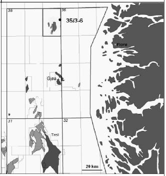
RWE-DEA Norge AS
COMPOSITE WELL LOG
WELL 35/3-6

LICENCE CO-VENTURES Aker Energy AS

North Sea Awards 2000 ROUND LICENCE 270

Scale 1:500

Area:	North Sea	**On Contract:**	03. Feb. 2002
Country:	Norway	**Spudded:**	06. Feb.2002
Geographical Location:	61 deg 53 min 36.86 sec N 03 deg 59 min 15.79 sec E	**TD Reached:**	24. Mar. 2002
UTM:	6 862 883.4 m 551 915.7 m	**Plugged Back:**	01. Apr. 2002
		Fm. at TD:	Heather
Target Location:	61 deg 53 min 36.96 sec N 03 deg 59 min 17.79 sec E	**Status:**	Dry well, Plugged and abandoned
UTM:	6 862 887.0 m 551 937.3 m	**Mud Logging:**	Sperry-Sun, a Halliburton Company
		MWD/LWD:	Schlumberger Drilling & Measurement
Seismic Location:	GP3D93 in/cross-line: 3825/1820	**Wireline Logging:**	Schlumberger Wireline
Well Classification:	Exploration		
Field:	Make Nord Prospect	**Borehole Seismic:**	Schlumberger Wireline
Rig:	Deepsea Bergen	**Wellsite Geologists:**	A. Scholze, Ø. Eikefet, M. Henderson S. Bjerkenes
RKB to MSL:	23.0m		
Water Depth:	225.0m		
TD Driller:	3366m MD 3363.5m TVD	**Log Prepared By:**	Scholze, Eikefet, Henderson, Bjerkenes
		Log Revised:	A. Hiksdal, 12.06.2002
TD Wireline:	3369m MD 3366.5m TVD		



Remarks:

Shallow water flow (SWF) detected two days after cementing 13 3/8" csg. After running cement and temperature logs the conclusion was that the top Utsira sand at 566m was causing the SWF. Perforated at 568m and pumped PBS pill and 1.50sg mud. Pumped 1.50sg cmt. into annulus behind perforation. A casing patch was set (565-571m) across the perforations.
The main target the Agat Formation/Albian sandstone was not present (only a 2m thick Agat sand was disvovered) . The main target proved to be a high gamma-ray Åsgård Formation.

Well Configuration

Hole and Casing Details

Bit Size	Hole (m) MD/TVD	Casing Size	Shoe (m) MD/TVD	Hanger (m) MD/TVD	Remarks
36" **9 7/8"**	309.0/309.0 1300.0/1299.0	**30"**	309.0/309.0 /	/ /	17 1/2" bit drilled down to 313m. 36" Hole opener TD is 309m. Pilot hole
17 1/2"	1300.0/1299.0	**13 3/8"**	1294.0/1293.0	/	Open up 9 7/8" pilot hole, FIT: 1.45 sg EMW
12 1/4"	2695.0/2692.0	**9 5/8"**	2688.0/2686.0	/	Drilled with bi-centrical dual diameter bits (Smith QD375 + Reed 3B154) to be able to pass below the csg. patch. FIT: 1.50 sg EMW
8 1/2"	3366.0/3363.5		/	/	

Logging Summary

Run	Log Type	Hole/Casing Size	Log Combinations	Dates	Interval (m)	BHT °C	Remarks
1	**LWD**	9 7/8"	GR-CDR-DIR-ECD	08-10 Feb. 02	309 - 983		Pilot hole. Trip at 983m because of CDR & ECD failure
2	**LWD**	9 7/8"	GR-CDR-DIR-ECD	10-11 Feb. 02	983 - 1300		Pilot hole. DIR and ECD not working
3	**LWD**	17 1/2"	GR-CDR-DIR-ECD	12-13 Feb. 02	309 - 1300		Hole opening
4	**LWD**	12 1/4"	GR-CDR-DIR-ECD	04-07 Mar. 02	1300 - 1986		POOH because of bit balling
5	**LWD**	12 1/4"	GR-CDR-DIR-ECD	07-08 Mar. 02	1986 -2369		POOH because of MWD tool failure
6	**LWD**	12 1/4"	GR-CDR-DIR-ECD	09-11 Mar. 02	2369 - 2695		TD section
7	**LWD**	8 1/2"	GR-RAB-ARC5-ADN-DIR-ECD-ULTRASONIC CAL	21-24 Mar. 02	2688 - 3366		TD well
1A	**Wireline**	13 3/8"	USIT-GR-CCL-AMS	20 Feb. 02	265 - 1209	38	Logged to confirm TOC and water flow behind csg. (by temp. log)
2A	**Wireline**	8 1/2"	CSAT(CSI)-GR-LEHQT	25-26. Mar. 02	3333 - 589	89	Zero offset VSP. Shot 76 levels and 8 check shots.
2A	**Wireline**	8 1/2"	CST-GR-LEHQT	26. Mar. 02	3365 - 2940	96	Shot 30 sidewall cores, 17 recovered, 1 empty, 12 lost

Mud Summary

Interval (m)	Type	Weight (s.g)	Remarks
248 - 309	Sea water/spud mud	1.03	Sea water and bentonite high viscosity pills
309 - 1300	Sea water/spud mud	1.03	Sea water and bentonite high viscosity pills
1303 - 2695	KCl mud (Glydril)	1.25 1.32	Weighted up the mud in steps from 1.25sg at 1545m to increase MW to 1.32sg @ 1900m.
2695 - 3366	KCl mud (Glydril)	1.32	

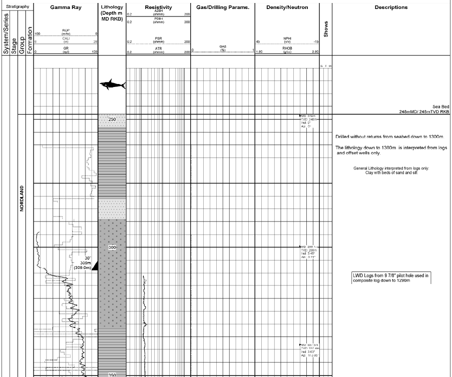
Key

- ▨ Breccia
- ▨ Conglomerate
- ▨ Sand/Sandstone
- ▨ Silt/Siltstone
- ▨ Clay
- ▨ Claystone
- ▨ Shale
- ▨ Mudstone
- ▨ Marl
- ▨ Volcanic rocks in general
- ▨ Intrusive rocks in general
- ▨ Limestone
- ▨ Dolomite
- ▨ Dolomitic Limestone
- ▨ Calcareous Dolomite
- ▨ Chalk
- ▨ Chert
- ▨ Salt in general
- ▨ Anhydrite
- ▨ Gypsum
- ■ Coal
- ⋯ Sandy
- ıı Silty
- — Argillaceous
- ⌶ Calcareous
- ⌶ Dolomitic
- I Chalky
- V Tuffaceous
- ✳ Glauconitic
- M Micaceous
- □ Pyritic
- S Sideritic
- Chl Chloritic
- C Carbonaceous
- ⊸ Bituminous
- ⊙ Oolitic
- Fossils
- Shell Fragments
- Microfossils
- Spicules
- Plant Fragments
- Rootlets
- ⌶ Calcite cement
- ⌶ Dolomite Cement
- Q Quartz Cement
- K Kaolinite Cement
- 1 Cored Interval (wireline depths)
- ☒ (no recovery)
- 1 Cored Interval (drilled depths)
- ☒ (no recovery)
- ➔ Sidewall Core
- ⇾ (no recovery)
- ① DST
- Perforated Interval
- ←○ RFT
- ← (failed)
- ←● (sample taken)
- Survey
- ◢ Casing Shoe
- ◸ Liner Hanger

Depth Range: 230m - 3380m

Scale 1:500

Author: 2.486
Date: 25.06.2002



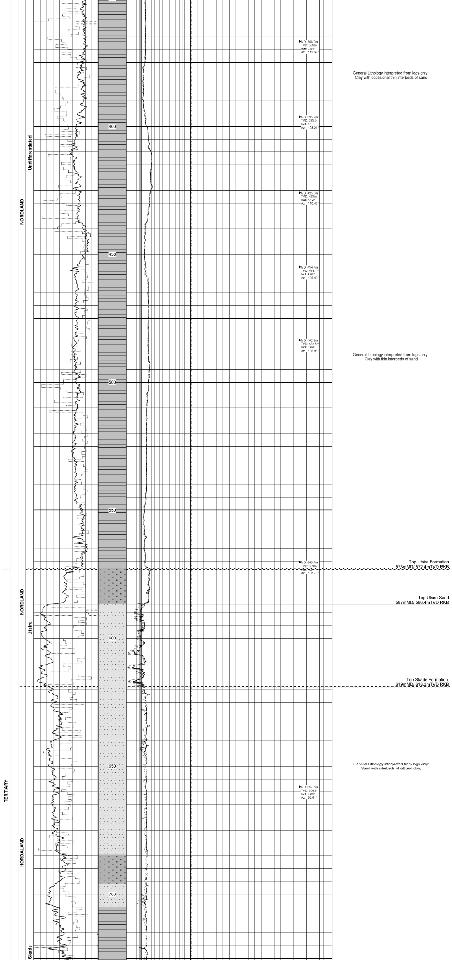
Sea Bed
248mMD/ 248mTVD RKB

Drilled without returns from seabed down to 1300m.

The lithology down to 1300m is interpreted from logs and offset wells only.

General Lithology interpreted from logs only:
Clay with beds of sand and silt

LWD Logs from 9 7/8" pilot hole used in composite log down to 1290m



General Lithology interpreted from logs only:
Clay with occasional thin interbeds of sand

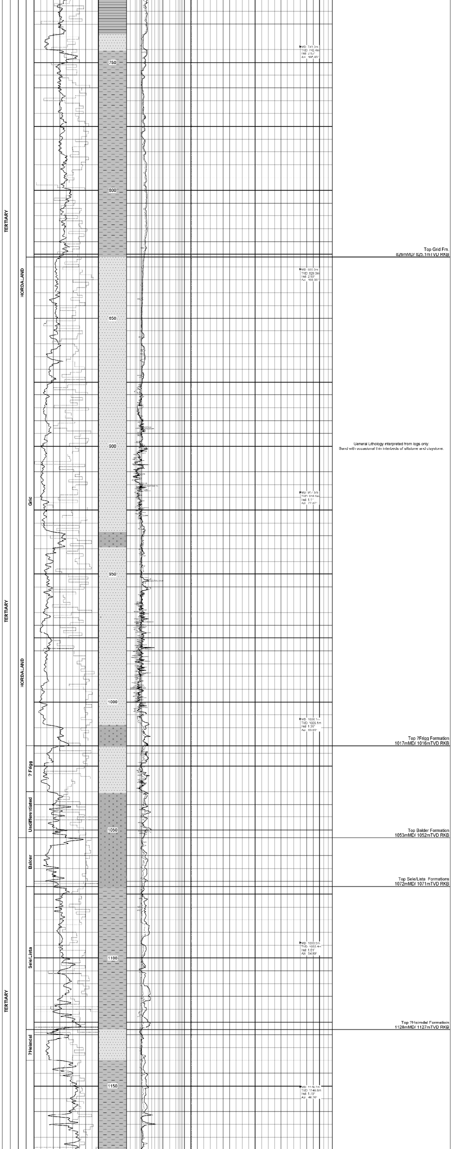
General Lithology interpreted from logs only:
Clay with thin interbeds of sand

Top Utsira Formation
573mMD/ 572.4mTVD RKB

Top Utsira Sand
587mMD/ 586.4mTVD RKB

Top Skade Formation.
619mMD/ 618.3mTVD RKB

General Lithology interpreted from logs only:
Sand with interbeds of silt and clay,



Top Grid Fm.
826mMD/ 825.1mTVD RKB

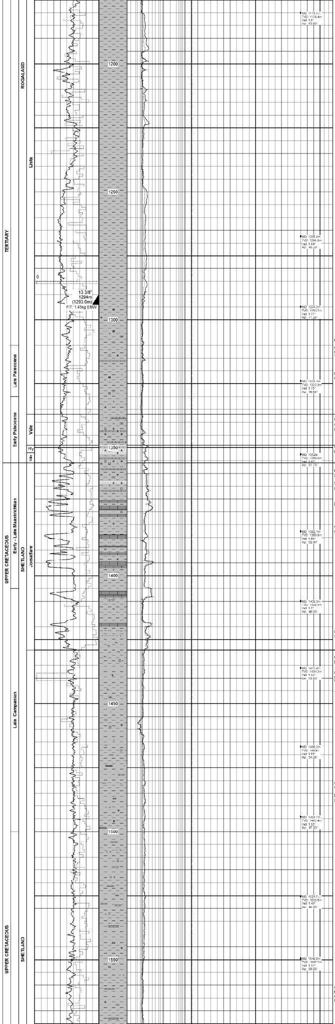
General Lithology interpreted from logs only:
Sand with occasional thin interbeds of siltstone and claystone.

Top ?Frigg Formation
1017mMD/ 1016mTVD RKB

Top Balder Formation
1053mMD/ 1052mTVD RKB

Top Sele/Lista Formations
1072mMD/ 1071mTVD RKB

Top ?Heimdal Formation
1128mMD/ 1127mTVD RKB



General Lithology interpreted from logs only:
Claystone with occasional interbeds of siltstone
and sandstone.

NO RETURNS.
Lithological interpretation from MWD-logs and offset wells

First returns and sampling of cuttings commenced at 1300m

Claystone with occasional trace of Sandstone

Clst: olv blk-dk gry, frm-mod hd, fri, def-sbblky, mod-v calc, sli slty, Glauc, Tr micromic, Tr micropyr, loc vf sdy.
Tr Ls: dk-pl yel brn, hd, brit, sbblky, micro-crpxln, sli arg, dol.

r Sst: olv blk, dk gn gry, vf-f, sbang-sbrnd, pr srt, fri-lse, calc, sli-v arg Mtrx pt grad Clst, sli-v Glauc, no visible porosity, no show.

Top Våle Formation
1337mMD/ 1335.9mTVD RKB

Claystone with a minor Sandstone bed

Clst: olv gry lt olv gry, frm-mod hd, fri, def-sbblky, v calc grad Ls, glauc, sdy

Top Ty Formation
1349mMD/ 1347.9mTVD RKB

Sd/Sst: clr Qtz, occ milky/smky, f-crs-occ v crs, sbang-rnd, occ pol, sbsphe, pr srt, pred lse, loc Tr calc arg Mtrx, com Glauc

Top Jorsalfare Formation
1356mMD/ 1354.9mTVD RKB

Claystone interbedded with Limestone and trace of Sandstone and Marl

Sst: gn gry-lt gn gry, gry gn, Qtz, f-crs-occ v crs as Sd at1350m, v arg Mtrx grad Clst, abd Glauc, no visible porosity, no show.

Ls: wh, sft-frm, amor-def, crp-occ microxln, cln, chky.

Clst: m dk gry-olv gry, loc mnr dk gn gry, sft-mod hd, fri-plas-def, v calc, sli slty, loc Glauc, loc Tr Pyr.

Clst/Mrl: mod brn, frm, blky-sbblky, occ amor, mod calc to v calc when grad Mrl

Top Kyrre Formation
1429mMD/ 1427.8mTVD RKB

Claystone with occasional stringers of Limestone and Dolomite

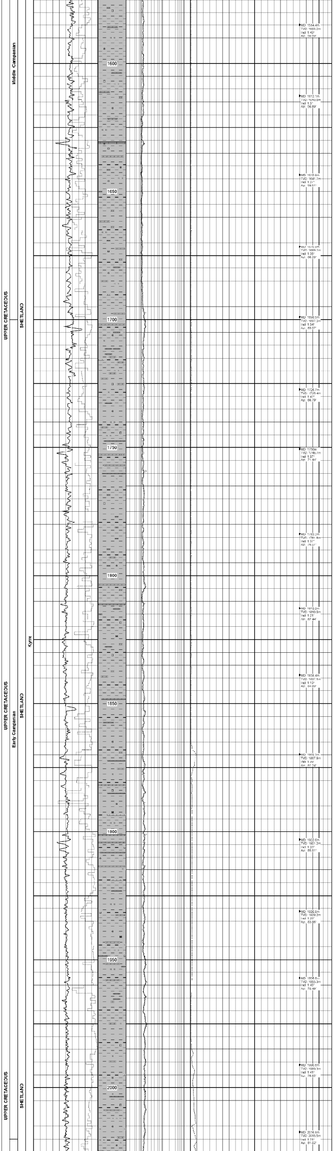
Clst: m lt gry-m gry, lt olv gry-gnsh gry, frm, blky, wxy Surf Tex, non-sli calc
Clst: lt gry, sft, amor, calc- v calc grad Ls

Tr Pyr & Glauc Nods

Clst: m dk gry-m gry, frm, blky, sli slty, sli microcarb spkld, loc sli micropyr, non calc

Dol: brnsh gry, occ dusky yelsh brn, hd-v hd, blky, ang brk, also yelsh or & crumbly when grad Dol Ls

Clst: gen a.a. m dk-dk gry, loc Tr dk gn gry, frm-occ mod hd, plas-fri, def-sbblky, non-loc mod calc, sli slty, Tr-loc mod glauc, r micropyr, loc Tr Pyr.
Dol: dk-pl yel brn, hd, brit, plty-sbblky-def, calc, microxln.



Ls: v lt gry-yel gry, frm-mod hd, def, crp-microxln, loc Glauc.

Clst: cont. as 1560m

Dol: dk-pl yel brn-occ lt gry, hd-v hd, brit, plty-sbblky, pt v calc, microxln.

r Sst: dk yel brn, clr-trnsl Qtz Gr, vf-f, sbrnd, sbspher, wl srt, fri, non calc, slty/arg Mtrx, no visible porosity, no show.

Ls: wh, yelsh gry, sft frm, amor sbblky, microxln

Tr Dol: brnsh gry-dk grysh brn-pl yel brn-occ lt gry, hd-v hd, brit, plty-sbblky, pt grad Dol Ls, microxln

Clst: m dk-dk gry, frm, plas, mas, sbblky-blky, non-sli calc, sli slty, occ sli microcarb spkld, oc sli micromic r Glauc, r micropyr, loc Tr Pyr

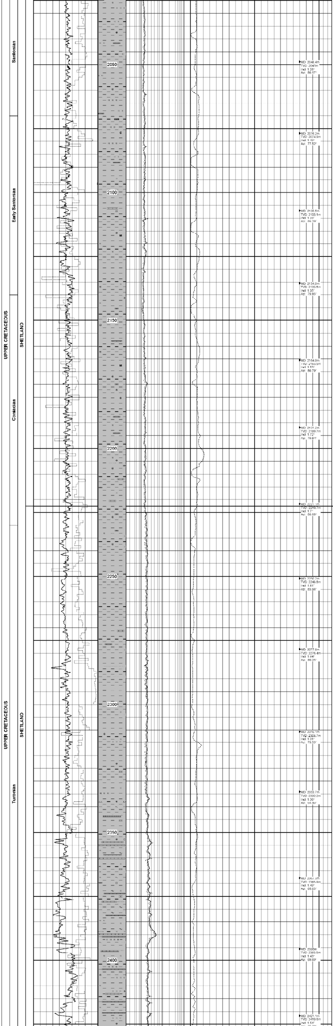
r Glauc, r micropyr, r Pyr Nodc

r Sltst: lt gry, mod hd, blky, Sil cmt

Clst: bcm m gry-m dk gry, sft-frm, sbblky, mas, non-sli calc
Tr Dol: dk yel brn, brn gry, mod yelsh brn, hd-v hd, brit, blky-plty, crp-microxln, com grad Dol Ls
Tr Ls: wh-lt gry, frm, blky-def, occ sli arg, crp-microxln

Clst: m gry-m dk gry, r dk gry, frm, sbblky, r blky, plty, mas, sli microcarb spkld, sli mcromic, slty, r slty lam, non calc
r Dol, r Ls, r Pyr, r Glauc a.a.

r Sltst: m lt gry, fri-frm, sbblky, sli arg, sli-mod calc, sli carb spkld, Tr Glauc



Clst gen a.a.: m dk-dk gry, frm-occ sft, fri-occ plas, def-sbblky-occ amor, sli-mod calc, loc non calc, slty, Tr carb/glauc, loc Tr Glauc r micromic, Loc Tr Pyr.

Tr Ls: yel gry, frm, fri, def-sbblky, micro-crpxln, sli arg

Loc r Sst: v lt gry, Qtz, vf-f, sbang, sbspher, wl srt, fri-mod hd, gd calc Cmt/Mtrx grad Ls, abd Glauc, no visible porosity, no show.

Loc r Sst occ grad Sltst: v lt gry, occ m gry, r gnsh gry, clr-trnsl Qtz Gr, crs slt to vf f, sbang, sbspher, wl srt, fri mod hd, gd calc Cmt/ Mtrx grad Ls, loc com arg Mtrx, loc abd Glauc, r Chlor, no visible porosity, no show.

Top Tryggvason Formation
2222.5mMD/ 2221.1mTVD RKB

Claystone with ocasional Limestone and Dolomite stringers. Interbedded Claystone and Sandstone: 2440-2495m.

Clst gen a.a.: m gry-m dk gry, r gnsh gry, frm-occ sft, fri-occ plas, def sbblky occ amor, sli mod calc, loc non calc, slty, Tr microcarb, loc Tr Glauc, r micromic, loc Tr Pyr

Clst: slty a.a. loc v slty grad Sltst

r Dol & Ls a.a.

Loc r Sst occ grad Sltst: a.a.

Clst: slty a.a., pt v calc

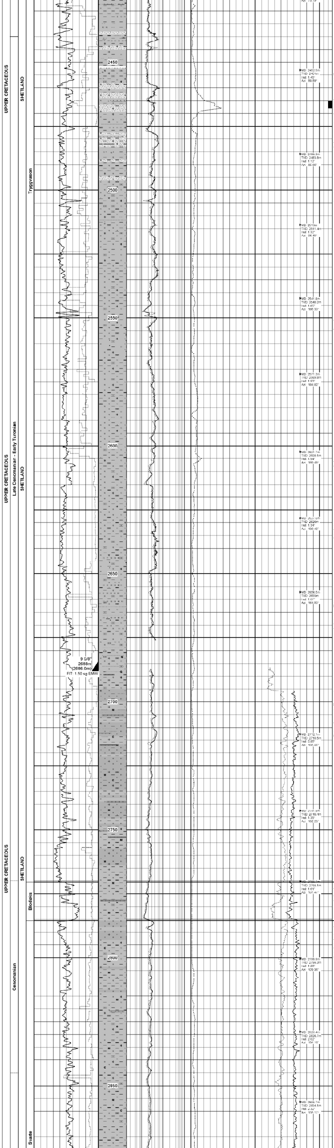
Clst: a.a., but sltly more slty, loc grad to Sltst/Sst a.a.

Clst: lt gry-m gry-m dk gry, v slty I.P. grad to Sltst, sft-frm, occ mod hd, blky, occ amor, v calc, Glauc, micropyr I.P.
Sltst: m lt gry, lt gn gry I.P., fri-frm, sbblky, arg I.P., mod calc, Glauc-v Glauc I.P., grad to v f glauc Sst.

Clst: lt gry-m gry-m dk gry, v calc grad to Mrl, occ slty grad to Sltst, sft-frm, occ mod hd, blky, occ amor, Tr Glauc, micropyr I.P.

Sltst: m lt gry, lt gn gry I.P., fri-frm, sbblky, arg I.P., mod hd-hd and v calc I.P., glauc-v glauc I.P., grad to v f glauc Sst.
Ls: lt-m gry, arg-slty, mod hd-hd, blky, Glauc I.P., grad to v calc sltst and mrl.

Tr Sst: v lt gry, clr-trnsl Qtz Gr, vf, com grad crs Slt, v wl srt, sbang, frm, wl-occ v wl calc cmt/Mtrx grad aren Ls, com grad calc Sltst, com-abd Glauc, no vis por, no show



Interbedded Claystone and Sandstone with minor Limestone

Ls: v lt gry-off wh, frm, sbblky, occ grad calc Sltst, microxln. r ?Shl
Fragm: pl or, brit, thn & lg xln
Tr Sst: a.a.

Sst: v lt gry-wh, clr-trnsl Qtz Gr, vf, com grad crs Slt, v wl srt, sbang, frm, wl-occ v wl calc cmt/Mtrx grad aren Ls, com-abd Glauc, no vis por
Show in Sst: Tr v pale yel dir Fluor, no dir cut, wk-dull yel crush cut Fluor, v wk yel Fluor Res, dull yel Res Ring

Sst: wh-v lt gry, clr-trnsl Qtz Gr, vf, r f, v wl srt, sbang, fri-frm, r mod hd, v wl-abd calc cmt, com Glauc, r Chlor, no vis por, loc Sst grad aren Ls
Show in Sst: a.a.
Sd: pred lse, clr-trnsl Qtz Gr, vf-f, occ m, r crs, mod srt, sbang-sbrndd, sbspher-sbelong, com Glauc
Tr Sst: a.a. but also loc sl arg Mtrx
Show in Sst: no dir Fluor, inst mod brt yel wh cut Fluor, mod yel Fluor Res, mod yel Fluor Res Ring

Sltst: m lt gry- m gry, frm, sbblky, micromic, glauc, v calc. Basically as Clst but more silty.
Clst: m gry, frm, sbblky, plas, mas, micromic, com glauc, v calc, v slty grad to Sltst
Tr Ls: pksh gry, frm, sbblky, sli aren, microxln
Sst: v lt gry, vf, v wl srt, v wl/abd calc cmt/Mtrx, com Glauc, loc micropyr, loc Mica, no vis por

Sst: v lt gry-wh, vf, abd calc & com glauc a.a.
Sltst: v calc grad Mrl else a.a.

Sltst: off wh-v lt gry, fri-frm, amor-sbblky, sli microcarb spkld, r micropyr, com Glauc, v calc com grad aren Ls
Show in Sltst: No dir Fluor, wk bl wh slow cloudy cut Fluor, mod wh Fluor Res Ring

Tr Sst. Clst a.a.

No shows in Sst.

Clst and Sltst a.a. (50/50)
Shows in Sltst: no dir Fluor, slow strmg/cloudy v wk yel-bl-wh Fluor cut, mod brt wh Fluor Res, brt wh Fluor Res Ring

Sltst and slty Clst, a.a. That is:
Sltst: off wh-v lt gry, fri-frm, amor-sbblky, sli microcarb spkld, r micropyr, com Glauc, v calc com grad aren Ls
Clst: m gry, frm, sbblky, plas, mas, micromic, com glauc, v calc, v slty grad to sltst.

Sltst: v lt gry, m lt gry, sft-frm, sbblky, occ sli amor, r Glauc, v calc occ grad Mrl, loc grad vf calc Sst
Shows in Sltst: no dir Fluor, v slow cloudy dull bl-wh cut Fluor, brt bl-wh Fluor Res, brt wh Fluor res Ring

Interbedded Claystone and Siltstone

Sst: v lt gry, clr-trnsl Qtz Gr, vf, v wl srt, sbang, frm-mod hd, occ hd, abd calc cmt/Mtrx, loc sli Sl cmt, com Glauc, r Chlor, r micropyr, r Mica, no vis por
Shows in Sst & Sltst: a.a.
Sltst: a.a. m dk gry, m gry, frm, sbblky, sli microcarb spkld, Tr Glauc, sli micromica, calc - v calc
Clst: a.a. dk gry, frm, occ mod hd, blky, mas, sli slty, r micromica, r microcarb, sli calc

Clst: dk-m dk gry, mod hd, brit, blky, non-v calc clac, sli-v slty grad Sltst, Tr carb/Glauc.
Sst: gn gry-dk gn gry, m-lt gry, Qtz, vf-slt, sbrndd-sbang, wl srt, frm-hd, fri-brit, blky-plty-def, gd calc cmt/Mtrx grad Ls, com Glauc, n.v.p
Show on Sst: no dir fluor, Tr v slow blmg bl wh Fluor cut, no vis cut, Tr wk yel Fluor Res, no vis Res
Sltst: dk gry, mnr m dk gry-olv gry, frm-mod hd, fri, def-sbblky, v calc,v arg grad Clst, loc Tr v f sdy, pt glauc, Tr carb, r micropyr, r micromic.
Show on Sltst: no dir Fluor, Tr v slow blooming bl wh Fluor crsh cut, no vis cut, Tr wk yel Fluor Res, no vis Res

Clst: dk gry-olv blk, frm-mod hd, fri, sbblky-def, sli-v calc, sli-v slty grad Sltst, carb, loc glauc, r micromic, r micropyr.

Tr Ls: wh-v lt gry, mod hd, brit, blky, crpxln, cln, chky

Top Blodøks Formation
2770.5mMD/ 2768.9mTVD RKB

Claystone

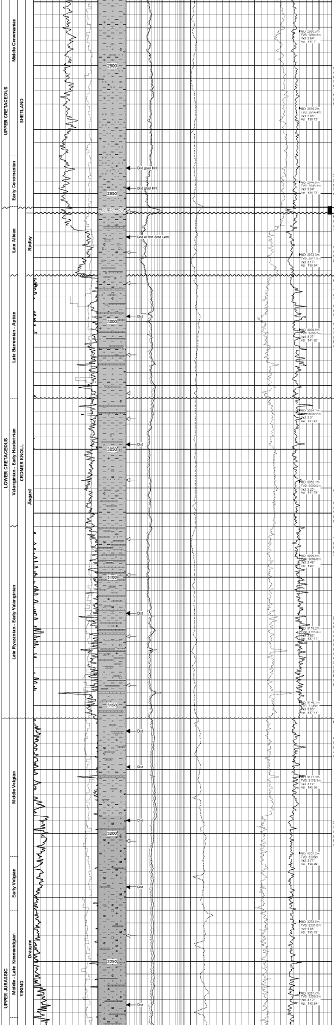
Clst: dk gry-olv blk, frm-mod hd, fri, sbblky-def, sli-v calc, sli-v slty grad Sltst. carb, loc Glauc, r micromic, r micropyr.

Top Svarte Fm.
2785.5mMD/ 2783.9mTVD RKB

Claystone and minor Siltstone

Clst: m dk-dk gry-olv gry, mod hd-sft, fri, def-sbblky-amor, mod-v calc, slty loc grad Sltst, carb, loc Glauc, Tr micromic
Sltst: dk-m dk gry, mod hd, fri, def-sbblky, non-mod calc, v arg grad Clst, carb, loc Tr Glauc.
Show on Clst & Sltst: no dir Fluor, Tr v slow blooming bl wh Fluor crsh cut, no vis cut, Tr wk yel Fluor Res, no vis Res
Ls: lt olv gry, hd, brit, plty, crp-microxln, sli arg.

Tr Ls: pred a.a., loc wh-v lt gry, mod hd, brit, blky, crpxln, cln, chky.



Clst com grad Sltst: dk gry-m dk gry also m gry-m lt gry, frm-fri, occ sft, blky-sbblky, occ amor, sli microcarb spkld, r micromica, calc, occ v calc when m lt gry, grad Mrl
Shows in Clst/Sltst: no dir Fluor, no cut Fluor, mod bl wh Fluor Res, mod brt bl wh Fluor Res Ring
Tr Sltst: basically as Clst above but also v lt gry, fri, r Glauc, calc
r Sst: v lt gry, clr-trnsl Qtz Gr, vf, occ f, v wl-wl srt, sbang, wl calc cmt, r Glauc, r Chlor, loc sli arg Mtrx, no visible porosity
r Ls: wh, yelsh gry, frm, blky, microxln, occ cln & chky

2956m: Sandstone
Sst: wh - v lt gry, clr-trnsl Qtz Gr, vf-f, v wl srt, sbang, abd calc cmt, r Mica, r Glauc, r Chlor, no visible porosity
Shows in Sst: Tr spty dull gold-yel dir Fluor (? Calc Min Fluor), v slow bloomig wk bl-wh cut Fluor, mod brt bl wh Fluor Res

Top Cromer Knoll Gp./Agat Fm.
2955.5mMD/ 2953.7mTVD RKB

Rødby Fm.
2957.5mMD/ 2955.7mTVD RKB

Claystone
Clst: dk gry, grysh blk, r dk gnsh gry, frm- mod hd, blky, sli micromic, r mica, non-sli calc
Tr Sst a.a. & lse Qtz Gr: vf-f, r m, r v crs, sbang, mod srt

Sltst com grad Clst: m gry, frm, occ fri, sbblky, sli microcarb, sli micromic, v calc grad Mrl
Clst: dk gry-grysh blk, occ olv blk, frm-mod hd, r hd & brit, micromica, sli carb spkld, sli calc

Top Åsgard
2982mMD/ 2980.2mTVD RKB

Claystone with frequent stringers of Limestone and Dolomite

Tr Sst: wh, clr-trnsl Qtz Gr, vf, occ f, wl srt, abd calc cmt, r Glauc, no visible porosity
Tr Ls: pksh gry, r grysh brn, mod hd, occ brit, blky, microxln

Clst: slty, olv blk, grysh blk-dk gry, sft, occ frm, com amor, occ sbblky, microcarb spkld, micromic, gd Tr micropyr, non calc
Gd Tr Pyr Nods, Tr carb Frag

Clst: bcm pred dk gry-olv blk, sft, stky, amor, sol, mod-v calc, slty, carb, loc Pyr, r micromic.
Show in Clst: no dir Fluor, v slow blooming-crsh dull bl wh cut Fluor, mod brt bl wh Fluor Res, brt bl wh Fluor Res Ring
Ls: pale-dk yel brn, loc m gry, hd, brit, plty-sbblky, crp-microxln, sli arg.

3030mMD/ 3028.1mTVD RKB

r Mrl: mod yelsh brn, sft, amor

Clst 1: grysh blk, frm-mod hd, blky, mas, brit, slty, micromic, microcarb spkld, sli calc
Clst 2: med gry-olv gry,m dk gry, sft, amor, def, plas, stky, v slty, mod calc (?reacts with the mud and creates a sticky mixture of mud and this Clst)

Tr Ls: off wh, pksh gry, frm, microxln
r Dol: grysh brn, blky, hd, microxln
Gd Tr micropyr Nods
r Sltst: dk gry, fri-frm, sbblky, micromic, microcarb, sli calc
Tr Dol Ls: grysh brn, mod hd-hd, blky, microxln

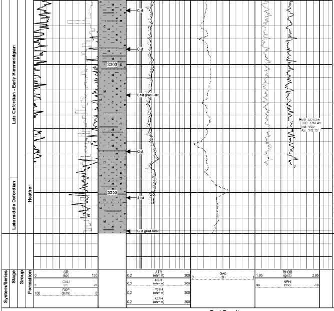
Dol: dk yel brn, grysh brn, hd brit, plty-blky, crp-microxln, r xln, sli arg, loc calc.
Ls: pale-occ dk yel brn, hd-occ sft, brit-fri, sbblky-plty, crp-microxln, sli arg, pt dol, loc mnr: wh, off wh, pksh gry, lt olv gry, frm, blky, crp-microxln, pt chky/cln.
Gd Tr Pyr Nods
Clst cont pred: olv gry, sft, stky, amor, sol, mod calc, slty, carb, micromic.
Clst cont Tr-mnr: olv gry-m dk gry, mod hd-sft, fri, def-sbblky, sli-mod calc, slty loc grad Sltst, carb, r micromic, r Pyr.
Show on Clst: no dir Fluor, v slow blmg-strmg dull bl wh fluor cut / crsh cut, mod brt bl wh-yel fluor Res, no vis Res.
Loc r Sst: lt olv gry, Qtz, f-vf, sbang-sbrndd, sbspher, wl srt, hd, brit, blky-plty, gd calc cmt/Mtrx, no visible porosity
Show on Sst: no dir Fluor, slow strmg bl wh Fluor cut, Tr bl wh-yel Fluor Res, no vis Res.

Top Draupne Formation
3155mMD/ 3152.9mTVD RKB

Claystone and Siltstone with minor limestone stringers

Clst cont pred: olv gry, sft as 3125m
Clst mnr bcm: olv blk, mod hd, brit-fri, def-sbblky-plty, pred non calc, v slty grad Sltst, com carb, com micromic, micropyr, Tr sdy.
Show on olv blk Clst: no dir Fluor, slow blooming bl wh Fluor cut, no vis cut, Tr bl wh-yel Fluor Res, no vis Res.

Sltst: gry blk-olv blk, mod hd, fri, non-r sli calc, arg, com grad Clst, v carb, mod-v micromic, loc micropyr, Tr Pyr.
Show on Sltst: no dir Fluor, slow blooming bl wh Fluor cut, no vis cut, Tr bl wh-yel Fluor Res, no vis Res.
r Ls: brn gry, hd, brit, sbblky-plty, crpxln, sli arg, pt dol.
v r C: blk, hd, brit, blky, vit, sb conch frac



r Dol: yelsh gry, mod hd, brit, microxln

r Sst: m gry, clr-trnsl Qtz Gr, vf, v wl srt, sbang, wl calc cmt, arg Mtrx, Tr Glauc, Tr micromic, no visible porosity

Top Heather Formation
3335mMD/ 3332.5mTVD RKB

Siltstone

Sltst: brnsh blk-dusky brn, occ grysh blk, fri-frm, occ mod hd, micromic, dissem micropyr, blky, occ brit w/ hd, arg, crumbly Surf Tex, microcarb spkld, non-occ v sli calc
Shows in Sltst a.a.
Tr Ls: pale yelsh brn, brnsh gry, frm-mod hd, blky-sbblky brit, crp-microxln, dol
Tr Pyr Nods, Carb Plt Frag

Sltst: bcm more slty else a.a., also gd Tr Sltst: m dk gry, fri, sbblky, sli-mod calc
Gd Tr Ls: dk brn (O Stn), brnsh gry, frm-mod hd, crpxln
Shows in Ls: dk brn O Stn, dull gold yel dir Fluor, slow blooming bl wh cut Fluor, dull yel wh Fluor Res

Sltst: a.a.
Tr Ls: brnsh gry, mod brn a.a., also off wh, frm, blky, microxln

TD
3366mMD/ 3363.5mTVD RKB

Test Results

Conventional Cores

No.	Cored Interval Drill Depth (m)		Recovered Interval (m)		Corrected to Wireline Depth (m)		Recovery		Group/ Formation	General Lithology
	Top	Base	Top	Base	Top	Base	m	%		
										No cores cut

Sidewall Cores

Run	No.	MD (m)	TVD (m)	Recovery	Description
2A	1	3365	3362.4	Fair	Clst grad Sltst: olv blk-grysh blk, frm, sbblky, crumbly Surf Tex, v micromic, v slty, sli microcarb, sli calc. Show: No dir Fluor, v slow blooming dull bl wh cut Fluor, no vis dir Res, fnt yel wh Fluor Res Ring
2A	2	3352	3349.4	Good	Sltst: olv blk-grysh blk, fri, sbblky, sli micromic, loc r micropyr, crumbly Surf Tex, arg, calc (H2S smell when fizz). Show: 100% even dull bl wh dir Fluor, fst blooming strmg bl wh cut Fluor, brt bl wh Fluor Res Ring, no vis dir Res
2A	3	3334	3331.5	Poor	Sltst: olv blk, frm, sbfis, crumbly Surf Tex, micromica Lam, arg, v sli carb, sli calc. Show: No dir Fluor, v slow blooming v wk bl wh cut Fluor, no vis dir Res, fnt yel wh Fluor Res Ring
2A	4	3312	3309.5	Fair	Sltst grad Clst: brnsh blk, fri-frm, fis, crumbly Surf Tex, sli micromic - occ micromic lam, arg, sli calc. Show: No dir Fluor, v slow blooming dull bl wh cut Fluor, no vis dir Res, fnt yel wh Fluor Res Ring
2A	5	3294	3291.6	Good	Clst: olv blk brnsh gry, frm, sbfis, crumbly Surf Tex, micromic, v sli microcarb spkld, slty, non-v sli calc. Show: a.a.
2A	6	3279	3276.6	Poor	Clst: olv blk-brnsh gry, frm, sbfis, crumbly Surf Tex, micromic, r microcarb, slty, non-v sli calc. Show: a.a.
2A	7	3267	3264.6	Fair	Clst: brnsh gry-grysh blk, frm, blky-sbfis, sli micromic, loc r micropyr, r microcarb, slty, mod calc. Show: a.a.
2A	8	3240	3237.7	None	Lost in hole.
2A	9	3221	3218.8	Good	Clst: olv blk-grysh blk, frm, blky-sbfis, micromic, slty, non-v sli calc. Show: No dir Fluor, v slow blooming wk bl wh cut Fluor, no vis dir Res, fnt yel wh Fluor Res Ring
2A	10	3203	3200.8	None	Lost in hole.
2A	11	3195	3192.8	Fair	Clst: olv blk-grysh blk, frm, blky, sli micromic, r carb Plt Rem, sli slty, sli calc. Show: a.a.
2A	12	3174	3171.9	Fair	Clst: olv blk, frm, fis, sli micromic, r carb Plt Rem, sli slty, sli calc. Show: a.a.
2A	13	3160	3157.9	Fair	Clst: a.a. Show: a.a.
2A	14	3142	3139.9	None	Lost in hole.
2A	15	3123	3121.0	None	Lost in hole.
2A	16	3114	3112.0	Fair	Clst: m gry, frm, sbblky, plas-def, sli slty, r microcarb, loc r micromic lam, calc. Show: a.a. but v wk cut Fluor
2A	17	3099	3097.0	None	Empty.
2A	18	3085	3085.0	None	Lost in hole.
2A	19	3062	3060.1	None	Lost in hole.
2A	20	3048	3046.1	Good	Clst: dk gry, mod hd, blky, sli micromic, r micropyr, sli slty, mod calc. Show: a.a. but v fnt bl wh Fluor Res Ring
2A	21	3038	3036.1	None	Lost in hole.
2A	22	3028	3026.1	None	Lost in hole.
2A	23	3013	3011.1	None	Lost in hole.
2A	24	2998	2996.2	Good	Clst: dk gry, frm, blky, mas, mod micromic, sli slty, sli calc. Show: No dir Fluor, slow blooming dull bl wh cut Fluor, no vis dir Res, v fnt bl wh Fluor Res Ring.
2A	25	2985	2983.2	None	Lost in hole.
2A	26	2973	2971.2	None	Lost in hole.
2A	27	2967	2965.2	Good	Clst w/ thn Sltst Lam, Clst: dk gry-grysh blk, mod hd, blky, sli micromic, non-sli calc, Sltst: m dk gry, fri, sbblky, micromic, sli microcarb, non calc. No dir Fluor, v slow blooming v wk bl wh cut Fluor, no vis dir Res, v fnt bl wh Fluor Res Ring
2A	28	2957	2955.2	None	Lost in hole.
2A	29	2948	2946.2	Fair	Clst grad Mrl: dk gry-m dk gry, frm, blky, sli-mod micromic, slty, r micropyr Incl, r Glauc, v calc. Show a.a.
2A	30	2940	2938.3	Fair	Clst grad Mrl: m gry, frm, sbblky, sli micromic, r Mic, Tr Glauc, slty, v calc. Show a.a.

Formation Pressure Data

Run	No.	MD (m)	TVD (m RKB)	Hydrostatic Pressure (Bar)	Formation Pressure (Bar)	Sample?	Quality	Comments
								No pressure points taken