Title: WELL 6305/9-1
FINAL WELL REPORT
PL 252

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Prepared by : Operation geology
Verified by : F.Johansen
Approved by : F.Livbjerg

Sign. :
Sign. : 2002-01-21 FJ.
Sign. : 2002-01-21 FL

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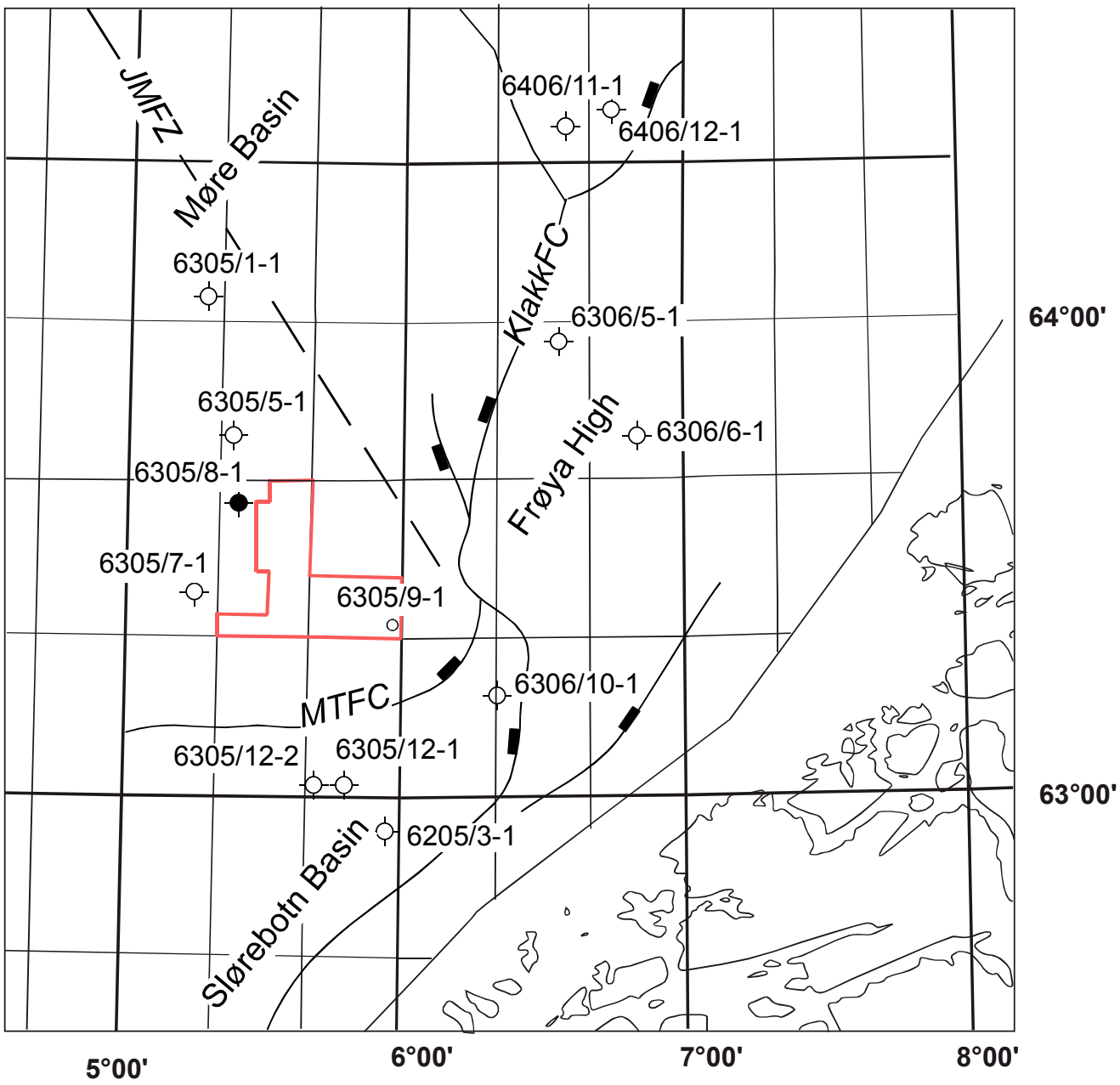
PREFACE

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

Norsk Hydro (operator)	50 %*
Chevron	25 %
RWE-DEA	25 %*

* dependant on approval from the authorities.
The well was drilled by Norsk Hydro ASA., on behalf of the group, during July 2001 (see Location Map, page 3).

All depths in this report are mMD RKB unless otherwise stated.


JMFZ
Møre Basin
6406/11-1
6406/12-1
KlakkFC
6305/1-1
6306/5-1
64°00'
6305/5-1
6306/6-1
Frøya High
6305/8-1
6305/7-1
6305/9-1
MTFC
6306/10-1
6305/12-2
6305/12-1
63°00'
6205/3-1
Sløre botn Basin
5°00'
6°00'
7°00'
8°00'

SUMMARY OF WELL DATA	
LOCATION:	Geo: 63° 17' 59.96" N 05° 59' 14.63" E UTM 7 022 673.7m N 649 731.5m E ED 50, UTM Zone 31, SM 03°E
OPERATOR: RIG: CONTRACTOR:	Norsk Hydro ASA Transocean Arctic Transocean
KB ELEVATION (to MSL): WATER DEPTH (MSL):	24m 187m
START OF OPERATIONS: WELL SPUDDED: REACHED TD ON: COMPLETED: STATUS: FORMATION AT TD:	08.07.2001 @ 11:00hrs 09.07.2001 @ 18:30hrs 23.07.2001 @ 02:30hrs 01.08.2001 @ 08:00hrs Plugged and abandoned Springar Fm
TD DRILLER (mRKB): TD LOGGER (mRKB):	2655 m MD/TVD 2655.5 m MD/TVD
DRILLING DEPTHS:	36" to 274 m 26" to 680 m 17 1/2" to 683 m 12 1/4" to 2305 m 8 1/2" to 2655 m
CASING DEPTHS:	30" to 272 m 20" to 675 m 9 5/8" to 2295 m

SECTION A

GEOLOGY

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1 Objectives

The exploration well 6305/9-1 on the "Blåveis" prospect is located in the south-eastern part of block 6305/9 in PL252, east of the Ormen Lange Field. The main objective of the well was to test if hydrocarbons was present in the Tertiary Egga Member in the Våle Formation, and in the Maastrichtian Springar Formation sandstones.

2 Results

The exploration well 6305/9-1 is located in the Blåveis prospect in the south-eastern part of block 6305/9 in PL252, east of the Ormen Lange Field. The main objective was to test the presence of hydrocarbons in the Tertiary Egga Member and the Maastrichtian Springar Formation. The well was permanently plugged and abandoned as a dry well 01.08.2001.

Well 6305/9-1 was spudded July 9th 2001, and reached TD at 2655.0m MD RKB in the Springar Formation July 23rd 2001. The well was drilled with Transocean Arctic. The rig left the well location on August the 1st 2001 after 23 days on location and 24 days on AFE.

The structure that defined the prospect was entirely based on mapping of a stratigraphic pinch out of the Egga Member. The way the prospect was defined made the sealing capacity of the lower Tertiary clays very important. The reservoir model was that the 6305/9-1 well was located within the feeder system of the Egga Member in the Ormen Lange where Egga Member is deposited by turbidity currents.

The main results were as follows:
In the Lower Paleocene an Egga Member sandstone of the Våle Formation was found, contain good sands that became increasingly interbedded with claystone towards top of the underlying Springar Formation. The clean sandstone intervals are high porosity-high permeability reservoirs. No hydrocarbon indications were observed.

One core was cut in the Egga Member, covering 17.4 m of the 55 m thick sandstone. The core shows a deposition within stacked channels and related overbank areas of intraslope basin turbidite system. The reservoir properties in the cored interval shows 27.5% porosity and 2280 mD permeability. No core was taken in the Springar Formation The reservoir quality of the Springar Formation clean sands is about similar to the Egga Member but the net sand fraction is less.

The geology of the well was very much as prognosed, specially the formation tops in the lower part of the well came in almost as prognosed. The lithostratigraphical breakdown for the well 6305/9-1 are listed in table 3.1.

The formation pressure in the lower Tertiary was hydrostatic.

3 Biostratigraphy

The biostratigraphical evaluation of well 6305/9-1 was carried out by Robertson Research Ltd. The analysed interval is from 740m - 2655mTD RKB.
Micropaleontological and palynological analyses have formed the basis for the biostratigraphical interpretation of the well. The analyses were carried out on cuttings, sidewall core and selected core samples.
The results of these analyses are documented in the Robertson report: "Norsk Hydro 6305/9-1 Norwegian Sea Biostratigraphy of the Interval 740m - 2655m TD".
Tables 3.1, and 3.2 on the following pages show a summarised lithostratigraphic subdivision and geochronological breakdown of well 6305/9-1. The interpretation is in accordance with Norsk Hydro's standard interpretation for the area and in a few minor instances, differs slightly from Robertson Research's interpretation.

Some of the major points from well 6305/9-1 are summarised below:

- The youngest sediments analysed at 740m are Pliocene age (Nordland Group, Naust Formation)

- The oldest sediments analysed at 2655m TD are of Late Cretaceous, middle Campanian age (Shetland Group, Springar Formation).

Nordland Group

- The Nordland Group has been divided into two formations. An upper, Pliocene restricted unit assigned to the Naust Formation and a lower unit assigned to the Kai Formation of early Pliocene - middle Miocene age. The boundary between these two formations is defined at 1074m (log) and within biostratigraphic resolution appears to be relatively conformable.

Hordaland Group

- The Hordaland Gp. (Brygge Fm.) was penetrated at 1303m (log). The boundary between the Hordaland Group and overlying Nordland Group, Kai Formation at 1303m (log) is represented by a stratigraphic break with sediments of Early Miocene age being absent.
- A major stratigraphic break within the Hordaland Group, Brygge Formation is indicated at 1501m (log) at the Eocene/Oligocene boundary. The majority of middle Eocene and the late Eocene is absent.

Rogaland Group

- The Rogaland Group, Tare Formation of intra- Early Eocene age was penetrated at 1669m (log). The boundary with the overlying Hordaland Group is represented by a minor hiatus.
- The Paleocene/ Eocene boundary is typically defined at a level within the lower part of the Tare Formation.

- The top of the Tang Formation is taken at 1948m (log) following reference to the standard definition. The boundary appears to be conformable.
- An informal unit designated 'Våle Formation Equivalent' is assigned from 2437m (log) and the Early /Late Paleocene boundary typically lies within this unit.

'Egga Sandstone Member'

- The informal 'Egga Sandstone Member' is recognised within the Rogaland Group, Våle Formation equivalent.
- Biostratigraphically, the age of his sandstone is restricted to the Early Paleocene and based on the recovery of aggluted benthonic foraminifera in core samples is considered to have been deposited in a deep marine palaeoenvironment.
- The 'Egga Sandstone Member' rests unconformably upon the Shetland Group, Springar Formation. Part of the Maastrichtian is absent but the amount of missing basal Paleocene section, if any, cannot be determined with accuracy.

Shetland Group

- The Shetland Group, Springar Formation was penetrated at 2523m (log). As indicated above is represented a stratigraphic break.
- The Springar Formation, in which the well terminated, is dated as Maastrichtian to middle Campanian age. The Maastrictian dating at the top of the formation is poorly constrained.
- Two sandstone units have been informally recognised within the Springar Formation. The upper sandstone unit is tentatively assigned to the Maastrichtian but the lower unit is restricted to the late Campanian.
- A hiatus is indicated within a mudstone unit between these two sandstones above positively dated Campanian sediments at 2538m (log).
- The well terminated at 2655m in middle Campanian sediments of the Springar Formation.

3.1 Lithostratigraphical and Geochronological breakdown

GROUP	FORMATION	MEMBER	DEPTH mMDRKB
Nordland			211
	Naust		211
	Kai		1074
Hordaland	Brygge		1303
Rogaland	Tare		1669
	Tang		1948
	Våle Fm. Equiv.		2437
		'Egga Sandstone'	2469 - 2523
Shetland	Springar		2523
		'Springar Sandstone 1'	2523 - 2531
		'Springar Sandstone 2'	2545 - 2551
			2655-**TD**

Table 3.1: Lithostratigraphical breakdown of well 6305/9-1

SAMPLE DEPTH m	PERIOD	AGE
740 (top not seen)	NEOGENE	Pliocene
1110		Early Pliocene - Late Miocene
1190		Late Miocene
1210		Middle Miocene
1303 (log)		----UNCONFORMITY----
1310	PALAEOGENE	Late Oligocene
1410		Early Oligocene
1501 (log)		----UNCONFORMITY----
1510		basal Middle Eocene
1530		Early Eocene
1900		Late Paleocene
2454 swc		Early Paleocene
2523 (log)		----UNCONFORMITY----
2526	LATE CRETACEOUS	?Maastrichtian
2538 (log)		----?UNCONFORMITY----
2538		early Maastrichtian - late Campanian
2544 swc		late Campanian
2256 swc - 2655 TD		middle Campanian

Table 3.2: Geochronological breakdown of well 6305/9-1

4 Lithostratigraphy

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

This summary is compiled predominantly from ditch cuttings descriptions. A total of 1 conventional core was cut in the interval from 2477 m to 2495 m in the well, see Table 6.1.1.

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 211 m to 680 m before setting 20" casing at 675 m. The first drill cuttings samples were taken at 700 m. The lithology interpretation is based on MWD logs and cuttings descriptions.

4.1 Nordland Group (211 - 1303 m MD)

211-680 m MD: From MWD logs: Clays interbedded with Sands.

680-820 m MD: The interval comprises of Claystones and Sandstones
Claystones: dk gry-m dk gry, grnsh blk, sft-frm, sbblky, r carb mat, sli calc, sli slty, r sdy
Sandstones: clr trnsl Qtz, vf-crs, r v crs, rndd-sbrndd, pr srt, lse, r shl frag, r carb mat, r pyr.

820-971 m MD: The interval comprises of Claystones and Sandstones
Claystones: dk grnsh blk, sbblky, frm, sli calc, slty, r shl frag, sdy
Sandstones: clr trnsl Qtz, vf-m, pred vf, rndd-sbrndd, lse, wl srt, r shl frag, r carb mat, r Glauc, r pyr, arg

Age: Pliocene

971-1074 m MD: The interval comprises of Argillaceous Siltstones with Sandstone beds.
Siltstones: m dk gry-dk grn gry, sbblky, frm, gen v arg, sl calc, gen vf sdy, r crs-pbly Rk frag, Gneis ?, loc carb mat, r Glauc
Sandstones: clr-trnsl Qtz, Qtzt+Gneis+mafic Rk frag, vf-v crs, pred vf-m, r pbly, lse Sd, pred sbang, mnr rndd-sbrndd, mod srt, tr Mic, r Biot, tr Mafic Min, r Shl frag, r Glauc

Age: Pliocene

4.1.1 Kai Formation (1074 - 1303 m MD)

1074-1303 m MD: The interval comprises of Argillaceous Siltstones with Sandstone beds.

Siltstones:	dk grn gry-brn gry-olv gry, sbblky, frm, gen v arg, sl calc, gen vf sdy, r crs-pbly Rk frag, Gneis ?, loc carb mat, Abd Glauc
Sandstones:	clr-trnsl-grn gry stn Qtz + blk Glauc Sd, pred f-m, r crs-pbly, sbrnd-rnd, mod srtd, lse, tr Shl frag, arg

Age: 'earliest Pliocene - Middle Miocene

4.2 Hordaland Group (1303 - 1669 m MD)

4.2.1 Brygge Formation (1303 - 1669 m MD)

1303 -1330 m MD: The interval comprises of Claystones with minor Sandstones and Siltstones

Claystones:	brn gry-brn blk-olv gry, mnr dk grn gry, sbblky, sft-frm, sl calc, slty incr w dpt, sl micromic, tr-abd Glauc decr w dpt
Siltstones:	dk grn gry-grn gry-olv gry, sbblky, frm, gen v arg, sl calc, occ sdy-v sdy, abd Glauc
Sandstones:	clr-trnsl Qtz, Qtz & Rk frag, vf-v crs, pred vf-m, incr pbly, lse Sd, pred sbang, mnr rndd-sbrndd, mod srt, tr Mic, r Biot, tr Mafic Min, r Shl frag, r Glauc

Age: Late Oligocene

1330-1460 m MD: The interval comprises of Siltstones with minor Sandstones and Limestones

Siltstones:	brn blk-brngry-olv blk, mnr dk grn gry, sbblky-occ blky, frm occ mod hd, mnr sft-stky, mod calc-v calc I.P. gen arg, vf sdy, abd Glauc, tr micromic, tr mic
Sandstones:	clr-trnsl-grn gry Qtz, vf-m, r crs, pred vf-f, lse Sd, pred sbrnd, wl srt, tr Mic, r Shl frag, abd Glauc
Limestones:	dk gry-olv gry-wh, mod hd, blk-sbplty, microxln, v arg, I.P. grdg Clyst

1460-1558 m MD: The interval comprises of Claystones with minor Siltstones and Limestone

Claystones:	grnsh blk-olv blk, brnsh blk, blky-sbblky, frm, occ mod hd, non calc, slty-grad sltst, r sdy: vf, Tr Glauc, r pyr, Tr micromic, Tr mic, r Ls.
Siltstones:	brn blk-brngry-olv blk, mnr dk grn gry, sbblky-occ blky, frm occ mod hd, mnr sft-stky, mod calc-v calc I.P. gen arg, vf sdy, abd Glauc, tr micromic, tr mic
Limestones:	dk gry-olv gry-wh, mod hd, blk-sbplty, microxln, v arg, I.P. grdg Clyst

Age: Early Oligocene - Middle Eocene

1558-1669 m MD: The interval comprises of Claystones with minor Siltstones and Limestones

Claystones: grnsh blk-olv blk, brnsh blk, blky-sbblky, frm, occ mod hd, non calc, slty-grad sltst, r sdy: vf, Tr Glauc, r pyr, Tr micromic, Tr mic, r Ls.

Siltstones: brn blk-brngry-olv blk, mnr dk grn gry, sbblky-occ blky, frm occ mod hd, mnr sft-stky, mod calc-v calc I.P. gen arg, vf sdy, abd Glauc, tr micromic, tr mic

Limestones: dk gry-olv gry-wh, mod hd, blk-sbplty, microxln, v arg, I.P. grdg Clyst

Age: Early Eocene

4.3 Rogaland Group (1669 - 2523 m MD)

4.3.1 Tare Formation (1669 - 1948 m MD)

1669-1833 m MD: The interval comprises of Claystones with minor Tuff, Sandstones and Limestones

Claystones: olv blk-olv gry, brn blk, blky, frm-fri-earthy, sl calc, sl -v slty, loc vf sdy, r Glauc, r pyr, abd micromic, I.P abd mic, bcm pred gry blk- m dk gry and less mic from 1740m.

Tuff: m dk gry-m lt gry-lt bl gry, sbblky, sft, tr Mic, slty, sdy, tr Glauc, tr pyr, r blk spk

Sandstones: clr-trnsl Qtz, vf-f, sbrnd, mod-w srtd, lse ,tr glauc, tr pyr

Limestones: dsky yel brn, yel gry, dk yel or, mod hd-hd, blky, I.P. arg, dol, micro xln, occ trnsl crs xln (Septarian nod ?)

Age: Early Eocene

1833-1948 m MD: The interval comprises of Claystones with minor Tuff, Sandstones and Limestones

Claystones: olv blk-olv gry, brn blk, blky, frm-fri-earthy, sl calc, sl -v slty, loc vf sdy, r Glauc, r pyr, abd micromic, I.P abd mic, bcm pred gry blk- m dk gry and less mic from 1740m.

Tuff: m dk gry-m lt gry-lt bl gry, sbblky, sft, tr Mic, slty, sdy, tr Glauc, tr pyr, r blk spk

Sandstones: clr-trnsl Qtz, vf-f, sbrnd, mod-w srtd, lse ,tr glauc, tr pyr

Limestones: dsky yel brn, yel gry, dk yel or, mod hd-hd, blky, I.P. arg, dol, micro xln, occ trnsl crs xln (Septarian nod ?)

Age: Early Eocene - Late Paleocene

4.3.2 Tang Formation (1948 - 2437 m MD)

1948-1980 m MD: The interval comprises of Claystones with minor Tuff, Sandstones and Limestones

Claystones: olv blk-olv gry, brn blk, blky, frm-fri-earthy, sl calc, sl -v slty, loc vf sdy, r Glauc, r pyr, abd micromic, I.P abd mic, bcm pred gry blk- m dk gry and less mic from 1740m.

Tuff: m dk gry-m lt gry-lt bl gry, sbblky, sft, tr Mic, slty, sdy, tr Glauc, tr pyr, r blk spk

Sandstones: clr-trnsl Qtz, vf-f, sbrnd, mod-w srtd, lse ,tr glauc, tr pyr

Limestones: dsky yel brn, yel gry, dk yel or, mod hd-hd, blky, I.P. arg, dol, micro xln, occ trnsl crs xln (Septarian nod ?)

Age: Late Paleocene

1980-2060 m MD: The interval comprises of Claystone

Claystones: olv blk-grysh blk, r dk grnsh blk, blky, mod hd, non calc, sli slty, r sdy, abd mic, micromic, r blk spec, Tr Glauc, Tr Tf, r Ls

Age: Late Paleocene

2060-2082 m MD: The interval comprises of Tuffaceous Siltstones and Claystones

Siltstones: olv blk-m dk gry, blky, frm-mod hd, sli sdy, v arg, r blk spec, Tr shl frag, mic micromic, Tr Glauc, Tr micropyr

Claystones: olv blk-grysh blk, r dk grnsh blk, blky, mod hd, non calc, sli slty, r sdy, abd mic, micromic, r blk spec, Tr Glauc, Tr Tf, r Ls

Age: Late Paleocene

2082-2160 m MD: The interval comprises of Claystones and Tuffaceous Siltstones

Claystones: m dk gry-dk gry, r grysh blk, blky-sbblky, frm-mod hd, non calc, abd micromic, Tr micropyr, r Glauc, r Dol, r Ls.

Siltstones: olv blk-m dk gry, blky, frm-mod hd, sli sdy, v arg, r blk spec, Tr shl frag, mic micromic, Tr Glauc, Tr micropyr

Age: Late Paleocene

2160-2305 m MD: The interval comprises of Claystones and Tuffaceous Siltstones with traces of Sandstones, Dolomite and Limestone

Claystones:	dk gry-grysh blk, bcmg m dk gry-m gry, blky, mod hd, non calc, sli slty, mic, micromic, I.P.less mic, tr pyr, micropyr, r Ls
Siltstones:	olv blk-m dk gry, blky, frm-mod hd, sli sdy, v arg, r blk spec, Tr shl frag, mic micromic, Tr Glauc, Tr micropyr
Sandstones:	clr trnsl Qtz, vf-f, r m, sbrndd-rndd, mod-wl srt, lse, tr Glauc, gd-tr Pyr, microfoss, abd Baryte contam.
Dolomites:	dusky-dk yel brn, blky, hd, brit, sl arg
Limestones:	wh-lt gry, blky, micromic, non-sli calc, microxln

Age: Late Paleocene

4.3.3 Våle Formation Equivalent (2437 - 2523 m MD)

2437-2468 m MD: The interval comprises of Claystones and Limestones

Claystones:	dk gry-olv gry, blky, frm, calc-v calc, sli slty, r glauc, Tr Micromic
Limestones:	yel gry-lt gry, off wh, blky, frm, occ dol, arg, microxln

Age: Late Paleocene - Early Paleocene

4.3.4 Egga Member (2469 - 2523 m MD)

2469-2477 m MD: The interval comprises of Sandstones and Limestones with minor Claystones

Sandstones:	clr trnsl Qtz, v f-m, pred f, sbang-sbrndd, mod-wl srt, Tr Glauc
Limestones:	wh-lt gry, sbblky, sft-frm, r glauc, arg, microxln
Claystones:	dk gry-olv gry, blky, frm, calc-v calc, sli slty, r glauc, Tr Micromic

Age: Early Paleocene

2477-2502 m MD: The interval comprises of Sandstones

Sandstones:	clr trnsl Qtz - mlky Qtz, v f-v crs, pred f-m, sbang-ang, mod hd, pr srt, sli calc cmt, r arg gr, Tr Glauc, Tr Mic, gd vis por

Age: Early Paleocene

2502-2523 m MD: The interval comprises of Sandstones with minor Limestones

Sandstones:	clr trnsl -mlky wh Qtz, v f-m, r crs, pred f-crs, sbang-sbrndd, lse, mod srt, Tr Glauc, r mic, r arg
Limestones:	wh-lt gry-lt grn gry, blky, slily sdy, Tr Glauc, microxln

Age: Early Paleocene

4.4 Shetland Group (2523 - 2655 m MD)

4.4.1 Springar Formation (2523 - 2655 m MD)

2523-2553 m MD: The interval comprises of Sandstones with minor Limestones, Claystones and Marls

Sandstones: v lt gry-lt gry-lt grn gry, clr trnsl-mlky wh Qtz, f-m, pred m, r crs, sbrndd-rndd, occ sbang, fri-lse, mod srt, slily-occ v calc cmt, Tr Glauc, Tr Micromic, occ slily arg, fr vis por, n.s

Limestones: wh-v lt gry, sbblky, sft, occ slily arg, microxln

Claystones: med gry-dk gn gry, occ grn blk, sbblky, occ lam, frm, non-pred v calc, slily slty, Tr Micromic

Marls: mod rd brn-dk rd brn, amor-sbblky, sft, slily stky, v arg grad calc Clst

Age: Maastrichtian - Late Campanian

2553-2580 m MD: The interval comprises of Claystones with minor Limestones and Sandstones

Claystones: med dk gry-olv gry, occ v f blk spt, amor-sbblky, sft, stly, slily calc-calc, Tr Glauc, Tr v f Carb Frag, slty-v f sdy

Sandstones: v lt gry-lt gry-lt grn gry, clr trnsl-mlky wh Qtz, f-m, pred m, r crs, sbrndd-rndd, occ sbang, fri-lse, mod srt, slily-occ v calc cmt, Tr Glauc, Tr Micromic, occ slily arg, fr vis por

Limestones: wh-v lt gry, sbblky, sft, occ slily arg, microxln

Age: Late Campanian - Middle Campanian

2580-2655 m MD: The interval comprises of Claystones with Traces of Limestones and Sandstones

Claystones: m gry-dk gn gry, v f blk spt, sbblky, sft-frm, slily stky, non calc-calc, pred non-slily calc, Tr Glauc, Tr v f Carb Frag, r micromic, occ slty

Sandstones: clr trnsl Qtz, f, r med-crs, sbang-rndd, pred sbrndd, fri-lse, occ calc cmt, arg, n.v.p

Limestones: v lt gry-lt gry, occ wh, blky, sft-frm, occ arg, microxln

Age: Middle Campanian

5 Hydrocarbon Shows

The evaluation of hydrocarbon shows at the wellsite was carried out in a conventional manner. A standard (Geoservices) hydrocarbon total gas detector system (Geoservices Gaslogger) together with a gas chromatograph for automatic and continuous gas analysis, recorded as ppm by volume of C1 through nC5, were operational below 680m down to the TD of the well.

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

5.1 Gas Record

211 - 680m: This interval was drilled with returns to sea bed.
680 - 2566m. The gas record was made by the Reserval system providing C_1 to C_5 breakdown.
See Gasratio Log in Section C.

5.2 Oil stain and Fluorescence

No oil stain or fluorescence was observed in ditch cuttings, core or sidewall cores.

6 Coring

6.1 Conventional Cores

One 18m core, with 96.7 % recovery, was cut in the Egga Member of the Våle Formation equivalent. The core was cut in 1 m lengths and gypsum was injected to preserve the core before being shipped to shore. A summary of the core is presented in Table 6.1.1 below and the core description can be found in Appendix I.

No	C: Cut(m) R: Recovery(m)	Rec. %	Lithology	Formations
1	2477-2495m (2477-2494.4)	96.7	Sandstone	Egga Member of the Våle Formation

Table 6.1.1: Conventional Cores 6305/9-1

Core no.	top (m RKB)	bottom (m RKB)	recovery (%)	depth shift (m)
1	2477.00	2494.40	96.7%	+0.95

Table 6.1.2: Core Depth Shift 6305/9-1

6.2 Sidewall Cores

Using the MSCT 28 sidewall cores were drilled and 14 sidewall cores were recovered. Table 6.2.1 show a summary of the recovered sidewall cores. For descriptions see Appendix II

Core No.:	Depth (mRKB)	Lithology	Formation
1	2 650	Clst	Springar Fm
2	2 610	Clst	Springar Fm
3	2 590	Clst	Springar Fm
4	2 575	Clst	Springar Fm
5	2 565	Clst	Springar Fm
6	2 555	Clst	Springar Fm
7	2 548	Sst	Springar Fm
8	2 544	Clst	Springar Fm
9	2 540	Clst	Springar Fm
10	2 535	Clst	Springar Fm
11	2 527.5	Ls	Springar Fm
12	2 525	Sst	Springar Fm
13	2 505	Sst	Våle Fm
14	2 340	Clst	Lista Fm

Table 6.2.1: Sidewall core summary

7 Logging

This section contains an overview of the logging data collected in this well. As no hydrocarbons were found only a limited wireline logging program was run and mainly the LWD data was used for formation evaluation. More details on log acquisition and quality is given in the following chapter on petrophysical evaluation.

7.1 MWD Logs

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

Run no.	Log Depth Interval (mRKB)	Hole section	Tool	Comments
1	211 – 274	36"	MWD	
2	267 – 671	26"	MWD&CDR	
3	674 – 2290	12 1/4"	MWD, CDR, ISONIC	No real-time ISONIC data below 753m. Memory data OK.
4	2295 – 2477	8 1/2"	MWD, ADN, RAB	
5	2460 – 2654	8 1/2"	MWD, ADN, RAB	Includes reaming data between 2460-2495 (ADN) and 2477-2495m (RAB) after coring

Table 7.1.1: MWD and LWD summary table

Using field software the following log corrections were applied at the wellsite:

Tool	Corrections
GR	Corrected for bit size, collar size, mud weight.
CDR	Borehole compensated but not environmentally corrected.
ISONIC	Log based on STC (slowness time coherence) projection.
ADN density	Borehole compensated.
ADN neutron porosity	Environmentally corrected for bit size, collar size, and mud hydrogen index (temperature, pressure, and mud salinity).
RAB	Borehole corrected.

Table 7.1.2: LWD log corrections

More details on the MWD/LWD services can be found in the Reference Chapter 12.

7.2 Wireline Logs

The limited wireline logging-program included pressure points, sidewall coring, sonic logging, and a zero-offset VSP survey. A summary is given below in.

Run no.	Log Depth Interval (mRKB)	Tool	Comments
1A	2474 - 2548 m (Pressure)	MDT/GR	8 pressure points 7 good, 1 tight
1A	2340 - 2650 m	CMST/GR	28 samples attempted 14 recovered only 3 sst. samples
1A	2068 - 2653	DSI/GR/ACTS	
1A	1790 - 2620 m	DUAL CSI-GR VSP	84 time-depth pairs

Table 7.2.1: Wireline logs summary table

No MDT fluid samples were collected. More information on the VSP survey can be found in the VSP report, Reference Chapter 12.

7.3 Velocity survey

A Zero Offset VSP was acquired by Schlumberger on the 25th of July 2001, and processed by Read Well Services. A total of 84 levels (10 meters interval) were recorded from 2619 m to 1789 m measured depth bellow kelly bushing (KB). Three clustered 150 cu. in. air guns were used as the source. The receiver array consisted of two tools (CSAT), each containing a 3 component geophone cartridge.

The data quality is quite good.

For more information see the VSP report.

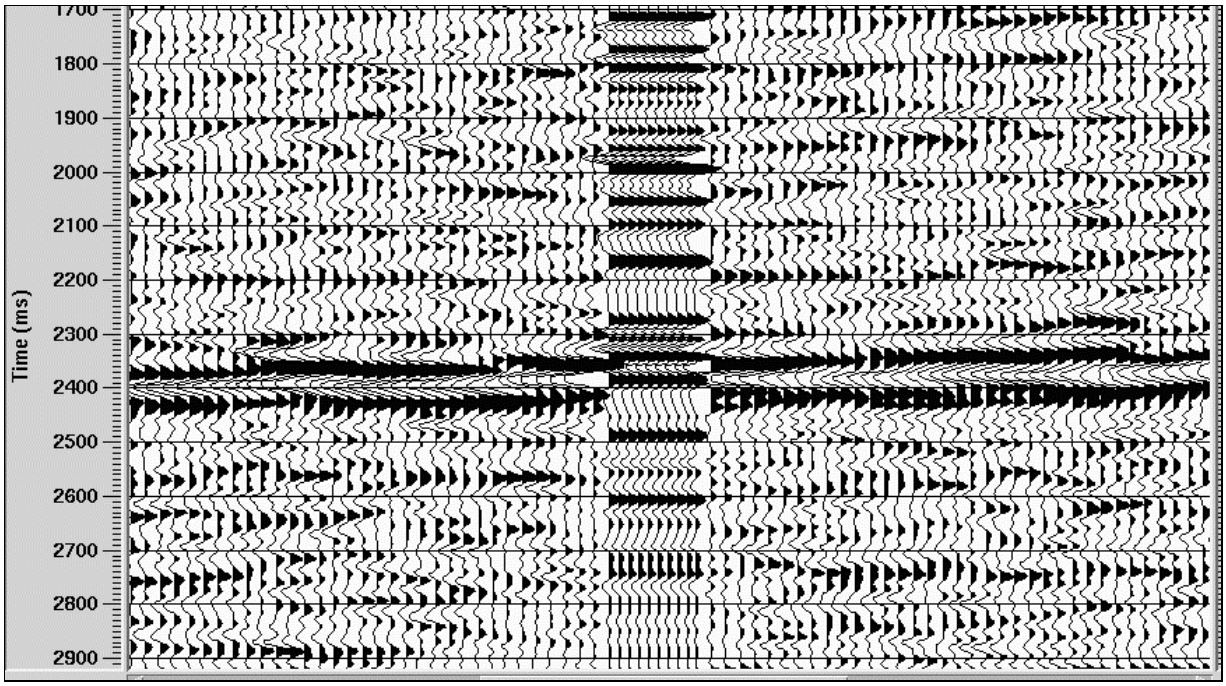


Fig. 7.3.1: A corridor stack is spliced into a 2D seismic line through the well 6305/9-1

7.4 Bottom hole temperatures from wireline logs

Table 7.4 gives a summary of the maximum-recorded bottom hole temperatures measured by wireline logs:

Tool	Run	Depth mMD	Temperature ° C	Time since circulation stopped
MDT/GR	1A	2548	69	6hrs 5min
CMST/GR	1A	2650	84	24hrs 20min
DSI/GR/ACTS	1A	2653	79	18hrs 40min
DUAL CSI-GR VSP	1A	2620	79	21hrs 40min

Table 7.4: BHT from wireline logs

8 Petrophysical evaluation

8.1 Summary

Well 6305/9-1 penetrated two potential reservoir targets: the Egga and Springar Formations. No hydrocarbons were found in this well, so therefore only a limited formation evaluation program was carried out.

The collected data was subjected to quality control and prepared for processing, interpretation and analysis. All calculations, processing, analysis and interpretation were performed using the GeoFrame software. Final products, including composite curves, interpretation curves, and core and pressure data were copied to the Recall database.

The petrophysical interpretation was based on a simple shaly sand model, including distinguishing cemented sandstone intervals. Porosity and permeability calculations were core calibrated. A 12% effective porosity cut-off criterion was applied to determine net sand.

The Egga and Springar formations consist of alternating sandstone and shale sequences. The clean sandstone intervals are high porosity-high permeability reservoirs.

Egga Formation
In the Egga reservoir, 1 core was taken. Horizontal Klinkenberg corrected permeabilities in the range between 0.09 and 8600 mD were measured. The core porosity varied between 9.6 and 34.1 %. Overburden correction measurements for core data were not available. Based on experience from Ormen-Lange a core porosity correction factor of 0.96 was applied. A synthetic permeability log was generated from a core porosity-permeability regression.

Springar Formation
No core was taken in the Springar formation. The reservoir quality of the clean sands was about similar to the Egga formation but the net sand fraction was less.

All petrophysical results were reported as averages according to the zonation and graphically displayed as computer processed interpretations (CPI), see Table 8.6.1 and Figure 8.3. A more detailed report on the petrophysical interpretation can be found in Reference Chapter 12.

8.2 Log Data Acquisition and Quality

Run no.	Log Depth Interval (mRKB)	Tool	Comments
1A	2474 - 2548 m (Pressure)	MDT/GR Run no.	8 pressure points 7 good, 1 tight
1A	2340 - 2650 m	CMST/GR	28 samples attempted 14 recovered only 3 sst. samples
1A	2068 - 2653	DSI/GR/ACTS	
1A	1790 - 2620 m	DUAL CSI-GR VSP	84 time-depth pairs

Table 8.2.1: summarise the logs acquired in well 6305/9-1.

More details on the MWD and LWD data acquisition can be found in Reference Chapter 12.

The well was drilled with waterbased mud.

Schlumberger provided a total of 5 MWD-LWD runs in this well. In addition a limited wireline-logging program was performed. Powerpulse MWD tools were used to measure the wellbore Direction and Inclination

In the 26" hole section the LWD GR-RES(CDR)-DIR tool combination was run. The log quality was generally good. Seawater with bentonite was used as drilling mud and high viscous pills were pumped to ensure good hole cleaning.

In the 12¼" hole section the LWD GR-RES(CDR)-ISONIC-DIR tools were run. In addition Schlumberger's Wireline DSI tool was run in the 9 5/8" casing. The 12¼" hole section was drilled with waterbased KCl mud. The only tool failure was that the MWD tool stopped sending the real-time ISONIC data at the hole depth of 753m. It was decided to drill ahead to TD. All data was successfully retrieved from the tool after POOH.
The CDR gamma ray read too high which is mainly due to the KCl content in the mud. Corrections are applied for hole size and mud weight for the CDR gamma ray to take into account the effect of gamma ray absorption by the mud but there is no correction available for KCl content of the mud itself. A baseline type shift (+ 93 GAPI) to the CDR gamma ray has been applied to match the DSI gamma ray readings in the 8½" hole section. This is currently the best way to handle this problem given that the KCl content was relatively constant over the 12 1/4" section (190 to 198 as per daily mud reports readings). The DSI gamma ray is not environmentally corrected but it is eccentered and so the KCl content in the mud has much less effect on the gamma ray reading.
The last section of the ISONIC DT log (compressional transit time) between 2050 -2270 mMD drifts away to lower transit time values in comparison to the wireline DSI data in casing (to a maximum difference of about 20 microsec.). Although the labelling of both logs looks OK, one

possible explanation could be shale hydration during drilling which causes the ISONIC DT to read too low. It is assumed that the DSI in casing is the better log in this section. The DSI is continuous passing from open hole to cased hole and, more significantly, the VSP data converted into an interval delta-t matches better with the DSI data than the ISONIC data. In addition, DT from DSI also seems to follow better the resistivity curve trend than the DT from ISONIC. The DSI shear wave quality in casing is considered poor, and should not be included in composite.

In the 8½" hole section the LWD RAB-ADN-DIR tools were run. The 8½" hole section was also drilled with waterbased KCl mud As no hydrocarbons were found the only wireline surveys were DSI-VSP (0-offset) and MDT-MSCT. The DSI was run in upper and lower dipole and P&S mode. The MDT only collected pressure data and no fluid samples were taken. The sidewallcore recovery from MSCT was poor. Only three sandstone cores were taken. Apart from the caved interval below the casing shoe, all the acquired data in this section is of generally good quality.
Generally the open hole DSI data is of good quality. However, over the 2 calcite beds between 2494 and 2502m, both the monopole compressional and dipole shear labelling from the field processing are incorrect. Regarding the monopole compressional data, an extra QC of the DSI labelling by Schlumberger ID Bergen showed that the field software labelled the wrong arrival. Simple relabelling solved this problem. The relabelling/ reprocessing of the dipole shear data was less straightforward. The main problem is that the formation-change from slow to fast is too quickly for the DSI dipole to resolve fully. Best reprocessing results were obtained from a multiple-shot processing technique, which often improves both the vertical resolution of the slowness logs and the accuracy of the slowness estimation. For a detailed discussion on this reprocessing see References Chapter 12.

The overall impression is that we obtained good quality log data. All data were subjected to a quality control. By means of editing, depth shifting, and merging the individual MWD and WL runs, a continuous composite log was generated. The LWD log data was used as depth reference. At the start of the wireline logging run, the wireline data was depth shifted by the logging engineer to match the LWD data. Once the final data was received from Schlumberger, the LWD and wireline data were depth matched one more time dynamically using the GeoFrame-WellEdit software. These final depth matched products were used for creating the composite logs.

8.3 Core

One 18m core, with 96.7% recovery, was cut in the Egga Formation (2477-2495m drillers depth). A total of 63 core plugs were subjected to conventional core analysis. The program involved measurements of horizontal porosity, Klinkenberg corrected horizontal and vertical air permeabilities, and grain density at approximately 0.25 m depth increment. In addition, Dean-Stark water saturation measurements were performed on plugs at approximately 1.0 m depth increment (also see Reference Chapter 12).
Using the GeoFrame-WellEdit software, the core gamma ray log was depth shifted to match the reference wireline gamma log (from DSI). The whole core was shifted +0.95m to match the log data.

MCST was run to collect sidewall cores from the uncored interval. The recovery was poor. Fourteen sidewallcore samples were taken from this well but only 3 were sandstone samples. Of these 3 sandstone samples only 2 produced measurable porosities, whereas the shape of the samples made it impossible to measure permeability. No petrophysical properties were measured on the claystone samples.

8.4 Formation testing

The MDT program involved pressure measurements in the Egga and Springar Formations. As the reservoir was water-filled the main objectives were to obtain absolute pressures, possible pressure barrier information, and formation water pressure gradient. The MDT gamma ray was used to depth match the pressure data with the LWD logs. The Schlumberger field engineer did this during data acquisition.

Of 8 attempted pressure tests, 7 were successful. Mobilities between 104 and 1400 mD/cP were measured, and only one test was tight. Results are shown in Table 8.4.1

Run 1A Test #	Depth (m MDRKB)	Depth (m TVDSS)	Drawdown mobility (mD/cp)	Initial mud Pressure CQG (bar)	Final mud Pressure CQG (bar)	Formation Pressure CQG (bar)	Remarks
1	2548	2523.4	162	332.91	331.89	251.82	
2	2529	2504.4					tight
3	2523	2498.4	128.9	325.59	328.64	249.38	
4	2514	2489.4	1398.7	327.43	327.47	248.49	
5	2505	2480.4	818	326.31	326.31	247.63	
6	2492	2467.4	841.8	324.6	324.63	246.37	
7	2482	2457.4	310.8	323.28	323.34	245.41	
8	2474	2449.4	103.7	322.35	322.4	244.7	

Table 8.4.1: MDT formation pressure data

Near top Egga formation a reservoir pressure of 244.7 bar was measured (2474 m MD RKB, top Egga at 2468m MD RKB). No pressure barrier can be concluded from the pressure data. The Egga and Springar formations were water filled. A water gradient of 0.096 bar/m was interpreted from the pressure data, see . This corresponds to a water density, of 0.98 g/cc, which indicates very fresh formation water.

8.5 Petrophysical interpretation

No movable hydrocarbons were found in the Egga and Springar Formation. Therefore, emphasis is put on analysing reservoir quality. The Egga and Springar formations consist of alternating sandstone and shale sequences. The clean sandstone intervals are high porosity-high permeability reservoirs. The petrophysical interpretation is based on a shaly-sand model calibrated to the available core data.

Total porosity is calculated using the density log. In the Egga Formation, the log derived total porosity is calibrated to overburden corrected core porosity (assumed overburden correction factor of 0.96). Shale volume is calculated by taking the minimum of shale volume determined from the gamma ray log and the density-neutron crossplot. Effective porosity is evaluated by subtracting from the total porosity the porosity associated with the shale volume. The water saturation is calculated by means of the Archie equation. Input parameters to the log analysis are listed in Table 8.5.1 and Table 8.5.2.

Input Parameters	**Egga** (2468-2523 m)	**Springar** (2523-2545 m)	**Springar** (2545-2550.5 m)
GR70 sand (GAPI)		50	70
GR shale (GAPI)	110	110	110
Shale density (g/cc)	2.48	2.50	2.48
Neutron shale porosity	0.23	0.35	0.23
a	1	1	1
m	1.8	1.8	1.8
n	2	2	2
Static Form. Temp. from Horner plot	96 °C @ 2606 mMD	96 °C @ 2606 mMD	96 °C @ 2606 mMD
Temperature gradient	3.9 °C/100m	3.9 °C/100m	3.9 °C/100m
Rmf. ohm.m @ °C	0.029 @ 96 °C	0.029 @ 96 °C	0.029 @ 96 °C
Rw (ohm.m) From Pickett plot	0.3	0.3	0.3

Table 8.5.1: Input parameters to petrophysical interpretation

Formation	Depth interval (m)	Fluid density (g/cc)	Matrix density (g/cc)
Egga	2468 - 2475	1.0	2.66
Egga	2475 - 2485	1.1	2.66
Egga	2485 - 2487	1.0	2.70
Egga	2487 - 2494	1.2	2.66
Egga	2494 – 2545	1.0	2.66
Springar	2445 – 2550.5	1.0	2.66

Table 8.5.2: Input parameters for total porosity calculation.

A continuous permeability log is obtained from core porosity-permeability regression. A strong relationship is found between a simple linear porosity and logarithmic permeability regression from the core data in the Egga Formation. The core regression crossplot is shown in Figure 8.2. The average overburden-corrected core porosity is 27.5% and the arithmetic averaged horizontal core permeability (not corrected for overburden) is 2280mD.

Net Sand determination is based on an effective porosity cut-off: PHIE > 12%.

8.6 Petrophysical Results

The average reservoir properties in the net sand fractions for the Egga and Springar Formation are listed in Table 8.6.1.

Zone Averages Well 6305/9-1

Formation	Interval (m MD RKB)	Thickness (m MD RKB)	NTG (frac)	Phie (frac)	Swt (frac)	Perm (mD)
Egga	2468-2523	55	0.781	0.244	0.982	1326
Springar	2523-2550.5	27.5	0.391	0.207	0.996	284

Table 8.6.1: Net Sand Averages

A CPI plot, including core data, is shown in Fig 8.3. The CPI legend is as follows:

Track1: GR = Gamma Ray (green) - from RAB
: HORD = Horizontal Hole Diameter – from ADN
Track2: RES_BD = Deep Button resistivity (red) - from RAB
: RES_BS = Shallow Button resistivity (green) - from RAB
: RES_RING = Ring resistivity (blue) - from RAB
Track3: RHOB = Bulk density (red) - from ADN
: TNPH = Neutron porosity (blue) - from ADN
: DRHO = Density correction (dotted blue) - from ADN
Track4: PHIE = Effective porosity (green)
: PHIT = Total porosity (blue)
: CPORC = Overburden corrected core porosity (red)
: SPOR = Sidewall core porosity (yellow)
: NET = Net sand flag (yellow)
Track5: CKHK = Klinkenberg corrected horizontal core permeability (red)
: CKVK = Klinkenberg corrected vertical core permeability (blue)
: KPERM = Computed permeability (blue line)
Track6: SAND = Sandstone volume relative to total volume (yellow)
: SHALE = Shale volume relative to total volume (green)
: CALCITE CEMENTATION = Calcite cementation flag
: RESIDUAL HC = Residual hydrocarbon volume relative to total volume (black)

8.7 Figures Petrophysical Evaluation

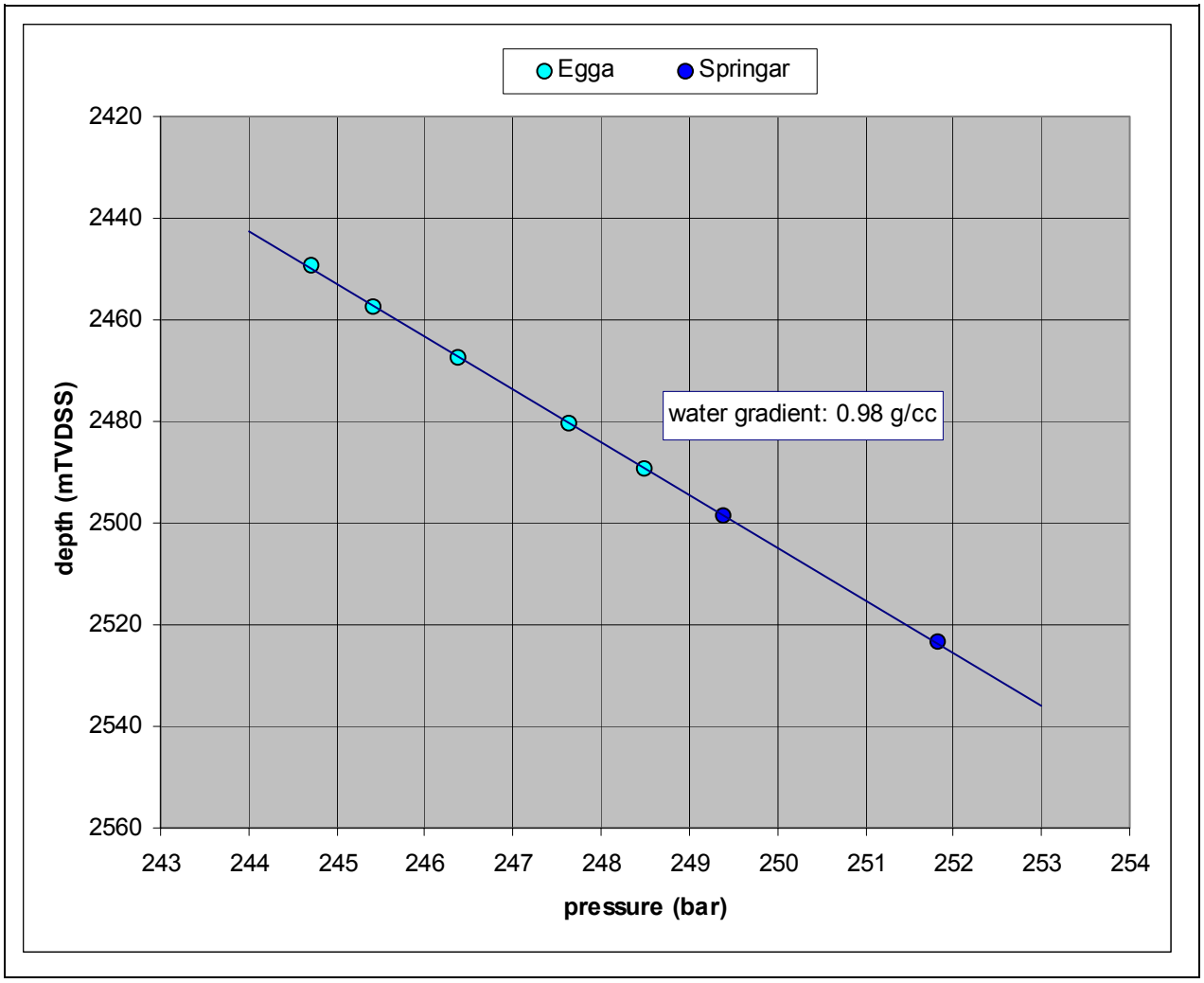


Figure 8.14: MDT pressure data and water gradient (in equivalent fluid density units)

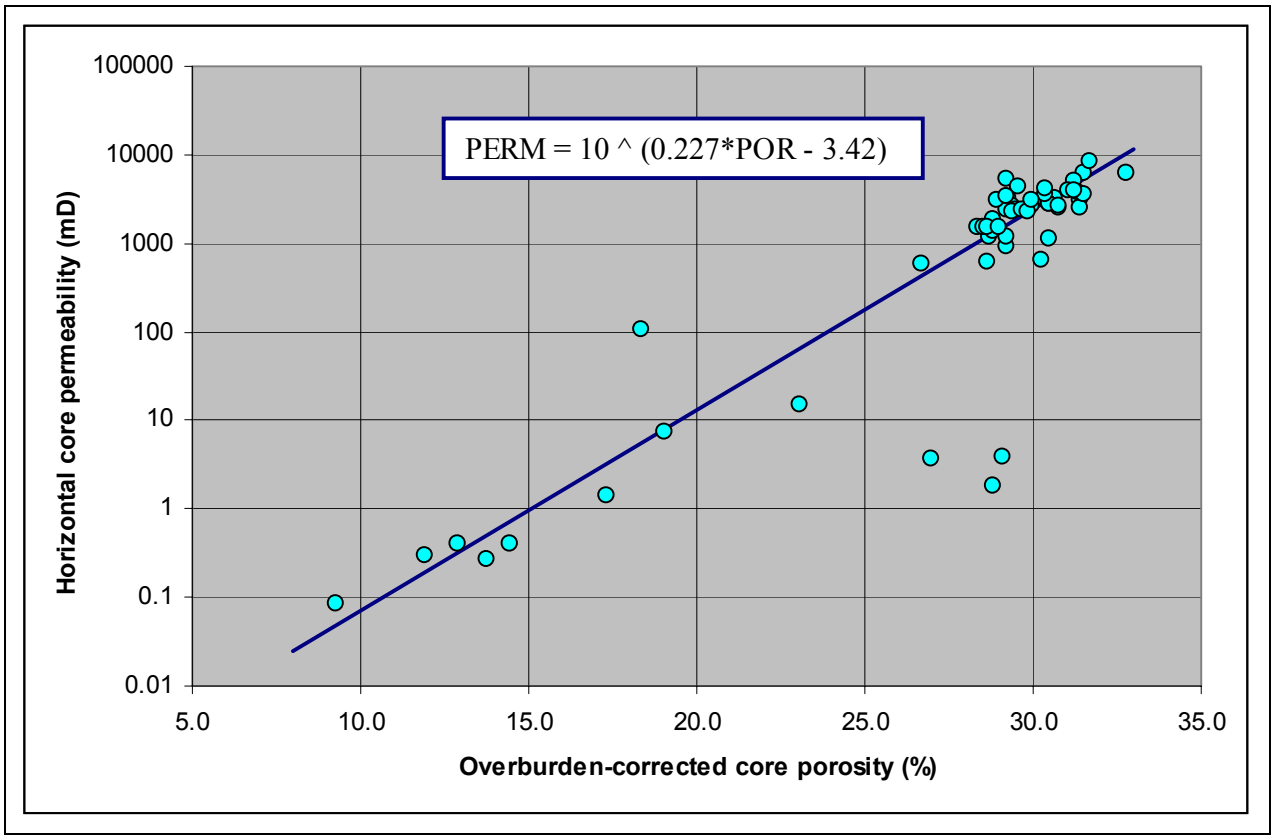


Figure 8.25: Core porosity versus permeability

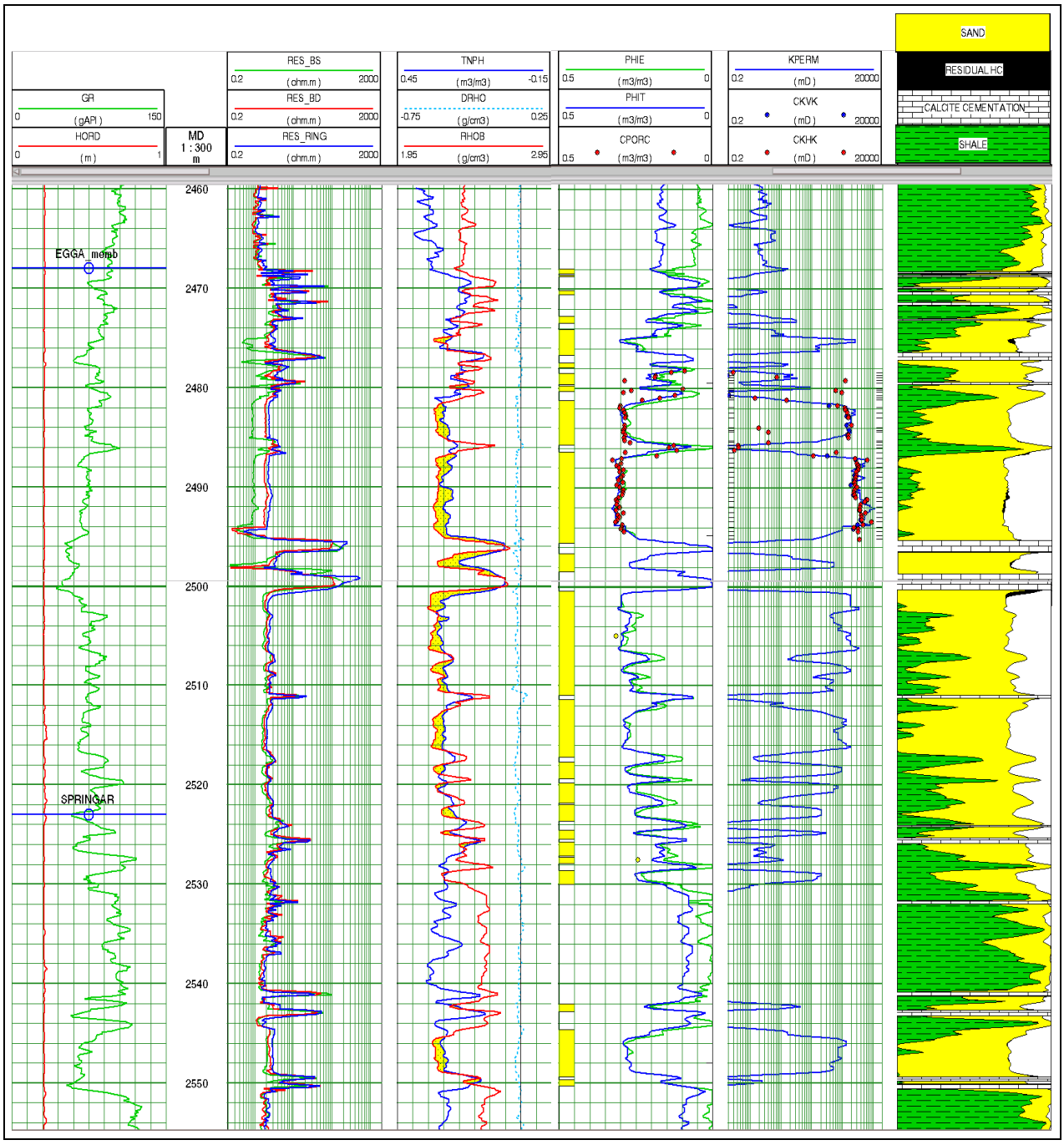


Figure 8.6: 6305/9-1 CPI reservoir interval.

9 Estimated Pore Pressure, Fracture, Overburden and Temperature Gradients

9.1 Pore Pressure

The pore pressures in well 6305/9-1 are based on drilling parameters, gas data, MWD logs, MDT pressure readings and wireline logs.

Shallow gas was not registered in the upper sediments.

From seabed to @1303m (top Brygge) a hydrostatic pressure is regarded as most likely. Trend shifts in resistivity indicate a pressure increase from 1,03sg to 1.08sg over the interval 1303m to 2425m. Thereafter drop to hydrostatic until 2523m (top Shetland) where resistivity and sonic logs indicates a pressure build up towards 1.10sg at TD. The MDT readings in Egga member gave all a pressure of approximately 1,01sg. When POOH at TD, tight hole was observed at 2577m but after reaming this spot no further hole problems were encountered.

9.2 Formation Strength

Normal LOT was performed to 1,50 sg at 683m and 1,67 sg at 2495m. These were only slightly higher than prognosed. Blocky, non-splintry cavings was observed from 1900m. Their origin is most likely due to tectonic stress. When increasing mudweigth to 1,35sg the problem was cured.

9.3 Overburden Gradient

Overburden gradient is based on density log and fits with prognosed Overburden gradient.

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

9.4 Temperature Gradient

Horner Plot at 2606m gave 95,8° C. This gives an average formation temperature gradient of 3,83° / 100m TVD. Assuming 4° C this gives a BHST at TD of 97,7° C.

For details of Temperature plot see Fig. 9.2

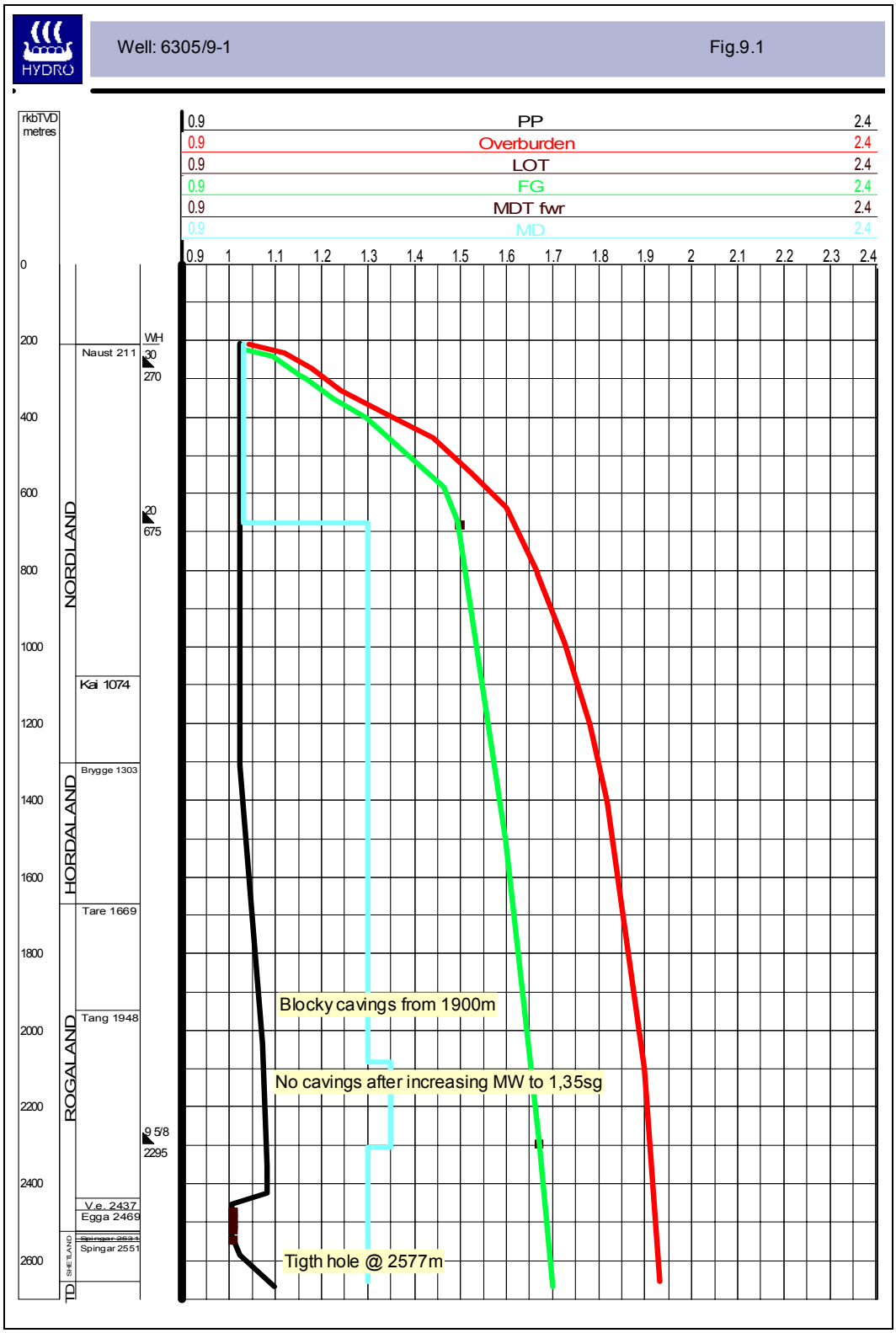


Figure 9.1: Porepressure, Fracture- and Overburden gradients

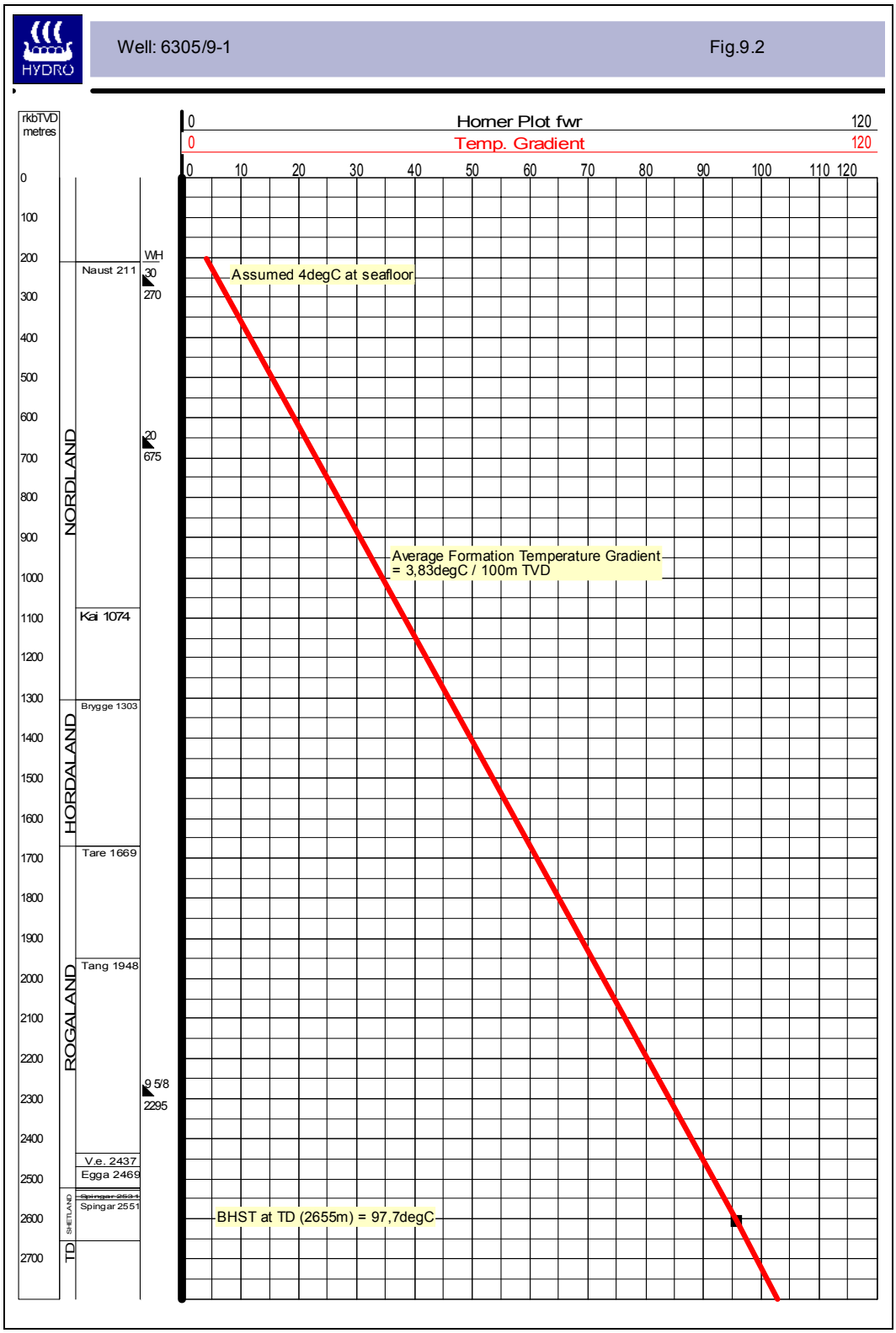


Figure 9.2: Temperature plot

10 Geophysical Results

The actual depths to top Våle Fm. and deeper levels were successfully prognosed (table 10.1). In the upper section the prognosed depths varied slightly from the actual depths (figure 10.1). The "Geodepth" method of the depth conversion is described in the Well programme. The formation tops are listed in table 10.2.

A synthetic seismogram with tie to well 6305/9-1 is shown in figure 10.2.

	Prognosed			Actual		
Seismic reflector / Fm.tops	**TWT msec**	**Depth TVD RKB**	**TWT msec**	**DT Prog./Actual**	**Depth TVD RKB**	**DZ Prog./Actual**
Seabed	250	210 **			211	1
Kai		1025	1042		1074	49
Brygge		1134	1091		1303	169
t160_intra_Brygge	1245	1245 *				
T100_top_Tare	1530	1564 *	1576	46	1669	105
Tang			1815		1948	
t70_intra_Tang	2127	2220 *				
t40_top_Våle	2299	2420 *	2304	5	2437	17
Top Egga s.st		2459	2328		2469	10
Base Egga s.st		2499				
Base Tertiary		2514	2363		2523	9
T10_btert-intra_Springar (Base Springar s.st)	2395	2538 *	2381	-14	2551	13
TD		2639			2655	16

RKB= 24m * = stacking velocities ** = depth from site survey report

Table 10.1: Prognosed and actual times and depths in well 6305/9-1.

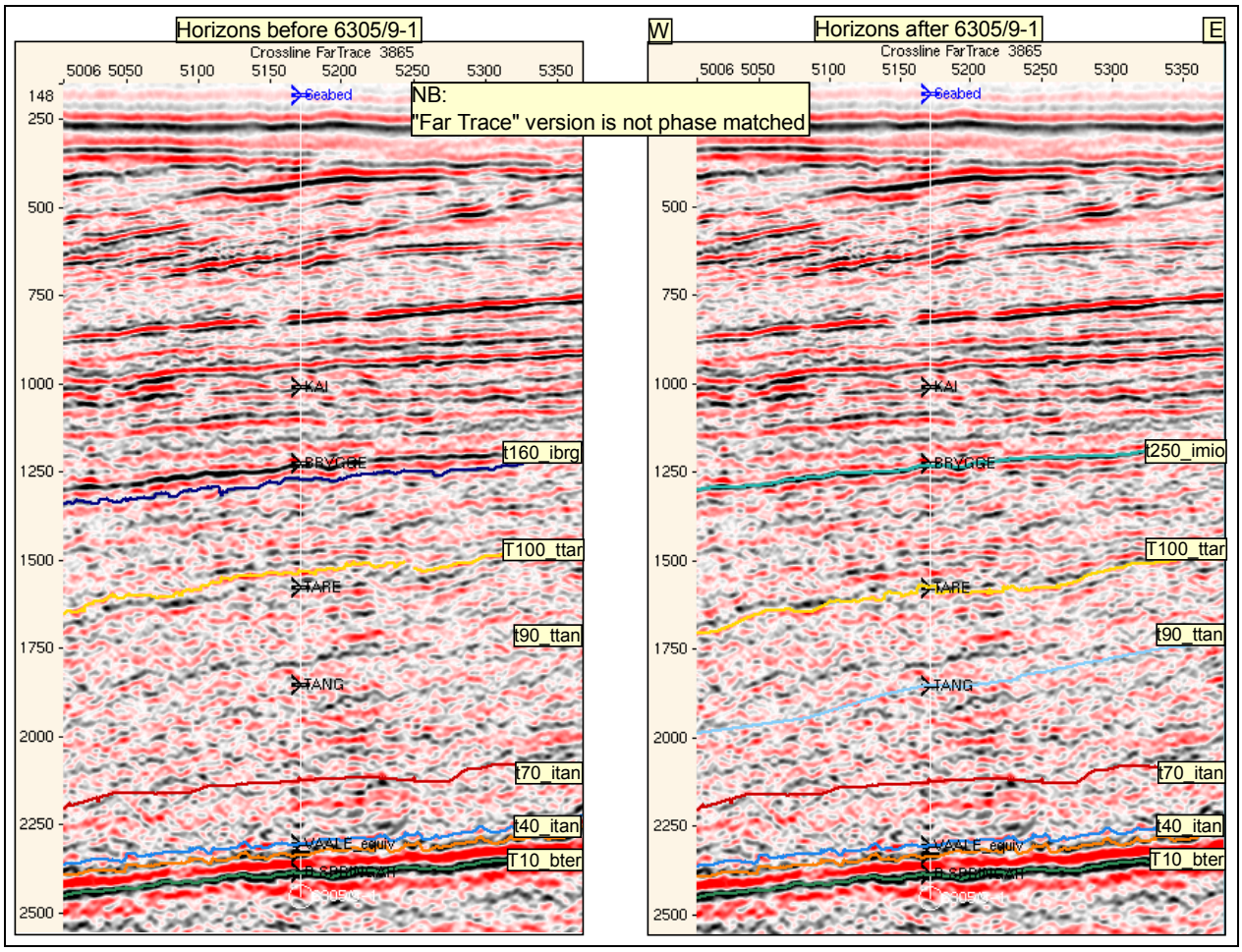


Figure 10.1: Seismic horizons pre- and post-drilled 6305/9-1 on crossline 3865

Survey OLSE98R01M	Xline 3865 Inline 5170					
Formation tops	**TWT msec**	**Int.Time msec**	**TVD mMSL**	**Int.D m**	**Avr.Vel. m/s**	**Int.Vel. m/s**
Seabed	251		187		1490	
		755		863		2286
Top Kai	1006		1050		2087	
		220		229		2082
Top Brygge	1226		1279		2086	
		350		366		2091
Top Tare	1576		1645		2088	
		275		279		2029
Top Tang	1851		1924		2079	
		453		489		2159
Top Våle	2304		2413		2095	
		24		32		2667
Top Egga s.st	2328		2445		2101	
		35		54		3086
Base Egga	2363		2499		2115	
		18		28		3111
Base Springar	2381		2527		2123	

Table 10.2: Geophysical Summary

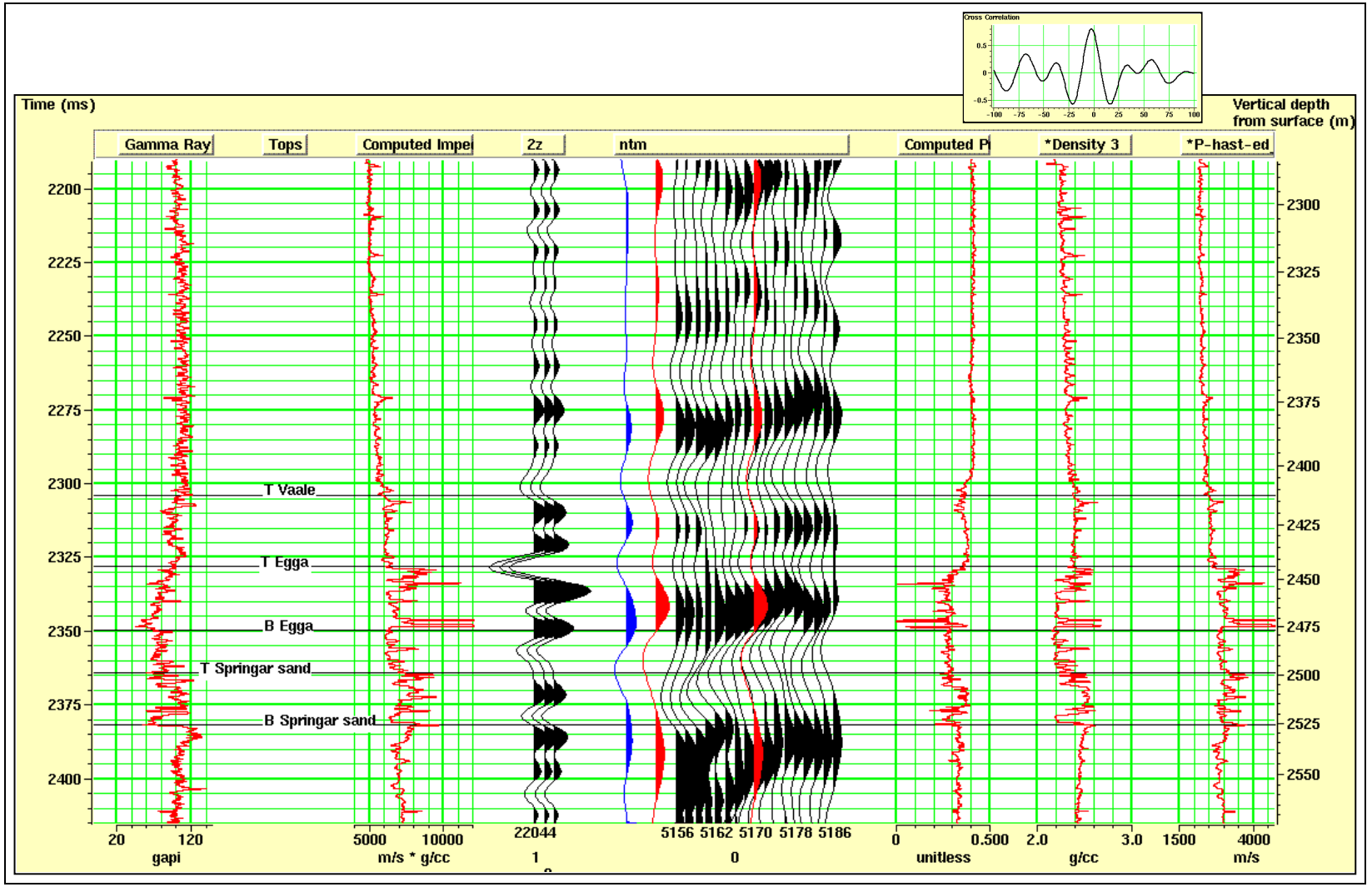


Figure 10.2:
Seismic tie to well 6305/9-1. From left: GR-log, tops, impedanse, VSP corridor stack (2Z), synthetic trace (blue), neartrace_match seismic, poisson ratio, density, P-velocity and the extracted wavelet above.

11 Post Site Survey Report

The results are based on:

- 2D high resolution reflection seismic (NH0065)
- 3D reflection seismic MC3D OLSE98 2MS Reprocessed and NH9602
- MWD logs (resistivity and gamma)
- Site Survey at Location 6305/9-1, PL 252 (NH-00014132)
- Drilling results from completed wells 6305/5-1 and 6306/10-1 and Geotechnical Borehole 6305/9-1

11.1 Well Data

11.1.1 Distance from rig floor (RKB) to sea level:

24m

11.1.2 Water depth (MSL):

187m

11.1.3 a Setting depth for conductor (m RKB):

272m

b Leak Off / Formation Integrity Test (g/cc):

N/A

11.1.4 a Setting depth (m TVD RKB) for casing on which BOP mounted:

674,7m

b Formation Integrity Test (g/cc):

1.50sg

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

md_INO3	:	282 m	(327 ms)
md_4	:	312 m	(354 ms)
md_5	:	339 m	(387 ms)
md_6a	:	371 m	(416 ms)
md_6	:	389 m	(430 ms)
md_Naust_516	:	440 m	(486 ms)
md_Naust_628	:	597 m	(618 ms)
md_Naust_673 (Base Pleistocene)	:	626 m	(648 ms)
md_Naust_840	:	796 m	(798 ms)
md_Naust_850	:	954 m	(933 ms)
md_B_Naust (Top Kai)	:	1074 m	(1006 ms)
md_Top Brygge	:	1303 m	(1226 ms)

Note: No chronostratigraphic information was collected in the tophole section of the well (from seabed down to 680 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 680 m RKB TVD.

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

No data exists on background gas levels from seabed down to 680 m (section drilled with returns to seabed). However, no gas related incidents were reported when drilling this interval.

The following sand bodies have been identified in well 6305/9-1:

Pleistocene Interval:			Pliocene Interval:		
312 m	-	313 m	796 m	-	798 m
322 m	-	324 m	813 m	-	814.5 m
331 m	-	332 m	894.5 m	-	901 m
440 m	-	442 m	917 m	-	921 m
470 m	-	471 m	928 m	-	930 m
479 m	-	482 m	959 m	-	960 m
500.5 m	-	502 m	962 m	-	963 m
507.5 m	-	511 m	1002 m	-	1003 m
538 m	-	539 m			

11.1.7 By what means is the presence of gas proven:

The well is drilled with returns to seabed above 680 m RKB TVD.

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

11.1.8 Composition and origin of gas:

Depth (m RKB TVD)	*Amount*	*Composition*
682.99 m-970.98 m	0.06-1.69%	C1-C3
970.98 m-1557.93 m	0.02-2.36%	C1-C3

11.1.9 Describe all measurements taken in gas bearing layers:

N/A

11.2 Seismic Data

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

The 2D high resolution and 3D exploration seismic was examined for indications of shallow gas. No gas warning was issued for the 6305/9-1 Well Location. However, caution due to potential gas hazards was advised at two levels; at 756 m ± 29 m (RKB) and at 782 m ± 31 m (RKB). At 756 m ± 29 m (RKB) shallow gas was thought to approach to within 310m of location. The location occurs up dip of the gas which is trapped within a faulted sand layer.

Caution was also advised at 782 m ± 31 m (RKB), where a second gas sand has been mapped. In general, the amplitudes at this level around location are only modest and shallow gas were not considered to pose a hazard to drilling at location. Caution is nonetheless advised due to the presence of a large area of high reflection amplitudes 380m to the east north-east.

The top hole section of the well was drilled with returns to seabed to 680 m RKB TVD. Background gas levels were consequently not monitored. However, no gas-related problems were experienced over this section.

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

N/A

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

a Shallow Gas:

No amplitude anomalies were mapped at the 6305/9-1 Well Location and therefore no gas warning was given.

No gas related problems were experienced in the well.

b Sand Bodies:

The Pleistocene, Pliocene and Oligocene sand layers were predicted and encountered sand layers correspond with the interpretation.

c Boulders:

Scattered boulders were predicted throughout the interval from seabed down to Base Pleistocene at 619m ± 22m RKB. No boulders were encountered.

d Unconformities (depths in metres RKB [TVD]):

Horizon	*Prognosis (P)*	*Observed (O)*	*Difference (O-P)*
Seabed	210 ± 2 m	211 m	+ 1 m (deeper)
Base Pleistocene	619 ± 22 m	626 m	+ 7 m (deeper)
Base Pliocene (Top Kai)	1028 ± 150 m	1074 m	+ 46 m (deeper)
Base Pliocene Top Brygge	1134 ± 200 m	1303 m	+169 m (deeper)

The differences between the prognosed and observed depths to different formation tops were within the uncertainty limits given in the site survey report.

e Correlation to Nearby Wells:

The drilling conditions experienced in well 6305/9-1 are as predicted and similar to those encountered in tie-wells (6305/5-1 and 6306/10-1 and Geotechnical Borehole 6305/9-1).

12 Standard and Special Studies

Norsk Hydro, 2001: Site Survey at Location 6305/9-1. Block 6305/9. PL252. NH-00014132

Norsk Hydro, 2001: Formation Evaluation Report, Well 6305/9-1, PL252. NH-00038448

Norsk Hydro, 2001: Standard Core Description, Well 6305/9-1. NH-00037145

Norsk Hydro, 2001: Geochemistry, Well 6305/9-1. NH-00037623

Norsk Hydro, 2001: Biostratigraphic Interpretation and Correlation of Well 6305/9-1 NH-00037388

Robertson Research Int.Ltd, 2001: 6305/9-1. Norwegian Sea.: Biostratigraphy of the interval 740m-2655m TD. NH-00037391.

Read Well Services,2000: Zero Offset VSP, Well 6305/9-1.

Schlumberger, 2001: DSI* Sonic Waveform Processing. - Open Hole. Well 6305/9-1.

Schlumberger Drilling and Measurement, 2001: End of Well Report, Directional and MWD/LWD, Well 6305/9-1.

Corpro Data, 2001: Conventional Core Analysis, Norsk Hydro. Well 6305/9-1.

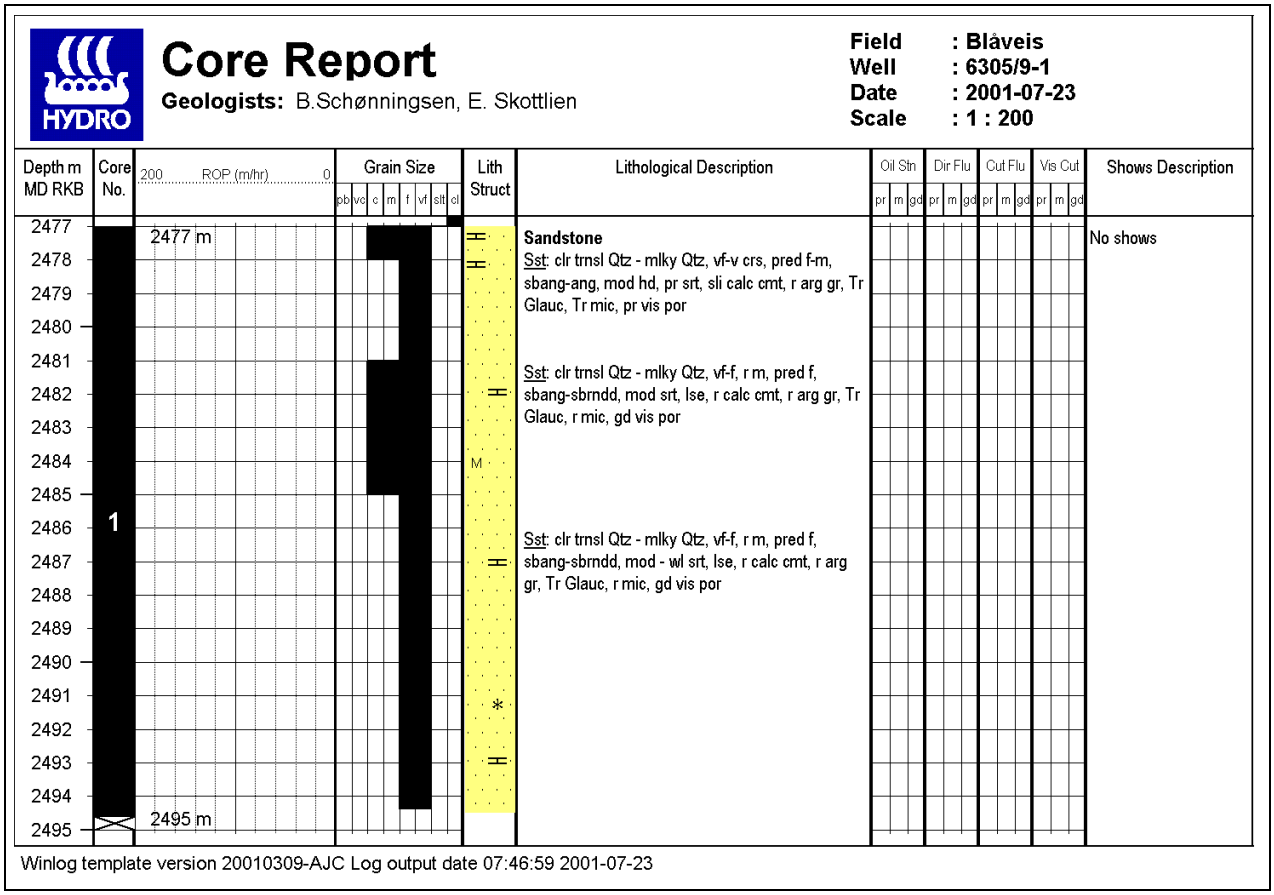
Corpro Data, 2001: CT-Scans of Whole Core, Norsk Hydro. Well 6305/9-1

Corpro Data, 2001: Core Photographs, Well 6305/9-1. White light/UV light, Core #1.

Geoservices,2001: End of Well Report, Well 6305/9-1, Mud Logging.

APPENDIX I

CORE DESCRIPTIONS


Core Report
Geologists: B.Schønningsen, E. Skottlien
Field : Blåveis
Well : 6305/9-1
Date : 2001-07-23
Scale : 1 : 200
Depth m MD RKB
Core No.
200 ROP (m/hr) 0
Grain Size
pb vc c m f vf slt cl
Lith Struct
Lithological Description
Oil Stn
Dir Flu
Cut Flu
Vis Cut
pr m gd
Shows Description
2477
2478
2479
2480
2481
2482
2483
2484
2485
2486
2487
2488
2489
2490
2491
2492
2493
2494
2495
2477 m
2495 m
1
Sandstone
Sst: clr trnsl Qtz - mlky Qtz, vf-v crs, pred f-m, sbang-ang, mod hd, pr srt, sli calc cmt, r arg gr, Tr Glauc, Tr mic, pr vis por
Sst: clr trnsl Qtz - mlky Qtz, vf-f, r m, pred f, sbang-sbrndd, mod srt, lse, r calc cmt, r arg gr, Tr Glauc, r mic, gd vis por
Sst: clr trnsl Qtz - mlky Qtz, vf-f, r m, pred f, sbang-sbrndd, mod - wl srt, lse, r calc cmt, r arg gr, Tr Glauc, r mic, gd vis por
No shows
Winlog template version 20010309-AJC Log output date 07:46:59 2001-07-23

APPENDIX II

SIDEWALL CORE DESCRIPTIONS

NORSK HYDRO — **SIDEWALL CORE SAMPLING** — **WELL:** 6305/9-1 — **RIG:** Transocean Arctic

Run No. : 1A	Date : 24.07.01	Tool type : MSCT		Page : 1 of 1
Gun No. :	Gun type: Mechanical	Hole size: 8½"	BHT 84	Geol. : Schønningsen/Skottlien

Core No.:	Depth (mRKB)	Lithology	Start time	Stop time	O/pull (lbs)	Mis-fired	Lost	Empty	Rec (cm)	Comments
1	2650	Clst	11:03	11:08					5	
2	2610	Clst	11:20	11:22					5	
3	2590	Clst	11:28	11:30					5	
4	2575	Clst	11:35	11:36					5	
5	2565	Clst	11:42	11:43					5	
6	2555	Clst	11:49	11:51					5	
7	2548	Sst	11:56	12:03					5	Electrical failure, fixed
8	2544	Clst	12:30	12:31					5	
9	2540	Clst	12:36	12:39					4	
10	2535	Clst	12:45	12:46					5	
11	2527.5	Ls	12:52	12:57					5	
12	2525	Sst	13:02	13:03					5	
13	2517	-	13:08	13:13				x		Probably elektrical failure in unit
14	2514	-	13:19	13:25				x		"
15	2505	Sst	13:31	13:26					5	"
16	2497.5	-	13:41	13:43				x		"
17	2476	-	13:50	13:54				x		"
18	2473	-	14:03	14:04				x		"
19	2471	-	14:12	14:09				x		"
20	2469	-	14:14	14:15				x		"
21	2465	-	14:20	14:21				x		"
22	2460	-	14:26	14:28	x			x		sample stuck
23	2455	-	14:35	14:41				x		Hard fm to drill in, off and on.
24	2445	-	14:46	14:48				x		Probably elektrical failure in unit
25	2441	-	14:52	14:54				x		"
26	2425	-	15:00	15:07				x		"
27	2400	-	15:14	15:31				x		Hard formation, 50% drilled
28	2340	Clst	15:38	15:41					5	Probably elektrical failure in unit

Run 1A	Date: 24.07.01	Logging: MSCT				Page 1 of 1
Drilled: 28	Miss	Los	Empty 14	Recoverd 14	Geologis E. Skottlien	

No.	Depth m RKB	Recovd cm	Lithology and shows description	Fluorescence					
				Direct			Cut		
				Tr	M	G	Tr	M	G
1	2 650	5	Clst: med gry-dk gry, blky, frm-hd, slily slty, non-occ slily calc, occ slily dol, micromic						
2	2 610	5	Clst: med gry-dk gry, blky, frm-hd, slily slty, non-occ slily calc, occ slily dol, micromic, intbd in Sst Sst: lt gry-lt grn gry, clr-mlky wh Qtz, v f-f, sbang-sbrndd, wl srt, frm-mod hd, slily calc cmt, slily Kao, Tr Glauc, r Carb Frag, fr vis por, n/s, intbd in Clst						
3	2 590	5	Clst: med gry-dk gry, blky, frm-hd, slily slty, non-occ slily calc, occ slily dol, micromic Tr Sst: lt gry-lt grn gry, clr-mlky wh Qtz, v f-f, sbang-sbrndd, wl srt, frm-mod hd, slily calc cmt, slily Kao, Tr Glauc, r Carb Frag, fr vis por, n/s, intbd in Clst						
4	2 575	5	Clst: med gry-dk gry, blky, frm-hd, v slty grad Slsts, non-occ slily calc, occ slily dol, micromic						
5	2 565	5	Clst: med gry-dk gry, blky, frm-hd, v slty grad Slsts, non-occ slily calc, occ slily dol, micromic						
6	2 555	5	Clst: med gry-dk gry, blky, frm-hd, slily slty, non-occ slily calc, occ slily dol, micromic, Tr Carb Frag						
7	2 548	5	Sst: v lt gry-lt grn gry, clr-mlky wh Qtz, f-m, sbrndd-rndd, wl-mod srt, fri-frm, slily calc cmt, slily Kao, glauc, tr Carb Frag, r micromic, r micropyr, fr vis por, n/s						
8	2 544	5	Clst: lt olv gry-gn gry, sbfis, frm, calc-v calc, Tr Micromic, r v f Carb Frag, r micropyr						
9	2 540	4	Clst: lt olv gry-gn gry, sbfis, frm, calc-v calc occ grad Mrl, Tr Micromic, r v f Carb Frag, r micropyr						
10	2 535	5	Clst: gry rd-dk rd brn, sbblky, occ splin, frm, calc-occ v calc grad Mrl						
11	2 527.5	5	Sst: v lt gry-lt grn gry, clr trnsl-mlky wh Qtz, f-m, pred m, sbrndd-rndd, wl srt, frm-occ mod hd, calc cmt, Tr Kao, glauc, abd Carb Frag, fr vis por, n/s						
12	2 525	5	Sst: wh-lt grn gry, clr trnsl-mlky wh Qtz, v f-f, occ m, sbrndd-rndd, wl-mod srt, frm, calc cmt, abd Glauc, Tr Kao, Tr Carb Frag, fr vis por, n/s Tr Ls: wh, blky, microxln						
15	2 505	5	Sst: wh-lt grn gry, clr trnsl-mlky wh Qtz, v f-f, occ m, sbrndd-rndd, wl-mod srt, fri-frm, slily calc cmt, abd Glauc, abd Kao, r Carb Frag, pr-fr vis por, n/s						
28	2 340	5	Clst: med dk gry-dk gry, sbblky, frm-mod hd, calc-v calc, micromic						

Tr:Trace M:Medium

APPENDIX III

WELL SUMMARY

GEOLOGICAL WELL SUMMARY

MDT RESULTS

WELL SUMMARY

Coord: 63°17' 59.96"N UTM: 7 022 673.7 mN
05°59' 14.63"E 649 731.5 mE

Zone: ED-50 UTM Zone 31 CM 3° E

Line: NH In-line 5170, X-line 3865

Rig: Transocean Arctic

Waterdepth: 186 m MSL **KB:** 24 m

Stopped in: Springar Formation

On location: 08.07.01
Spud: 09.07.01
At TD: 23.07.01
P&A finished: 01.08.01

TD Driller: 2655,0 m
TD Logger: 2655,5 m
Wireline Logg: Schlumberger WS
MWD: Schlumberger Anadrill
Mudlogging: Geoservices

WELL: **6305/9-1**

LICENCE: **PL 252**

COUNTRY: **Norway**

OPERATOR: NORSK HYDRO

OWNED BY: NORSK HYDRO, CHEVRON, RWE-DEA

TARGET:

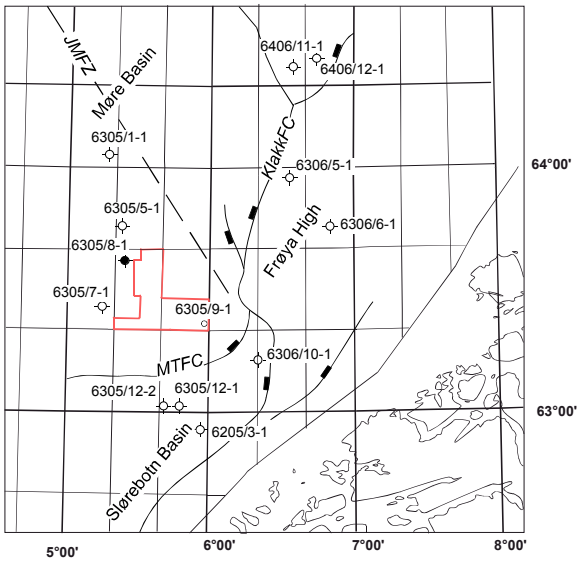
Primary: Våle Formation, Egga Member

RESULTS:

- Dry hole

MWD / LWD	
36"	PowerPulse
26"	GR-CDR
9 5/8"	GR-CDR-ISONIC
8½	GR-Geovision(RAB)-ADN

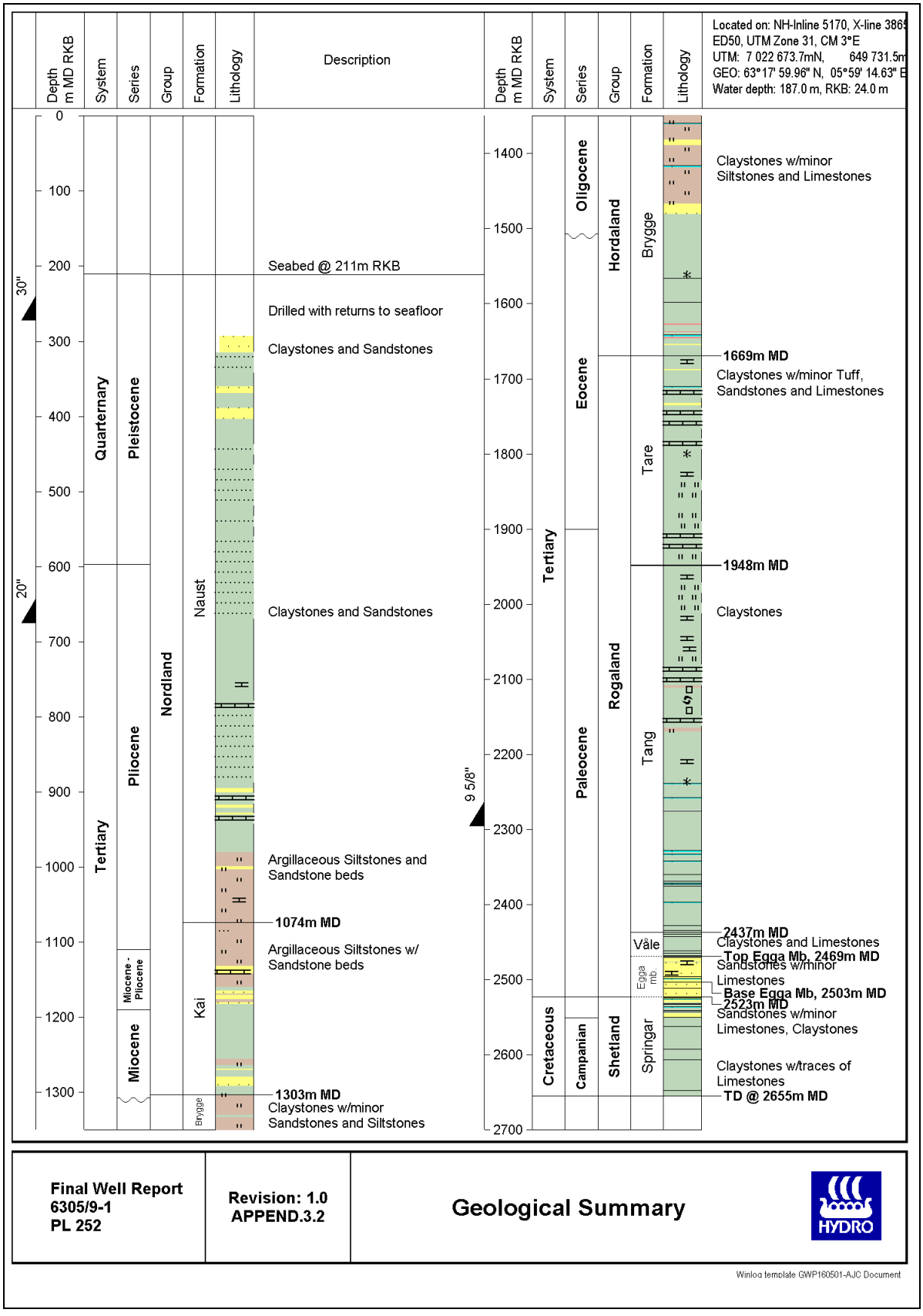
CASING	
30"	272,0m
20"	675,0m
9 5/8"	2295,0m
TD	2655,0m



LOGS		
MDT (pressure only)	1A	2548,0 - 2474,0 m
DSI-VSP	1A	2654,0 - ,0 m
MSCT (28 cores)	1A	2650,0 - 2340,0 m

CORES

Core #1: 2477,0 - 2495,0 m
Rec.: 2477,0 - 2494,5 m, 96,7%



Final Well Report 6305/9-1 PL 252	**Revision: 1.0 APPEND.3.2**	**Geological Summary**

Winlog template GWP160501-AJC Document

FORMATION PRESSURE DATA — **RUN 1A** — **Pressure profiling**

Well : 6305/9-1 | Rig : Transocean Arctic | Date : 23 Jul 2001
Pressure Units : Bars | RKB-MSL : 24 m | MSL-SBed: 187 m. | Witnessed by : Schønningsen
Toolstring: | Conveyance: Wireline

Test No.	Depth mMD RKB	Depth mTVD RKB	Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure			Time hh:mm		Formation Pressure sg EMD	Fluid Gradient g/cc	Mud Pressure sg EMD	Test Temp degC	Good Data? Y/N	Quartz Mobility md/cp	Remarks	Pre Test Vol
			Quartz	Strain	Quartz	Strain	Quartz	Strain	Diff	Set	Retract								
1	2548,0	2547,4	332,91	331,85	251,817	251,89	331,89	331,79	1,02	17:12	17:15	1,008	1,008	1,332	67,4	Y	162		20
2	2529,0	2528,4								17:18	17:20					N		Tight	2,4
3	2523,0	2522,4	325,59	328,45	249,377	249,56	328,64	328,50	-3,05	17:25	17:30	1,009	0,995	1,316	68,0	Y	128,9		20
4	2514,0	2513,4	327,43	327,27	248,494	248,49	327,47	327,32	-0,04	17:31	17:35	1,008	1,000	1,328	68,0	Y	1398,7		20
5	2505,0	2504,4	326,31	326,13	247,627	247,62	326,31	326,16	0,00	17:39	17:43	1,008	0,982	1,328	68,2	Y	818		20
6	2492,0	2491,4	324,60	324,41	246,374	246,34	324,63	324,48	-0,03	17:46	17:51	1,008	0,983	1,328	68,5	Y	841,8		20
7	2482,0	2481,4	323,28	323,12	245,412	245,39	323,34	323,17	-0,06	17:55	17:59	1,008	0,981	1,328	68,2	Y	310,8		20
8	2474,0	2473,4	322,35	322,18	244,704	244,68	322,40	322,21	-0,05	18:00	18:04	1,008	0,902	1,329	68,0	Y	103,7		20

NB: Formation Pressure sg is calculated from RKB

SECTION B

OPERATIONS

Prepared by: P. Skødt

Approved by: Terje Skram

LIST OF CONTENTS Page

TABLES

FIGURES

1 DRILLING SUMMARY AND EXPERIENCES

1.1 Mobilising

Total time used:	38,5 hrs	
Operational time:	38,5 hrs	(100.0 %)
Downtime:	0 hrs	(0 %)

Wellhead co-ordinates :

7022673.7 mN 649731.5 mE

1.2 36" Hole Section / 30" Conductor

Water depth:	187.0 m	
Total depth of section:	272.0 m	
Total time used:	27 hrs	
Operational time:	27 hrs	(100.0 %)
Downtime:	0 hrs	(%)

1.2.1 Drilling

The bottom hole assembly had been made up during the last part of the tow and while anchor handling, the 30” conductor was run and hung off in moon pool.

The well was spudded on July 9th., 2001, at 18:30 hrs.

A 36" rotary BHA with 17-1/2" 02M insert bit and 36" x 26" hole opener was run, the section was drilled to 36” TD at 272.0 m. The section was drilled with sea water and hi-visc pills. After drilling, high-visc was pumped and the hole displaced to 1,50 SG mud before a wiper trip was performed to below seabed and back to TD. The hole was again displaced to 1.50 SG mud.

1.2.2 Casing

The 30" conductor with the Permanent Guide Base was run to 272 m and cemented back to the sea bed with good returns.

1.3 26" Hole Section / 20" Casing

Total depth of section:	680.0 m	
Total time used:	76.0 hrs	
Operational time:	68.5 hrs	(90.13 %)
Downtime:	7.5 hrs	(9.87 %)

1.3.1 Drilling

Drilled 26" hole from 272 m to TD of section at 680 m with a 26” M02SODC bit in one run. Used sea water and high viscous pills for hole cleaning. Displaced hole to 1,50 SG mud and POOH to run casing.

1.3.2 Casing

The 20" casing with the 18-3/4" wellhead was run to 675 m without problems. The casing was cemented in place with returns to seabed, and pressure tested to 69 bar. Ran BOP with riser and pressure tested the wellhead connector to 690 bar.

1.4 12 1/4" Hole Section/ 9 5/8" Casing

Total depth of section: 2305 m MD

Total time used:	156,5 hrs	
Operational time:	151.0 hrs	(96.49 %)
Downtime:	5.5 hrs	(3.51 %)

1.4.1 LOT

Drilled out the 20” casing shoe and 3 m new formation with 17 1/2” bit. Spotted 10 m3 hi-vis on bottom and performed a leak off test (LOT) which confirmed formation strength of 1,50 SG equivalent mud weight (EMW) at 675 m. Pulled assembly out of hole.

1.4.2 Drilling

Ran in with a 12 1/4" motor assembly, and a MA89HPX insert bit. Displaced hole to 1,30 SG sulphate free mud. Drilled 12 1/4” hole down to TD of the section at 2305m. From 2082m the mud weight was increased to 1,35 SG while drilling, due to increase in size and amount of blocky cavings on shakers. A wiper trip was performed at TD, revealing several tight spots and back on bottom 33 m fill. Consequently the mud weight was increased to 1,40 SG and the motor assembly pulled out of hole without further problems.

1.4.3 Casing

The 9 5/8" casing hung up a couple of times and was circulated past these spots between 1710m and 1877m. The casing was eventually landed with shoe at 2295m MD and cemented in place. The casing was pressure tested to 357 bar.

1.5 8 1/2" Hole Section

Total depth of section: 2655 m.

Total time used:	109.0 hrs	
Operational time:	103.5 hrs	(94.95 %)
Downtime:	5.5 hrs	(5.05 %)

1.5.1 FIT

The cement in the 9 5/8” shoe track and 4 m new formation was drilled out with a 8 1/2" MA82PX bit using 1,30 SG KCL water based mud. The leak off test (LOT) confirmed formation strength of 1,67 SG equivalent mud weight (EMW) at 2295m MD.

1.5.2 Drilling

Drilling 8 1/2" hole continued down to drilling break at 2477m MD. Samples confirmed coring point and the drilling assembly was pulled out of hole. After having cored the interval 2477m - 2495m (1 core), the section was drilled to TD of well at 2655m MD again with the previous drilling assembly. A wiper trip was performed to casing shoe before logging since the hole pulled tight on the way out.

1.5.3 Coring

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

Run #	Cored interval m MD	Recovery %	Reason pulled
1	2477 - 2495	96.7	Full

1.5.4 Logging

The following wire line logging runs were performed :

Log suite	Logged interval mMD	Comments
MDT	2548 - 22474	9 stations, 1 tight, 8 good
DSI-VSP	2654 - 2295	Lost time 15 min. No shear signal
MSCT	2650 - 2340	Recovered 14 out of 25 cores.

1.6 Plug and Abandonment

Total time used:	165.0 hrs	
Operational time:	83.0 hrs	(50.3 %)
Downtime:	82.0 hrs	(49.7 %)

The well was permanently abandoned with cement in open hole from TD 2655 m to 2145 m (150 m inside casing). The plug was located at 2138 m with 10 ton setdown weight and pressure tested to 154 bar (70 bar above LOT).

The well was displaced to 1.40 SG mud before the lock ring and seal assembly were pulled. The 9 5/8" casing was cut in 3 attempts and eventually pulled free at 502 m with heavy jarring action.

A Parabow was set at 500 m and a 200 m cement plug was spotted on top. The plug was located with 10 ton at 305 m and pressure tested to 77 bar.

Sea water was then circulated in the well and the mud displaced prior to retrieving the BOP.

Eventually the 20x30" casing was cut at 216 m using a rotary assembly and retrieved together with guide base and wellhead.

While anchor handling a previous dropped stand of drill collars was fished out of seabed with an overshot and an in same incident lost moon pool trolley plate, was fished with podline wire and ROV assistance.

A final seabed survey was performed as well while anchor handling and location was left August 2001 at 07:00 hrs.

1.7 Recommendations

Again fibre rope where used across pipelines with good success and the extra time used is in most cases well spend against the risk with to steep or short chains.

A total of 10 hrs was lost during P & A operation because no back-up grapple was available on rig. These non-rental, low cost items should be plentiful.

Dril Quip procedures in respect to setting, testing and confirming seal assembly is set on the 9 5/8" casing needs to be evaluated thoroughly since it is very time consuming.

GENERAL INFORMATION ON WELL 6305/9-1

Field : BLÅVEIS
Licence : 252
UTM zone : 31
Country : NORWAY
Installation : TRANSOCEAN ARCTIC
Central Median : 3' E **Horiz. Datum:** ED50

Location coordinates:		**Surface**	**Target**
UTM	**North [m]:**	7022673,7	
UTM	**East [m]:**	649731,5	
Geographical	**North :**	63 18'00.00"	
Geographical	**East :**	05 59'14.62"	

Water Depth: 187,0 **m** **Reference Point Height:** 24,0 **m**
Formation at TD: SPRINGAR at 2655 m MD

Operators: NORSK HYDRO PRODUKSJON A/S **Share:** 60,00 **%**

Partners: NORSK CHEVRON A/S **Share:** 25,00 **%**
EXXON MOBIL 15,00 **%**

Total depth (RKB) : 2655,0 **m MD** 2654,2 **m TVD**

TIME SUMMARY
Start Time : 2001-07-08 11:00:00
Spudding date : 2001-07-09
Abandonment date : 2001-08-01

Main operation	**Hours**	**Days**	**%**
MOBILIZATION	38,5	1,6	6,7
DRILLING	300,0	12,5	52,4
FORMATION EVALUATION LOGGING	28,0	1,2	4,9
FORMATION EVALUATION CORING	22,0	0,9	3,8
PLUG AND ABANDONMENT	83,0	3,5	14,5
DOWNTIME DRILLING	18,0	0,8	3,1
DOWNTIME FORM. EVAL. CORING	0,5	0,0	0,1
DOWNTIME PLUG AND ABANDONMENT	82,0	3,4	14,3
Sum:	**572,0**	**23,8**	

Hole and casing record

Hole	**Track**	**Depth [m MD]**	**Casing/Tubing**	**Track**	**Depth [m MD]**
36"		274,0	30"		272,0
26"		680,0	20"		674,7
12 1/4"		2305,0	9 5/8"		2295,0
8 1/2"		2655,0			

Well status: PERMANENTLY ABANDONED

Norsk Hydro

2002-01-03

DOWNTIME REPORT TRANSOCEAN ARCTIC

Last 179 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOA	6305/9-1	2001-07-15	6	1,0	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Leaking wash pipe. Changed same.	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOI	313.02	Top Drive	
TOA	6305/9-1	2001-07-15	8	1,0	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Leaking washpipe. Changed same	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOI	313.02	Top Drive	
TOA	6305/9-1	2001-07-16	9	1,0	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Wash pipe leaked. Changed same.	HOISTING EQUIPMENT	DRILLING	DRILLING CONTRACTOI	313.02	Top Drive	
TOA	6305/9-1	2001-07-19	10	1,0	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	TO BE NAMED	Failure on pipe deck crane. Changed to main deck crane.	HOISTING EQUIPMENT	CASING	DRILLING CONTRACTOI	305.00	Other Hoisting Equipment	
TOA	6305/9-1	2001-07-20	11	4,0	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Repaired gooseneck alignment to cure wash pipe wear.	DRILL FLOOR EQUIPMENT/SYS	DRILLING	DRILLING CONTRACTOI	317.00	Other Drill Floor Eq./Syst.	MH 1687-21
TOA	6305/9-1	2001-07-21	12	0,5	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	CAMERON NORGE	Troubleshooted leakage on UPR close function. Small leakage when operating through both pods on main system. No leakage when using accoutic system.	WELLCONTROL EQUIPMENT/SYS	CORING	DRILLING CONTRACTOI	332.00	Bop Control System	
TOA	6305/9-1	2001-07-23	13	1,0	Other	NORSK HYDRO A/S		Temporarily stuck at 2557 m. Established circulation and worked pipe free.		DRILLING				
TOA	6305/9-1	2001-07-25	14	1,0	Equipment failure	TRANSOCEAN OFFSHORE EUROPE LIMITED	MARITIME HYDRAULICS A/S	Repaired minor leakage on iron roughneck.	DRILL FLOOR EQUIPMENT/SYS	PLUG AND ABANDONMEI	DRILLING CONTRACTOI	317.00	Other Drill Floor Eq./Syst.	
TOA	6305/9-1	2001-07-26	15	4,5	Equipment failure	NORSK HYDRO A/S	BOWEN TOOLS INC.	Unable to cut 9 5/8" casing.	SERVICE EQUIPMENT/SYS	PLUG AND ABANDONMEI	CASING CUTTING	372.38	Equipment for cutting tbg/csg with explos. mill	
TOA	6305/9-1	2001-07-26	18	21,0	Other	NORSK HYDRO A/S		Unable to pull free 9 5/8" casing.		PLUG AND ABANDONMEI				

Norsk Hydro

2002-01-03

DOWNTIME REPORT TRANSOCEAN ARCTIC

Last 179 days

Inst.	Wellname	Startdate	#	Sum hrs	Downtime Type	Responsible Contractor	Manufacturer	Short description	Equipment Type	Activity	Service Type	NSFI Code	NSFI Type	Serial Number
TOA	6305/9-1	2001-07-27	17	6,5	Waiting for materials/equip	SMITH RED BARON		Found 9 5/8" spear grapple damaged. No backup onboard. Waiting for same.	SERVICE EQUIPMENT/SYS	PLUG AND ABANDONMEI	CASING CUTTING	372.37	Equipment for fishing	
TOA	6305/9-1	2001-07-28	19	0,5	Equipment failure	BJ SERVICES	BJ SERVICES	Unable to operate discharge valve from cement surge tank. Repaired same.	MUD AND BULK SYSTEMS	CEMENTING	CEMENTING	321.00	Bulk Storage/Trans	
TOA	6305/9-1	2001-07-28	20	5,5	Other	SMITH RED BARON		10 cm bearing gap on mud motor shaft.		PLUG AND ABANDONMEI				
TOA	6305/9-1	2001-07-29	25	43,0	Waiting on weather			WOW to pull BOP.		PLUG AND ABANDONMEI				
			Sum:	91,5										
			Total Sum:	91,5										

DAILY REPORT ON WELL 6305/9-1

Daily report no : 1 **Date:** 2001-07-08
Midnight depth : 211 m MD **Estimated PP:** sg **Mud weight:** 0,00 sg

Stop time	Description
11:00	
23:59	Rig in transit to well 6305/9-1.

Daily report no : 2 **Date:** 2001-07-09
Midnight depth : 274 m MD **Estimated PP:** 1,00 sg **Mud weight:** 1,05 sg

Stop time	Description
02:00	Continued on tow to 6305/9-1 location.
11:00	Ran anchors and pretensioned to 140T.
15:30	Ran 5 jts of 30" conductor and hung off in moonpool.
18:00	Picked up and made up the 36" BHA.
18:30	Ran down and tagged seabed at 211m MSL.
23:00	Spudded well at 1830hrs and drilled 211m to 274m (36" hole to 272m)
23:30	Pumped round hi-vis pill and displaced the hole to 1.5sg mud.
23:59	Pulled back to seabed with no problems. Ran into well and tagged bottom - no fill.

Daily report no : 3 **Date:** 2001-07-10
Midnight depth : 274 m MD **Estimated PP:** 1,00 sg **Mud weight:** 1,05 sg

Stop time	Description
00:30	Swept hole with hi-vis mud and displaced to 1.5sg mud.
01:30	POOH and racked back the 36" BHA.
02:00	Moved 30" conductor to below the rotary table.
03:00	Ran cementing stinger into pipe. Ran and engaged 30" running tool into wellhead.
04:00	Ran casing to seabed and stabbed into 36" hole. Continued to RIH and land on bottom with shoe at 271m.
04:30	Circulated 30m3 seawater. Good returns at seabed.
05:30	Cemented 30" conductor as per program and displaced to 5m above shoe.
11:30	Waited on cement.
12:30	Released running tool, pulled to surface and laid out. Racked back cement stinger.
13:00	Laid out cement stand.
14:00	Laid out bit and hole opener.
15:30	Made up remote operated plug dropping head and racked back in derrick.
17:30	Began making up 26" BHA.
18:30	Modifyed BHA due to wrong stabilisers being sent to rig.
19:30	Continued to make up 26" BHA.
20:30	Dropped stand of drill collars through hole in rig floor. Investigated incident.
21:30	Continued to make up 26" BHA.
22:30	Ran down and stabed into wellhead. RIH and taged cement at 267m.
23:59	Drilled cement inside 30" conductor

Daily report no : 4 **Date:** 2001-07-11
Midnight depth : 680 m MD **Estimated PP:** 1,00 sg **Mud weight:** 1,05 sg

Stop time	Description
00:30	Completed drilling out of 30" cement, shoe and rathole.. Reamed through twice.
17:30	Drilled 26" hole.
19:30	Pumped 25 m3 hivis pill all the way round then displaced the well with 1,5 sg mud.
20:30	Pulled out of hole to 30" shoe. Hole in good condition.
22:00	POOH to surface. Downloaded MWD and laid out 26" bit and near bit stab.
23:59	Picked up and made up 18 3/4" housing, running tool, plug launch equipment and 20" cement plug. Laid assembly back out on deck.

Daily report no : 5 **Date:** 2001-07-12
Midnight depth : 680 m MD **Estimated PP:** 1,00 sg **Mud weight:** 1,05 sg

Stop time	Description
00:30	Rigged up to run 20" casing. Held pre job safety meeting.

DAILY REPORT ON WELL 6305/9-1

Daily report no : 5 **Date:** 2001-07-12

Midnight depth : 680 m MD **Estimated PP:** 1,00 sg **Mud weight:** 1,05 sg

Stop time	Description
07:30	Ran 20" casing.
08:30	Made up well head and laid out casing equipment.
10:00	Ran in hole with 20" casing on landing string. Washed down last 5 m and landed casing. Confirmed with 25 ton over pull.
11:00	Circulated bottoms up with 2000 lpm.
14:30	Pressure tested lines to 200 bar. Mixed and pumped 131 m3 1,44 sg lead slurry followed by 23 m3 1,95 sg tail slurry.
16:00	Displaced plug with rigpumps. Bumped plug with 50 bar and pressure tested casing to 69 bar.
16:30	Released running tool and washed well head area.
17:30	Racked cement stand in the derrick. POOH and laid out running tool.
19:00	Prepared to run BOP.
22:00	Ran BOP.
23:30	Attempted to pressure test BOP choke and kill lines.
23:59	Prepared to retrieve BOP.

Daily report no : 6 **Date:** 2001-07-13

Midnight depth : 683 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,05 sg

Stop time	Description
00:30	Retrieved BOP and hung off same in moon pool.
03:30	Changed "o" rings in kill and choke lines. Tested lines OK.
10:00	Ran in with BOP and landed same. Confirmed with 25 ton pull test.
12:00	Installed diverter. Pressure tested kill and choke lines to 35/690 bar. Rigged down BOP equipment.
15:00	Made up 2 stands HWDP below BOP test tool. Ran in and landed off test tool in well head. Pressure tested well head connection to 35/690 bar against upper pipe ram. POOH and laid out test tool.
16:30	Made up 18 3/4" nominal bore protector to running tool. Ran in hole and installed protector in well head. POOH and laid out running tool.
18:30	Made up 17 1/2" BHA. Ran in hole to 625 m.
19:00	Washed down and tagged plug at 661 m.
19:30	Performed choke drill.
22:30	Drilled plug, shoetrack and shoe to 675 m. Cleaned out rathole to 680 m.
23:00	Drilled 3 m new formation to 683 m. Pumped 10 m3 hi-vis and circulated clean.
23:30	Spotted 10 m3 hi-vis in open hole.
23:59	Pulled into 20" casing shoe and lined up for LOT.

Daily report no : 7 **Date:** 2001-07-14

Midnight depth : 971 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Pressure tested surface lines to 100 bar. Performed LOT to EMW 1,50 sg.
02:00	POOH with 17 1/2" assembly.
02:30	Laid out 17 1/2" bit and stabilizer.
04:00	Broke and laid out 26" bottom hole assembly.
05:00	Serviced and loaded cement head. Racked back in derrick again.
07:00	Pressure tested mudhose, wash pipe and IBOP to 345 bar.
08:30	Attempted to make up 9 5/8" running tool.
10:30	Made up 9 5/8" hanger to running tool with seal assembly, lock ring and plugs.
13:00	Made up 12 1/4" motor assembly.
14:30	Ran in hole with 12 1/4" assembly to 680 m.
16:00	Displaced well to 1,30 sg sulphate free KCL mud.
23:59	Drilled 12 1/4" hole from 683 m to 971 m.

Daily report no : 8 **Date:** 2001-07-15

Midnight depth : 1558 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
00:30	Drilled 12 1/4" hole from 971 m to 995 m.
01:30	Pulled back one stand and changed leaking wash pipe.
17:00	Drilled 12 1/4" hole from 995 m to 1414 m.
18:00	Changed leaking washpipe.

DAILY REPORT ON WELL 6305/9-1

Daily report no : 8 **Date:** 2001-07-15
Midnight depth : 1558 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,30 sg

Stop time	Description
23:59	Drilled 12 1/4" hole from 1414 m to 1558 m.

Daily report no : 9 **Date:** 2001-07-16
Midnight depth : 2082 m MD **Estimated PP:** 1,03 sg **Mud weight:** 1,31 sg

Stop time	Description
23:00	Drilled 12 1/4" hole from 1558 m to 2082 m with 3550 lpm/268 bar.
23:59	Wash pipe leaked. Changed same.

Daily report no : 10 **Date:** 2001-07-17
Midnight depth : 2305 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,35 sg

Stop time	Description
12:00	Drilled 12 1/4" hole from 2082 m to section TD 2305 m.
13:30	Circulated bottoms up.
15:30	Pulled out of hole on wipertrip to 1682 m.
18:00	Worked string. Established circulation in increments and circulated bottoms up.
23:59	Pumped out of hole on wipertrip from 1682 m to 770 m.

Daily report no : 11 **Date:** 2001-07-18
Midnight depth : 2305 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,40 sg

Stop time	Description
00:30	Continued pumping out of hole from 770 m to 20" casing shoe at 675 m.
01:00	Circulated bottoms up to riser.
02:30	Ran in hole from 675 m to 1763 m.
04:00	Attempted to pass 1763 m. No go. Freed pipe, established rotation and circulation in increments. Washed down to 1800 m with 3000 lpm.
06:00	Ran in hole from 1800 m to 1862 m. Stood up. Established rotation and circulation. Washed down from 1862 m to 1950 m. Ran in hole from 1950 m to 2272 m.
06:30	Tagged bottom at 2272 m. 33 m fill. Rotated and pumped to TD.
10:00	Circulated bottoms up. Raised mud weight to 1.40 SG. Displaced kill, choke & booster lines to 1.40 SG mud. Circulated and conditioned mud. Made SCRs.
16:30	POOH from 2305-1500 m. Max overpull 10-15 MT @ 1966 m & 1766 m. Pumped slug & continued to POOH. Laid down bit & mud motor. Cleaned rig floor.
17:30	Made up jet sub & 9 x 5" HWDP below running tool. RIH same.
19:00	Washed wellhead area. Engaged seat protector & took Vetco measurements. Closed MPR to mark pipe.
21:00	POOH with seat protector. Washed wellhead on the way out. Laid down seat protector, running tool and HWDP.
22:00	Prepared to run 9 5/8" casing. Held safety meeting.
23:59	Ran 11 joints 9 5/8" casing to 130 m.

Daily report no : 12 **Date:** 2001-07-19
Midnight depth : 2305 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,40 sg

Stop time	Description
03:30	Ran 9 5/8" casing to casing shoe.
04:00	Rigged up 500 ton elevator and Frank circulation tool. Held safety meeting prior to stabbing operation.
05:00	Continued running 9 5/8" casing to 830 m.
05:30	Failure on pipe deck crane. Changed to main deck crane.
07:00	Continued running 9 5/8" casing.
11:30	Held safety meeting with crew. Continued to run 9 5/8" casing according to tally. Filled every joint with 1.40 SG mud. Took 15 MT at 1709 & 1720 m. Worked through.
12:00	Stop in casing running due to helicopter arrival.
13:00	Continued to run 9 5/8" casing. Took 30 MT at 1856 m. Worked string to pass obstruction. No go.
13:30	Activated Frank's packer and established circulation at 1856 m. Worked string through obstruction to 1860 m. OK.
15:00	Continued to run 9 5/8" casing. Filled every joint. Took 30 MT at 1875 & 1877 m. No restrictions below.
15:30	Rigged down Frank's fill up assy & 500 ton elevator. Made up casing hanger. Rigged down flush mounted spider.
17:00	RIH on landing string. Filled every stand with 1.40 SG mud. Landed at 16:40 hrs.

DAILY REPORT ON WELL 6305/9-1

Daily report no : 12 **Date:** 2001-07-19

Midnight depth : 2305 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,40 sg

Stop time	Description
17:30	Circulated casing volume. Held pre-job meeting. Max gas at 4.7%.
18:00	Pumped 10 m3 fresh water spacer and dropped ball.
21:00	Mixed & pumped 10.2 m3 1.90 SG slurry. Displ. cmt w/1650 lpm inside csg. Incr. to 2200 lpm in open hole. Lost 1.5 m3 mud in the first phase, and 12 m3 after increasing the rate. Got 10 m3 back when reducing rate. P test csg 357 bar OK.
22:00	Set seal assy with 7 turns and 2500 psi. Pressure tested 35/690 bar OK.
23:59	Pressure tested BOP to 35/690 bar with blue pod.

Daily report no : 13 **Date:** 2001-07-20

Midnight depth : 2305 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,30 sg

Stop time	Description
01:00	Continued to pressure test BOP to 35/690 bar with blue pod. Function tested with BOP control panel and yellow pod.
02:00	Released seal assy running tool with 20 ton overpull. Pulled back 3 m, circulated 3 min and relanded tool. Reapplied setting of seal assy and tested to 2500 psi to confirm seal sleeve down.
03:00	POOH running tool and laid down same. Function tested shear ram accoustically.
05:00	Made up 9 5/8" wear bushing and RIH same. Closed upper annular and set wear bushing with 2500 psi. POOH running tool.
05:30	Laid down hybrid cement head.
06:30	Started to lay down 12 1/4" BHA.
07:00	Cleaned rig floor and prepared to pick up 8 1/2" BHA.
09:00	Made up 8 1/2" bit. Programmed RAB-6. Initialized MWD & performed pump test on same.
10:00	Held safety meeting and installed radioactive sources.
11:30	Continued to make up 8 1/2" BHA. Picked up 9 x 6 1/2" DC & jar.
14:30	RIH 8 1/2" bit to 2257 m. Filled string @ 1000 m & TD. Tagged float @ 2257 m.
15:30	Slip & cut drilling line. Circulated to reduce mudweight to 1.30 SG.
19:30	Continued to reduce mudweight while repairing top drive.
20:30	Performed choke drill. Functioned LPR.
22:30	Pressure tested IBOP & kelly cock to 690 bar, kelly hose to 345 bar.
23:59	Commenced to drill cement plug & float.

Daily report no : 14 **Date:** 2001-07-21

Midnight depth : 2477 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,30 sg

Stop time	Description
03:30	Continued to drill out casing float and shoe. Cleaned rathole. Drilled 4 m new formation to 2309 m.
04:30	Performed LOT @ 1.67 SG EMW.
15:00	Drilled 8 1/2" hole from 2309-2477 m.
16:30	Flow checked after drilling break at 2474 m. Circulated bottoms up for samples. Max gas 0.37%. Pumped slug.
19:30	POOH.
20:30	Dumped ADN. Removed radioactive sources. Broke bit and racked MWD/LWD tools.
21:30	Made up 8 1/2" corehead and 60' core barrel.
23:00	RIH 8 1/2" core assy.
23:30	Troubleshooted leakage on UPR close function.
23:59	Continued to RIH 8 1/2" coring assy.

Daily report no : 15 **Date:** 2001-07-22

Midnight depth : 2598 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,30 sg

Stop time	Description
01:30	Continued to RIH 8 1/2" coring assy.
02:00	Washed down from 2446-2475 m. Dropped ball. Took SCRs.
04:00	Cut core #1 from 2477-2495 m. Max 0.8% gas. No overpull when breaking core.
05:00	Flowchecked OK. Pulled wet inside casing shoe.
09:00	Flowchecked OK. Pumped slug. POOH. Pulled slowly from 350 m. Held safety meeting prior to pulling out core. Checked for H2S. Negative.
09:30	Recovered core #1. 96.7% recovery.
10:00	Laid down core barrel.
12:00	Made up BHA #7. Loaded MWD. Installed radioactive source.
14:00	RIH 8 1/2" BHA. Filled string at 1100 m.

DAILY REPORT ON WELL 6305/9-1

Daily report no : 15 **Date:** 2001-07-22
Midnight depth : 2598 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,30 sg

Stop time	Description
15:00	Logged and reamed down from 2470 m to TD.
23:59	Drilled 8 1/2" hole from 2495-2598 m.

Daily report no : 16 **Date:** 2001-07-23
Midnight depth : 2655 m MD **Estimated PP:** 1,08 sg **Mud weight:** 1,30 sg

Stop time	Description
02:30	Continued drilling 8 1/2" hole to 2655 m.
04:00	Circulated hole clean.
05:00	Flow checked. Slugged pipe. POOH.
06:00	Increasingly tight hole. Max overpull +/- 50 MT. Temporarily stuck @ 2557 m. Established circulation and worked pipe free.
07:30	Backreamed to 2459 m. Continued to POOH to casing shoe.
08:30	RIH to TD. Wiped formerly tight section. Hole in good condition.
09:30	Circulated bottoms up and until clean shakers.
10:30	POOH to casing shoe. Pumped slug.
12:30	POOH 8 1/2" BHA.
13:30	Dumped ADN. Removed radioactive source.
14:00	Broke bit. Cleaned rig floor.
14:30	Rigged up Schlumberger.
15:30	Made up MDT string.
19:00	RIH wireline run #1. Took pressure points. POOH.
21:00	Made up VSP logging string.
23:59	RIH wireline run #2, VSP.

Daily report no : 17 **Date:** 2001-07-24
Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,30 sg

Stop time	Description
07:00	Continued to log DSI-VSP.
09:00	Made up MSCT tool string.
17:00	Logged MSCT, logging run #3. Recovery; 14 out of 28 cores.
18:00	POOH. Rigged down Schlumberger.
19:30	Laid down 6 3/4" MWD equipment.
21:00	Made up 30 jnts 3 1/2" drill pipe with diverting sub on bottom end.
23:59	RIH with cement stinger.

Daily report no : 18 **Date:** 2001-07-25
Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,40 sg

Stop time	Description
01:00	Circulated bottoms up w/ 2900 lpm.
03:00	Rigged up and tested cement hose on pump in sub to 140 bar. Pumped 5 m3 FW spacer. Mixed and pumped 11.5 m3 cement followed by 1 m3 FW. Displaced with 18.5 m3 1.30 SG while rotating string @ 50 rpm to set balanced cmt plug from TD-2400 m.
03:30	POOH to 2400 m.
04:30	Circulated out excess cement w/2940 lpm while rotating pipe w/ 50 rpm. Boosted riser when cement above BOP.
05:30	Hooked up cement hose. Pressure tested same. Pumped 5 m3 FW spacer. Mixed and pumped 11.7 m3 slurry and 1 m3 FW spacer. Displaced with 16 m3 1.30 SG mud while rotating string w/ 50 rpm to set balanced cement plug from 2400-2145 m.
06:00	POOH to 2145 m.
07:30	Circulated bottoms up.
10:30	POOH. Laid down 15 jnts. 3 1/2" pipe.
13:00	Made up 8 1/2" bit and RIH.
14:00	Repaired minor hydraulic leakage on iron roughneck.
14:30	Continued to RIH to 2079 m.
15:00	Washed down and tagged TOC at 2138 m with 10 MT.
16:30	POOH to 956 m.
19:30	WOC.

DAILY REPORT ON WELL 6305/9-1

Daily report no : 18 **Date:** 2001-07-25

Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,40 sg

Stop time	Description
20:30	Pressure tested surface lines to 170 bar. Closed MPR and tested 9 5/8" casing / cement plug to 154 bar/10 min OK.
21:30	Displaced hole to 1.40 SG mud from 950 m.
23:30	Continued to POOH. Laid down jar & 2 x 6 1/2" DCs.
23:59	RIH jet sub, 1 std 5" HWDP and Multi Purpose Tool on V-150 landing string.

Daily report no : 19 **Date:** 2001-07-26

Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,40 sg

Stop time	Description
01:00	Continued to RIH Multi Purpose Tool. Washed BOP and wellhead area. Pulled wear bushing with 30 ton overpull. POOH same.
03:30	RIH Multi Purpose Tool. Washed wellhead area. Closed upper annular and performed strip test. Unseated seal assy with 25 ton overpull. Flowchecked OK. Opened annular and POOH.
05:30	Made up 9 5/8" cutting assy. Function tested same and RIH to 645 m.
06:30	Cut 9 5/8" casing at 645 m 710 lpm 70 bar. Torque jumping between 2-8 kNm without working action.
07:30	POOH casing cutter.
08:00	Verified knives not worn. Function tested same OK.
09:30	RIH 9 5/8" cutter assy with annular swivel and landed on marine swivel. Closed upper annular.
10:30	Cut 9 5/8" casing at 635 m with 850 lpm, 105 bar, 4-9 kNm.
11:30	POOH and laid down casing cutter.
12:00	Cleaned rig floor.
13:00	Made up 9 5/8" spear assy.
13:30	RIH and engaged spear.
15:30	Attempted to pull free casing with max 200 ton overpull. No go. Established circulation through cut and up annulus 1400 lpm / 13 bar without losses.
16:00	Released spear and POOH. Racked same.
19:00	Made up mill and flush tool and RIH. Flushed casing hanger area. POOH. Tool indicated full landing on casing hanger.
20:30	Made up cutting assy and RIH same.
21:00	Cut 9 5/8" casing at 502 m with 870 lpm, 105 bar, 2.5-8 kNm. Took 10 ton overpull with pumps on.
22:30	Flowchecked 10 min OK. POOH cutter assy.
23:59	Laid down 6 1/2" DC while waiting on spear grapple.

Daily report no : 20 **Date:** 2001-07-27

Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,40 sg

Stop time	Description
00:30	Continued to lay down 6 1/2" DC while waiting on spear grapple.
01:30	Slipped & cut drill line while waiting for spear grapple.
02:00	Installed 8" Bowen fishing jar on spear assy.
08:30	Waiting for spear grapple while servicing rig.
09:30	Installed new grapple on 9 5/8" casing spear.
11:00	RIH casing spear and engaged same. Attempted to pull casing free with max 240 ton overpull. Jarred 5 times with 75 ton force on jar and while circulated 1600 lpm. No go.
12:00	Released spear. Checked derrick / DDM. POOH spear and racked same.
14:00	Evaluated further operation.
16:00	Made up 9 5/8" cutter assy and RIH same to 499 m. Pumped 870 lpm and verified open cut from 502-502.5 m. POOH.
17:00	Closed shear ram and performed injection test.
19:00	Changed to Bowen super fishing-jar, made up accelerators and RIH 9 5/8" casing spear.
20:30	Engaged spear and jarred casing free. Jarring circulation 1400 lpm - 16 bar. Pumped slug.
22:00	POOH jaring string. Laid down 2 accelerators.
22:30	Casing hanger in slips. Attempted to release spear. No go. Broke out toolstring above spear and racked same.
23:00	Rigged up Weatherford casing equipment. Inspected derrick and top drive after jaring.
23:59	Made second attempt to release spear. Held SJA meeting. Torqued string with 50.000 ft.lbs. No go.

Daily report no : 21 **Date:** 2001-07-28

Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,40 sg

Stop time	Description
03:00	Laid down casing hanger. POOH and laid down 9 5/8" casing. Rigged down casing equipment.

DAILY REPORT ON WELL 6305/9-1

Daily report no : 21 **Date:** 2001-07-28

Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,40 sg

Stop time	Description
04:30	Made up BJ Parabow and RIH on 5" drill pipe to 500 m. Drifted string to 2 1/4" on way in.
06:00	Washed down to 500 m. Dropped ball and circulated down same to set Parabow at 500 m. Pulled back one single and circulated bottoms up w/ 2000 lpm - 20 bar. Pressure tested surface lines 150 bar.
07:00	Pumped 10 m3 SW spacer. Mixed and pumped 1.95 SG slurry while rotating string w/30 rpm.
07:30	Unable to operate discharge valve on cement surge tank. Repaired same.
08:30	Continued to pump 1.95 SG slurry. Totally 35.5 m3. Pumped 540 l SW spacer. Displaced same with 2 m3 1.40 SG mud to set balanced cement plug from 500-300 m.
09:00	POOH slowly to 295 m.
09:30	Circulated bottoms up. Boosted riser.
10:00	POOH and laid down Parabow setting tool.
13:00	Laid down marine and annular swivels, jar, bumper sub and 15 x 3 1/2" drill pipe from derrick.
13:30	Cleaned rig floor.
15:30	Picked up 20"/30" cutting assy. Discovered 10 cm bearing gap on mud motor shaft. Racked same.
16:30	Serviced rig while investigating mud motor problem.
17:00	Rearranged stands in derrick to be able to pick up drill collars for rotary cutting assy.
18:00	Picked up 6 x 8" drill collars for rotary cutting assy and racked same in derrick.
19:00	Laid down faulty motor cutting motor assy.
20:30	Made up 20-30" cutting assy and racked same in derrick.
22:00	RIH w/ 17 1/2" bit, washed from 265 m and tagged firm cement at 305 m with 10 ton.
22:30	Pressure tested cement plug #3 to 77 bar / 10 min OK.
23:00	Displaced hole to seawater.
23:59	POOH 17 1/2" bit.

Daily report no : 22 **Date:** 2001-07-29

Midnight depth : 2655 m MD **Estimated PP:** 1,01 sg **Mud weight:** 1,40 sg

Stop time	Description
01:30	Prepared to pull BOP.
23:59	WOW due to increasing wind/sea and bad weatherforcast. Near standby from standby vessel unavailable for pulling BOP.

Daily report no : 23 **Date:** 2001-07-30

Midnight depth : 2655 m MD **Estimated PP:** sg **Mud weight:** 1,40 sg

Stop time	Description
20:30	WOW to pull BOP.
23:59	Held safe job meeting and prepared to pull BOP. Laid down diverter, unlatched wellhead connector 21:40 hrs. Picked up BOP and pulled rig 20 m off location. Hung off support ring, laid down slip joint and commenced pulling BOP.

Daily report no : 24 **Date:** 2001-07-31

Midnight depth : 2655 m MD **Estimated PP:** sg **Mud weight:** 1,40 sg

Stop time	Description
04:00	Continued to pull BOP. BOP through splash zone 03:40 hrs. Landed BOP on beams.
06:00	Disconnected riser, guidewires, podwires etc.
07:30	Skidded BOP to park position. Laid down 2 x 50 ft risers & booster termination spool. Rigged down riser running equipment.
10:30	Picked up and function tested knives on 20" x 30" casing cutter. Installed guideropes and RIH. Positioned rig. Stabbed into wellhead assisted by ROV.
16:00	Cut 20" x 30" casing at 216 m. (5 m below seabed). Pulled casing free with 20 ton overpull.
16:30	POOH with guide base and wellhead.
23:59	Anchor handling. Deballasted rig to 25 m draught. Changed anchor chain #8 and pulled two anchors. Performed seabed survey.

Daily report no : 25 **Date:** 2001-08-01

Midnight depth : 2655 m MD **Estimated PP:** sg **Mud weight:** 1,40 sg

Stop time	Description
07:00	Anchor handling.

DAILY REPORT ON WELL 6305/9-1

Daily report no : 25 **Date:** 2001-08-01

Midnight depth : 2655 m MD **Estimated PP:** sg **Mud weight:** 1,40 sg

Stop time	Description
23:59	No activity. Rig in transit to 25/2-16S.

TIME DISTRIBUTION

Well: 6305/9-1 **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN ARCTIC **Depth:** 2306,0 **m MD**
All sections **Stop date:** 2002-01-10

Operations	Hours	%	Hours	%	Acc. total
MOBILIZATION					
MOVING	15,0	2,62			
MOORING; RUNNING ANCHORS	9,0	1,57			
MOORING; PULLING ANCHORS	14,5	2,53			
Sum.			38,5	6,73	38,5
DRILLING					
BHA HANDLING/TESTING	15,5	2,71			
EQUIPMENT TEST	3,0	0,52			
MWD HANDLING/TESTING/SURVEYING	5,5	0,96			
TRIPPING IN CASED HOLE	14,0	2,45			
TRIPPING IN OPEN HOLE	11,0	1,92			
DRILLING	108,5	18,97			
OTHER	0,5	0,09			
WELLHEAD EQUIPMENT INSTALLATION	8,0	1,40			
CIRC. AND COND. MUD/HOLE	18,0	3,15			
WIPER TRIP	15,5	2,71			
CASING HANDLING/TESTING	21,5	3,76			
RUNNING CASING IN CASED HOLE	6,5	1,14			
RUNNING CASING IN OPEN HOLE	14,5	2,53			
DRILLING OUT OF CASING	10,0	1,75			
PRIMARY CEMENTING	20,0	3,50			
TRIPPING FOR CEMENT JOB	0,5	0,09			
FORMATION STRENGTH TESTING	2,0	0,35			
BOP HANDLING	3,5	0,61			
BOP RUNNING/RETRIEVING	9,5	1,66			
BOP TESTING	7,0	1,22			
WELLHEAD EQUIPMENT HANDLING	4,5	0,79			
SLIP AND CUT DRILLING LINE	1,0	0,17			
Sum.			300,0	52,45	338,5
FORMATION EVALUATION LOGGING					
LOGGING	8,0	1,40			
LOGGING EQUIPMENT HANDLING/TESTING	6,5	1,14			
FORMATION TESTER	3,5	0,61			
VERTICAL SEISMIC	10,0	1,75			
Sum.			28,0	4,90	366,5
FORMATION EVALUATION CORING					
MWD HANDLING/TESTING/SURVEYING	3,0	0,52			
TRIPPING IN CASED HOLE	7,5	1,31			
CORING EQUIPMENT/CORE HANDLING	2,0	0,35			
TRIPPING IN OPEN HOLE	6,0	1,05			
OTHER	1,0	0,17			
CORING	2,0	0,35			
CIRC. AND COND. MUD/HOLE	0,5	0,09			
Sum.			22,0	3,85	388,5
PLUG AND ABANDONMENT					
BHA HANDLING/TESTING	7,0	1,22			
TRIPPING IN CASED HOLE	3,0	0,52			
CIRC. AND COND. MUD/HOLE	1,5	0,26			
TRIPPING FOR CEMENT JOB	17,5	3,06			
BOP HANDLING	5,0	0,87			
BOP RUNNING/RETRIEVING	7,5	1,31			
WELLHEAD EQUIPMENT HANDLING	4,0	0,70			
SET CEMENT PLUG	13,5	2,36			
TRIPPING OF CASING CUTTING EQUIPMENT	6,5	1,14			
CUT CASING/WELLHEAD	7,5	1,31			
CASING RETRIEVING	9,0	1,57			
SLIP AND CUT DRILLING LINE	1,0	0,17			
Sum.			83,0	14,51	471,5

TIME DISTRIBUTION

Well: 6305/9-1 **PO:** 1 **Start date:** 1980-01-01 **Rig:** TRANSOCEAN ARCTIC **Depth:** 2306,0 **m MD**
All sections **Stop date:** 2002-01-10

Operations	Hours	%	Hours	%	Acc. total
DOWNTIME DRILLING					
EQUIPMENT FAILURE AND REPAIR	15,0	2,62			
STICKING/GOING STUCK WITH EQUIPMENT	1,0	0,17			
OTHER	2,0	0,35			
Sum.			18,0	3,15	489,5
DOWNTIME FORM. EVAL. CORING					
EQUIPMENT FAILURE AND REPAIR	0,5	0,09			
Sum.			0,5	0,09	490,0
DOWNTIME PLUG AND ABANDONMENT					
EQUIPMENT FAILURE AND REPAIR	11,5	2,01			
WAITING	49,5	8,65			
STICKING/GOING STUCK WITH EQUIPMENT	21,0	3,67			
Sum.			82,0	14,34	572,0
Reported time (100,0 % of well total 572,0 hours) :					572,0

2002-01-03

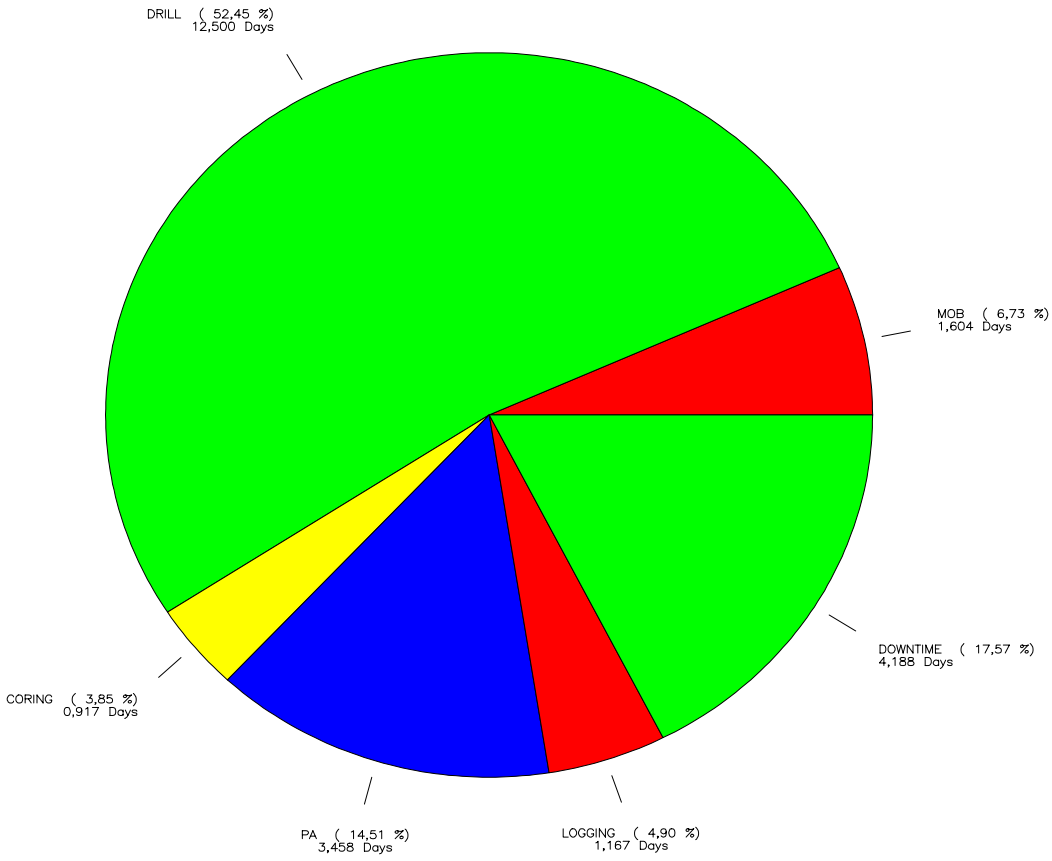


Figure 1		Time Distribution 6305/9-1	**HYDRO**

HOLE DEVIATION

Well: 6305/9-1 **Reference point:** RKB ; 24,0 **m** ABOVE MSL

Waterdepth: 187,0 **m** **Vertical to:** 210,9 **m** **Total Depth:** 2655,0 **m MD**

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

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

Wellhead Coordinates, UTM: **North :** 7022673,70 **m,** **East :** 649731,50 **m**

Official Surveys: N **Track :**

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
211,00	0,00	0,00	MWD	1	211,00	0,00	0,00	0,00	0,00	0,00	0,00
218,20	0,50	288,80	MWD	1	218,20	0,01	-0,03	0,03	2,08	2,08	-296,67
227,40	0,60	240,50	MWD	1	227,40	-0,00	-0,11	0,11	1,50	0,33	-157,50
237,20	1,11	162,61	MWD	1	237,20	-0,12	-0,13	0,17	3,51	1,56	-238,44
246,90	0,40	228,90	MWD	1	246,90	-0,23	-0,12	0,26	3,15	-2,20	205,02
262,30	0,50	228,60	MWD	1	262,30	-0,31	-0,21	0,38	0,19	0,19	-0,58
262,60	0,46	232,36	MWD	1	262,60	-0,31	-0,22	0,38	5,02	-4,00	376,00
265,50	0,30	165,90	MWD	1	265,50	-0,32	-0,22	0,39	4,52	-1,66	-687,52
276,20	0,20	169,00	MWD	1	276,20	-0,37	-0,21	0,43	0,28	-0,28	8,69
284,30	0,30	148,20	MWD	1	284,30	-0,40	-0,20	0,45	0,49	0,37	-77,04
294,80	0,40	161,50	MWD	1	294,80	-0,46	-0,17	0,49	0,37	0,29	38,00
324,50	0,20	156,80	MWD	1	324,50	-0,61	-0,12	0,62	0,20	-0,20	-4,75
353,70	0,10	141,50	MWD	1	353,70	-0,67	-0,08	0,68	0,11	-0,10	-15,72
382,70	0,10	126,90	MWD	1	382,70	-0,71	-0,05	0,71	0,02	0,00	-15,10
412,20	0,20	169,00	MWD	1	412,20	-0,77	-0,02	0,77	0,14	0,10	42,81
441,40	0,10	176,90	MWD	1	441,40	-0,85	-0,01	0,85	0,10	-0,10	8,12
471,30	0,10	196,70	MWD	1	471,30	-0,90	-0,01	0,90	0,03	0,00	19,87
500,00	0,00	258,70	MWD	1	500,00	-0,92	-0,02	0,92	0,10	-0,10	64,81
529,40	0,10	282,00	MWD	1	529,40	-0,92	-0,04	0,92	0,10	0,10	23,78
559,90	0,20	263,10	MWD	1	559,90	-0,92	-0,12	0,93	0,11	0,10	-18,59
588,60	0,10	291,20	MWD	1	588,60	-0,92	-0,20	0,94	0,13	-0,10	29,37
618,30	0,10	274,60	MWD	1	618,30	-0,91	-0,25	0,94	0,03	0,00	-16,77
647,20	0,20	300,00	MWD	1	647,20	-0,88	-0,32	0,93	0,12	0,10	26,37
661,30	0,50	291,80	MWD	1	661,30	-0,84	-0,39	0,93	0,65	0,64	-17,45
706,80	0,50	292,90	MWD	1	706,79	-0,69	-0,76	1,03	0,00	0,00	0,73
735,00	0,50	286,20	MWD	1	734,99	-0,61	-0,99	1,16	0,06	0,00	-7,13
793,40	0,40	331,10	MWD	1	793,39	-0,36	-1,34	1,38	0,18	-0,05	23,07
823,00	0,40	300,60	MWD	1	822,99	-0,22	-1,47	1,49	0,21	0,00	-30,91
853,50	0,60	301,20	MWD	1	853,49	-0,08	-1,70	1,70	0,20	0,20	0,59
882,40	0,40	315,40	MWD	1	882,39	0,07	-1,90	1,90	0,24	-0,21	14,74
912,10	0,60	327,60	MWD	1	912,09	0,28	-2,06	2,08	0,23	0,20	12,32
942,00	1,00	346,10	MWD	1	941,98	0,66	-2,21	2,30	0,47	0,40	18,56
970,50	1,00	346,50	MWD	1	970,48	1,14	-2,32	2,59	0,00	0,00	0,42
1000,30	1,00	332,00	MWD	1	1000,28	1,63	-2,51	2,99	0,25	0,00	-14,60
1029,30	0,60	337,90	MWD	1	1029,27	1,99	-2,68	3,34	0,42	-0,41	6,10
1058,60	0,60	352,70	MWD	1	1058,57	2,28	-2,76	3,58	0,16	0,00	15,15

Norsk Hydro

2002-01-03

HOLE DEVIATION

Well: 6305/9-1 **Reference point:** RKB ; 24,0 **m** ABOVE MSL

Waterdepth: 187,0 **m** **Vertical to:** 210,9 **m** **Total Depth:** 2655,0 **m MD**

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

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

Wellhead Coordinates, UTM: **North :** 7022673,70 **m,** **East :** 649731,50 **m**

Official Surveys: N **Track :**

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
1087,70	0,70	3,60	MWD	1	1087,67	2,61	-2,77	3,81	0,16	0,10	11,24
1118,10	0,70	20,20	MWD	1	1118,07	2,97	-2,69	4,01	0,20	0,00	16,38
1147,60	0,80	26,00	MWD	1	1147,56	3,33	-2,54	4,19	0,13	0,10	5,90
1176,70	0,70	26,30	MWD	1	1176,66	3,67	-2,37	4,37	0,10	-0,10	0,31
1208,20	0,80	31,90	MWD	1	1208,16	4,03	-2,17	4,58	0,12	0,10	5,33
1267,40	0,70	30,20	MWD	1	1267,35	4,69	-1,77	5,01	0,05	-0,05	-0,86
1326,30	0,80	19,50	MWD	1	1326,25	5,39	-1,45	5,58	0,09	0,05	-5,45
1383,70	1,00	17,30	MWD	1	1383,64	6,25	-1,17	6,35	0,11	0,10	-1,15
1442,00	0,90	3,50	MWD	1	1441,93	7,19	-0,99	7,26	0,13	-0,05	-7,10
1471,60	0,80	355,50	MWD	1	1471,53	7,63	-0,99	7,69	0,16	-0,10	-8,11
1531,00	0,60	22,10	MWD	1	1530,93	8,33	-0,91	8,38	0,19	-0,10	13,43
1590,40	0,40	21,20	MWD	1	1590,32	8,81	-0,72	8,84	0,10	-0,10	-0,45
1619,30	0,40	8,40	MWD	1	1619,22	9,00	-0,66	9,03	0,09	0,00	-13,29
1678,40	0,10	55,50	MWD	1	1678,32	9,24	-0,59	9,26	0,17	-0,15	23,91
1736,80	0,60	138,30	MWD	1	1736,72	9,04	-0,35	9,04	0,31	0,26	42,53
1766,30	1,10	150,60	MWD	1	1766,22	8,68	-0,10	8,68	0,54	0,51	12,51
1796,80	1,10	152,30	MWD	1	1796,71	8,16	0,18	8,16	0,03	0,00	1,67
1856,20	1,60	156,80	MWD	1	1856,10	6,89	0,77	6,94	0,26	0,25	2,27
1942,50	1,70	163,00	MWD	1	1942,36	4,56	1,62	4,84	0,07	0,03	2,16
1973,80	1,70	160,00	MWD	1	1973,65	3,68	1,91	4,15	0,08	0,00	-2,88
2004,80	1,60	162,20	MWD	1	2004,63	2,84	2,20	3,59	0,11	-0,10	2,13
2060,90	1,70	161,80	MWD	1	2060,71	1,30	2,70	3,00	0,05	0,05	-0,21
2090,00	1,80	164,60	MWD	1	2089,80	0,45	2,96	2,99	0,14	0,10	2,89
2180,00	2,00	160,50	MWD	1	2179,75	-2,39	3,86	4,54	0,08	0,07	-1,37
2250,20	2,20	157,90	MWD	1	2249,90	-4,79	4,77	6,76	0,09	0,09	-1,11
2278,70	2,30	157,90	MWD	1	2278,38	-5,83	5,19	7,81	0,10	0,11	0,00
2302,00	2,60	163,40	MWD	1	2301,66	-6,77	5,52	8,74	0,49	0,39	7,08
2331,50	2,80	163,50	MWD	1	2331,12	-8,10	5,91	10,03	0,20	0,20	0,10
2361,50	2,70	163,30	MWD	1	2361,09	-9,48	6,33	11,40	0,10	-0,10	-0,20
2390,30	2,90	163,00	MWD	1	2389,86	-10,83	6,73	12,75	0,21	0,21	-0,31
2419,40	2,90	159,10	MWD	1	2418,92	-12,22	7,21	14,19	0,20	0,00	-4,02
2448,30	2,80	161,10	MWD	1	2447,78	-13,57	7,70	15,60	0,15	-0,10	2,08
2466,80	2,90	160,80	MWD	1	2466,26	-14,44	8,00	16,51	0,16	0,16	-0,49
2509,50	2,70	161,00	MWD	1	2508,91	-16,41	8,68	18,57	0,14	-0,14	0,14
2539,80	2,90	153,60	MWD	1	2539,17	-17,77	9,26	20,04	0,41	0,20	-7,33
2596,50	2,80	150,50	MWD	1	2595,80	-20,26	10,58	22,86	0,10	-0,05	-1,64

Norsk Hydro

2002-01-03

HOLE DEVIATION

Well: 6305/9-1 **Reference point:** RKB ; 24,0 **m** ABOVE MSL

Waterdepth: 187,0 **m** **Vertical to:** 210,9 **m** **Total Depth:** 2655,0 **m MD**

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

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

Wellhead Coordinates, UTM: **North :** 7022673,70 **m,** **East :** 649731,50 **m**

Official Surveys: N **Track :**

Coordinates are measured from the wellhead centre.

Depth MD [m]	Incli-nation [Deg]	Direc-tion [Deg]	Tool Type	#	Depth TVD [m]	Coordinates North [m]	Coordinates East [m]	Vert. Sect [m]	Dogleg [D/30m]	Build [D/30m]	Turn [D/30m]
2626,20	2,70	148,00	MWD	1	2625,47	-21,49	11,30	24,28	0,16	-0,10	-2,53

MAIN CONSUMPTION OF CASING/TUBING ON WELL 6305/9-1 PO: 1

Size	Casing string	Grade	Weight [kg/m]	Weight [lb/ft]	Threads type	Length [m]	No. of joints
30"	CONDUCTOR	X-52	460,86	309,70	SL-60	62,5	5
20"	SURFACE	X-56	197,92	133,00	E60MT	466,2	38
9 5/8"	PRODUCTION	P-110	69,94	47,00	NS-CC	2086,4	178

BITRECORD FOR WELL 6305/9-1 PO: 1

Bit No	Bit RR	Bit Type	Size (in)	Manu-fact-urer	Trade name	Serial no.	IADC code	Nozzles diameter (../32in)	Flow area (in2)	BHA no.	Depth out (m MD)	Bit meter (m)	Rot. hours (hrs)	ROP (m/hr)	Rotation min/max) (rpm)	Total bit revol.	Weight min/max (kN)	Flow min/max (l/min)	Pump min/max (bar)	Cutting Structure I - O -DC- L - B	Gauge 1/16 (in)	Other Remarks	Pull Cause
1		ISRT	17,50	SMIT	02M	LK6329	415X	15,18,20,20	1,035	1	274	63	2,60	24,2	50/110	17000	1/2	3000/4500	77/154	2 - 2 - BT - C - E	I	NO	TD
2		ISRT	26,00	SMIT	M02SODC	LK4720	415	18,22,22,22	1,362	2	680	406	11,80	34,4	80/140	96000	5/21	3000/4644	60/202	1 - 1 - NO - A - E	I	NO	TD
3		ISRT	17,50	SMIT	02M	LK6329	415X	15,18,20,20	1,035	3	683	22	0,30	73,3	61/77	10000	20/40	3411/3414	123/124	2 - 2 - BT - C - E	I	NO	BHA
4		PDC	12,25	SMIT	MA89HPX	SC0371	223	12,12,12,12,12,12	0,792	4	2305	1622	45,30	35,8	75/232	632000	0/190	2481/3900	124/303	7 - 7 - RO - T - X	1	BT	TD
5		PDC	8,50	SMIT	MA82PX	JS3781	223	12,12,12,12,12,12	0,663	5	2477	172	8,70	19,8	62/149	77000	0/6	2424/2551	207/249	1 - 1 - NO - A - X	I	NO	CP
6		BIT	8,50	SDBS	FC274RILI	7000940			0,000	6	2495	18	1,70	10,6	80/140	12000	0/10	975/2502	71/245	1 - 1 - NO - A - X	I	PN	TD
5	1	PDC	8,50	SMIT	MA82PX	JS3781	223	12,12,12,12,12,12	0,663	7	2655	160	15,80	10,1	62/165	139000	3/11	924/2551	67/249	1 - 1 - NO - A - X	I	NO	TD
5	2	PDC	8,50	SMIT	MA82PX	JS3781	223	12,12,12,12,12,12	0,663	8	2138	0		0,0	0/0		0/100	630/3640	8/195	1 - 1 - NO - A - X	I	NO	BHA
7		ISRT	17,50	SMIT	10GMODC	LW8943	435	13	0,130	15	305	0		0,0	0/0		0/100	700/2000	0/20	1 - 1 - BT - - 2	I	NO	BHA

BOTTOM HOLE ASSEMBLIES USED ON WELL 6305/9-1 PO: 1

BHA no. 1: No. / Element / OD(in) / Length(m) Depth In: 211 m MD Out: 274 m MD

1	02M	17,5	0,42	2	4700	36,0	3,89
3	BIT SUB	9,5	0,92	4	MWD	9,5	8,92
5	NON MAG. COLLAR	9,5	9,00	6	DRILL COLLAR STEEL	9,5	18,09
7	X-OVER	9,5	0,88	8	DRILL COLLAR STEEL	8,0	54,89
9	JAR	8,0	9,61	10	DRILL COLLAR STEEL	8,0	18,36
11	X-OVER	8,0	1,00	12	HWDP	5,0	72,52

Reason pulled: TOTAL DEPTH/CASING DEPTI Sum: 198,50

BHA no. 2: No. / Element / OD(in) / Length(m) Depth In: 274 m MD Out: 680 m MD

1	M02SODC	26,0	0,65	2	NEAR BIT STAB	26,0	2,50
3	NON MAG. COLLAR	9,563	2,55	4	PIN-PIN SUB	9,25	0,30
5	NEAR BIT STAB	26,0	1,45	6	LOGGING WHILE DRILLING TO(	9,5	15,74
7	NON MAG. STAB	26,0	2,16	8	NON MAG. COLLAR	9,5	9,00
9	X-OVER	9,5	0,93	10	DRILL COLLAR STEEL	8,0	54,77
11	JAR	8,0	9,61	12	DRILL COLLAR STEEL	8,0	18,36
13	X-OVER	8,0	1,00	14	HWDP	5,0	135,83

Reason pulled: TOTAL DEPTH/CASING DEPTI Sum: 254,85

BHA no. 3: No. / Element / OD(in) / Length(m) Depth In: 661 m MD Out: 683 m MD

1	02M	17,5	0,42	2	NEAR BIT STAB	17,5	2,20
3	X-OVER	9,5	0,93	4	DRILL COLLAR STEEL	8,0	54,77
5	JAR	7,688	9,61	6	DRILL COLLAR STEEL	8,0	18,36
7	X-OVER	8,0	1,00	8	HWDP	5,0	135,83

Reason pulled: CHANGE BOTTOMHOLE ASSI Sum: 223,12

BHA no. 4: No. / Element / OD(in) / Length(m) Depth In: 683 m MD Out: 2305 m MD

1	MA89HPX	12,25	0,36	2	DOWNHOLE MOTOR	9,625	9,23
3	FLOAT SUB	8,0	0,78	4	NON MAG. STAB	12,25	2,47
5	CDR	9,012	6,95	6	NON MAG. STAB	12,125	1,40
7	MWD	8,375	8,28	8	LOGGING WHILE DRILLING TO(	9,0	7,32
9	NON MAG. STAB	12,125	2,00	10	DRILL COLLAR STEEL	8,0	27,46
11	JAR	7,688	9,61	12	DRILL COLLAR STEEL	8,0	18,36
13	X-OVER	8,0	1,00	14	HWDP	5,0	135,83

Reason pulled: TOTAL DEPTH/CASING DEPTI Sum: 231,05

BHA no. 5: No. / Element / OD(in) / Length(m) Depth In: 2305 m MD Out: 2477 m MD

1	MA82PX	8,5	0,27	2	LOGGING WHILE DRILLING TO(	8,375	3,03
3	LOGGING WHILE DRILLING TOOL	8,5	1,50	4	MWD	6,875	8,34
5	LOGGING WHILE DRILLING TOOL	8,25	5,75	6	DRILL COLLAR STEEL	6,5	75,69
7	JAR	6,5	9,53	8	DRILL COLLAR STEEL	6,5	18,97
9	HWDP	5,0	135,83				

Reason pulled: CORE POINT Sum: 258,91

BHA no. 6: No. / Element / OD(in) / Length(m) Depth In: 2477 m MD Out: 2495 m MD

1	FC274RILI	8,5	0,36	2	CORE BARREL		20,94
3	X-OVER	6,5	0,80	4	BIT SUB	6,438	0,91
5	DRILL COLLAR STEEL	6,5	18,93	6	STEEL STAB	8,375	1,72
7	DRILL COLLAR STEEL	6,5	37,80	8	JAR	6,5	9,53
9	DRILL COLLAR STEEL	6,5	18,97	10	HWDP	5,0	135,83

Reason pulled: TOTAL DEPTH/CASING DEPTI Sum: 224,85

BOTTOM HOLE ASSEMBLIES USED ON WELL 6305/9-1 PO: 1

BHA no. 7: No. / Element / OD(in) / Length(m) Depth In: 2495 m MD Out: 2655 m MD

1	MA82PX	8,5	0,27	2	LOGGING WHILE DRILLING TO(	8,375	3,03
3	LOGGING WHILE DRILLING TOOL	8,5	1,50	4	MWD	6,875	8,34
5	LOGGING WHILE DRILLING TOOL	8,25	5,75	6	DRILL COLLAR STEEL	6,5	75,69
7	JAR	6,5	9,53	8	DRILL COLLAR STEEL	6,5	18,97
9	HWDP	5,0	135,83				

Reason pulled: TOTAL DEPTH/CASING DEPT Sum: 258,91

BHA no. 8: No. / Element / OD(in) / Length(m) Depth In: 2138 m MD Out: 2138 m MD

1	MA82PX	8,5	0,27	5	BIT SUB	6,5	0,98
6	DRILL COLLAR STEEL	6,5	56,76	7	JAR	6,5	9,53
8	DRILL COLLAR STEEL	6,5	18,97	9	HWDP	5,0	135,83

Reason pulled: CHANGE BOTTOMHOLE ASSI Sum: 222,34

BHA no. 9: No. / Element / OD(in) / Length(m) Depth In: 645 m MD Out: 645 m MD

1	INTERNAL CUTTER	8,188	3,19	2	DRILL PIPE	5,0	432,08
3	X-OVER	6,5	0,73	4	OTHER	12,0	1,24
5	X-OVER	8,0	0,86				

Reason pulled: Sum: 438,10

BHA no. 10: No. / Element / OD(in) / Length(m) Depth In: 635 m MD Out: 635 m MD

1	INTERNAL CUTTER	8,188	3,19	2	DRILL PIPE	5,0	422,29
5	X-OVER	8,0	0,86	6	OTHER	12,0	1,24
7	X-OVER	8,0	0,86	8	PUP JOINT	5,0	4,56
9	PUP JOINT	5,0	4,54	10	OTHER	8,75	4,26

Reason pulled: Sum: 441,80

BHA no. 11: No. / Element / OD(in) / Length(m) Depth In: 635 m MD Out: 635 m MD

2	SPEAR PACK OFF	8,063	0,93	3	SPEAR	8,0	1,39
4	STOP SUB	8,0	0,95	5	BUMPER SUB	7,938	1,66
6	X-OVER	7,25	0,47	7	DRILL COLLAR STEEL	6,5	28,32

Reason pulled: Sum: 33,72

BHA no. 12: No. / Element / OD(in) / Length(m) Depth In: 502 m MD Out: 502 m MD

1	INTERNAL CUTTER	8,188	3,19	2	DRILL PIPE	5,0	284,76
3	PUP JOINT	5,0	4,50	5	X-OVER	6,5	0,73
6	OTHER	12,0	1,24	7	X-OVER	8,0	0,86
8	PUP JOINT	5,0	4,56	9	PUP JOINT	5,0	4,54
10	OTHER	8,75	4,26				

Reason pulled: Sum: 308,64

BHA no. 13: No. / Element / OD(in) / Length(m) Depth In: 502 m MD Out: 502 m MD

2	SPEAR PACK OFF	8,063	0,93	3	SPEAR	8,0	1,39
4	STOP SUB	8,0	0,95	5	BUMPER SUB	7,938	1,66
6	JAR	7,75	2,49	7	DRILL COLLAR STEEL	8,0	27,46
8	X-OVER	7,25	0,47				

Reason pulled: Sum: 35,35

BOTTOM HOLE ASSEMBLIES USED ON WELL 6305/9-1 PO: 1

BHA no. 14: No. / Element / OD(in) / Length(m) Depth In: 502 m MD Out: 502 m MD

2	SPEAR PACK OFF	8,063	0,93	3	SPEAR	8,0	1,39
4	STOP SUB	8,0	0,95	5	BUMPER SUB	7,938	1,66
6	JAR	7,938	3,80	7	DRILL COLLAR STEEL	8,0	54,77
8	ACCELERATOR	7,937	5,48	9	X-OVER	7,25	0,47
10	DRILL PIPE	5,0	117,81	11	ACCELERATOR	6,188	3,85
12	DRILL PIPE	5,0	28,82				

Reason pulled: Sum: 219,93

BHA no. 15: No. / Element / OD(in) / Length(m) Depth In: 305 m MD Out: 305 m MD

1	10GMODC	17,5	0,44	2	BIT SUB	9,5	0,95
3	DRILL COLLAR STEEL	8,0	27,46	4	X-OVER	8,0	1,21

Reason pulled: CHANGE BOTTOMHOLE ASSI Sum: 30,06

CEMENT SLURRY REPORT ON WELL 6305/9-1 PO: 1

Date	CsgSize	Jobtype	Slurry Type	Pumped Volume [m3]	Density [sg]	BHCT [DegC]	Yield [l/100 kg]	Additive	Unit	Additives [../100 kg Cement]	Additives [../m3 Slurry]
2001-07-10	30"	CASING CEMENTING	LEAD	19,00	1,56	7,00	129,60	A-3L	l	3,50	
								FP-14L	l	0,20	
			TAIL SLURRY	19,00	1,95	7,00	74,73	A-7L	l	3,50	
								FP-14L	l	0,20	
			DISPLACEMENT	6,00	1,03	7,00					
			DISPLACEMENT			7,00					
2001-07-12	20"	CASING CEMENTING	LEAD	35,70	1,44	21,00	220,24	FP-14L	l	0,20	
								A-3L	l	5,30	
								D-8	kg	35,00	
			LEAD NO. 2	95,80	1,44	21,00	168,53	FP-14L	l		0,20
								A-3L	l		5,30
			TAIL SLURRY	23,00	1,95	21,00	73,99	A-7L	l	1,00	
								FP-14L	l	0,20	
			DISPLACEMENT	80,00	1,03	21,00					
			DISPLACEMENT			21,00					
2001-07-19	9 5/8"	CASING CEMENTING	SPACER	10,00	1,00	56,00					
			TAIL SLURRY	10,20	1,90	56,00	78,58	CD-31L	l	0,40	
								FP-14L	l	0,20	
								MICRO	l	4,00	
								R-12L	l	0,55	
			DISPLACEMENT	76,90	1,40	56,00					
			DISPLACEMENT			56,00					
2001-07-25	9 5/8"	PLUG IN OPEN HOLE	SPACER	5,00	1,00	66,00					
			TAIL SLURRY	11,70	1,90	66,00	76,75	FP-14L	l	0,20	
								R-12L	l	0,75	
			DISPLACEMENT			66,00					
2001-07-25	9 5/8"	PLUG IN OPEN HOLE	SPACER	5,00	1,00	76,00					
			TAIL SLURRY	11,50	1,90	76,00	76,80	FP-14L	l	0,20	
								R-12L	l	1,00	
			DISPLACEMENT			76,00					
2001-07-28	20"	PLUG IN CASED HOLE	SPACER	10,00	1,00	16,00					
			TAIL SLURRY	35,50	1,95	16,00	73,69	FP-14L	l	0,20	

CEMENT SLURRY REPORT ON WELL 6305/9-1 PO: 1

Date	CsgSize	Jobtype	Slurry Type	Pumped Volume [m3]	Density [sg]	BHCT [DegC]	Yield [l/100 kg]	Additive	Unit	Additives [../100 kg Cement]	Additives [../m3 Slurry]
2001-07-28	20"	PLUG IN CASED HOLE	DISPLACEMENT			16,00					

CEMENT CONSUMPTION PER JOB ON WELL 6305/9-1 PO: 1

Date	CsgSize	Job Type	Cement/ Additive	Description	Unit	Actual Amount Used
2001-07-10	30"	CASING CEMENTING	A-3L	EXTENDER: LIQUID LODENSE	l	693
			A-7L	ACCELERATOR: LIQUID CACL2	l	922
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	70
			G	API CLASS G	MT	38
2001-07-12	20"	CASING CEMENTING	A-3L	EXTENDER: LIQUID LODENSE	l	3875
			A-7L	ACCELERATOR: LIQUID CACL2	l	308
			D-8	SPECIAL ADDITIVE: SILICA FLUOR, TEMP. TO 204 I	kg	22
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	204
			G	API CLASS G	MT	92
2001-07-19	9 5/8"	CASING CEMENTING	CD-31L	DISPERSANT: CD-31L LIQUID	l	45
			FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	30
			G	API CLASS G	MT	13
			MICRO	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGF	l	600
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 D	l	90
2001-07-25	9 5/8"	PLUG IN OPEN HOLE	FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	30
			G	API CLASS G	MT	16
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 D	l	520
2001-07-25	9 5/8"	PLUG IN OPEN HOLE	FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	30
			R-12L	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 D	l	150
			G	API CLASS G	MT	16
2001-07-28	20"	PLUG IN CASED HOLE	FP-14L	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100
			G	API CLASS G	MT	47

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 6305/9-1 PO: 1

Section	Product/ Additive	Unit	Total Amount Used
26"	BARITE	kg	28000,00
	CELPOL ESL	kg	25,00
	CMC EHV	kg	75,00
	DUOTEC NS	kg	25,00
12 1/4"	BARITE	kg	127000,00
	DUOTEC NS	kg	2375,00
	GLYCOL	l	20400,00
	GLYDRIL MC	l	186000,00
	KCL BRINE	l	410000,00
	PACSEAL LV	kg	7700,00
	POTASSIUM CARBONATE	kg	250,00
8 1/2"	BARITE	kg	56000,00
	CITRIC ACID	kg	1000,00
	DUOTEC NS	kg	175,00
	GLYCOL	l	2800,00
	PACSEAL LV	kg	975,00
	POTASSIUM CARBONATE	kg	650,00
	SODIUM BICARBONATE	kg	925,00

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 6305/9-1 PO: 1

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2001-07-09	211	211	SPUD MUD	90,0	1,05						0	0							
2001-07-10	274	274	SPUD MUD	95,0	1,05						0	0							

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2001-07-11	680	680	SPUD MUD	105,0	1,05						0	0							
2001-07-12	680	680					0	0	0	0	0	0	0	0					

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2001-07-14 23:59	972	972	KCL/POLYMER	80,0	1,30	20,0	76	56	45	31	0	0	12	10	50,0	20,0	18,0	6,0	9,0
2001-07-15 23:59	1522	1522	KCL/POLYMER	79,0	1,30	20,0	70	52	43	33	0	0	12	10	50,0	18,0	17,0	5,0	8,0
2001-07-16	2076	2076	KCL/POLYMER	79,0	1,31		73	54	46	35	0	0	12	10	50,0	19,0	17,5	5,0	9,0
2001-07-17 23:05	2305	2305	KCL/POLYMER	100,0	1,35		84	62	52	39	0	0	13	10	50,0	22,0	20,0	6,0	10,0
2001-07-18 22:00	2305	2305	KCL/POLYMER	103,0	1,40		81	59	49	37	0	0	13	10	50,0	22,0	18,5	5,0	10,0
2001-07-19 21:00	2305	2305	KCL/POLYMER	103,0	1,40		83	60	50	38	0	0	13	10	50,0	23,0	18,5	5,0	10,0

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2001-07-20 21:00	2257	2257	KCL/POLYMER	87,0	1,30		61	45	38	29	0	0	8	11	50,0	16,0	14,5	4,5	9,0
2001-07-21 22:25	2477	2476	KCL/POLYMER	89,0	1,30		78	56	46	35	0	0	10	8	50,0	22,0	17,0	4,5	9,0
2001-07-22 22:00	2580	2579	KCL/POLYMER	85,0	1,30		70	51	40	30	0	0	10	8	50,0	19,0	16,0	4,0	9,0

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 6305/9-1 PO: 1

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

Date	Depth [m]		Mud Type	Funnel Visc	Dens	Mudtmp Out	Fann Readings								Rheo Test	PV	YP	Gel0	Gel10
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
2001-07-24 21:00	2655	2654	KCL/POLYMER	85,0	1,30		71	50	41	32	0	0	10	8	50,0	21,0	14,5	4,0	9,0
2001-07-25 21:00	2138	2138	KCL/POLYMER	92,0	1,40		77	54	44	36	0	0	11	9		23,0	15,5	5,0	10,0
2001-07-26 12:00	2195	2195	KCL/POLYMER	95,0	1,40		78	55	46	36	0	0	12	9	50,0	23,0	16,0	5,0	11,0
2001-07-28 10:00	300	300	KCL/POLYMER	85,0	1,40		70	50	41	30	0	0	10	8		20,0	15,0	5,0	10,0

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 6305/9-1 PO: 1

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2001-07-09	211	211	SPUD MUD	1,05					/																
2001-07-10	274	274	SPUD MUD	1,05					/																

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]
2001-07-11	680	680	SPUD MUD	1,05					/																
2001-07-12	680	680							/																

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]
2001-07-14 23:59	972	972	KCL/POLYMER	1,30	1,8		1		/	8,6	0,5	0,0	0,1		95	90000	400		400	12,5	6,0	0,0	20	3,6	79
2001-07-15 23:59	1522	1522	KCL/POLYMER	1,30	1,6	12,0	1	2	12 / 100	8,0	0,1	0,0	0,1		80000	90000	300		300	14,0	6,0	0,0	18	3,6	77
2001-07-16	2076	2076	KCL/POLYMER	1,31	2,7	14,0	1	1	/ 121	8,0	0,1	0,1	0,9		95000	94000	500		500	15,5	4,5	0,6	18	3,4	115
2001-07-17 23:05	2305	2305	KCL/POLYMER	1,35	2,1	12,0	1	1	/ 121	8,0	0,1	0,1	0,6			97000	820		820	17,0	4,8	0,7	25	3,5	147
2001-07-18 22:00	2305	2305	KCL/POLYMER	1,40	2,4	12,0	1	1	/ 121	8,1	0,1	0,1	0,6		90	95000	840		840	17,0	4,5	0,8	28	3,5	147
2001-07-19 21:00	2305	2305	KCL/POLYMER	1,40	2,4	12,0	1	1	/ 121	8,0	0,1	0,1	0,6		90	95000	800		800	17,0	5,0	0,8	28	3,5	147

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]
2001-07-20 21:00	2257	2257	KCL/POLYMER	1,30	2,3	12,0	1	1	/ 121	8,0	0,1	0,1	0,5		90	94000	820		820	14,0	4,5	0,6	30	3,2	152
2001-07-21 22:25	2477	2476	KCL/POLYMER	1,30	2,2	11,0	1	1	/ 121	8,1	0,1	0,1	0,7		95000	91000	760		760	14,5	4,5	0,5	28	3,5	86
2001-07-22 22:00	2580	2579	KCL/POLYMER	1,30	2,3	12,0	1	1	/ 121	8,1	0,1	0,1	0,7		95000	90000	900		900	14,0	4,6	0,5	28	3,7	60

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

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2001-07-24 21:00	2655	2654	KCL/POLYMER	1,30	2,5	14,0	1	1	/ 121	8,2	0,1	0,1	0,6		95000	90000	800		800	14,0	5,0	0,5	28	3,7	61
2001-07-25 21:00	2138	2138	KCL/POLYMER	1,40	2,6	12,0	1	2	/	9,0		0,3	1,6		95000	90000	1000		1000	16,5	5,0	0,5	28	4,0	33

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 6305/9-1 PO: 1

Hole section : P&A

WATER BASED SYSTEM

Date	Depth [m] MD	Depth [m] TVD	Mud Type	Dens [sg]	Filtrate API [ml]	Filtrate HPHT [ml]	Filtcake API [mm]	Filtcake HPHT [mm]	HPHT Press/Temp [bar/DegC]	pH	Alcalinity Pm [ml]	Alcalinity Pf [ml]	Alcalinity Mf [ml]	Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage Solid [%]	Percentage Oil [%]	Percentage Sand [%]	CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
2001-07-26 12:00	2195	2195	KCL/POLYMER	1,40	2,6	16,5	1	2	/	8,8		0,2	1,5		95000	90000	1000		1000	16,5	5,0	0,5	28	4,0	33
2001-07-28 10:00	300	300	KCL/POLYMER	1,40	2,6	13,0	1	2	/	8,8		0,2	1,3		95000	89000	1200		1200	16,5	5,0	0,5	28	4,0	34

TOTAL CONSUMPTION OF CEMENT ADDITIVES ON WELL 6305/9-1 PO: 1

Section	Cement/Additive	Unit	Total Amount Used
36"	ACCELERATOR: LIQUID CACL2	l	922,00
	API CLASS G	MT	38,00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	70,00
	EXTENDER: LIQUID LODENSE	l	693,00
26"	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	204,00
	SPECIAL ADDITIVE: SILICA FLUOR, TEMP. TO 204 DEGC	kg	22,00
	EXTENDER: LIQUID LODENSE	l	3875,00
	ACCELERATOR: LIQUID CACL2	l	308,00
	API CLASS G	MT	92,00
12"	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	30,00
	API CLASS G	MT	13,00
	DISPERSANT: CD-31L LIQUID	l	45,00
	SPECIAL ADDITIVE: MICROBLOCK, ANTI GAS MIGRATION	l	600,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	90,00
8 1/2"	API CLASS G	MT	31,00
	RETARDER: LIQUID LIGNOSULFONATE UP TO 93 DEGC	l	670,00
	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	60,00
0.0	SPECIAL ADDITIVE: DEFOAMER FP-14L	l	100,00
	API CLASS G	MT	47,00

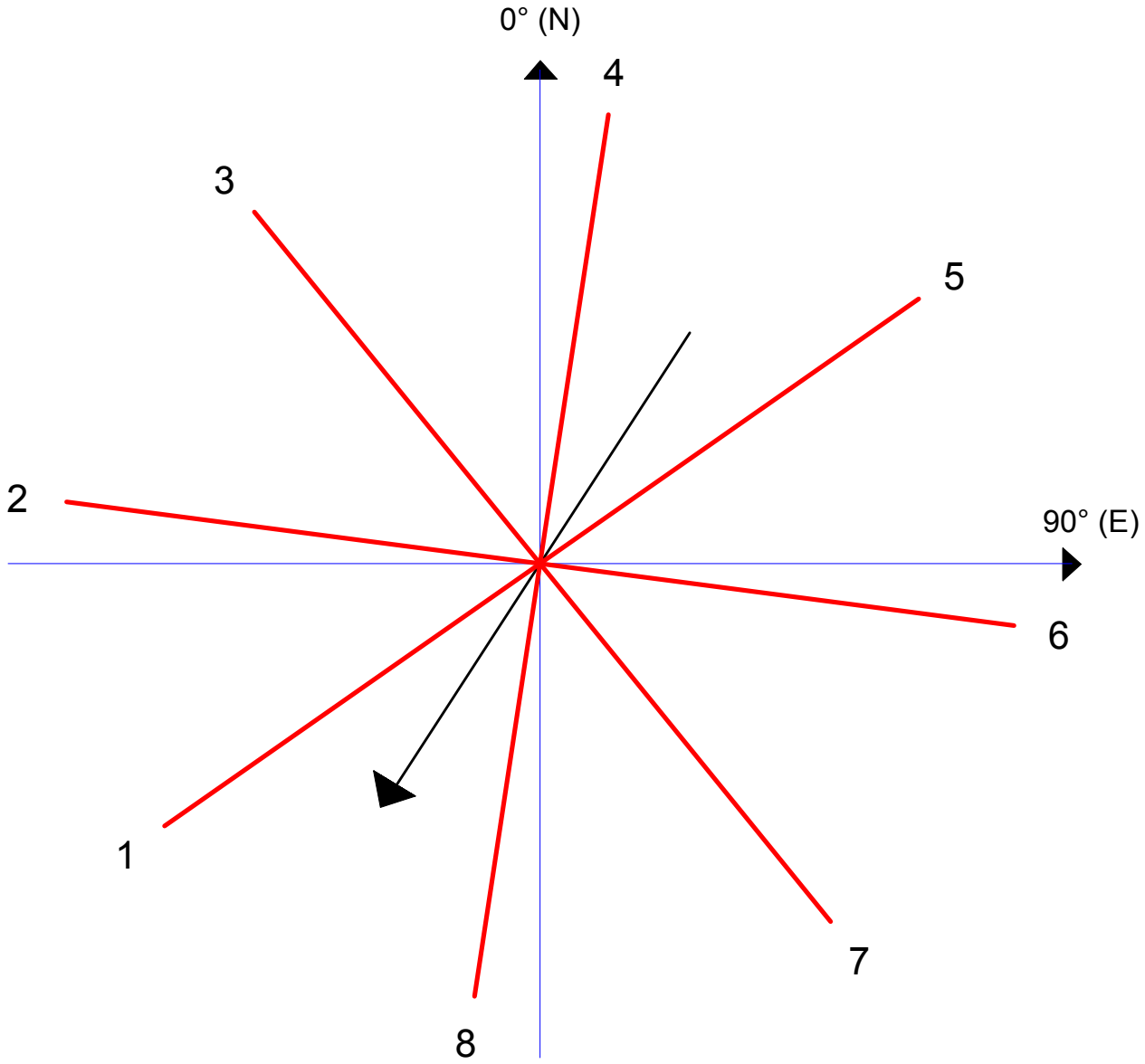
LOGGING INFORMATION ON WELL 6305/9-1

Hole size: 8 1/2"

#	Run No.	Logging Company	Logged Bottom [m MD]	Logged Top [m MD]	Log Suite
1	1A		2548	2473	GR/MDT
2	1A		2654	2295	DSI/VSP
3	1A		2650	2340	MSCT

LEAK OFF TEST ON WELL 6305/9-1

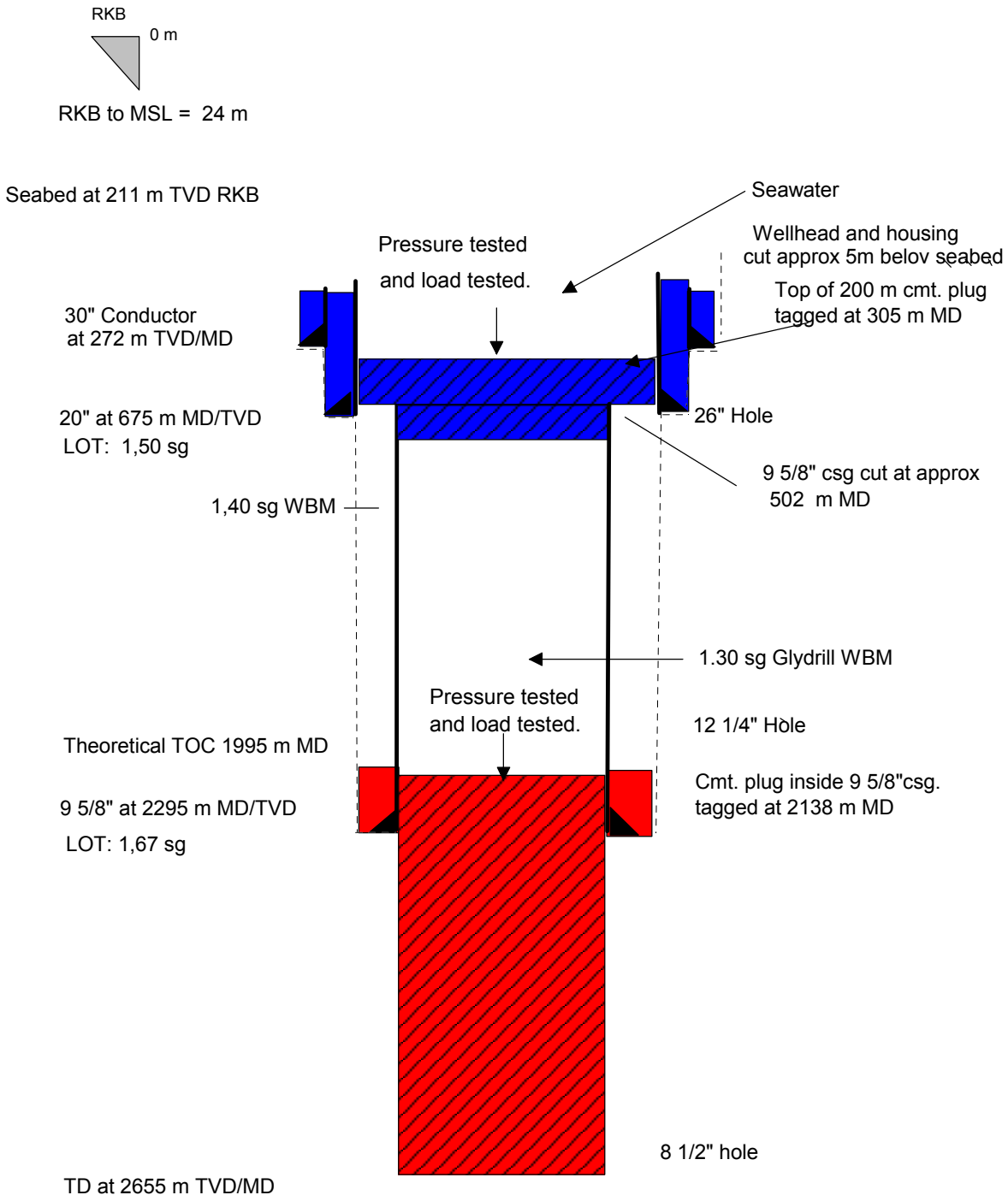
Depth	Section	Date	Mudtype	Mudweight SG	Test pressure	LOT SG
675	12,25"	2001-07-13	Seawater	1.03	31	1,50
2 295	8.5"	2001-07-21	Water Base Mud	1.3	84	1.67



RIGHEADING 211 DEG.

ANCHOR NO		DIRECTION (DEG.)		LENGTH (m)	
	1		233		1699
	2		278		1729
	3		323		1716
	4		8		1767
	5		53		1714
	6		98		1731
	7		143		1747
	8		188		1703

Figure 1		RIG ANCHORS TRANSOCEAN ARCTIC 6305/9-1	**HYDRO**



Plug and Abandonment Program Well 6305/9-1	**Revision: 0**	**Permanent Plug and Abandonment**

SECTION C

COMPOSITE LOG

LITHOLOGY LOG

CORE LOG

GASRATIO LOG

POST SITE SURVEY LOG