked drillstring while mixing additional 1.30 sg mud.
16:00	Displaced the well with 320 m3 of 1.30 sg mud.
19:00	Pulled out with the 5" DP and the 26" BHA - no hole problems.
20:00	Rigged up the 20" casing tools.
23:00	Ran the 20" casing to 200 m - no problems were encountered going through 30" shoe.
23:59	Ran the 20" casing in 26" open hole to 300 m.

Daily report no : 17 **Date:** 1998-12-05
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
06:30	Ran the 20" casing to 904 m.
10:00	Made up the 18 3/4" well head housing to the casing string. Ran the casing on landing string and landed out same in the 30" well head.
15:00	Completed mixing the sement mixwater.
15:30	Pressure tested the surface lines and the rigpumps to 100 bar. Attempt to commence cementing - fault on the cement transfer control panel.
18:00	Troubleshooted the problem on thecement transfer control panel - no success.
22:00	Completed the cementing job on the 20" casing (manual control of cement system) : 217 m3 gastight lead @ 1.44 sg, 68 m3 lead @ 1.44 sg, 23 m3 tail @ 1.92 sg.
23:30	Dropped the dart / top plug. Displaced the cement with sewater and bumped the plug. Floats checked - OK.
23:59	Pressure tested the 20" casing : 100bar / 10minutes. Riged down the surface lines.

Daily report no : 18 **Date:** 1998-12-06
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
01:00	Released the 18 3/4" well head housing running tool and then jetted the well head area clear.
02:30	Pulled the landing string. Laid out the DP bullseye bracket, 18 3/4" running tool and subsea plug launcher.
05:00	Rigged up to run the BOP : laid out the topdrive pipe handler, rigged up the riser handling equipment, installed the riser spider.
09:30	Picked up a 5 ft booster, 50 ft and 60 ft riser double (skidded the rig 20 m starboard). Made up the riser to the BOP and then installed the MUX cables.
17:30	Ran the BOP on riser, slip and landing joints - pressure tested choke/kill lines as required.
22:00	Installed the kill, choke, booster and conduit line goosenecks and mux saddles.

Daily report no : 18 **Date:** 1998-12-06
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
23:00	Engaged the riser load ring to the slip joint and pressuretested the choke / kill line to 400bar (skidded rig back onto location).
23:59	Landed and latched the BOP. Completed a 25T overpull test. Commenced pressuretest the shear ram / H4 connector and 20" casing - 35bar / 5 mins.

Daily report no : 19 **Date:** 1998-12-07
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
01:30	Attempted a 100bar pressuretest on the shear rams / H4 connector and the 20" casing - no success. Pumped water / dye mix - ROV confirmed leak present.
03:00	Unlatched the BOP (skid rig off location). ROV recovered the VX gasket and brought it to surface for inspection.
05:00	Rigged up the ROV gasket deployment tool. ROV ran and installed the new VX gasket (cadnium with 2x resilient rings).
06:30	Relocated the rig onto location. Landed the BOP, latched and confirmed with 25T overpull. Attempted to pressuretest the shear rams / H4 connector and 20" casing - no success (dye present around BOP).
11:30	Unlatched the BOP (skid rig off location). The ROV recovered the VX (resilient seal) gasket, inspected 18 3/4" WH and brushed the VX gasket seal area clean. Installed new VX-HX gasket into well head.
13:30	Relocated the rig onto location. Landed the BOP, latched and confirmed with 30T overpull. Attempted to pressuretest the shear rams / H4 connector and 20" casing - no success.
16:30	Unlatched the BOP (skid rig off location). ROV recovered the VX-HX gasket and installed a new standard stainless steel VX type gasket. ROV noted dye / bubbles while cleaning WH gasket area indicating potential casing leak.
17:30	Relocated the rig onto location. Landed the BOP, latched and confirmed with 30T overpull.
22:00	Laid out the landing joint. Nippled up the diverter housing. Laid out the riser spider and handling tools. Made up the topdrive pipe handler.
23:59	Made up the BOP isolation test tool. Landed out same in the 18 3/4" well head and attempted a pressuretest of the H4 connector = no success, observed dye from connector weep holes. Pulled the BOP isolation test tool.

Daily report no : 20 **Date:** 1998-12-08
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
01:00	Attempted to pressuretest the shear rams / H4 connector and 20" casing - leak still present.
02:00	Laid out the BOP isolation tool and the 20" cement head.
13:30	Picked up 65 stands of 5" DP and racked back same.
14:00	Serviced the topdrive.
17:00	Laid out the 26" BHA : 4 x 9 1/2" DCs, the failed MWD and the 26" stab and bit.
18:30	Picked up 3 x 8 1/4" DCs, 18 3/4" well head running tool and the BOP "donut-unlatch" tool.
23:59	Waited on weather

Daily report no : 21 **Date:** 1998-12-09
Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 1,20 sg

Stop time	Description
06:30	Waited on weather.
07:30	Ran in hole with the SG5 donut on 5" drill pipe to the BOP's.
10:00	Spaced out the drill string, closed the top pipe rams, unlatched and lifted the BOP stack. ROV recovered the VX gasket for inspection.
11:30	Jumped the ROV and installed new pewter type VX gasket, Damaged gasket when attemting to land the BOP stack. Replaced the VX gasket, landed and latched the BOP stack to the wellhead. Checked with 30 Tonn overpull. Pulled out with SG5 donut.
14:00	Made up and ran the BOP test tool string on 5" drill pipe. Pressure tested wellhead connector to 35 bar/ 5 min, 100 bar/ 10 min and 345 bar/ 10 min. Pulled out of hole and laid out the BOP test tool.
15:00	Made up and ran in hole with the nominell bore protector.
15:30	Function tested the BOP's on both pods from both stations.
16:00	Installed the nominell bore protector in the wellhead. Pulled out of hole with the landing string.
16:30	Broke and laid down the 18 3/4" CART tool.
18:00	Made up and ran the 17 1/2" BHA.
20:00	Ran in hole with 5" drill pipe and tagged the top of cement at 1024 m.
21:30	Pumped 18 m3 of hi-vis mud. Displaced the hole to 1.2 sg mud.
22:30	Pressure tested the 20" casing to 35 bar/ 10 min and 100 bar/ 10 min. Function tested lower pipe rams.
23:00	Performed choke drill and took slow circulation rates.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 21 **Date:** 1998-12-09

Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 1,20 sg

Stop time	Description
23:59	Drilled out the shoe track from 1024 m to 1025 m.

Daily report no : 22 **Date:** 1998-12-10

Midnight depth : 1044 m MD **Estimated PP:** sg **Mud weight:** 1,20 sg

Stop time	Description
01:30	Drilled the shoetrack and rathole from 1025 to 1044 m.
02:00	Drilled new formation from 1044 to 1046 m.
03:30	Circulated to even mud weight.
05:00	Pressure tested surface lines to 100 bar. Performed an extended leak off test.
07:00	Pulled out of hole with 5" drill pipe.
08:00	Pulled out of the hole with the bottom hole assembly.
09:30	Ran in hole to 1046 m with open ended drill pipe.
10:00	Circulated.
10:30	Rigged up and pressure tested the surface lines to 100 bar.
11:00	Pumped 5 m3 drill water. Mixed and pumped 10 m3 of 1.92 sg cement slurry. Displaced with 270 ltr drill water followed by 8 m3 of 1.2 sg mud.
12:00	Pulled out to 970 m. Spaced out and pressure tested surface lines to 100 bar.
14:00	Hezitation squeezed 5.8 m3 slurry at max pump pressure of 78 bar.
14:30	Flushed the string and pumped slug.
16:00	Pulled out of the hole with the drill pipe.
18:00	Made up and racked back the cement head and dart launcher assembly.
19:30	Made up and ran the 17 1/2" bottom hole assembly.
20:30	Ran in hole with 5" drill pipe to 970 m.
23:59	Waited on cement to set.

Daily report no : 23 **Date:** 1998-12-11

Midnight depth : 1100 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,20 sg

Stop time	Description
02:00	Waited on cement to set.
03:00	Ran in hole and tagged hard cement at 1031 m.
04:30	Drilled hard cement from 1031 m to 1046 m. Drilled new formation from 1046 m to 1047 m.
06:00	Circulated and conditioned mud.
07:00	Rigged up and tested the surface lines to 100 bar. Performed a leak-off test. Leak off pressure 41.5 bar with 1.2 sg mud in hole, EMW 1.60 sg.
09:00	Pulled out with the drill pipe and the bottom hole assembly.
10:00	Recovered the nominel bore protector.
11:30	Serviced wearbushing running tool. Ran and installed the extended wear bushing in the wellhead.
15:30	Made up the 9 5/8" casing hanger with 13 3/8" dummy hanger. Loaded plugs and drifted pipe. Racked back in derrick.
17:30	Made up the 12 1/4" bottom hole assembly, Tested the MWD tool and ran in hole with the bottom hole assembly.
18:30	Ran in hole with 5" drill pipe to 20" shoe at 1037 m.
19:00	Filled the drill pipe and tested the MWD tool.
19:30	Serviced the top drive.
23:00	Had flow line plugged with cement cuttings. Cleared flow line and gumbo trap for cuttings and cement plug rubber.
23:59	Tagged bottom. Drilled 12 1/4" hole from 1047 m to 1100 m.

Daily report no : 24 **Date:** 1998-12-12

Midnight depth : 1667 m MD **Estimated PP:** 1,14 sg **Mud weight:** 1,45 sg

Stop time	Description
09:30	Drilled 12 1/4" hole from 1100 m to 1521 m.
12:30	Circulated and reciprocated the drill pipe while weighing up the mud system to 1.45 sg.
19:30	Circulated and reciprocated the drill pipe while weighing up the mud system to 1.45 sg.
20:00	Tagged bottom. Recorded slow circulation rates.
20:30	Drilled 12 1/4" hole from 1521 m to 1547 m.
21:00	Had total loss of returns to flowline. Found slip joint packer leak due to no air pressure.
23:59	Drilled 12 1/4" hole from 1547 m to 1667 m.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 25 **Date:** 1998-12-13

Midnight depth : 1903 m MD **Estimated PP:** 1,28 sg **Mud weight:** 1,45 sg

Stop time	Description
02:00	Drilled 12 1/4" hole from 1667 m to 1755 m.
04:30	Kelly hose blew up. Tripped out to 20" shoe at 1037 m to change out the hose.
10:00	Changed out the kelly hose. Pressure tested the kelly hose to 34 bar / 5 min and 345 bar / 10 min.
11:30	Ran in hole from 1037 m to resistance at 1072 m. Reamed from 1072 m to 1075 m. Ran in to restistance at 1085 m. Washed from 1085 m to 1103 m.
12:30	Ran in hole with drill pipe to bottom at 1755 m.
13:30	Drilled 12 1/4" hole from 1755 m to 1785 m.
14:00	Circulated at reduced rate while cleaning the shaker screens for cuttings.
17:00	Drilled 12 1/4" hole from 1785 m to 1903 m.
22:00	Circulated hole untill clean returns at shale shakers.
22:30	Tested the MWD tool for low flow. Flowchecked the well.
23:59	Pulled out of the hole to 1720 m, pumped slug. Pulled out of hole. Max overpull 10 ton.

Daily report no : 26 **Date:** 1998-12-14

Midnight depth : 2040 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,48 sg

Stop time	Description
01:30	Pulled out of hole to the 20" shoe at 1037 m. Flowchecked well.
03:00	Pulled out of hole with 5" drill pipe to 250 m.
05:00	Pulled out of hole with the bottom hole assembly. Flowchecked with the bit at the BOP´s. Broke and laid down the bit.
05:30	Broke and laid down the MWD configuration.
06:30	Made up the motor / navigator assembly.
08:00	Downloaded the MWD tool, verified the navigator conn. Tested MWD and navigator.
08:30	Ran in hole with the BHA.
09:30	Ran in hole with 5" drill pipe to the 20" shoe at 1037 m.
10:00	Serviced the top drive and the travelling block.
11:30	Ran in hole with 5" drill pipe to 1876 m. Filled the string.
12:00	Precautionary reamed from 1876 m to bottom at 1903 m.
23:59	Drilled 12 1/4" hole from 1903 m to 2040 m. Steered and surveyed as requested.

Daily report no : 27 **Date:** 1998-12-15

Midnight depth : 2040 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,48 sg

Stop time	Description
02:00	Circulated the hole clean. Weighed up the mud from 1.45 sg to 1.48 sg.
06:00	Flow checked, pumped slug. Pulled out of the hole due to the weather forecast and low drilling rate.
06:30	Downloaded the MWD tool.
07:00	Broke of the bit. Racked back the MWD / navigator assembly.
23:59	Waited on weather.

Daily report no : 28 **Date:** 1998-12-16

Midnight depth : 2244 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,48 sg

Stop time	Description
03:00	Waited on weather.
04:00	Made up Bit #6 and ran in the hole with the BHA.
05:30	Ran in the hole with 5" DP to the 20" casing shoe.
07:00	Waited on weather.
09:00	Ran in the hole and tagged bottom at 2040 m. Found no fill on bottom.
23:59	Drilled 12 1/4" hole from 2040 m to 2244 m.

Daily report no : 29 **Date:** 1998-12-17

Midnight depth : 2371 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,48 sg

Stop time	Description
20:00	Drilled 12 1/4" hole from 2244 m to 2371 m.
21:00	Circulated the open hole volume. Flow checked the well. Pumped a slug in the drill pipe.

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Daily report no : 29 **Date:** 1998-12-17
Midnight depth : 2371 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,48 sg

Stop time	Description
22:00	Pulled out of the hole with 5" drill pipe to 1816 m.
22:30	Repaired the derrick standlift equipment.
23:59	Pulled out of the hole with 5" drill pipe to 1037 m.

Daily report no : 30 **Date:** 1998-12-18
Midnight depth : 2403 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,48 sg

Stop time	Description
01:00	Pulled 5" drill pipe out of the hole.
02:30	Pulled the BHA out of the hole.
03:00	Laid out the MWD and navigator assemblies.
05:00	Picked up new MWD and navigator assemblies.
06:00	Made up the BHA.
07:00	Ran in the hole with the BHA.
08:00	Ran in the hole with 5" drill pipe to 20" casing shoe at 1037 m.
10:30	Ran in the hole with 5" drill pipe to 2330 m.
11:30	Logged the hole with the MWD from 2330 m to 2371 m.
17:30	Drilled 12 1/4" hole from 2371 m to 2403 m. The hole packed off with the bit at 2396 m after observing sudden increase in drill pipe pressure. The assembly became stuck with no up or down movement of assembly possible and circulation lost.
21:30	Worked stuck pipe until assembly came free. Gradually regained full circulation while attempting to rotate and jar assembly free.
23:30	Backreamed out of the hole to 2318 m.
23:59	Washed the assembly back to bottom at 2403 m.

Daily report no : 31 **Date:** 1998-12-19
Midnight depth : 2539 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,50 sg

Stop time	Description
23:59	Drilled 12 1/4" hole from 2403 m to 2539 m.

Daily report no : 32 **Date:** 1998-12-20
Midnight depth : 2575 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,50 sg

Stop time	Description
06:00	Drilled 12 1/4" hole from 2539 m to 2575 m.
08:00	Circulated bottoms up.
15:00	Pulled 5" drill pipe out of hole for a wiper trip back to the 20" casing shoe. Flow checked inside the casing shoe.
17:30	Ran in the hole with 5" drill pipe. The assembly took weight at 2536 m.
18:00	Precautionary wash and ream assembly to TD at 2575 m. No resistance when reaming to bottom.
20:30	Circulated bottoms up prior to pulling out of the hole to run the 9 5/8" casing.
21:00	Flow checked well and pumped a slug in the 5" drill pipe.
23:00	Pulled 5" drill pipe out of the hole.
23:59	Pulled 5" drill pipe out of the hole.

Daily report no : 33 **Date:** 1998-12-21
Midnight depth : 2575 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,50 sg

Stop time	Description
00:30	Pulled 5" drill pipe out of the hole.
02:00	Pulled the BHA out of the hole.
03:00	Downloaded the MWD tool at surface.
04:30	Ran in the hole and pulled the wearbushing from the wellhead. Washed the wellhead area as the wearbushing was pulled out of the wellhead by pumping down the recovery string.
06:00	Rigged up to run 9 5/8" casing. Held prejob safety meeting.
15:30	Ran the 9 5/8" casing to the 20" casing shoe.
23:59	Ran the 9 5/8" casing to 2317 m.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 34 **Date:** 1998-12-22

Midnight depth : 2575 m MD **Estimated PP:** 1,29 sg **Mud weight:** 1,50 sg

Stop time	Description
00:30	Ran the 9 5/8" casing to 2436 m.
02:00	Picked up and made up the 9 5/8" casing hanger.
02:30	Ran 9 5/8" casing on HWDP landing string to 2554 m. Casing string started to take weight.
03:00	Washed the casing string to setting depth. Landed the casing with 9 5/8" casing hanger in 18 3/4" wellhead. Shoe depth 2565 m.
04:00	Circulated 100% of the casing contents volume prior to cement job.
05:00	Pumped 15 m3 cement spacer. Pressuretested the cement line to 335 bar/10 minutes.
06:00	Cemented the 9 5/8" casing. Dropped the ball to shear the bottom plug. Mixed and pumped 31 m3 tail cement slurry @ 1.75 sg. Dropped the dart and released the top plug by pumping 3 m3 of water.
07:00	Displaced the cement by pumping mud with the rig pumps. Bumped the plug.
08:00	Pressuretested the casing to 335 bar /10 minutes. Set the seal assembly. Pressuretested the seal assembly to 335 bar / 10 minutes.
10:30	Tested the BOP to 35 / 335 bar for 5 / 10 minutes on the yellow pod. Function tested the BOP on the blue pod.
11:30	Released the casing hanger/seal assembly running tool. Pulled HWDP landing string out of the hole. Laid out the running tool assembly.
13:00	Ran in the hole and attempted to set the wearbushing. The wearbushing was retrieved to surface on the running tool.
15:30	Ran in hole with a new assembly including a jetting tool and set the wearbushing on the second attempt. Jetted the wellhead area with the jetting tool prior to landing the wearbushing. Pulled out of the hole with the running tool assembly.
17:30	Laid out the 12 1/4" BHA.
18:30	Laid out the cement stand with cement head assembly.
20:30	Pressuretested the top drive IBOP valves and the mud hose to 35 / 335 bar for 5 / 10 minutes
22:00	Cut and slipped the drilling line. Pressure tested the shear rams to 35 / 335 bar for 5/10 minutes.
23:59	Picked up and made up the 8 1/2" MWD tool.

Daily report no : 35 **Date:** 1998-12-23

Midnight depth : 2578 m MD **Estimated PP:** 1,18 sg **Mud weight:** 1,35 sg

Stop time	Description
02:00	Made up the 8 1/2" BHA.
03:00	Ran in the hole with 5" drill pipe.
03:30	Tested the MWD tool.
06:00	Continued running in the hole with 5" drill pipe. Tagged the top cement plug at 2513 m.
06:30	Performed a choke drill with the rig crew.
10:00	Drilled 9 5/8" cement plugs, float collar, shoe track and casing shoe. Casing shoe at 2565 m. Cleaned out rat hole to 2575 m. Displaced the hole to 1.35 sg mud on commencement of drilling.
10:30	Drilled 3 m of new formation in the 8 1/2" hole.
11:00	Circulated bottoms up prior to performing a leak off test.
13:00	Performed an extended leak off test (ELOT) with 1.35 sg mud in the hole. Test result in equivalent mud weight was 1.77 sg.
13:30	Flow checked the well. Pumped a slug in the drill pipe.
15:30	Pulled out of the hole with the 5" drill pipe.
16:30	Pulled out of the hole with the bottom hole assembly. Broke off bit # 8.
18:00	Laid out the MWD tool, NB Stabilisor and short drill collar. Picked up a new MWD tool.
18:30	Conducted an electrical test of the MWD tool.
19:30	Made up and ran in the hole with a new BHA with bit # 8 RR.
22:30	Ran in the hole with 5" drill pipe. Tested the MWD at 2545 m.
23:00	Serviced and lubricated the top drive.
23:59	Ran in hole to the casing shoe at 2565 m. Washed and reamed the rat hole and the new hole to 2578 m.

Daily report no : 36 **Date:** 1998-12-24

Midnight depth : 2759 m MD **Estimated PP:** 1,18 sg **Mud weight:** 1,35 sg

Stop time	Description
23:30	Drilled 8 1/2" hole from 2578 m to 2759 m.
23:59	MWD data communication with the surface failed. Drilling was halted while unsuccessful attempts were made to restore data communication with the MWD tool.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 37 **Date:** 1998-12-25
Midnight depth : 2915 m MD **Estimated PP:** 1,18 sg **Mud weight:** 1,35 sg

Stop time	Description
00:30	Attempted to re-establish failed data communication with MWD tool.
01:30	Circulated bottoms up. Flow checked the well. Pumped a slug in the drill pipe.
02:00	Pulled 5" drill pipe out of the open 8 1/2" hole to change the failed MWD tool and replace the bit.
05:30	Pulled 5" drill pipe out of the 9 5/8" csg to change the failed MWD tool and replace the bit.
06:30	Pulled the bottom hole assembly out of the hole.
07:00	Downloaded the MWD Tool.
07:30	Broke off bit # 8RR and laid out the MWD assembly.
08:30	Picked up and made up a new MWD assembly.
09:00	Programmed the MWD tool.
10:30	Made up used PDC Bit #9 and ran the bottom assembly in the hole.
13:30	Ran 5" drill pipe and BHA in 9 5/8" csg.
14:00	Ran 5" drill pipe and BHA in open hole to 2683 m.
14:30	Washed and reamed assembly to bottom at 2759 m.
23:59	Drilled 8 1/2" hole from 2759 m to 2915 m.

Daily report no : 38 **Date:** 1998-12-26
Midnight depth : 2988 m MD **Estimated PP:** 1,18 sg **Mud weight:** 1,35 sg

Stop time	Description
04:30	Drilled 8 1/2" hole from 2915 m to 2988.27 m.
06:00	Circulated bottoms up prior to pulling out of the hole to start logging. Flow checked the well. Pumped a slug in the drill pipe.
07:30	Pulled the 5" drill pipe out of the hole for a wiper trip to the 9 5/8" casing shoe.
09:30	Ran 5" drill pipe back into the hole.
10:30	Circulated bottoms up after the wiper trip.
11:30	Pulled the 5" drill pipe out of the hole to the 9 5/8" casing shoe.
14:30	Pulled the 5" drill pipe out of the 9 5/8" csg.
15:30	Pulled the bottom hole assembly out of the hole.
16:30	Downloaded MWD data from the MWD tool.
17:00	Laid out the MWD tool.
17:30	Rigged up Schlumberger logging equipment.
20:00	Made up logging tools for Run # 1A - PEX (HALS/TLD/HGNS/DSI/GPIT/ACTS)
23:59	Ran in the hole with the logging tools. Logged main log up from 2988 m.

Daily report no : 39 **Date:** 1998-12-27
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,35 sg

Stop time	Description
05:00	Logged 8 1/2" hole with the first logging toolstring, Run #1A - PEX (HALS/TLD/HGNS/DSI/GPIT/ACTS).
06:00	Rigged down the logging toolstring.
07:30	Rigged up the second logging toolstring, Run #1A - FMI/HNGS/ACTS
11:30	Ran in the hole to TD and Logged 8 1/2" hole with FMI/HNGS/ACTS. Pulled out of the hole.
12:00	Rigged down the logging toolstring.
12:30	Rigged up the third logging toolstring, Run #1A - MDT/GR
19:30	Ran in the hole to TD and Logged 8 1/2" hole with MDT/GR. Pulled out of the hole.
20:30	Rigged down the logging toolstring.
21:30	Rigged up the fourth logging toolstring, Run #1A - VSP/GR.
23:00	Ran in the hole to 2420 m and took check shot with the VSP tool.
23:59	Waited while sufficient rig air pressure was built up to operate the VSP guns. Took check shots at 2425 m and 2660 m as assembly was run slowly in the hole.

Daily report no : 40 **Date:** 1998-12-28
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,35 sg

Stop time	Description
02:30	VSP/GR Logging assembly was stuck in the hole on three occasions. The assembly came free by holding maximum allowable overpull on the logging line.
04:00	Pulled the VSP/GR toolstring out of the hole.
04:30	Laid down the toolstring and rigged down the Schlumberger equipment.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 40 **Date:** 1998-12-28
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,35 sg

Stop time	Description
05:30	Made up and ran in the hole with a 8 1/2" BHA for a wiper trip to TD.
08:30	Ran 5" drill pipe in the 9 5/8" csg.
09:30	Ran 5" drill pipe and bottom hole assembly in 8 1/2" open hole
11:00	Circulated bottoms up. Flow checked the well. Pumped a slug in the drill pipe.
11:30	Pulled the 5" drill pipe and the BHA out of the open hole into the 9 5/8" casing shoe.
14:00	Pulled the 5" drill pipe and the BHA out of the 9 5/8" csg.
15:00	Pulled the BHA out of the hole.
15:30	Rigged up Schlumberger wireline to run the Read VSP toolstring.
16:00	Rigged up the fourth logging toolstring, Run #1B - VSP/GR.
19:00	Ran in the hole with the logging toolstring. Unable to pass below 12 1/4" rathole below 9 5/8" casing shoe.
20:30	Pulled out of hole, logging with VSP inside 9 5/8" cased hole up to 1800 m. Continued pulling out of the hole to surface.
23:59	Ran the toolstring into the 9 5/8" csg and on into the 8 1/2" open hole to bottom and commenced logging.

Daily report no : 41 **Date:** 1998-12-29
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,35 sg

Stop time	Description
00:30	Pulled out of the 9 5/8" csg with the VSP/GR logging toolstring.
01:30	Rigged down the VSP/GR logging toolstring.
02:30	Rigged up the fifth logging toolstring, Run #1A - CST/GR
12:00	Ran in the hole to TD and commenced taking sidewall core samples from 2966 m.
12:30	Rigged down CST/GR toolstring and rigged down the Schlumberger equipment.
13:30	Made up the cement stand and rigged up the 3 1/2" tubular handling equipment.
16:00	Picked up and made up 30 joints of 3 1/2" drill pipe.
19:00	Ran in hole with 5" drill pipe to the 9 5/8" casing shoe
20:00	Ran in hole with 5" drill pipe to 2973 m.
22:30	Cleared the drawworks drum of jumped wrap of drilling line. Drawworks stopped too quickly while tripping, causing a wrap to jump over other wraps trapping the line.
23:00	Picked up the cement stand and ran in the hole and tagged TD while breaking circulation.
23:59	Rigged up and set cement a plug from 2988 m to 2710 m.

Daily report no : 42 **Date:** 1998-12-30
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,35 sg

Stop time	Description
00:30	Displaced cement plug # 1 with 22.5 m3 1.35 SG mud.
01:30	Pulled back out of the hole to 2700 m.
02:30	Reverse circulated hole with cement stinger at 2700 m.
03:00	Installed a wiper dart in the drill string and circulated the contents of the cement string conventionally.
04:00	Set cement plug # 2 from 2700 m to 2400 m.
04:30	Displaced the cement plug # 2 with 19.5 m3 1.35 sg mud.
05:30	Pulled back out of the hole to 2300 m.
06:30	Reverse circulated the hole with the cement stinger at 2300 m.
07:30	Installed a wiper dart in the drill string and circulated the contents of cement string conventionally.
09:30	Pulled the 5" drill pipe out of the hole.
11:30	Pulled and laid out 45 joints of 5" drill pipe.
12:30	Pulled the 3 1/2" drill pipe cement stinger out of the hole and racked the stands in the derrick.
13:30	Serviced the top drive
14:00	Made up 8 1/2" rerun bit and bit sub on one a 6 1/2" DC stand. Racked the stand in the derrick.
20:00	Waited on weather. Displaced the riser to seawater at beginning of the waiting period.
21:00	Made up a 8 1/2" BHA and ran in the hole to tag the cement plug.
23:59	Ran 5" drill pipe in the hole.

Daily report no : 43 **Date:** 1998-12-31
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,35 sg

Stop time	Description
01:00	Ran 5" drill pipe in the hole. Tagged the top of cement plug # 2 at 2391 m. Weight tested plug with 10 T.

Daily report no : 43 **Date:** 1998-12-31
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,35 sg

Stop time	Description
02:00	Pressuretested the cement plug and casing to 170 bar / 10 minutes.
04:00	Pulled out of the hole laying down excess 5" drill pipe.
04:30	Repaired the dies on the iron roughneck. Dies were broken attempting to break out overtorqued drill pipe tool joints.
06:00	Pulled out of the hole laying down excess 5" drill pipe.
06:30	Repaired sheared pin on EZY torque breakout cathead top sheave.
07:00	Repaired a damaged hose on the MIKO hydraulic deck crane.
09:30	Pulled the 5" drill pipe out of the hole.
10:00	Pulled the BHA out of the hole.
10:30	Installed the Weatherford casing tong modem pedestal on the rig floor.
11:00	Made up a 9 5/8" "N-1" bridge plug on a drill pipe running assembly.
12:00	Ran 5" drill pipe in the hole with 9 5/8" "N-1" Bridge Plug made up to CT tool
13:30	Set the bridge plug at 600 m. Dropped the 1 7/16" kirksite ball in the drill string. Pressured up to 223 bar to set the bridge plug and shear off from the shear stud.
16:00	Pulled out of the hole laying down excess 5" drill pipe.
18:00	Made up the 9 5/8" casing cutting assembly.
19:30	Ran the casing cutting assembly in the hole and landed the stop plate in the 9 5/8" wear bushing.
20:00	Cut the 9 5/8" casing at 500 m
21:30	Pulled out of the hole with the casing cutting assembly.
22:00	Made up the 9 5/8" casing fishing assembly.
23:00	Ran the 9 5/8" casing fishing assembly in the hole.
23:30	Engaged the 9 5/8" grappel in the 9 5/8" casing. Pulled the cut 9 5/8" casing string free with 40 T overpull.
23:59	Circulated mud down 9 5/8" casing and up through 20" x 9 5/8" casing annulus.

Daily report no : 44 **Date:** 1999-01-01
Midnight depth : 2988 m MD **Estimated PP:** 1,12 sg **Mud weight:** 1,38 sg

Stop time	Description
01:30	Pulled the fishing assembly and retrieved joints of 9 5/8" casing out of the hole.
02:00	Disengaged the 9 5/8" fishing spear assembly from the retrieved casing string.
03:30	Rigged up to break and lay out the recovered 9 5/8" casing hanger/seal assembly and wearbushing assembly.
04:00	Laid out the 9 5/8" casing hanger/seal assembly and wearbushing assembly.
07:00	Pulled and laid out the recovered 31 joints of 9 5/8" casing.
07:30	Laid out the Weatherford casing equipment.
09:00	Made up the 3 1/2" drill pipe cement stinger and ran 5" drill pipe into the hole to 500 m.
09:30	Circulated one annular volume of mud - 321 m3/5200 strokes.
11:00	Mixed and pumped 44.9 m3 1.90 sg cement slurry.
12:00	Pulled the 5" cement stringer out of hole to 200 m.
12:30	Reverse circulated the hole with the cement stringer at 200 m.
13:00	Displaced the riser to seawater
14:30	Laid out the 3 1/2" cement stinger - 30 joints.
15:00	Laid out the 9 5/8" casing fishing spear assembly.
15:30	Made up a jet sub and ran in the hole and jetted the wellhead with seawater.
16:00	Circulated with the jet sub in the wellhead to wash the BOP's.
22:00	Laid out 5 " drill pipe
23:00	Ran in the hole with a 8 1/2" bit assembly on 5" drill pipe and tagged the cement plug #3 at 254 m. Weight tested the plug with 10 T weight.
23:59	Pulled the 5" drill pipe out of the hole and laid out single joints.

Daily report no : 45 **Date:** 1999-01-02
Midnight depth : 2988 m MD **Estimated PP:** sg **Mud weight:** 1,38 sg

Stop time	Description
02:00	Pulled the 8 1/2" bottom hole assembly out of the hole and laid out 6 1/2" drill collars. Closed the BOP shear rams and attempted to pressuretest the cement plug # 3 to 100 bar. Pressure not holding.
02:30	Ran 5" drill pipe in the hole to 230 m.
03:00	Attempted to pressuretest the cement plug to 100 bar. Closed BOP upper pipe rams around the drill pipe in the hole.
03:30	Ran the 5" drill pipe in the hole and retagged the top of the cement plug at 254 m.
04:30	Displaced hole above the cement plug at 254 m and below the BOP at 112 m to 1.40 sg mud.
05:30	Attempted unsuccessfully to pressure test the cement plug to 100 bar. Closed BOP upper pipe rams around the drill pipe in the hole.

Daily report no : 45 **Date:** 1999-01-02
Midnight depth : 2988 m MD **Estimated PP:** sg **Mud weight:** 1,38 sg

Stop time	Description
07:00	Pulled out of the hole laying down 5" drill pipe.
08:30	Laid down the 9 5/8" cutting assembly, swivel assembly, 8 1/4" DC and hwdp.
10:30	Made up and racked back the MOST tool and 20 / 30" casing cutter assembly.
12:00	Flushed the surface- and choke lines. Pressuretested the surface- and choke lines to 100 bar. Closed blind / shear ram and pressure tested cement plug no 3 to 35 bar / 5 min, 70 bar / 5 min and 100 bar / 10 min.
15:00	Laid out the remaining excess tubulars from derrick.
16:00	Rigged down the 350 mt bails and the torque wrench from the top drive.
23:59	Waited on weather to pull the marine riser and the BOP. time wind(kts) sea(m) heave(m) 1600 50 6-9 3 2000 45 6-9 3 2400 43 6-9 3.3

Daily report no : 46 **Date:** 1999-01-03
Midnight depth : 2988 m MD **Estimated PP:** sg **Mud weight:** 1,38 sg

Stop time	Description
13:30	Waited on weather to pull the marine riser and BOP. time wind(kts) sea(m) heave(m) 0200 40 6-8 2 0600 40 6-8 2.5 1000 30 5-7 2.5 1300 30 3-5 1.4
20:00	Picked up the riser landing joint, Closed and secured the slip joint. Made final checks and unlatched the BOP from the wellhead and pulled clear of the well.
22:00	Laid out the landing joint, slip joint and a joint of marine riser.
23:59	Waited on weather to continue to pull the riser and BOP. time wind(kts) sea(m) heave(m) 2200 35 4-6 2 2359 32 4-6 1.5

Daily report no : 47 **Date:** 1999-01-04
Midnight depth : 2988 m MD **Estimated PP:** sg **Mud weight:** 1,38 sg

Stop time	Description
02:00	Waited on the weather to pull the marine riser and BOP.
04:00	Pulled the marine riser and BOP. Pulled the BOP through the splash zone into the guide.
07:00	Debalasted the rig to 21.5 m. Positioned the transporter and secured the BOP. Nippled down the double riser joint and the MUX cables.
16:30	Waited on the weather to lay down the double riser joint.
17:30	Laid down the double riser joint and a 5' pup.
19:30	Rigged down the riser handling equipment.
21:00	Installed the top drive torque wrench and the bails.
22:30	Made up and RIH with the 20" x 30" cutter and MOST tool to cut at 132.5 m.
23:59	Cut the 20" and 30" casings.

Daily report no : 48 **Date:** 1999-01-05
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 1,38 sg

Stop time	Description
01:00	Continued to cut the 20" and 30" casing. Pulled free with 40 mt overpull.
02:00	Pulled the wellhead to the moonpool.
03:30	Removed the bullseye frame and pulled the wellhead to the rotary. Released the MOST tool assembly and racked it in the derrick.
05:00	Installed the lifting eyes om the 30" wellhead and laid out the wellhead.
07:00	Laid down the MOST tool and the cutting assembly.
13:00	Deballasted the rig to transit draft.
23:59	Commenced pulling the anchors.

DAILY REPORT ON WELL 30/6-25 S

Daily report no : 49 **Date:** 1999-01-06
Midnight depth : m MD **Estimated PP:** sg **Mud weight:** 1,38 sg

Stop time	Description
00:30	Passed pennant no 8 to Pacific Blade. Chased out.
04:30	Held position while finishing backloading.
08:00	Pulled the anchors.
23:30	Commenced tight tow. 23:30 hrs rig at location 33/9, passed 500 m zone. Rig off contract.

TIME DISTRIBUTION

Well: 30/6-25 S **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN LEADER **Depth:** 2988,3 **m MD**
All sections **Stop date:** 1999-05-11

Operations	Hours	%	Hours	%	Acc. total
MOBILIZATION					
MOVING	93,5	8,02			
MOORING; RUNNING ANCHORS	17,0	1,46			
MOORING; PULLING ANCHORS	36,5	3,13			
Sum.			147,0	12,61	147,0
DRILLING					
BHA HANDLING/TESTING	64,0	5,49			
EQUIPMENT TEST	2,0	0,17			
MWD HANDLING/TESTING/SURVEYING	2,5	0,21			
TRIPPING IN CASED HOLE	22,5	1,93			
TRIPPING IN OPEN HOLE	28,0	2,40			
DRILLING	218,0	18,70			
OTHER	8,0	0,69			
WELLHEAD EQUIPMENT INSTALLATION	4,0	0,34			
REAMING	3,0	0,26			
CIRC. AND COND. MUD/HOLE	23,5	2,02			
WIPER TRIP	18,5	1,59			
CASING HANDLING/TESTING	14,5	1,24			
RUNNING CASING IN CASED HOLE	16,0	1,37			
RUNNING CASING IN OPEN HOLE	21,5	1,84			
DRILLING OUT OF CASING	5,5	0,47			
PRIMARY CEMENTING	21,5	1,84			
DRILLING OUT CEMENT PLUG	3,5	0,30			
FORMATION STRENGTH TESTING	5,0	0,43			
BOP HANDLING	2,5	0,21			
BOP RUNNING/RETRIEVING	19,0	1,63			
BOP TESTING	3,0	0,26			
WELLHEAD EQUIPMENT HANDLING	12,5	1,07			
SLIP AND CUT DRILLING LINE	1,5	0,13			
Sum.			520,0	44,60	667,0
FORMATION EVALUATION MWD					
BHA HANDLING/TESTING	0,5	0,04			
MWD HANDLING/TESTING/SURVEYING	7,0	0,60			
LOGGING WITH MWD	1,0	0,09			
Sum.			8,5	0,73	675,5
FORMATION EVALUATION LOGGING					
LOGGING	20,0	1,72			
LOGGING EQUIPMENT HANDLING/TESTING	11,0	0,94			
SIDEWALL CORING	9,5	0,81			
VERTICAL SEISMIC	7,0	0,60			
Sum.			47,5	4,07	723,0
PLUG AND ABANDONMENT					
BHA HANDLING/TESTING	11,0	0,94			
TRIPPING IN CASED HOLE	32,0	2,74			
OTHER	2,0	0,17			
CIRC. AND COND. MUD/HOLE	4,0	0,34			
CASING HANDLING/TESTING	1,0	0,09			
TRIPPING FOR CEMENT JOB	18,0	1,54			
BOP HANDLING	5,0	0,43			
BOP RUNNING/RETRIEVING	11,5	0,99			
WELLHEAD EQUIPMENT HANDLING	3,0	0,26			
SET CEMENT PLUG	9,5	0,81			
SET MECHANICAL PLUG	2,0	0,17			
TRIPPING OF CASING CUTTING EQUIPMENT	5,0	0,43			
CUT CASING/WELLHEAD	3,0	0,26			
CASING RETRIEVING	8,0	0,69			
Sum.			115,0	9,86	838,0

TIME DISTRIBUTION

Well: 30/6-25 S **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN LEADER **Depth:** 2988,3 **m MD**
All sections **Stop date:** 1999-05-11

Operations	**Hours**	**%**	**Hours**	**%**	**Acc. total**
DOWNTIME MOBILIZATION					
WAITING	42,5	3,64			
OTHER	6,5	0,56			
Sum.			49,0	4,20	887,0
DOWNTIME DRILLING					
EQUIPMENT FAILURE AND REPAIR	65,5	5,62			
WAITING	61,5	5,27			
CEMENTING	31,0	2,66			
STICKING/GOING STUCK WITH EQUIPMENT	25,5	2,19			
OTHER	3,5	0,30			
WIPER TRIP	2,5	0,21			
Sum.			189,5	16,25	1076,5
DOWNTIME FORM. EVAL. MWD					
EQUIPMENT FAILURE AND REPAIR	25,5	2,19			
Sum.			25,5	2,19	1102,0
DOWNTIME FORM. EVAL. LOGGING					
EQUIPMENT FAILURE AND REPAIR	1,0	0,09			
STICKING/GOING STUCK WITH EQUIPMENT	8,5	0,73			
WIPER TRIP	10,5	0,90			
Sum.			20,0	1,72	1122,0
DOWNTIME PLUG AND ABANDONMENT					
EQUIPMENT FAILURE AND REPAIR	1,5	0,13			
WAITING	41,0	3,52			
OTHER	1,5	0,13			
Sum.			44,0	3,77	1166,0
Reported time (100,0 % of well total 1166,0 hours) :					1166,0

DOWNTIME REPORT TRANSOCEAN LEADER

Last 173 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOL	30/6-25 S	1998-11-20	1	42,5	Waiting on weather			Rig hove to while in transit to new location. Rig under tight tow by vessel Far		RIG MOVE/SKIDDI				
TOL	30/6-25 S	1998-11-21	2	2,5	Other	TRANSOCEAN OFFSHORE NORWAY CORP.		Rig suffered Total Blackout at 1130 hours. Main Power restored at 1137 hours.		RIG MOVE/SKIDDI				
TOL	30/6-25 S	1998-11-26	3	4,5	Equipment failure	BAKER HUGHES INTEQ	BAKER HUGHES INTEQ	Pulled BHA (repositioned rig 11m forward for respud). Troubleshoot MWD problem -	DRILLSTRING/DC EQUIPMENT	DRILLING	DIRECTIONAL DRILLING	357.02	MWD/LWD	
TOL	30/6-25 S	1998-11-26	5	2,0	Equipment failure	BAKER HUGHES INTEQ	BAKER HUGHES INTEQ	Attempt survey prior to spud - no success. Work on pressure transducer setup and	DRILLSTRING/DC EQUIPMENT	DRILLING	DIRECTIONAL DRILLING	357.02	MWD/LWD	
TOL	30/6-25 S	1998-11-28	6	2,5	Other	NORSK HYDRO A/S		Rigged up to complete 30" top up cement job. Attempt mixing cement - problem wit		DRILLING				
TOL	30/6-25 S	1998-11-28	7	12,0	Waiting on weather			Wait on weather.		DRILLING				
TOL	30/6-25 S	1998-11-29	8	2,0	Equipment failure	BAKER HUGHES INTEQ	BAKER HUGHES INTEQ	Attempt to initialise MWD - troubleshoot and resolve signal problem.	DRILLSTRING/DC EQUIPMENT	DRILLING	DIRECTIONAL DRILLING	357.02	MWD/LWD	
TOL	30/6-25 S	1998-12-01	9	5,5	Other	NORSK HYDRO A/S		Pulled 3-1/2" cement stinger assembly and laid out plugged joint. Reran stinger		CEMENTING				
TOL	30/6-25 S	1998-12-03	10.1	21,5	Other	NORSK HYDRO A/S		Pulled 20" casing. Lay out shoetrack - removed all centralisers.		CASING				
TOL	30/6-25 S	1998-12-03	10	4,0	Waiting on weather			Wait on weather - cranes down due to high winds.		CASING				
TOL	30/6-25 S	1998-12-05	11	5,0	Waiting for materials/equip	NORSK HYDRO A/S		Complete mixing of BJ mixwater.	MUD AND BULK SYSTEMS	CEMENTING	CASING/TUBI RUNNING	324.00	Mud Mixing/Storag	

1999-05-11

DOWNTIME REPORT TRANSOCEAN LEADER

Last 173 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOL	30/6-25 S	1998-12-05	12	2,5	Equipment failure	TRANSOCEAN DRILLING A/S	TRANSOCEAN DRILLING A/S	Troubleshoot problem on cement transfer control panel - no success.	MUD AND BULK SYSTEMS	CEMENTING	DRILLING CONTRACTOI	321.00	Bulk Storage/Trans	
TOL	30/6-25 S	1998-12-07	13	40,5	Equipment failure	NORSK HYDRO A/S	DRIL-QUIP	Attempted 100bar pressure test on shear rams / H4 connector and 20" casing - no	WELLCONTROL EQUIPMENT/SYS	BOP INSTALLATIOI AND TESTING	SUB-SEA EQUIPMENT	331.00	BOP Stack	
TOL	30/6-25 S	1998-12-08	14	12,0	Waiting on weather			Wait on weather		BOP INSTALLATIOI AND TESTING				
TOL	30/6-25 S	1998-12-10	15	23,0	Other	NORSK HYDRO A/S		Ran in hole to 1046 m with open ended drill pipe.		DRILLING				
TOL	30/6-25 S	1998-12-11	16	3,5	Other	NORSK HYDRO A/S		Had flow line plugged with cement cuttings. Cleared flow line and gumbo trap for		DRILLING				
TOL	30/6-25 S	1998-12-12	17	0,5	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	TO BE NAMED	Had total loss of returns to flowline. Found slip joint packer leak due to no ai	SERVICE EQUIPMENT/SYS	DRILLING	RIG UTILITIES	370.00	Other Service Equipment/Sy	nn
TOL	30/6-25 S	1998-12-13	18	9,0	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	TO BE NAMED	Kelly hose blew up. Tripped out to 20" shoe at 1037 m to change out hose.	DRILL FLOOR EQUIPMENT/SYS	DRILLING	RIG UTILITIES	317.00	Other Drill Floor Eq./Syst.	nn
TOL	30/6-25 S	1998-12-15	19	28,5	Waiting on weather			Circulated hole clean.		DRILLING				
TOL	30/6-25 S	1998-12-17	20	0,5	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	MARITIME HYDRAULICS A/S	Repaired derrick Standlift Equipment.	PIPE HANDLING EQUIPMENT/SYS	DRILLING	DRILLING CONTRACTOI	341.00	Vertical Pipe Handling	
TOL	30/6-25 S	1998-12-18	21	6,5	Other	NORSK HYDRO A/S		Worked stuck pipe until assembly came free. Gradually regained full circulation		DRILLING				
TOL	30/6-25 S	1998-12-22	23	1,5	Equipment failure	DRIL-QUIP	DRIL-QUIP	Ran in the hole and attempted to set the Wearbushing. Wearbushing retrieved to s	MISCELLANEOUS EQUIPMENT/SYS	DRILLING	WELLHEAD	380.00	Miscellaneous equipment, systems and services	

DOWNTIME REPORT TRANSOCEAN LEADER

Last 173 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOL	30/6-25 S	1998-12-23	24	10,5	Equipment failure	BAKER HUGHES INTEQ	BAKER HUGHES INTEQ	Pulled out of the hole with 5" drill pipe to replace failed MWD tool.	DRILLSTRING/DC EQUIPMENT	DRILLING	ELECTRIC LOGGING	357.02	MWD/LWD	
TOL	30/6-25 S	1998-12-24	22	15,0	Equipment failure	BAKER HUGHES INTEQ	BAKER HUGHES INTEQ	MWD data communication with surface failed. Drilling was halted while unsuccessf	DRILLSTRING/DC EQUIPMENT	DRILLING	MWD/LWD	357.02	MWD/LWD	DC 2558-6
TOL	30/6-25 S	1998-12-27	25	1,0	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	TRANSOCEAN OFFSHORE NORWAY CORP.	Waited while sufficient rig air pressure was built up to operate VSP guns.	MISCELLANEOUS EQUIPMENT/SYS	LOGGING	DRILLING CONTRACTOI	385.00	Hydraulic/Pne Power Pack	
TOL	30/6-25 S	1998-12-28	26	19,0	Other	NORSK HYDRO A/S		VSP/GR Logging assembly stuck in the hole on three occasions. Came free by holdi		LOGGING				
TOL	30/6-25 S	1998-12-29	27	2,5	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	CONTIENTAL EMSCO	Clear drawworks drum of jumped wrap of drilling line.	DRILL FLOOR EQUIPMENT/SYS	PLUG AND ABANDONMEI	CEMENTING	312.00	Drawworks and Machinery	
TOL	30/6-25 S	1998-12-30	28	19,5	Waiting on weather			Waited on weather. Displaced riser to seawater at beginning of waiting period.		PLUG AND ABANDONMEI				
TOL	30/6-25 S	1998-12-31	29	0,5	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	MARITIME HYDRAULICS A/S	Repair dies on Iron Roughneck. Dies broken attempting to break out overtorqued d	PIPE HANDLING EQUIPMENT/SYS	PLUG AND ABANDONMEI	DRILLING CONTRACTOI	342.00	Drillfloor Tubular Handling	
TOL	30/6-25 S	1998-12-31	30	0,5	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	VARCO BJ OIL TOOLS	Repaired sheared pin on EZY Torque breakout cathead Top Sheave.	PIPE HANDLING EQUIPMENT/SYS	PLUG AND ABANDONMEI	DRILLING CONTRACTOI	347.00	Other Pipe Handling Equipment	HC-26
TOL	30/6-25 S	1998-12-31	31	0,5	Equipment failure	TRANSOCEAN OFFSHORE NORWAY CORP.	HYDRALIFT	Repaired Damaged Hose on MIKO Hydraulic Deck Crane.	MATERIAL HANDLING SYSTEM	PLUG AND ABANDONMEI	DRILLING CONTRACTOI	361.00	Deck Cranes	
TOL	30/6-25 S	1999-01-02	32	1,5	Other	NORSK HYDRO A/S		Attempted to pressure test the cement plug to 100 bar. Closed BOP Upper Pipe Ram		PLUG AND ABANDONMEI				

DOWNTIME REPORT TRANSOCEAN LEADER

Last 173 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOL	30/6-25 S	1999-01-02	33	21,5	Waiting on weather			Waited on weather to pull marine riser and BOP. time wind(kts) sea(m) hea		PLUG AND ABANDONMEI				
TOL	30/6-25 S	1999-01-06	35	4,0	Other	TO BE NAMED		Held position while finished backloading.		RIG MOVE/SKIDDI				
			Sum:	328,0										
			Total Sum:	328,0										

HOLE DEVIATION

Well: 30/6-25 S
Waterdepth: 105,0 m
Utm zone: 31
Reference point: RKB ; 23,5 m ABOVE MSL
Vertical to: 126,9 m
Central Median: 3' E
Total Depth: 2988,0 m MD
Horizontal datum: ED50
Template Centre Coordinates, UTM: **North :** m, **East:** m
Wellhead Coordinates, UTM: **North :** 6708684,75 m, **East:** 484682,44 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		Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
						North [m]	East [m]				
127,0	0,00	0,00	MWD		127,0	0,00	0,00	0,0	0,00	0,00	0,00
132,0	0,60	262,60	MWD		132,0	-0,00	-0,03	0,0	3,60	3,60	-584,40
142,0	0,60	307,20	MWD		142,0	0,02	-0,12	0,1	1,37	0,00	133,80
152,0	0,20	253,70	MWD		152,0	0,05	-0,18	0,2	1,52	-1,20	-160,50
162,0	0,00	251,30	MWD		162,0	0,04	-0,19	0,2	0,60	-0,60	-7,20
172,0	0,20	251,30	MWD		172,0	0,04	-0,21	0,2	0,60	0,60	0,00
180,0	0,10	267,30	MWD		180,0	0,03	-0,23	0,2	0,40	-0,38	60,00
213,0	0,50	244,00	MWD		213,0	-0,03	-0,39	0,4	0,37	0,36	-21,18
241,0	0,50	245,40	MWD		241,0	-0,14	-0,61	0,6	0,01	0,00	1,50
269,0	0,50	235,20	MWD		269,0	-0,26	-0,82	0,9	0,09	0,00	-10,93
298,0	0,60	104,50	MWD		298,0	-0,37	-0,78	0,9	1,04	0,10	-135,21
328,0	0,60	88,20	MWD		328,0	-0,40	-0,47	0,6	0,17	0,00	-16,30
357,0	0,50	196,10	MWD		357,0	-0,52	-0,35	0,6	0,92	-0,10	111,62
445,0	0,30	200,80	MWD		445,0	-1,10	-0,54	1,2	0,07	-0,07	1,60
534,0	0,70	272,40	MWD		534,0	-1,30	-1,17	1,7	0,23	0,13	24,13
622,0	0,70	47,60	MWD		622,0	-0,91	-1,31	1,6	0,44	0,00	46,09
711,0	0,40	35,00	MWD		711,0	-0,29	-0,73	0,8	0,11	-0,10	-4,25
799,0	0,30	107,00	MWD		799,0	-0,11	-0,33	0,3	0,14	-0,03	24,55
889,0	1,40	120,80	MWD		889,0	-0,74	0,84	1,1	0,37	0,37	4,60
976,0	0,60	50,20	MWD		976,0	-0,99	2,10	2,3	0,46	-0,28	-24,34
1031,0	1,00	122,30	MWD		1031,0	-1,06	2,73	2,9	0,54	0,22	39,33
1065,0	1,60	139,30	MWD		1064,9	-1,58	3,29	3,6	0,62	0,53	15,00
1098,0	1,80	131,10	MWD		1097,9	-2,27	3,98	4,6	0,29	0,18	-7,45
1127,0	2,10	133,20	MWD		1126,9	-2,94	4,71	5,5	0,32	0,31	2,17
1216,0	2,00	151,70	MWD		1215,9	-5,42	6,64	8,6	0,22	-0,03	6,24
1301,0	1,90	153,70	MWD		1300,8	-7,99	7,96	11,3	0,04	-0,04	0,71
1391,0	0,90	185,40	MWD		1390,8	-10,03	8,56	13,2	0,41	-0,33	10,57
1479,0	0,90	199,00	MWD		1478,8	-11,37	8,27	14,1	0,07	0,00	4,64
1568,0	0,40	234,00	MWD		1567,8	-12,21	7,79	14,5	0,21	-0,17	11,80
1656,0	1,00	331,80	MWD		1655,8	-11,72	7,18	13,7	0,38	0,20	33,34
1744,0	1,70	329,60	MWD		1743,7	-9,92	6,15	11,7	0,24	0,24	-0,75
1834,0	3,00	254,00	MWD		1833,7	-9,41	3,21	9,9	1,02	0,43	-25,20
1892,0	4,20	260,00	MWD		1891,6	-10,20	-0,34	10,2	0,65	0,62	3,10
1948,0	3,80	272,50	MWD		1947,4	-10,48	-4,21	11,3	0,51	-0,21	6,70
1980,0	3,30	307,80	MWD		1979,4	-9,86	-6,00	11,5	2,07	-0,47	33,09
2004,0	3,90	319,10	MWD		2003,3	-8,82	-7,08	11,3	1,16	0,75	14,13

HOLE DEVIATION

Well: 30/6-25 S
Reference point: RKB ; 23,5 m ABOVE MSL
Waterdepth: 105,0 m
Vertical to: 126,9 m
Total Depth: 2988,0 m MD
Utm zone: 31
Central Median: 3' E
Horizontal datum: ED50
Template Centre Coordinates, UTM: **North :** m, **East:** m
Wellhead Coordinates, UTM: **North :** 6708684,75 m, **East:** 484682,44 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]
2038,0	4,20	331,90	MWD		2037,2	-6,85	-8,42	10,9	0,84	0,26	11,29
2061,0	4,00	5,10	MWD		2060,2	-5,31	-8,75	10,2	3,06	-0,26	43,30
2091,0	4,20	27,00	MWD		2090,1	-3,29	-8,16	8,8	1,57	0,20	21,90
2121,0	4,40	29,20	MWD		2120,0	-1,31	-7,10	7,2	0,26	0,20	2,20
2150,0	4,90	39,60	MWD		2148,9	0,62	-5,76	5,8	1,01	0,52	10,76
2180,0	4,80	52,60	MWD		2178,8	2,37	-3,95	4,6	1,10	-0,10	13,00
2209,0	4,70	51,90	MWD		2207,7	3,84	-2,05	4,4	0,12	-0,10	-0,72
2243,0	3,30	57,10	MWD		2241,6	5,23	-0,13	5,2	1,27	-1,24	4,59
2271,0	1,30	78,90	MWD		2269,6	5,73	0,86	5,8	2,30	-2,14	23,36
2297,0	1,50	176,40	MWD		2295,6	5,45	1,17	5,6	2,43	0,23	112,50
2330,0	3,90	203,60	MWD		2328,6	3,99	0,74	4,1	2,41	2,18	24,73
2357,0	5,20	209,90	MWD		2355,5	2,09	-0,23	2,1	1,55	1,44	7,00
2387,0	7,40	214,20	MWD		2385,3	-0,69	-2,00	2,1	2,25	2,20	4,30
2417,0	9,90	215,60	MWD		2415,0	-4,39	-4,58	6,3	2,51	2,50	1,40
2449,0	13,00	220,60	MWD		2446,3	-9,36	-8,53	12,7	3,05	2,91	4,69
2479,0	17,30	222,70	MWD		2475,3	-15,20	-13,75	20,5	4,33	4,30	2,10
2504,0	19,90	222,00	MWD		2499,0	-21,10	-19,12	28,5	3,13	3,12	-0,84
2534,0	23,10	224,40	MWD		2526,9	-29,10	-26,66	39,5	3,32	3,20	2,40
2554,0	25,40	226,80	MWD		2545,1	-34,84	-32,53	47,7	3,75	3,45	3,60
2590,0	28,70	227,20	MWD		2577,2	-46,00	-44,50	64,0	2,75	2,75	0,33
2619,0	27,90	226,80	MWD		2602,7	-55,37	-54,56	77,7	0,85	-0,83	-0,41
2648,0	26,70	226,50	MWD		2628,5	-64,50	-64,23	91,0	1,25	-1,24	-0,31
2678,0	25,90	227,30	MWD		2655,4	-73,59	-73,94	104,3	0,87	-0,80	0,80
2707,0	25,50	225,70	MWD		2681,5	-82,24	-83,06	116,9	0,83	-0,41	-1,66
2738,0	25,20	226,10	MWD		2709,5	-91,48	-92,59	130,2	0,33	-0,29	0,39
2767,0	25,10	225,80	MWD		2735,8	-100,05	-101,45	142,5	0,17	-0,10	-0,31
2796,0	25,30	226,50	MWD		2762,0	-108,60	-110,35	154,8	0,37	0,21	0,72
2827,0	25,30	228,50	MWD		2790,0	-117,55	-120,12	168,1	0,83	0,00	1,94
2856,0	25,70	228,20	MWD		2816,2	-125,85	-129,45	180,5	0,43	0,41	-0,31
2885,0	26,10	229,40	MWD		2842,3	-134,19	-138,98	193,2	0,68	0,41	1,24
2915,0	26,40	229,90	MWD		2869,2	-142,78	-149,09	206,4	0,37	0,30	0,50
2945,0	26,20	229,90	MWD		2896,1	-151,34	-159,26	219,7	0,20	-0,20	0,00
2973,0	26,10	230,50	MWD		2921,2	-159,24	-168,74	232,0	0,30	-0,11	0,64

MAIN CONSUMPTION OF CASING/TUBING ON WELL 30/6-25 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	63,6	5
20"	SURFACE	X-56	197,92	133,00	E60MT	911,3	75
9 5/8"	PRODUCTION	P-110	69,94	47,00	NK 3 SB	2438,2	207

TOTAL CONSUMPTION OF CEMENT ADDITIVES ON WELL 30/6-25 S

Section	Cement/Additive	Unit	Total Amount Used
36"	API CLASS G	MT	86,00
	SPECIAL ADDITIVE: DEFOAMER	l	340,00
	RAPID CEMENT	MT	45,00
	ACCELERATOR: LIQUID CACL2	l	2590,00
26"	EXTENDER: LIQUID LODENSE	l	2140,00
	DISPERSANT: CD-31L LIQUID	l	1283,00
	RETARDER: HIGH TEMP. BETWEEN 93 AND 149 DEGC	l	525,00
	API CLASS G	MT	209,00
	SPECIAL ADDITIVE: DEFOAMER	l	450,00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	56456,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	2139,00
	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	18352,00
17 1/2"	SPECIAL ADDITIVE: DEFOAMER	l	45,00
	API CLASS G	MT	15,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	119,00
12 1/4"	WEIGHT MATERIAL: BARITE	kg	
	EXTENDER: BENTONITE	kg	450,00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	900,00
	SPACER ADDITIVE: CAUSTIC SODA POWDER	kg	
	API CLASS G	MT	42,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	252,00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	130,00
	DISPERSANT: CD-31L LIQUID	l	190,00
	EXTENDER: BENTONITE	kg	300,00
	SPACER ADDITIVE: MCS-G	l	832,00
P&A	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	4630,00
	DISPERSANT: CD-31L LIQUID	l	310,00
	FLUID-LOSS ADDITIVE: BETWEEN 38 AND 177 DEGC	l	2720,00
	SPECIAL ADDITIVE: DEFOAMER	l	237,00
	ACCELERATOR: LIQUID CACL2	l	860,00
	API CLASS G	MT	102,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	412,00

BITRECORD FOR WELL 30/6-25 S PO: 1

Bit				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
No		RR	Type																					
1		1	MITO	17,50	SDBS	SS44G	652480	135M	18,18,18	0,746	1	193	65	7,90	8,3	25/75	30	0/50	2500/4000	45/85	2 - 1 - WT - A - E	I	NO	TD
1		1	HO	36,00	REDB	HEAVYDUTY	RV13462			0,000	1	193	65	7,90	8,3	25/75	30	0/50	2500/4000	45/85				
2			ISRT	26,00	SMIT	M02SODLC	LK2487	415	15,20,22,22	1,222	2	194	10	3,00	3,3						0 - 0 - NO - A - E	I	NO	TD
3			ISRT	8,50	HTC	ATMGTP09	K51CT	437	16,18,18	0,693	3	1038	844	25,70	32,8	90/130		10/50	2450/2600	120/140	0 - 0 - NO - A - E	I	NO	TD
2		1	ISRT	26,00	SMIT	M02SODLC	LK2487	415	15,22,22,36	1,909	4	1044	850	25,70	33,1	100/150		10/220	4000/4400	105/185	1 - 1 - NO - A - E	I	NO	TD
1		2	MITO	17,50	SDBS	SS44G	652480	135M	22,22,22	1,114	5	1046	22		0,0	110/120		0/100	3800/3850	180/190	2 - 2 - BT - A - E	I	NO	TD
1		3	MITO	17,50	SDBS	SS44G	652480	135M	22,22,22	1,114	6	1047	1		0,0	110/120		55/100	3500/3850	180/190	2 - 2 - BT - A - E	I	NO	TD
4			ISRT	12,25	HTC	MXC09DDT	D09DH	437	16,22,22,22	1,310	7	1903	856	14,70	58,2	140/150	132025	60/300	3500/3550	186/296	8 - 8 - LT - A - F	I	CC	BHA
5			PDC	12,25	LYNG	LA335BG	2197	M647	14,14,14,14,14,14	0,902	8	2040	137	8,50	16,1	120/212	87913	20/220	2930/3110	280/295	1 - 1 - NO - A - X	I	NO	PR
6			ISRT	12,25	HTC	MXC09DDT	D10DH	437	16,22,22,22	1,310	9	2371	331	28,10	11,8	116/240	284231	4/22	2876/3500	260/350	2 - 2 - CC - 2 - E	I	NO	PR
7			ISRT	12,25	HTC	MXC09DX	B84DA	437	16,22,22,22	1,310	10	2575	204	27,50	7,4	98/219	207500	2/32	2136/3001	195/304	1 - 1 - CC - 2 - E	I	NO	TD
8			ISRT	8,50	HTC	MXC09DX	C44DW	437	16,16,16	0,589	11	2578	3	2,80	1,1	130/135	10456	12/15	2450/2600	289/292				DTF
8		1	ISRT	8,50	HTC	MXC09DX	C44DW	437	16,16,16	0,589	12	2759	181	21,40	8,5	52/126	133464	7/20	2200/2300	265/270	1 - 1 - CT - A - E	I	NO	DTF
9			PDC	8,50	SMIT	M50P	JR6513	M333	11,11,11,12,12,12	0,610	13	2988	229	11,10	20,6	137/154	89024	1/7	2240/2300	270/280	2 - 3 - CT - T - X	I	LT	TD
8		2	ISRT	8,50	HTC	MXC09DX	C44DW	437	16,16,16	0,589	14	2988	0		0,0						1 - 1 - CT - A - E	I	NO	TD

BOTTOM HOLE ASSEMBLIES USED ON WELL 30/6-25 S PO: 1

BHA no. 1: No. / Element / OD(in) / Length(m) Depth In: 127 m MD Out: 193 m MD

1	SS44G	17,5	0,44	2	HEAVYDUTY	36,0	4,03
3	X-OVER		0,98	4	MWD		15,97
5	X-OVER		0,88	6	DRILL COLLAR STEEL	9,5	36,00
7	X-OVER		1,23	8	DRILL COLLAR STEEL	8,25	9,28
9	JAR	8,0	9,68	10	DRILL COLLAR STEEL	8,25	9,10
11	X-OVER		0,96	12	HWDP		26,82

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 115,37

BHA no. 2: No. / Element / OD(in) / Length(m) Depth In: 184 m MD Out: 194 m MD

1	M02SODLC	26,0		5	BIT SUB	95,0	0,91
6	DRILL COLLAR STEEL	9,5	27,26	7	X-OVER		1,23
8	DRILL COLLAR STEEL	8,25	9,28	9	JAR	8,0	9,68
10	DRILL COLLAR STEEL	8,25	9,10	11	X-OVER		0,96
12	HWDP		108,95				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 167,37

BHA no. 3: No. / Element / OD(in) / Length(m) Depth In: 194 m MD Out: 1038 m MD

1	ATMGTP09	8,5		2	BIT SUB	6,5	1,20
3	MWD	6,75	18,57	4	STRING MAGNET	8,5	1,58
5	DRILL COLLAR STEEL	6,25	82,38	6	JAR	6,75	9,31
7	DRILL COLLAR STEEL	6,25	18,90	8	HWDP	5,0	108,95

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 240,89

BHA no. 4: No. / Element / OD(in) / Length(m) Depth In: 194 m MD Out: 1044 m MD

1	M02SODLC	26,0	0,66	3	BIT SUB	9,5	0,91
4	MWD	8,25	18,66	5	X-OVER		0,88
6	DRILL COLLAR STEEL	9,5	36,00	7	X-OVER		1,23
8	DRILL COLLAR STEEL	8,25	83,68	9	JAR	8,0	9,68
10	DRILL COLLAR STEEL	8,25	9,10	11	X-OVER		0,96
12	HWDP		136,76				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 298,52

BHA no. 5: No. / Element / OD(in) / Length(m) Depth In: 1024 m MD Out: 1046 m MD

1	SS44G	17,5	0,45	2	BIT SUB	9,5	1,22
3	DRILL COLLAR STEEL	8,25	111,55	4	X-OVER	8,0	0,96
5	HWDP	5,0	136,76				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 250,94

BHA no. 6: No. / Element / OD(in) / Length(m) Depth In: 1046 m MD Out: 1047 m MD

1	SS44G	17,5	0,45	2	BIT SUB	9,5	1,22
3	DRILL COLLAR STEEL	8,25	111,55	4	X-OVER	8,0	0,96
5	HWDP	5,0	136,76				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 250,94

BHA no. 7: No. / Element / OD(in) / Length(m) Depth In: 1047 m MD Out: 1903 m MD

1	MXC09DDT	12,25	0,35	2	BIT SUB	8,0	0,92
3	MWD	8,25	17,83	4	NON MAG. STAB	12,25	1,70
5	NON MAG. COLLAR	8,0	8,65	6	DRILL COLLAR STEEL	8,25	101,42
7	JAR	7,875	9,68	8	DRILL COLLAR STEEL	8,25	9,10
9	X-OVER	8,0	0,96	10	HWDP	5,0	136,76

Reason pulled: CHANGE BOTTOMHOLE ASSI Sum: 287,37

BOTTOM HOLE ASSEMBLIES USED ON WELL 30/6-25 S PO: 1

BHA no. 8: No. / Element / OD(in) / Length(m) Depth In: 1903 m MD Out: 2040 m MD

1	LA335BG	12,25	0,35	2	NAVIGATOR	9,5	16,41
3	MWD	8,25	11,78	4	NON MAG. COLLAR	8,0	8,65
5	FLOAT SUB	8,0	1,09	6	DRILL COLLAR STEEL	8,25	27,86
7	JAR	8,0	9,68	8	DRILL COLLAR STEEL	8,25	9,10
9	X-OVER	8,0	0,96	10	HWDP	5,0	136,76

Reason pulled: PENETRATION RATE Sum: 222,64

BHA no. 9: No. / Element / OD(in) / Length(m) Depth In: 2040 m MD Out: 2371 m MD

1	MXC09DDT	12,25	0,35	2	NAVIGATOR	9,5	16,41
3	MWD	8,25	11,78	4	NON MAG. COLLAR	8,0	8,65
5	FLOAT SUB	8,0	1,09	6	DRILL COLLAR STEEL	8,25	55,42
7	JAR	8,0	9,68	8	DRILL COLLAR STEEL	8,25	9,10
9	X-OVER	8,0	0,96	10	HWDP	5,0	136,76

Reason pulled: PENETRATION RATE Sum: 250,20

BHA no. 10: No. / Element / OD(in) / Length(m) Depth In: 2371 m MD Out: 2575 m MD

1	MXC09DX	12,25	0,35	2	NAVIGATOR	9,5	16,41
3	MWD	8,25	11,78	4	NON MAG. COLLAR	8,0	8,65
5	FLOAT SUB	8,0	1,09	6	DRILL COLLAR STEEL	8,25	55,42
7	JAR	8,0	9,68	8	DRILL COLLAR STEEL	8,25	9,10
9	X-OVER	8,0	0,96	10	HWDP	5,0	136,76

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 250,20

BHA no. 11: No. / Element / OD(in) / Length(m) Depth In: 2575 m MD Out: 2578 m MD

1	MXC09DX	8,5	0,24	2	NEAR BIT STAB	8,5	1,87
3	NON MAG. COLLAR	6,75	3,05	4	STEEL STAB	8,25	1,87
5	X-OVER	6,75	0,99	6	MWD	6,75	18,18
7	STEEL STAB	8,5	1,64	8	DRILL COLLAR STEEL	6,5	81,78
9	JAR	6,5	9,31	10	DRILL COLLAR STEEL	6,5	18,90
11	HWDP	5,0	136,76				

Reason pulled: DOWNHOLE TOOL FAILURE Sum: 274,59

BHA no. 12: No. / Element / OD(in) / Length(m) Depth In: 2578 m MD Out: 2759 m MD

1	MXC09DX	8,5	0,24	2	BIT SUB	6,5	1,19
3	STEEL STAB	8,25	1,87	4	X-OVER	6,75	0,99
5	MWD	6,75	18,17	6	STEEL STAB	8,5	1,64
7	DRILL COLLAR STEEL	6,5	81,78	8	JAR	6,5	9,31
9	DRILL COLLAR STEEL	6,5	18,90	10	HWDP	5,0	136,76

Reason pulled: DOWNHOLE TOOL FAILURE Sum: 270,85

BHA no. 13: No. / Element / OD(in) / Length(m) Depth In: 2759 m MD Out: 2988 m MD

1	M50P	8,5	0,28	2	BIT SUB	6,5	1,19
3	STEEL STAB	8,25	1,87	4	X-OVER	6,75	0,90
5	MWD	6,75	17,63	6	STEEL STAB	8,5	1,64
7	DRILL COLLAR STEEL	6,5	81,78	8	JAR	6,5	9,31
9	DRILL COLLAR STEEL	6,5	18,90	10	HWDP	5,0	136,76

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 270,26

BOTTOM HOLE ASSEMBLIES USED ON WELL 30/6-25 S PO: 1

BHA no. 14: Depth In: 2988 m MD Out: 2988 m MD

No.	Element	OD(in)	Length(m)	No.	Element	OD(in)	Length(m)
1	MXC09DX	8,5	0,24	2	BIT SUB	6,5	1,19
3	STEEL STAB	8,25	1,87	4	DRILL COLLAR STEEL	6,5	18,03
5	STEEL STAB	8,5	1,64	6	DRILL COLLAR STEEL	6,5	63,75
7	JAR	6,5	9,31	8	DRILL COLLAR STEEL	6,5	18,90
9	HWDP	5,0	136,76				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 251,69

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 30/6-25 S PO: 1

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

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
1998-12-09	1046	1046	AQUACOL KCL/POI	175,0	1,20		87	59	47	32	0	0	9	6	50,0	28,0	15,5	3,5	4,5

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

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
1998-12-10	1046	1046	AQUACOL KCL/POI	181,0	1,20		100	68	54	37	0	0	10	8	50,0	32,0	18,0	4,0	5,5
1998-12-11	1100	1100	AQUACOL KCL/POI	173,0	1,20		98	66	50	33	0	0	10	7	50,0	32,0	17,0	4,0	5,0
1998-12-12	1614	1614	AQUACOL KCL/POI	109,0	1,45		130	87	70	48	0	0	12	9	50,0	43,0	22,0	5,0	6,5
1998-12-13	1892	1892	AQUACOL KCL/POI	121,0	1,45		153	105	84	57	0	0	14	10	50,0	48,0	28,5	5,0	6,5
1998-12-14	2040	2039	AQUACOL KCL/POI	96,0	1,48		137	93	74	50	0	0	11	9	50,0	44,0	24,5	5,0	6,0
1998-12-15	2040	2039	AQUACOL KCL/POI	95,0	1,48		136	92	73	50	0	0	12	10	50,0	44,0	24,0	5,0	6,0
1998-12-16	2244	2243	AQUACOL KCL/POI	95,0	1,48		135	95	78	54	0	0	12	9	50,0	40,0	27,5	4,5	6,0
1998-12-17 23:59	2371	2369	AQUACOL KCL/POI	102,0	1,48		154	105	83	57	0	0	12	9	50,0	49,0	28,0	5,0	6,5
1998-12-18 23:59	2403	2401	AQUACOL KCL/POI	105,0	1,48		153	104	82	56	0	0	12	9	50,0	49,0	27,5	4,5	5,5
1998-12-19 23:59	2539	2531	AQUACOL KCL/POI	105,0	1,50		153	104	83	57	0	0	13	10	50,0	49,0	27,5	5,0	75,0
1998-12-20 23:59	2575	2564	AQUACOL KCL/POI	120,0	1,50		157	109	88	61	0	0	14	10	50,0	48,0	30,5	5,0	8,0
1998-12-21 23:59	2575	2564	AQUACOL KCL/POI	120,0	1,50		157	109	88	61	0	0	14	10	50,0	48,0	30,5	5,0	8,0

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

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
1998-12-22 23:59	2575	2564	AQUACOL KCL/POI	120,0	1,50		162	111	89	61	0	0	15	11	50,0	51,0	30,0	5,5	9,0
1998-12-23 23:59	2578	2566	AQUACOL KCL/POI	150,0	1,35		120	74	55	34	0	0	7	5	50,0	46,0	14,0	2,5	4,0
1998-12-24 23:59	2759	2729	AQUACOL KCL/POI	91,0	1,35		117	82	66	46	0	0	12	9	50,0	35,0	23,5	4,5	5,5
1998-12-25 23:59	2915	2869	AQUACOL KCL/POI	98,0	1,35		130	90	74	51	0	0	14	10	50,0	40,0	25,0	4,5	6,0
1998-12-26 23:59	2988	2935	AQUACOL KCL/POI	115,0	1,35		136	95	72	54	0	0	14	11	50,0	41,0	27,0	5,5	8,0
1998-12-27 23:59	2988	2935	AQUACOL KCL/POI	115,0	1,35		136	95	72	54	0	0	14	11	50,0	41,0	27,0	5,5	8,0
1998-12-28 23:59	2988	2935	AQUACOL KCL/POI	110,0	1,35		121	84	68	47	0	0	12	9	50,0	37,0	23,5	4,5	7,0
1998-12-29 23:59	2988	2935	AQUACOL KCL/POI	110,0	1,35		121	84	68	47	0	0	12	9	50,0	37,0	23,5	4,5	7,0
1998-12-30 23:59	2988	2935	AQUACOL KCL/POI	110,0	1,35		68	47	37	26	0	0	12	9	50,0	37,0	23,5	4,5	7,0
1998-12-31 23:59	2988	2935	AQUACOL KCL/POI	106,0	1,35		118	44	35	24	0	0	12	9	50,0	36,0	23,0	4,5	6,5
1999-01-01 23:59	2988	2935	AQUACOL KCL/POI	106,0	1,38		85	58	46	31	0	0	7	5	50,0	27,0	15,5	3,0	4,5

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 30/6-25 S PO: 1

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]
1998-12-09	1046	1046	AQUACOL KCL/P(	1,20	8,0	0,0	1		35/ 150	7,2			0,4	184		88	100		280	10,5					16

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

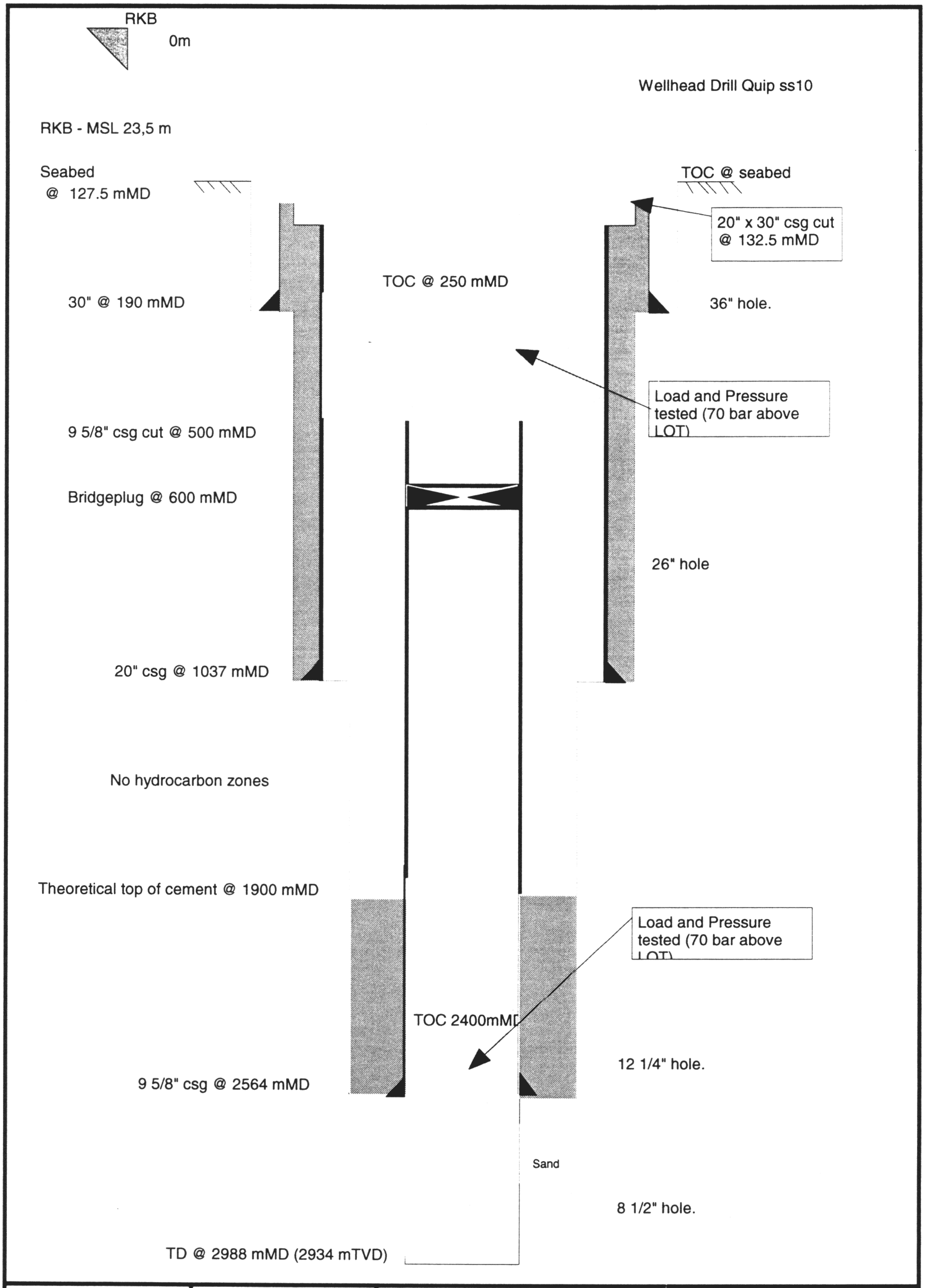
Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
1998-12-10	1046	1046	AQUACOL KCL/P(	1,20	8,6		1		35/ 150	8,2		0,0	0,7	182		87	440		720	10,5	3,0				18
1998-12-11	1100	1100	AQUACOL KCL/P(	1,20	4,2		1		35/ 150	10,1		0,3	1,1	163		85	440		600	10,8	3,0	0,1			37
1998-12-12	1614	1614	AQUACOL KCL/P(	1,45	2,9		1		35/ 150	9,6		0,0	1,1	142		82	420		640	18,8	3,0	0,8			71
1998-12-13	1892	1892	AQUACOL KCL/P(	1,45	2,8		1		35/ 150	8,9		0,0	1,0	152		85	400		600	19,5	3,0	1,5	21		105
1998-12-14	2040	2039	AQUACOL KCL/P(	1,48	2,6		1		35/ 150	8,7		0,0	0,4	163		87	460		660	20,0	3,0	1,0	18		79
1998-12-15	2040	2039	AQUACOL KCL/P(	1,48	2,6		1		35/ 150	8,7		0,0	0,3	164		87	440		660	20,0	3,0	1,0	18		79
1998-12-16	2244	2243	AQUACOL KCL/P(	1,48	2,7	0,0	1		35/ 150	8,0		0,0	0,1	160		90000	640		760	20,0	3,0	0,6	39	0,0	72
1998-12-17 23:59	2371	2369	AQUACOL KCL/P(	1,48	2,4	0,0	1		35/ 150	8,2			0,2	160		90000	720		840	20,4	3,0	0,5	43	0,0	94
1998-12-18 23:59	2403	2401	AQUACOL KCL/P(	1,48	2,3	0,0	1		35/ 150	8,3		0,0	0,1	160		94000	720		840	20,5	3,0	0,6	46	0,0	90
1998-12-19 23:59	2539	2531	AQUACOL KCL/P(	1,50	2,2	0,0	1		35/ 150	8,0		0,0	0,1	165		94000	800		880	21,7	3,3	0,4	50	0,0	123
1998-12-20 23:59	2575	2564	AQUACOL KCL/P(	1,50	2,0		1		35/ 150	8,2		0,0	0,1	165		96000	840		960	21,7	3,2	0,4	50	0,0	119
1998-12-21 23:59	2575	2564	AQUACOL KCL/P(	1,50	2,0	0,0	1		35/ 150	8,2		0,0	0,1	165		96000	840		960	21,7	3,2	0,4	50	0,0	119

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
1998-12-22 23:59	2575	2564	AQUACOL KCL/P(	1,50	2,2	0,0	1		35/ 150	8,2			0,1	165		96000	840		960	21,7	3,2	0,4	50		119
1998-12-23 23:59	2578	2566	AQUACOL KCL/P(	1,35	2,5		1		35/ 150	10,9		0,1	0,3	173		100000	440		440	17,0	3,2	0,5	29		97
1998-12-24 23:59	2759	2729	AQUACOL KCL/P(	1,35	3,0	0,0	1	0	35/ 150	8,7		0,0	0,1	151		90000	360		640	17,0	3,2	0,1	42		120
1998-12-25 23:59	2915	2869	AQUACOL KCL/P(	1,35	2,8	0,0	1		35/ 150	8,7		0,0	0,2	151		92000	360		440	17,0	3,2	0,2	35	0,0	115
1998-12-26 23:59	2988	2935	AQUACOL KCL/P(	1,35	2,6	0,0	1		35/ 150	8,5		0,0	0,1	150		92000	560		720	17,3	3,1	0,3	49	0,0	132
1998-12-27 23:59	2988	2935	AQUACOL KCL/P(	1,35	2,6	0,0	3		35/ 150	8,5		0,0	0,1	150		92000	560		720	17,3	3,1	0,3	49	0,0	132
1998-12-28 23:59	2988	2935	AQUACOL KCL/P(	1,35	2,6	0,0	1		35/ 150	8,7		0,0	0,1	156		86000	400		480	17,3	3,0	0,2	50	0,0	146
1998-12-29 23:59	2988	2935	AQUACOL KCL/P(	1,35	2,6	0,0	1		35/ 150	8,7		0,0	0,1	156		86000	400		480	17,3	3,0	0,2	50	0,0	146
1998-12-30 23:59	2988	2935	AQUACOL KCL/P(	1,35	2,6		1		35/ 150	8,7		0,0	0,1	156		86000	400		480	17,3	3,0	0,2	50		146
1998-12-31 23:59	2988	2935	AQUACOL KCL/P(	1,35	2,7		1		35/ 150	9,3		0,0	0,2	151		86000	420		520	17,3	3,0	0,2	50		146
1999-01-01 23:59	2988	2935	AQUACOL KCL/P(	1,38	2,6	0,0	1		35/ 150	9,8		0,3	0,7	148		83000	560		720	17,3	3,0	0,3	32	0,0	104

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 30/6-25 S

Section	Product/ Additive	Unit	Total Amount Used
36"	BARITE	kg	40000,00
	BENTONITE	kg	14000,00
	LIME	kg	70,00
	SODA ASH	kg	100,00
26"	AQUACOL S	kg	14284,00
	BARITE	kg	318000,00
	BENTONITE	kg	105000,00
	BIO-PAQ	kg	5055,00
	CITRIC ACID	kg	1568,00
	DFE 1501	kg	36592,00
	KCL	kg	27000,00
	LIME	kg	200,00
	SODA ASH	kg	250,00
	SODIUM BICARBONATE	kg	1420,00
	SODIUM CHLORIDE	kg	47000,00
	XAN PLEX	kg	2506,00
12 1/4"	ANTISOL FL30	kg	19,00
	AQUAPAC LV	kg	20113,00
	BARITE	kg	329000,00
	BENTONITE	kg	1000,00
	BICARBONATE	kg	442,00
	BP DCP 208 (POLYALC. GLYCO)	kg	42442,00
	CITRIC ACID	kg	492,00
	KCL	kg	271000,00
	KCL BRINE	l	50000,00
	LIME	kg	25,00
	SODA ASH	kg	463,00
	XAN PLEX	kg	3636,00
	XANTHAN GUM	kg	107,00
8 1/2"	AQUAPAC LV	kg	2853,00
	BACL2	l	800,00
	BARITE	kg	73000,00
	BICARBONATE	kg	574,00
	BP DCP 208 (POLYALC. GLYCO)	kg	5691,00
	CITRIC ACID	kg	484,00
	KCL	kg	39000,00
	LIME	kg	11,00
	SODA ASH	kg	85,00
	XAN PLEX	kg	510,00



Final Well Report 30/6-25 S	Figure B-1	**WELL SCHEMATIC** **Permanent Plug & Abandonment**

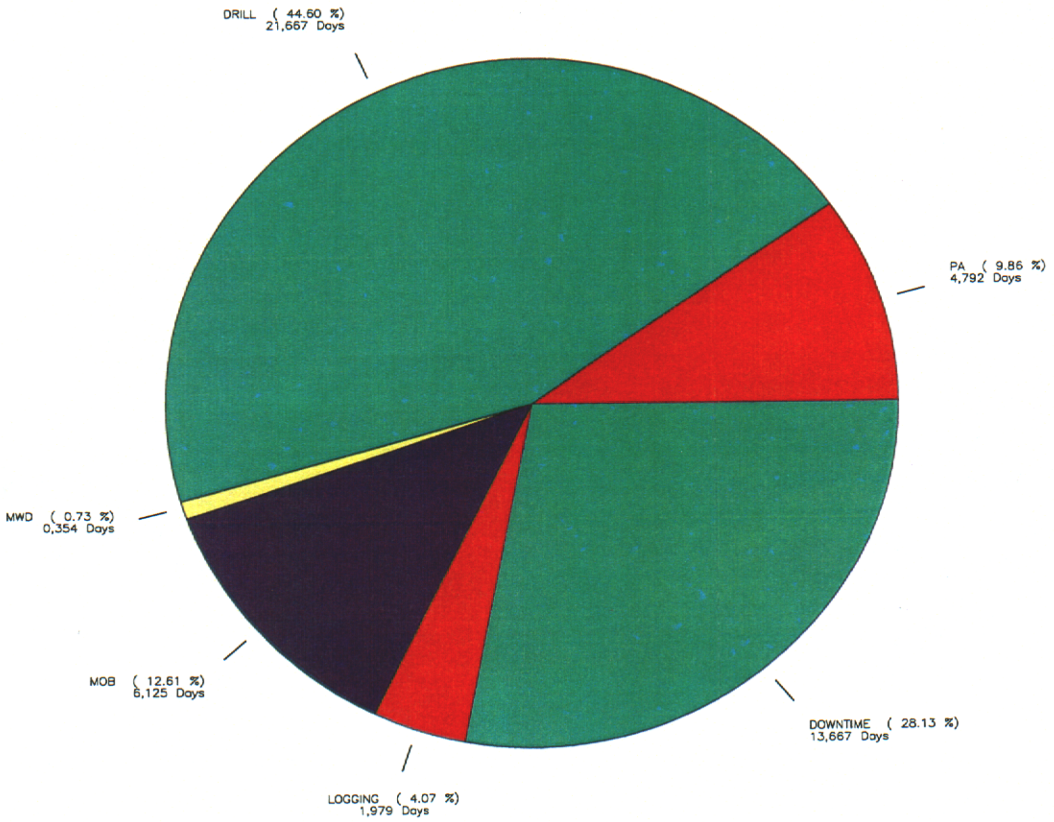
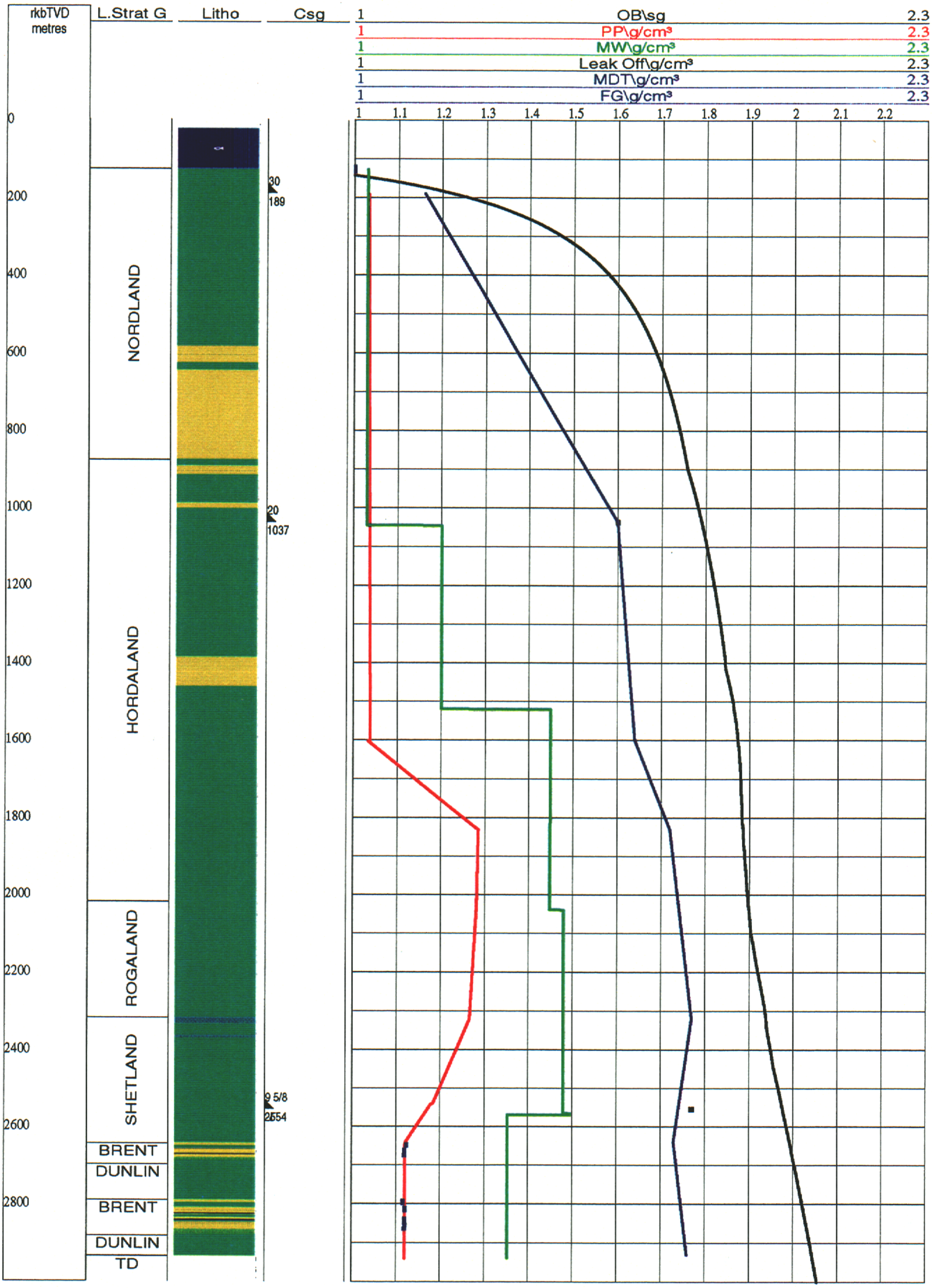
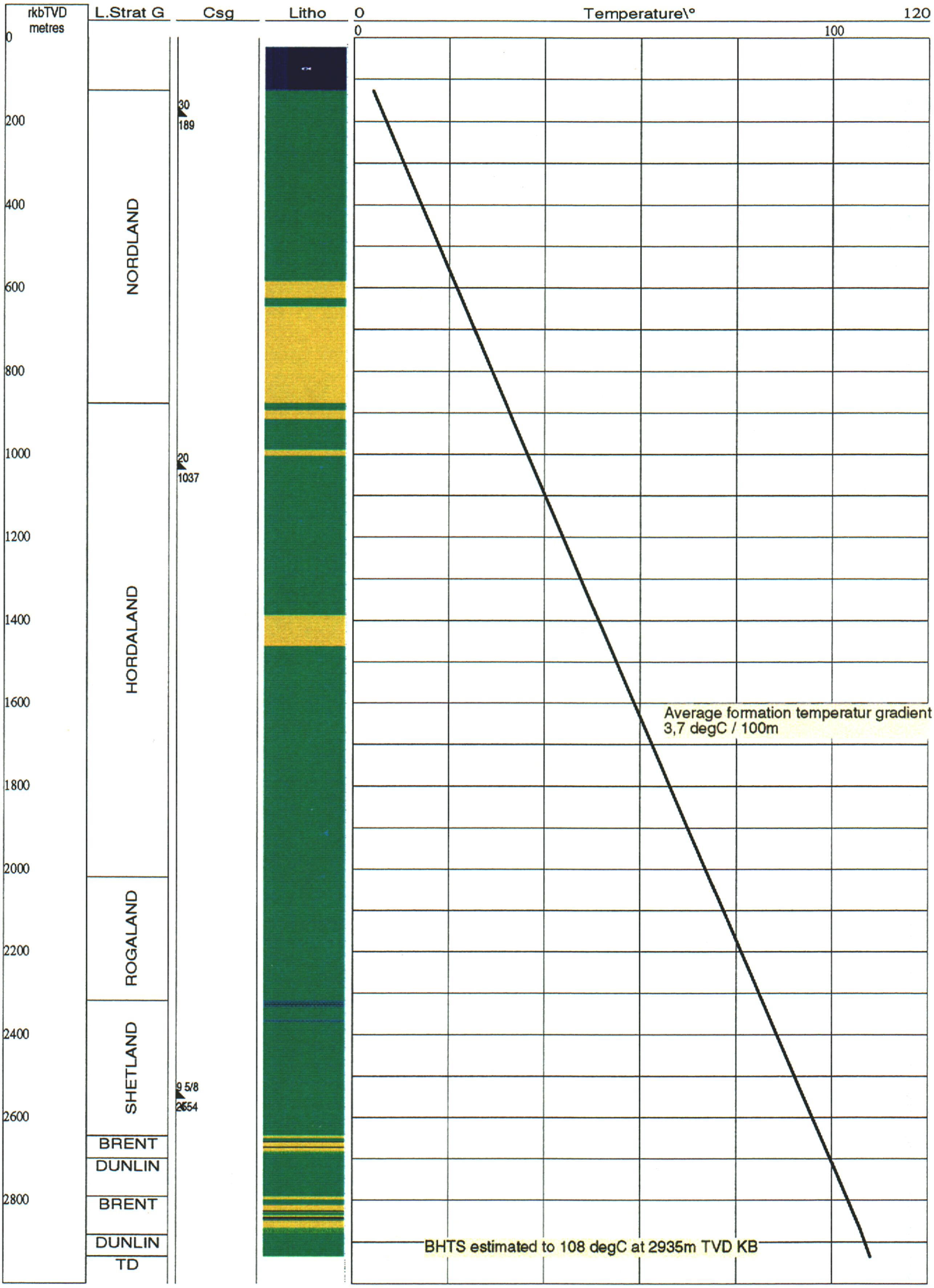


Figure 2		Time Distribution 30/6-25 S	**HYDRO**



Estimated Pore pressure, Fracture and Overburden Gradient

Fig.B-4



Average formation temperatur gradient
3,7 degC / 100m

BHTS estimated to 108 degC at 2935m TVD KB

Formation Temperature Gradient

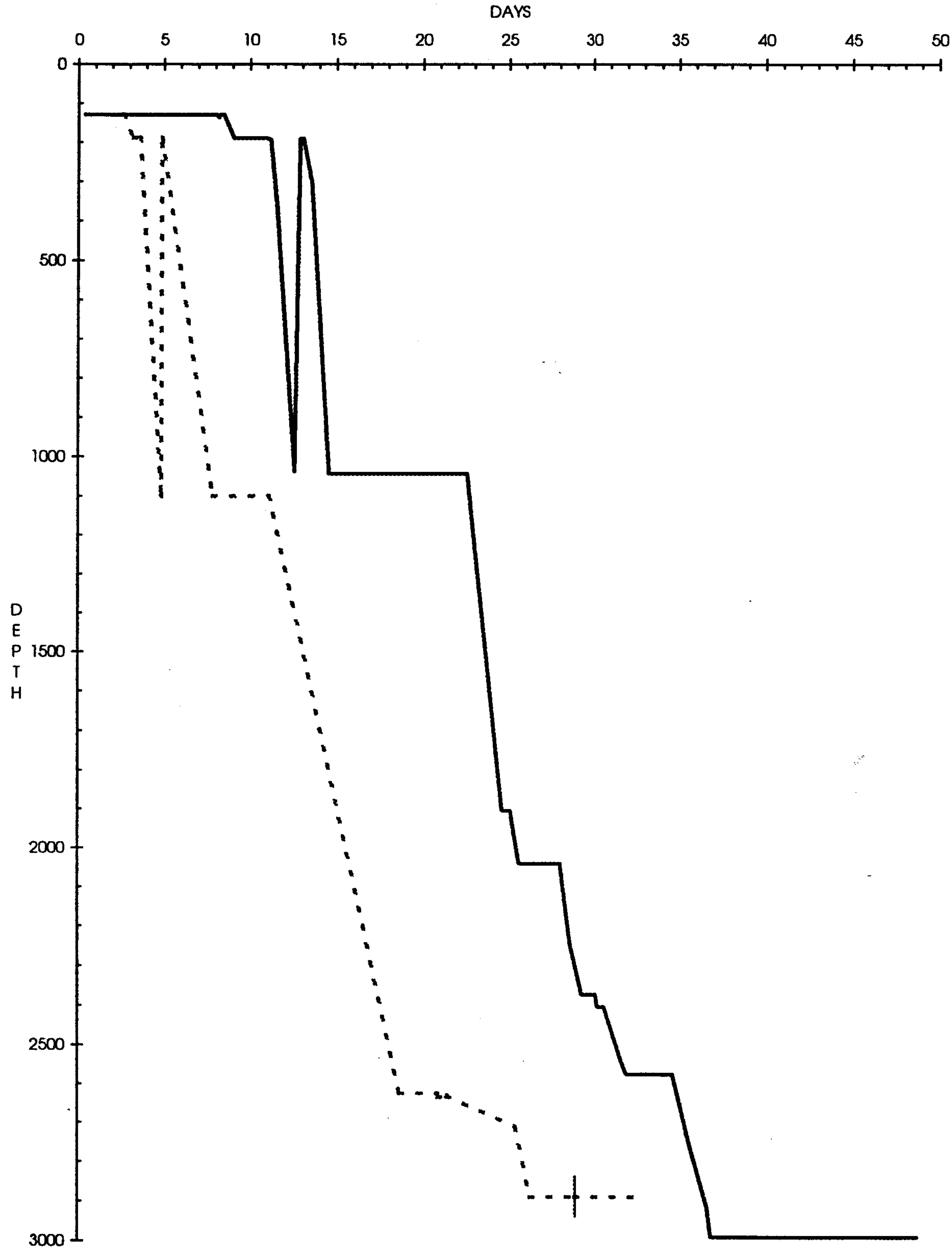


Fig. B-5

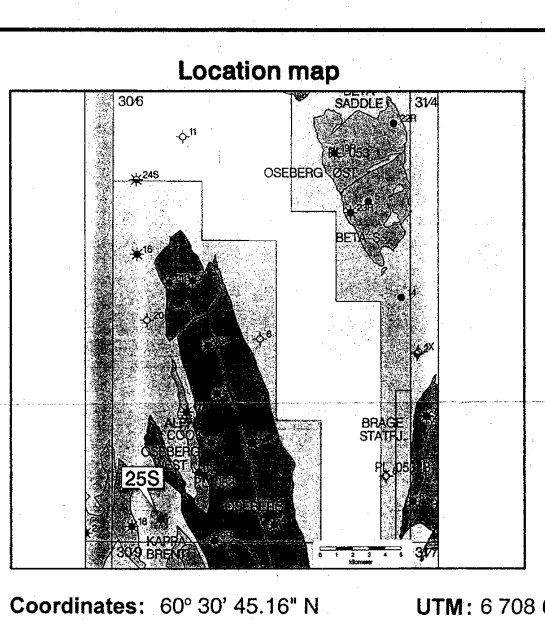
Drilling Curves
Well 30/6-25 S

Completion Log

Scale 1:500

Well: 30/6-25S

Location map



Coordinates: 60° 30' 45.16" N
2° 43' 15.85" E
UTM: 6 708 684.6 mN
484 682.5 mE

RKB Elevation : 23.5 m
Water Depth : 104 m MSL
Total Depth (Driller) : 2988 m MD (2935 m TVD)
Total Depth (Logger) : 2988.5 m MD (2935 m TVD)
Formation at Total Depth : Drake Fm.

Country : Norway
Licence : Oseberg Unit
Owners : Norsk Hydro (Operator), Statoil, Elf, Mobil, Saga, Total
Field : Oseberg

Date Spudded : 26.11.98
Reached TD : 26.12.98
Completed : 06.01.99
Well Status : Dry, permanent plugged and abandoned

Rig : Transocean Leader
Contractor : Transocean
Mudlogging Company : Baker Hughes Inteq
Geologists : S. Eriksson, F.M. Jacobsen, R. Nyby, Å. Halvorsen, B. Schønningsen, C. Dons

Prepared by : S. S. Gahlla
Date : June 1999

Casing Records			Comments
30"	at	189.5 m	
20"	at	1037 m	
13 3/8"	at	-	
9 5/8"	at	2564 m	

Logs			Cores		
HALS/DSI/TLD/HGNS/ GPIT/GR/SP	MDT/GR	FMI/HNGS	VSP/GR	CST/GR	MWD (DPR/GR/DIR)
HALS/TLD/HGNS/DSI/GPIT/ACTS 2564 - 2985.5 m	MDT/GR/ACTS 2668.5 - 2917.1 m	FMI/HNGS/ACTS 2574 - 2884 m	VSP/GR 2980 - 1800 m	CST/GR 2966 - 2580 m	127.5 - 2988 m

Legend

- CONGLOMERATE
- SAND/SANDSTONE
- SILT/SILTSTONE
- CLAY
- CLAYSTONE
- SHALE
- LIMESTONE
- DOLOMITE
- DOLOMITIC LIMESTONE
- CALCAREOUS DOLOMITE
- CHALK
- MARL/MARLSTONE
- COAL/LIGNITE
- ANHYDRITE
- SALT
- GYPSUM
- TUFF
- IGNEOUS EXTR./INTR.
- SANDY, VERY / SANDY / SANDY, SLIGHTLY
- SILTY, VERY / SILTY / SILTY, SLIGHTLY
- ARGILLACEOUS
- CEMENT / CARBONATE
- QUARTZ / KAOLINITE
- C Carboaceous mat.
- △ Chert.
- Glauconite
- M Mica
- ☐ Pyrite
- Macrofossils
- Macrofossils frag
- Microfossils

Hydrocarbon Shows
- Stain
- Fluorescene
- Visible Cut
- Fluorescene Cut
- Gas Shows

- Casing Shoe ◢
- Casing Shoe ◺
- Directional Survey Inc. Azi.
- Two way time from Velocity survey 2154 m TVD RKB 2033 ms
- Core Interval
- (No recovery)
- Side Wall Core →
- (No recovery) ⇾
- Perforated Interval
- Cement Plug Interval
- DST ① Through casing
- ② Open hole
- Re-run
- ① RFT/FIT

Drilled with returns to the seabed

Drilled with returns to seabed

1045-1087 m
Sst: clr-trnsl Qtz-mlky Qtz, f-m, loc crs, sbrnd-sbang, mod-wl srt, com lse gr, Tr glauc, Tr mic.

MW: 1.20 sg

1087-1366 m
Clst: olv gry-dsky yel brn, sft-firm, blky, slily calc, slily slty, Tr sd, r-Tr glau, r micropyr, r -Tr mic.

MW: 1.20 sg

1366- 1468 m
Sst: clr-trnsl Qtz, r mlky Qtz Gr, f-crs, Tr v crs, md-sbang, pred lse gr, mod srt, loc Sst Agg w/wh Cl Mtrx, non calc, Tr Glau, r-Tr Mic, r carb, r Micropyr cotg.

1468 - 1530 m
Clst: dsky yel brn, m dk gry, frm, blky, slily calc, slty, loc v slty grad Sltst, Tr Glauc, Tr Micromic, loc abd Micropyr, Tr sd.

Sst: clr-trnsl-mlky Qtz, v f-f, occ m, sbang-sbrndd, mod srt, lse gr,Tr Glauc, r mic, non calc

MW: 1.20 sg
MW: 1.45 sg
1530 - 1880 m
Clst: olv gry, dsky yel brn, Tr dk gnsh gry, sft-frm, blky, slily slty, slily calc, Tr Glauc, Tr Micropyr,

Tr Dol: dk yel brn, frm-mod hd, blky, micro-crptxln.

MW: 1.45 sg

1880 - 1930 m
Clst: Varic, dk gr gry, dusky yel brn, olv gry, m dk gry, Tr m bl gry, r dusky rd, r olv blk, blky, com sbfis, non calc, no - Tr micropyr, Tr pyr Nod, no - Tr micromic.

Ls: wh, v lt gry, mod yel brn, frm, blky, microxln.

1930 - 1980 m
Clst: Varic, lt bl gry - m bl gry, Tr dk gr gry, dusky yel brn, m dk gry, r olv blk, blky, com sbfis, slily calc, no - Tr micropyr, Tr pyr Nod, no - Tr micromic.

MW: 1.45 sg

1980 - 2028.5 m
Clst: Varic, lt bl gry - m bl gry, Tr dk gr gry, dusky yel brn, m dk gry, r olv blk, blky, com sbfis, sli -mod calc, no - Tr micropyr, Tr pyr Nod, no - Tr micromic.

Clst: mod brn - gry brn, frm - sft, blky - sbblky, non - slily calc, ea.
Ls: pl yel brn, v lt gry, lt gn gry, Tr dusky yel brn, mod yel brn, gen frm-sft , occ mod hd, blky, occ arg, microxln, occ xln.
Tr Tf: lt gry - m gry, m dk gry, sbblky - amor, non calc, Tr micropyr, sli blk spk.

2028.5 - 2105.5 m
Clst: pred dk gry, pl blsh gry - m blsh gry, bcm dk gn gry - gn blk, Tr mod brn, frm - mod hd, blky, non calc, r micropyr, r Pyr nod.

Tf: m lt gry, m gry, sbblky - amor, non calc, Tr micropyr, blk spk.

Ls: wh, pl yel brn, v lt gry, dusky yel brn, frm - v hd, micro - crpxln, r pyr.

Dol: dusky yel brn , ang, hd - v hd, crpxln, loc suc.

MW: 1.48 sg

2105.5 - 2148.5 m
Clst: pred olv blk, dk gry, frm - mod hd, blky, non calc, r micropyr, r Pyr nod.

2148.5 - 2253m
Clst: dk gn gry, mod brn - brn gry, dk gry, bcm m gry - olv gry, gn gry, blky - sbfis, frm, non -slily calc, slily slty, r micropyr, r micromic, r carb, loc tf & ea, r Pyr nod.

Ls: pl yel brn, v lt gry, blky, frm - mod hd, microxln.

Dol: dusky yel brn , ang, hd - v hd, crpxln, loc suc.

MW: 1.48 sg

2253 - 2310m
Clst: m gry - olv gry, m dk gry - dk gry, bcm pred olv gry, gn gry, sbblky - blky, sft, occ frm, slily slty, non - slily calc, non - slily slty, r micropyr, r carb, r Pyr nod.

Ls: pl yel brn, mod yel brn, lt gry, blky, frm - mod hd, micro - crpxln.

MW: 1.48 sg
2310 - 2320m
Clst: pred m dk gry - dk gry, r dusky bl, dk gnsh gry - gnsh gry, sft - mod hd, blky - sbblky, r - slily calc, r micropyr, r pyr Nod.

Dol: dusky yel brn, ang, v hd, crpxln, loc suc.
2320 - 2336m
Ls: pk gry - v pl orng, also wh, sft - frm, blky, microxln, stky.
On pk gry-pl orng Ls: gd uni pl crm - yel dir Fluor, inst strmg brt bl wh Fluor cut, no vis cut, gd brt bl wh - crm even Fluor res, pr yel vis res.
On wh Ls: dull dir min Fluor, mod strmg bl wh Fluor cut, no vis cut, fr dull bl wh Fluor res, no vis res.
2336 - 2526m
Clst: pred m dk gry - dk gry, olv blk, grey blk, gnsh blk, blky - sbblky, occ amor, sft - mod hd, pred mod hd, slily slty, v calc, r micropyr, r pyr Nod, r carb Mat, i.p. stky, towards base at 2520m bcmg m gry - m lt gry, sbblky - blky, sft - frm, calc - v calc, stky, r slily slty, r micromic.

Ls: v lt gry - pk gry, wh, blky - ang, sft - frm, occ mod hd, microxln, r micropyr, loc slily arg.

Sst: trnsl - mky Qtz, vf - m, occ crs, sbang - sbrndd, as lse g.

MW: 1.50 sg

2526 - 2662.5m
Clst: m dk gry - m gry, olv gry-olv blk, r - Tr grn gry-dk gnsh gry, sbblky - blky, tr sbfis, frm-mod hd, calc-slily calc, slily slty, r micro-mic, r carb Mat, r-tr pyr .

Dol: dk yel or-m yel brn, dk yel brn-dsky yel brn, hd, blky, brit, microxln-crptxln.

MW: 1.50 sg

MW: 1.35 sg

2662.5 - 2684m
Sst: m lt gry-pl yel brn, clr-trnsl-mlky Qtz, vf - crs, r pbly, gen lse gr, sbrndd-sbang, pr srt, occ calc cmt, tr mic flk, tr micropyr, mod-pr vis por in sst agg. No pet od, tr yel brn oil stn, no dir fluor, slo strmg-blmg bl wh fluor cut, no vis cut, wk even bl wh-yel wh fluor res, no vis res (Poor shows)

Clst: m gry-olv gry, olv blk-brn blk, blky-fis, sft-m hd, non-slily calc, occ sdy, tr carb, tr micropyr, r mic.
C: blk, plty, hd-brit-fri, plt rem, occ arg grad Clst
2684 - 2698.5m
Sst: m lt gry-pl yel brn, clr-trnsl-mlky Qtz, pred m, also vf-m, r crs-pbly, gen lse gr, sbrndd-sbang, pr srt, occ calc cmt, tr mic flk, tr micropyr, mod-pr vis por in sst agg, No shows.
2698.5 - 2713m
Sst: clr-trnsl Qtz, vf-v crs, also v crs-pbly, trnsl-mlky wh Qtz, gen lse gr, sbrndd-sbang, pr srt, tr Mic tr micropyr, Tr Pyr, No shows.

C: blk, plty, hd-brit-fri, plt rem, occ arg.

Ls: wh-v lt gry, sft-frm, occ arg
2713 - 2830m
Sltst: brn gry-olv gry, blky-sb plty-sbfis, mod hd-frm, non-slily calc, arg, plt rem, tr micropyr, occ pyr nod, tr carb, loc-abdt carb

Clst: olv gry-olv blk, dk gry, frm-sft, blky-plty, sli-non calc, carb spk, micropyr, slty-v slty grad Sltst.

Ls: m lt gry-v lt gry, blky, sft-frm, arg, r micropyr, microxln

Sltst: olv gry-lt olv gry-m dk gry, blky-sbplty, mnr sbfis, non calc, arg, mnr grad Clst, abd carb-plt rem, occ micromic-mic, occ vf sdy

Clst: dusky yel brn-brn blk-dk gry, sbplty, frm-mod hd, non calc, occ slty, micromic, slily carb, occ plt rem, occ tr pyr

Sltst: brn gry-olv gry, blky-sb plty-sbfis, mod hd-frm, non-slily calc, arg, plt rem, tr micropyr, occ pyr nod, tr carb, loc-abdt carb

Clst: olv gry-olv blk, dk gry, frm-sft, blky-plty, sli-non calc, carb spk, micropyr, slty-v slty grad Sltst.
Ls: m lt gry-v lt gry, blky, sft-frm, arg, r micropyr, microxln
2830 - 2889 m
Sst: lt gry -wh, clr-trnsl-mlky Qtz, f - m, bcmg f - crs, loc v crs-pbly, gen lse gr, gen sbang loc sbrndd, pr -loc mod srt, occ slily silic + calc cmt, tr mic flk, tr micropyr, mod vis por in aggr,
no oil stn, r dull yel-or yel dir fluor, slo blmg bl wh-yel wh fluor cut, no vis cut, wk yel wh fluor res, no vis res (Poor shows)

Clst: varicol lt gry-olv gry-olv blk-dk gry, gen frm-sft, sbblky-plty, sli-non calc, sli-loc v carb, occ slty, loc micropyr, loc v slick

Coal: blk, hd ,blky-plty, shny, loc arg, loc grad carb Clst, mnr micropyr, abd plt rem
Ls: wh, sft, occ slily arg, micro-cryptoxln
2889 - 2918 m
Sst: lt gry -wh, clr-trnsl-mlky Qtz, f - v crs, occ pbly, gen lse gr, gen sbang loc sbrndd, pr -loc mod srt, occ slily silic + calc cmt, tr mic flk, tr micropyr, mod loc por vis por in aggr
MW: 1.35 sg

Clst: varicol lt gry-olv gry-olv blk-dk gry, gen frm-sft, sbblky-plty, sli-non calc, sli-loc v carb, occ slty, loc micropyr, loc v slick

Coal: blk, hd ,blky-plty, shny, loc arg, loc grad carb Clst, mnr micropyr, abd plt rem

TD: 2988 m MD/2935 m TVD

FORMATION PRESSURE WORKSHEET

Well Name : 30/6-25 S   Rig : Transocean Leader   Date : 27.12.98
Pressure Units : Bars   RKB-MSL : 24 m.   MSL-SBed: 104 m.   Witnessed by : S.Eriksson

Run No./ Test No.	Depth mMD RKB	Depth mTVD RKB	Initial Hydrostatic Pressure Strain	Initial Hydrostatic Pressure HP	Formation Pressure Strain	Formation Pressure HP	Final Hydrostatic Pressure Strain	Final Hydrostatic Pressure HP	Time hh:mm Set	Time hh:mm Retract	Formation Pressure sg EMD	Test Temp degC	Good Data? Y/N	Sample Information Main Fluid Type	Sample Information HC Gravity g/cc	Sample Information Sample Vol, cc	Remarks
1A/1	2668,5	2646,8	364,5	365,05	291,4	291,79	364,9	364,49	14:00	14:10	1,124	93,6	Y				mob 14,7
1A/2	2672,5	2650,4	365,1	365,50	291,9	292,36	365,0	365,38	14:19	14:25	1,124	94,4	Y				mob 1,7
1A/3	2685,5	2662,1	366,7	367,12	292,0	292,44	366,6	366,97	14:34	14:38	1,120	94,9	Y				mob 140,5
1A/4	2689,5	2665,7	367,2	367,57	292,4	292,84	367,0	367,44	14:44	14:48	1,120	95,4	Y				mob 751,0
1A/5	2700,0	2675,2	368,5	368,90	293,3	293,68	368,3	368,66	14:54	14:58	1,119	95,9	Y				mob 391,1
1A/6	2831,0	2793,6	384,4	384,86	305,4	305,86	384,3	384,73	15:15	15:19	1,116	98,5	Y				mob 108,5
1A/7	2836,5	2798,6	385,0	385,50	305,9	306,35	384,9	385,38	15:26	15:39	1,116	100,1	Y				mob 128,5
1A/8	2851,0	2811,7	386,9	387,33	308,8	309,28	386,7	387,13	15:37	15:40	1,121	101,3	Y				mob 256,5
1A/9	2857,0	2817,1	387,6	388,03	309,4	309,81	387,4	387,44	15:47	15:50	1,121	102,1	Y				mob 310,8
1A/10	2881,5	2839,1	390,8	391,20	311,5	311,95	390,5	390,96	15:58	16:01	1,120	102,9	Y				mob 17,6
1A/11	2892,0	2848,6	392,0	392,45	312,4	312,88	391,8	392,23	16:08	16:13	1,120	103,6	Y				mob 22,7
1A/12	2899,0	2854,9	392,8	393,26	313,0	313,90	392,6	393,05	16:17	16:21	1,121	104,3	Y				mob 34,9
1A/13	2909,0	2863,8	394,1	394,48	314,0	314,45	398,8	394,36	16:28	16:30	1,119	105,0	Y				mob 2,2
1A/14	2917,0	2871,0	395,0	395,43	-0,0	0,00	394,8	395,16	16:32	16:37	0,000	105,7	N				Tight
1A/15	2916,8	2869,9	395,0	395,36	0,0	0,00	394,8	395,22	17:10	17:13	0,000	106,0	N				Tight

NB: Fmtn Press sg calculated from RKB

INTERPRETATION RESULTS

DRILLING RESULTS

30/ 6-25S

LEGEND:

Correlation of seismic event with log event
(Seismic pick in site survey report)

Revised seismic pick
(Based on log results)

COORDINATES:

Geographic:
60° 30` 45.16" N – 02° 43` 15.85" E

UTM:
6 708 684.6 mN – 484 682.5 mE
ED50, Zone 31 (CM 3° E).

RIG: TRANSOCEAN LEADER

RKB: 23.5 m

SPUD DATE: 26.11.98

COMPLETION DATE: 06.01.99

LEGEND:

☐ – Clay/claystone

– Sand/sandstone

▨ – Silt/Siltstone

▦ – Limestone

▨ – Cement plug

Seismic

Seismic source: 2x10, 20 & 40 cu.in airgun
Sample rate: 1.0 ms
Streamer: 1200 m/96 ch/12.5 m/11.72 m
Line: NH9859-313

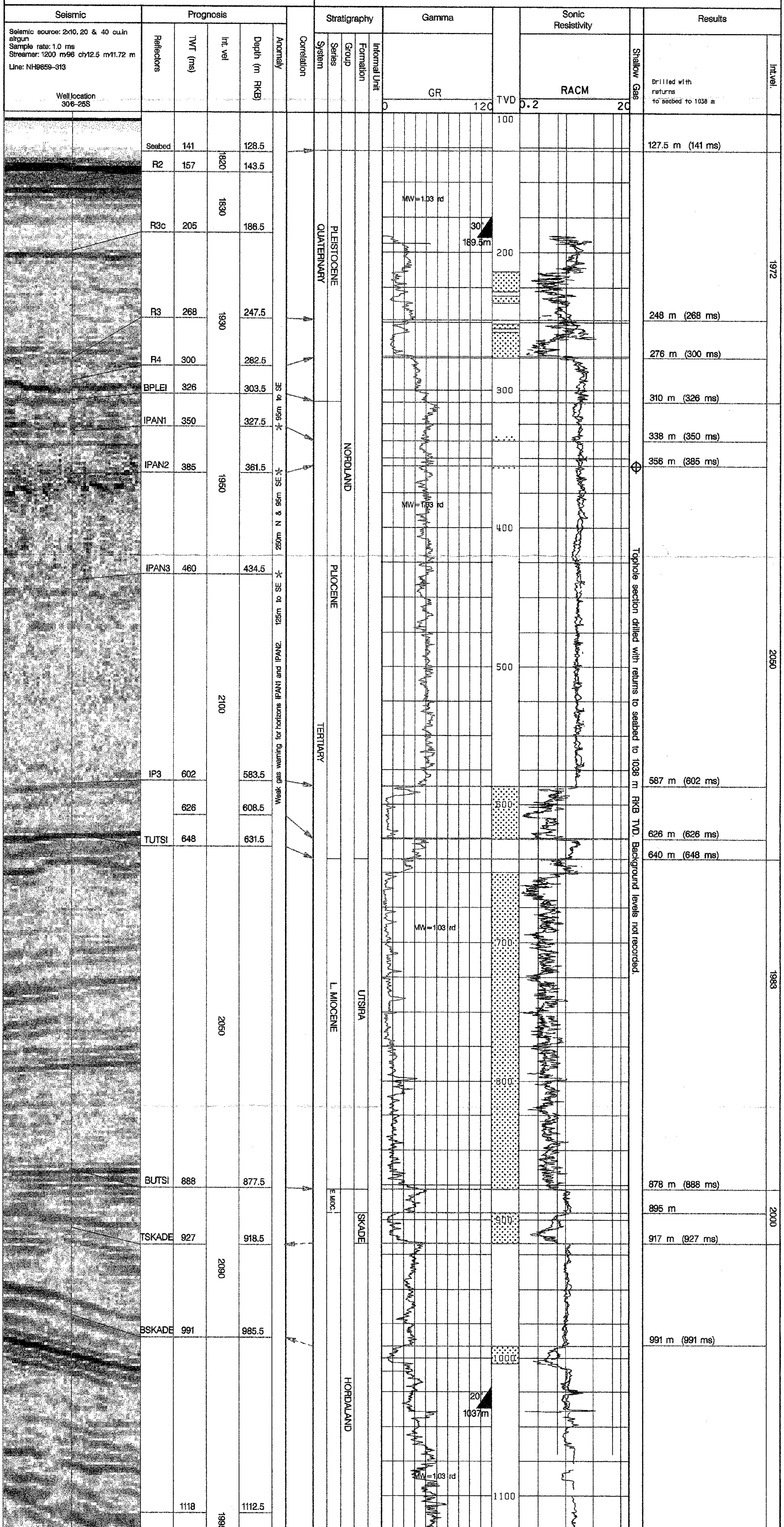
Well location 30/6-25S

Reflectors	TWT (ms)	Int. vel	Depth (m RKB)	Results	Int.vel.
Seabed	141	1820	128.5	127.5 m (141 ms)	1972
R2	157	1830	143.5		
R3c	205	1930	186.5		
R3	268		247.5	248 m (268 ms)	
R4	300		282.5	276 m (300 ms)	
BPLEI	326	1950	303.5	310 m (326 ms)	2050
IPAN1	350		327.5	338 m (350 ms)	
IPAN2	385		361.5	356 m (385 ms)	
IPAN3	460	2100	434.5		
IP3	602		583.5	587 m (602 ms)	
	626		608.5	626 m (626 ms)	
TUTSI	648	2050	631.5	640 m (648 ms)	1983
BUTSI	888	2090	877.5	878 m (888 ms)	2000
				895 m	
TSKADE	927		918.5	917 m (927 ms)	
BSKADE	991	1995	985.5	991 m (991 ms)	
	1118		1112.5		
	1310		1303.5		

Anomaly: Weak gas warning for horizons IPAN1 and IPAN2. 125m to SE ✱ 250m N & 95m SE ✱ 95m to SE ✱

Drilled with returns to seabed to 1038 m

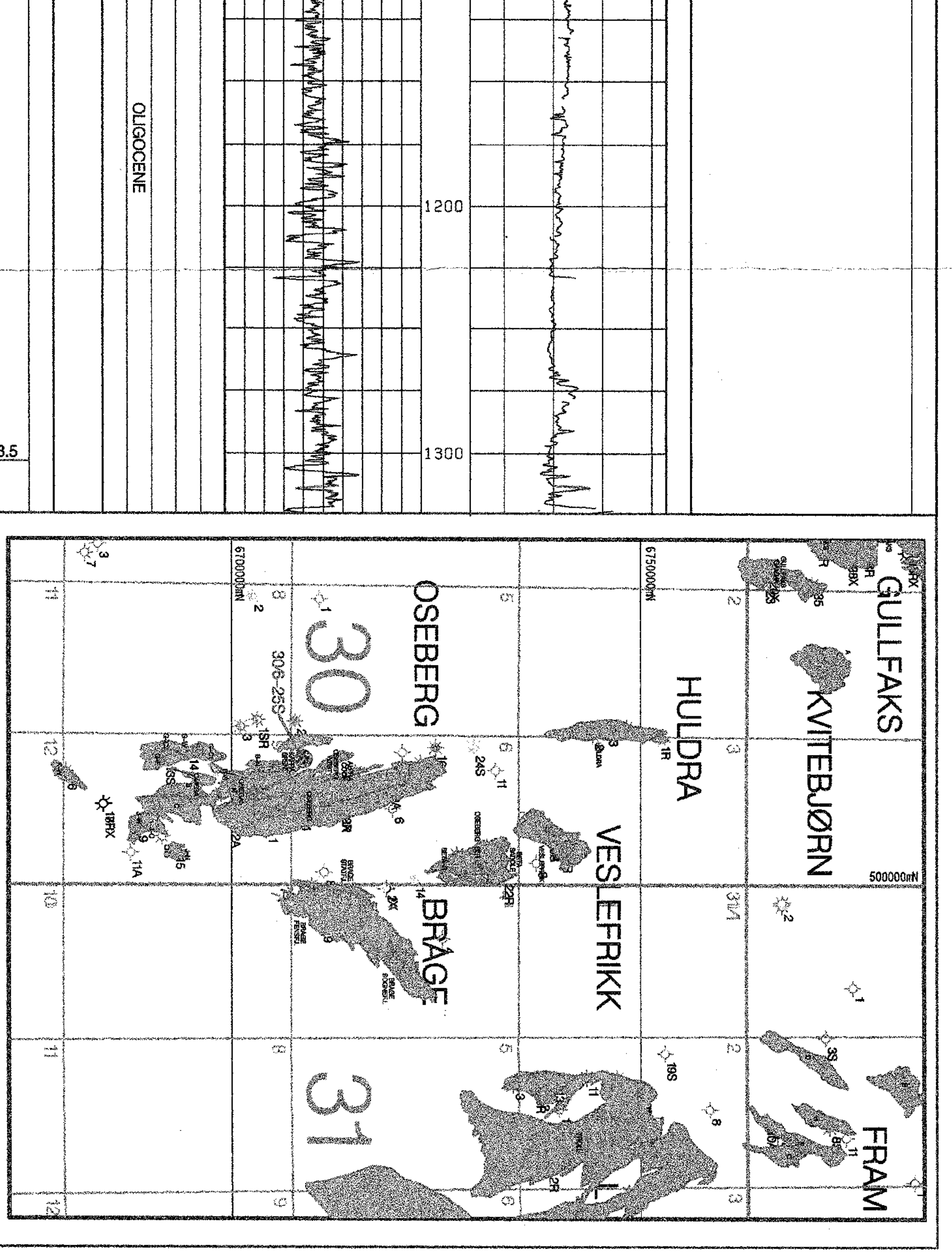
Shallow Gas: Tophole section drilled with returns to seabed to 1038 m RKB TVD. Background levels not recorded.



NOTES:

The given stratigraphy is based on seismic correlation to other wells as no datings or cuttings are available from the investigated interval in well 30/6-25S.

Scale Index Map: 1 : 600 000



HYDRO

Exploration and Production Division

Marine Surveys Section

Drawing title :

Post site survey for well 30/6–25 S

Comparison for predicted lithology, stratigraphy, shallow gas and obtained drilling results

Interpreted by	Drawn by	Checked by	Date	File no.	Rev.	Scale
KB	MRD	SRØ	16.04.1999	30625s.etr	0	1:2000

File: j:\oseberg\log\30625s.etr