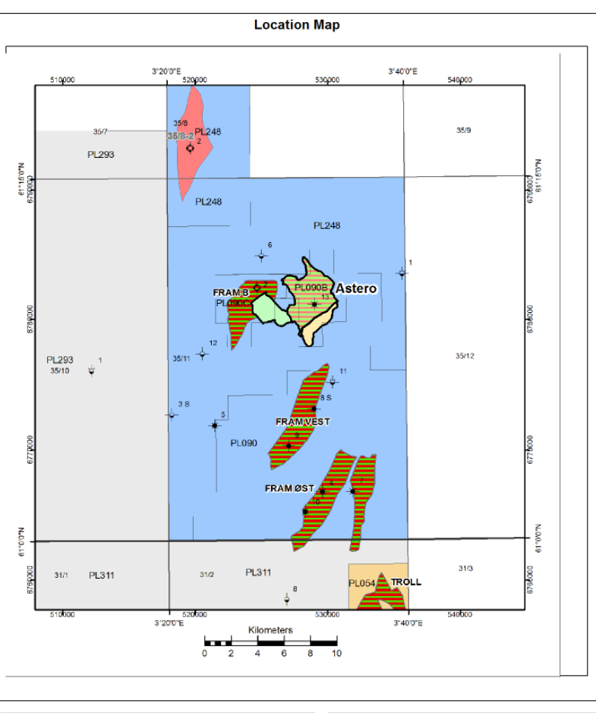
HYDRO

COMPLETION LOG
ASTERO
Scale: 1 / 500
Well: 35/11-13

Location Map



KB Elevation	25.0 m	**Country**	Norway
Water Depth	361.7 m	**Licence**	PL 090
Depth Reference	RKB		
		Owners	Hydro 25 % Mobil 25 % Statoil 20% Idemitsu 15 %, Gaz de France 15 %
Total Depth (Driller)	3291.5 m MD RKB 3290.9 m TVD RKB		
Total Depth (Logger)	3295 m MD RKB 3294.4 m MD RKB		
		Field	Astero
Formation at Total Depth	Heather	**Platform**	Deepsea Trym
Date Spudded	18.03.2005		
Date Reached TD	29.04.2005	**Drilling Contractor**	Odfjell Drilling
Date Abandoned	29.05.2005	**Mudlogging Company**	Baker Hughes Inteq
Well Status	Plugged & abandoned as a discovery well	**Logging Company**	Schlumberger
		MWD Company	Baker Hughes Inteq
Well Classification	Exploration	**Geologists**	S.Bjerkenes, M.Henderson, B.Schønningsen, M.Tillung, E.Skottlien
Prepared by	Henderson, Tillung, Schønningsen, Bjerkenes, Skottlien		
Controlled by			
Date	November 2005		
Revision	1.0		

Well Coordinates	**Geographic:**	61° 09' 44.05" N	3° 32' 21.36" E
	UTM zone 31 (CM 3°E), ED50	6 781 139.0 m N	529 019.0 m E

Output log file created : 2005-12-13 12:47:10
Winlog well ID : 35_11_13
Hydro (BORE) well ID : 907022
Template version : v3.02 [20031210] - AJC
Project file version : v3.01
Designed for Winlog Version 3 (TVD)

Casing Records

Diameter	Shoe depth m MD RKB	Shoe depth m TVD RKB
30" Casing shoe	471.5	471.5
20" Casing shoe	694.5	694.4
13 3/8" Casing shoe	1751.3	1751.0
9 5/8" Casing shoe	2924.4	2924.1
7" Liner shoe	3290.5	3290.1

LOT / FIT

Type	Result g/cc	Depth m MD RKB	Depth m TVD RKB
			0.0
LOT	1.47	704	703.9
FIT	1.64	1760	1759.7
FIT	1.70	2924.4	2924.1

Comments

Well spudded: 12:30hrs, 18.3.2005.
MWD Resistivity failed on 9 7/8" pilot hole. GR & Res logs taken from 26" hole opening.
MWD data down to 2925m. Wireline data spliced in below 2925m.
Wireline data approx 4m deeper than MWD.

Cores 1 & 2 plotted at original drillers depth
Lithology, descriptions & formation tops shifted to wireline depth in 8 1/2" section

Logs

Run no.	Log type	Logged interval
	MWD	
1	DIR- ECD	386 - 474
2	DIR- ECD	474 - 476
3	DIR - GR - RES - ECD	472 - 699 (pilot)
4	DIR - GR - RES - ECD	468 - 693 (26")
5	DIR - GR - RES - ECD	684 - 1145
6	DIR - GR - RES - ECD	1081 -1742
7	DIR - GR - RES - ECD	1734-1769
8	DIR - GR - RES - ECD	1764-1932
9	DIR - GR - RES - ECD	1920-2801
10	DIR - GR - RES - ECD	2780-2918
11	DIR - GR - RES - ECD	2881-2947
12	DIR - GR - RES - ECD	2924-3096
13	DIR - GR - RES - ECD	3083-3291.5
	Wireline	
1A	SP-DSI-HRLA-PEX-ECS	2925.2-3268.2
1A	MDT	3097-3205.5
1A	VSP	1611.5-3290
1B	MDT	3097-3157.5
1A	MSCT	2960-3151

Cores

Core no.	Cored interval m MD RKB		Recovered interval m MD RKB		Rec. mMD	Rec. %
1	3100	3115	3100	3114.4	14.4	96
2	3115	3142	3115	3134.3	19.3	71.5

Pressure points (MDT)

Test no.	Depth m MD RKB	Depth m TVD RKB	Fmn. Press. Bar	Test no.	Depth m MD RKB	Depth m TVD RKB	Fmn. Press. Bar
1A1	3205.5	3205.1		1A20	3123.5	3123.1	315.439
1A2	3202	3201.6	322.550	1A21	3117.5	3117.1	315.068
1A3	3200.5	3200.1	322.546	1A22	3115	3114.6	314.898
1A4	3193.5	3193.1	321.784	1A23	3112.5	3112.1	314.776
1A5	3186.5	3186.1	321.043	1A24	3107	3106.6	314.374
1A6	3183.5	3183.1	320.850	1A25	3105	3104.6	314.269
1A7	3175.5	3175.1	319.979	1A26	3102.5	3102.1	314.107
1A8	3170	3169.6	319.441	1A27	3100.5	3100.1	313.981
1A9	3166.2	3165.8	319.110	1A28	3098	3097.6	313.840
1A10	3157.5	3157.1	318.243	1A29	3097	3096.6	313.816
1A11	3155.5	3155.1	318.068	1B1	3097	3096.6	313.722
1A12	3147.5	3147.1	317.295	1B2	3107	3106.6	314.392
1A13	3142.5	3142.1	316.819	1B3	3128	3127.6	315.760
1A14	3136	3135.6	316.291	1B4	3135	3134.6	316.195
1A15	3135	3134.6	316.274	1B5	3157.5	3157.1	318.177
1A16	3134.1	3133.7	316.227	1B6	3135	3134.6	316.188
1A17	3133.3	3132.9	316.100	1B7	3137	3136.6	316.268
1A18	3128	3127.6	315.770	1B8	3136	3135.6	316.168
1A19	3126.5	3126.1	315.626				

Perforated Intervals

Interval no.	Perforation top m MD RKB	Perforation bottom m MD RKB
1	3111.5	3130

Lithology Legend

CONGLOMERATE
SAND/SANDSTONE
SILT/SILTSTONE
CLAY/CLAYSTONE
SHALE
COAL
LIMESTONE
DOLOMITE
DOL. LIMESTONE
CALC. DOLOMITE
CHALK
MARL
ANHYDRITE
SALT
GYPSUM
TUFF
INTR. IGNEOUS
EXTR. IGNEOUS
PYROCLASTIC
BRECCIA
METAMORPHIC
SANDY, VERY
SANDY
SANDY, SLIGHTLY
SILTY, VERY
SILTY
SILTY, SLIGHTLY
ARGILLACEOUS
CALCAREOUS
DOLOMITIC
CHALKY
OOZE
CLASTS
OOLITE
PSEUDO OOLITE
PELLETS
C CARBONACEOUS MAT.
△ CHERT
* GLAUCONITE
M MICA
□ PYRITE
V TUFFACEOUS
B BITUMINOUS
Λ ANHYDRITIC
Chl CHLORITE
MACROFOSSILS
MACROFOSSILS FRAG
MICROFOSSILS
PLANT REMAINS
Q CEMENT: QUARTZ
CEMENT: CARBONATE
K CEMENT: KAOLINITIC

Symbol legend

Casing shoe
Liner hanger
Liner shoe
Milled window
Deviation survey - MWD
Deviation survey - Other
Core interval
Sidewall core (No recovery)

DST
Open hole
Open hole (rerun)
Through casing
Through casing (rerun)
Perforation interval
RFT / MDT

SHOWS
Oil stain
Fluorescence
Visible cut
Fluorescence cut
Gas shows
Dipmeter Azi / Inc
Mud gain
Mud loss

LITHOLOGICAL DESCRIPTION

— Seabed at 386.7 m MD / 386.7 m TVD RKB —

387-701m Returns to seabed. Lithology interpreted from logs and drilling parameters.

— LOT 704 m MD / 703.9 m TVD RKB : 1.47 g/cc EMW —

701 - 710 m
Claystones
Clst: m dk gry, sft, amor stky I.P.

710 - 765 m
Sandstones with Traces of Claystones
Sst: clr-trnsl, occ mky wh-yelsh gry, Qtz, f-vcrs, pred m-crs, mod-pr srt, sbrndd-rndd, lse, Tr Rk Frag, blk-dk gry, grsh brn
Clst: dk gry, sft, amor, also brnsh blk, frm-sft, carb

— Hordaland Gp. at 763 m MD / 762.9 m TVD RKB —

765 - 800 m
Claystones with Traces of Sandstones
Clst: bcm pred olv gry-dk yel brn, dk gn gry, occ brn gry, r dsky gn, v sft, stky, solb, amor, pt sli calc, loc abdt gn blk Glauc, r micromic
Sst: clr-trnsl, occ mky wh-yelsh gry, Qtz, f-vcrs, pred m-crs, mod-pr srt, sbrndd-rndd, lse, Tr Rk Frag, blk-dk gry, grsh brn

800 - 910 m
Claystones
Clst: olv gry, sft, sli stky, amor, solb, non calc, v slty, Tr micromic, loc Tr Glauc, r loc Tr Pyr

910 - 932 m
Sandstones
Sst: clr trnsl-mlky Qtz, r rose Qtz, f-crs, r v crs, ang-sbang, pr srt, tr Glauc, tr C, r mica

932 - 1012 m
Claystones
Clst: olv gry, blky-sbblky, sft-frm, non calc, sli slty, r glauc, r micropyr, r carb mat
clr-trnsl Qtz, mnr rose & yel brn Qtz, oc lg lit Frag, f- v crs, pred m, com crs, occ v crs, r Gran <3mm, ang-rnd, pred sbrnd, occ shattered, occ Pol, sbspher- sbelong,

1012 - 1079 m
Sandstones
Sandstones
Sst: clr-trnsl Qtz, mnr rose & yel brn Qtz, oc lg lit Frag, f- v crs, pred m, com crs, occ v crs, r Gran <3mm, ang-rnd, pred sbrnd, occ shattered, occ Pol, sbspher- sbelong, pr srt, lse, gd Tr Mic pred Biot, Tr Glauc.

1079 - 1135 m
Claystones with rare Limestones
Clst: olv gry, mnr dk gn gry + dsky gn, sft, occ frm-mod hd, stky, occ fri, amor, pred solb, non calc, occ sli slty, loc w/ abdt Glauc, r micromic, loc Tr Pyr.
Ls: v pl or, sft-frm, amor, v arg grad Clst, pt glauc.

1135 - 1152 m
Claystones
Clst: olv gry-olv blk, mnr dk gn gry- dsky gn, sft, occ frm-mod hd, stky, occ fri, amor, pred solb, non calc, pt sli slty, loc w/ abdt Glauc, r micromic, loc Tr Pyr.

1152 - 1192 m
Claystones
Clst: olv gry-olv blk, occ dusky yelsh brn, frm, stky, sbblky, amor, pred solb, non calc, pt sli slty, loc w/ abdt Glauc, r micromic, r micropyr.

1192 - 1250 m
Claystones with rare Limestones
Clst: olv gry-olv blk, occ dusky yelsh brn, frm, stky, sbblky, amor, pred solb, non calc, pt sli slty, loc w/ abdt Glauc, r micromic, R micropyr, r sdy.
Ls: dusky yelsh brn, blky, hd

1250 - 1310 m
Claystones with rare Limestones
Clst: olv gry-olv blk-dsky yel brn, sft-frm, plas-fri, amor, non calc, sli slty, Tr micromic, r Glauc, loc r Tr Pyr
Ls: lt olv gry-pl yel brn, frm-mod hd, fri-sft, sbblky, sli arg, crpxln.

— Green Clay Fm. at 1309 m MD / 1308.8 m TVD RKB —

1310 - 1390 m
Claystones with rare Limestones
Clst: dk gn gry, Tr dsky yel brn, frm, fri, sbblky, non calc, slty, Tr micromic, r Glauc, loc r Pyr.
Ls: lt olv gry-pl yel brn, frm-mod hd, fri-sft, sbblky, sli arg, crpxln.

1390 - 1400 m
Sandstones
Sst: clr-trnsl Qtz, f-m, subang-sbrnd, spher, wl srt, lse, loc Tr fri Agg w/ lt gry slty/arg Mtrx, non calc, n.v.p. n/s.

1400 - 1456 m
Claystones
Clst: dk gn gry, tr-mnr olv gry, frm, fri, sbblky, non calc, slty, Tr micromic, r Glauc, loc r Pyr.

1456 - 1500 m
Claystones with rare Sandstones and Limestones
Clst: dk gn gry, alt olv gry-olv blk-brn blk, frm, fri, sbblky, non calc, sli-mod slty, Tr micromic, r Glauc, loc r Pyr
Sst: clr-trnsl Qtz, f-crs, pred m, ang-sbrnd, sbspher, pr srt, lse, Tr Mic.
Ls: pl yel brn, hd, sft, brit, fri, sli arg, crpxln.

1500 - 1541 m
Claystones
Clst: pred mod brn, mnr dk gn gry, Tr olv gry-olv blk-brn blk, frm, fri, sbblky, non-occ mod calc, sli-mod slty, Tr micromic, loc r Pyr.

— Balder Fm. at 1541 m MD / 1540.8 m TVD RKB —

1541 - 1598 m
Claystones and Tuff
Clst: varicol dk gnsh gry-m dk gry, r mod brn, blky-sbblky, frm, fri, I.P. mod calc, r micropyr, r micromic, r Glauc, sli slty
Tf: lt gry-m gry, sft-frm, blky-sbblky, blk spec, calc

— Sele Fm. at 1598 m MD / 1597.8 m TVD RKB —

1598 - 1653 m
Claystones
Clst: grysh blk-dk gry, dk gnsh gry, frm-mod hd, non calc, r micromic, r micropyr, r pyr nod, I.P. sli slty

— Lista Fm. at 1653 m MD / 1652.8 m TVD RKB —

1653 - 1697 m
Claystones
Clst: dk grn gry-gry blk-dk gry, blky, frm-mod hd, r micromic, r micropyr, r Pyr od, Tr Glauc

— Heimdal Fm. at 1697 m MD / 1696.8 m TVD RKB —

1697 - 1735 m
Sandstones
Sst: clr-trnsl Qtz, f-m-loc crs, r v crs, subang-sbrnd, pred sbang, sbspher, pr-loc wl srt, lse, r mic, loc r Pyr.

1735 - 1752 m
Argillaceous Sandstones
Sst: m-dk gry, lt olv gry, dk gn gry, clr-trnsl Qtz, pred f, occ m-crs, sbang-sbrnd, sbspher, mod srt, sft-frm, lse-fri, non calc, v arg Mtrx grad Clst w/ fltg Sd, r mic, loc glauc, v r Pyr, n.v.p., n/s.

— FIT 1760 m MD / 1759.7 m TVD RKB : 1.64 g/cc EMW —

— Våle Fm. at 1769 m MD / 1768.7 m TVD RKB —

1752 - 1842 m
Claystones and Sandstones
Clst: m-dk gry, dk gnsh gry, frm, non calc, r micromic, r micropyr, sdy
Sst: m-lt olv gry, clr-trnsl Qtz, pred f, occ m-crs, sbang-sbrnd, sbspher, mod srt, sft-frm, lse-fri, non calc, v arg, r mic, Tr Glauc, n.v.p., n/s.

— Ty at 1842 m MD / 1841.7 m TVD RKB —

1842 - 1883 m
Sandstones
Sst: v lt gry, clr trnsl Qtz, f-m, r crs, sbang -sbrnd, mod srt, sft, pred lse Qtz grns, r calc cmt, occ Kao mtx, tr Glauc nod, r Pyr, n.v.p., n/s

1883 - 1929 m
Claystones and Sandstones
Clst: m-dk gry, dk gnsh gry, frm, non calc, r micromic, r micropyr, sdy
Sst: v lt gry, clr trnsl Qtz, m-crs,sbang- sbrnd, mod srt, pred lse Qtz grns, r calc cmt, occ Kao mtx, tr Glauc nod, r Pyr, n.v.p., n/s

— Jorsalfare Fm. at 1938 m MD / 1937.7 m TVD RKB —

1929 - 2040 m
Marls with Limestone stringers
Mrl: lt gry-m gry, dk gry I/P, sft-frm, amor-sbblky, arg grd to calc Clst, slily slty and Glauc I/P, Pyr I/P
Ls: wh-off wh, prtly lt gry, sft-frm, hd I/P, amor-blky, pred micr, occ silty Glauc.

2040 - 2060 m
Claystones and Marls with Limestone stringers
Clst: gn gry-lt olv gry-lt bl gry, sft-frm, sbblky, calc-v calc, occ glauc, r slty
Mrl: mod brn-pl rd brn, sft-frm, sbblky, sli slty-v f sdy
Ls: wh-off wh, prtly lt gry, sft-frm, hd I/P, amor-blky, pred micr, occ silty Glauc, Tr Pyr

2060 - 2087.5 m
Claystones with Traces of Marls
Clst: lt gry-lt olv gry-lt gn gry, frm, sbblky-blky, calc- v calc grad mrl, Tr Micropyr, r glauc, occ slty-v f sdy
Mrl: mod brn-pl rd brn, sft-frm, sbblky, sli slty-v f sdy

— Kyrre Fm. at 2087.5 m MD / 2087.2 m TVD RKB —

2087.5 - 2120 m
Claystones with Limestone stringers
Clst: gn gry-lt olv gry-lt bl gry, sft-frm, sbblky, calc-v calc, occ glauc, r slty
Ls: wh-off wh, prtly lt gry, sft-frm, hd I/P, amor-blky, pred micr, occ slily Glauc, Tr Pyr

2120 - 2270 m
Claystones with stringers of Dolomitic Limestone
Clst: Pred m dk gry, prtly m gry and m lt gry, sft-frm, sbblky, mod-v calc, micromica, r Glauc
Ls: Dolomitic, pa-dk yel brn, yel gry in less dol prts, hd, blky, crptoxln, prtly wh-off wh, frm, sbblky, micr, Glauc

2270 - 2330 m
Claystones with Limestone stringers
and Traces of Dolomites and Sandstones
Clst: m gry-gn gry, sft-frm, sbblky, calc-v calc, Tr Glauc, pred sli slty, r micropyr
Ls: wh, occ dk gn yell spt, frm, blky, occ glauc, microxln
Dol: v pl org-gry org, frm, blky, occ v f sdy
Sst: gn gry, pl yel brn, vlr trnsl Qtz, f, sbang-sbrndd, wl srt, sft-frm, occ glauc, calc cmt, n v p, n/s

2330 - 2540 m
Claystones with Limestone and Dolomite stringers
Clst: m gry-gn gry, sft-frm, sbblky, non-sli calc, Tr Glauc, pred sli slty, r micropyr
Ls: wh-v pl org, sft-frm, sbblky, occ v f sdy, r Tr Micropyr
Dol: lt brn gry-mod brn, hd-mod hd, blky, microxln

2540 - 2565 m
Claystones with sandy Glauconitic Limestone
Clst: m lt gry-olv gry, sft-frm, slily stky, sbblky, calc-v calc, r micropyr, r micromica
Ls: Glauc and sdy, arg I/P, wh-off wh w/ gn Glauc spks, sft-frm
Sst: clr-lt gn trnsl Qtz, f-m, v crs I/P, sbang-sbrnd, pr srtd, fri-mod hd, prtly as lse grns, prtly calc cmt, Glauc.

— Tryggvason Fm. at 2565 m MD / 2564.7 m TVD RKB —

2565 - 2590 m
Limestone, sandy and Glauconitic in parts
Ls: off wh-yel gry, mod hd, blky, slily-v Glauc I/P, microxln-micr, sdy I/P
Sst: Minor amounts, clr-lt gn trnsl Qtz, f-m, v crs I/P, sbang-sbrnd, pr srtd, fri-mod hd, prtly as lse grns, prtly calc cmt, Glauc.

2590 - 2625.5 m
Limestone, very Silty in parts
Ls: off wh-yel gry-lt gry, mod hd, blky, slily-v Glauc I/P, microxln-micr, v slty grd to sltst, sdy I/P
Sltst: lt-m gry, frm-mod hd, sbblky, v calc grd to slty Ls, prtly v sdy grd to calc sst, arg.

— Blodøks Fm. at 2625.5 m MD / 2625.2 m TVD RKB —

2625.5 - 2646 m
Claystone with Limestone stringers
Clst: dk gry-gry blk-olv blk, frm-mod hd, blky, plty I/P, calc, micromica

Limestone
Ls: off wh-lt gry, frm-mod hd, blky, slily Glauc, micr, arg, sdy I/P

— Svarte Fm. at 2646 m MD / 2645.7 m TVD RKB —

2646 - 2667 m
Limestone
Ls: Mainly lt gry, prtly off wh, blky, frm-mod hd, arg, v slty

— Rødby Fm. at 2671 m MD / 2670.7 m TVD RKB —

2667 - 2700 m
Claystone with Limestone stringers in lower part
Clst: m gry, occ m dk gry, frm, blky, v calc, r slty, Tr Micropyr, Tr Micromic

Ls: v lt gry-lt gry, frm, blky, arg, sli slty

— Åsgard Fm. at 2700 m MD / 2699.7 m TVD RKB —

2700 - 2712 m
Siltstone and Claystone
Sltst: m gry-m dk gry, sft-frm, sbblky, v Micromic, Tr Micropyr, sli calc
Clst: mod rd brn, frm, sbblky, sli calc-calc, r Micromic, sli slty

2712 - 2720 m
Claystones
Clst: mod rd brn A/A down to about 2720m, frm, sbblky, sli calc-calc, r Micromic, sli slty

2720 - 2835 m
Claystones, occ with Limestone strgr
Clst: lt gry-lt olv gry, sft, stky, sbblky, v calc, r Pyr, sli slty
Ls: v lt gry-lt gry, frm, blky, occ arg, occ sli slty, Glauc I/P

Dolomitic Limestone
Ls: v lt gry-lt gry, prtly m-lt brn, dolomitic, blky, hd, crpxln.

2835 - 2865 m
Claystone
Clst: grysh brn - pl brn, frm, sbblky, slily slty, calc - v calc, grdg Mrl I.P., slily micromic

2865 - 2902 m
Claystone
Clst: m lt gry - lt gry - m gry, occ m dk gry, sft - frm, sbblky, calc - v calc, micromic, sl micropyr
Tr: Ls, Pyr Nod

— Draupne Fm. at 2902 m MD / 2901.7 m TVD RKB —

2902 - 2987 m
Claystone
Clst: olv blk - occ brnsh blk, frm, sbblky, sl lam / sbfis, slty, spk carb Mat, micromic, micropyr, non calc

— FIT 2924.4 m MD / 2924.1 m TVD RKB : 1.70 g/cc EMW —

Tr Sst: clr - lt yel trnsl Qtz, m, mod - wl srt, sbang - rndd, lse

2987 - 3093 m
Siltstone with thin calcite cemented sandstone beds
Sst: off wh - lt gry, clr Qtz, vf - m, pred f, sbang - sbrndd, mod srt, mod hd - hd, pred sil cmt, I.P. calc cmt, Kaol Mtrx, arg I.P., Mic, micropyr, no - v pr vis por, slily carb
Shows: no shows

Shows: r - Tr dull - mod bri yel dir fluor, v slw strmg bl wh cut fluor, mky wh - bl wh res fluor, no vis res

— Heather Fm. at 3013 m MD / 3012.7 m TVD RKB —

Sltst: m dk gry - gry blk, olv blk, frm, sbblky, slily sbfis, micromic, micropyr, sl carb, arg grdg slty Clst, non calc

Sst: m gry - brnsh gry, clr - trnsl Qtz, f - crs, pred m, wl srt, calc cmt, Tr sil cmt, spk/strk carb Mat, slty, Mic, no - v pr vis por

Shows: no shows

— J54 at 3047 m MD / 3046.6 m TVD RKB —

Sltst: dk gry - grysh blk, frm - occ mod hd, sbblky - sbfis, micromic, micropyr, non - slily calc, vf sdy I.P.

— J52 at 3096 m MD / 3095.6 m TVD RKB —

— GOC at 3098 m MD / 3097.6 m TVD RKB —

3096 - 3206 m
Sandstone with thin siltstones
Sst: lse clr - trnsl Qtz, vf - crs, pred f - crs, mod srt, sbrndd - occ sbang. Shw. dull yel uni dir fluor, slw - v slw bl wh cut fluor, fnt bl wh res ring
Sst: pl-dk yel brn, clr-trnsl-occ smky Qtz, f-crs, ang-sbrnd, sbspher-sb elong, pr-mod srt, mod hd, fri, blky, non calc, slty Mtrx, loc r arg Mtrx, Mic, loc carb, no-fr vis por.
Shows: Gd pet od, 90-70% bri yel-bl wh spkld dir Fluor, slo strmg bl wh-yel fluor cut, no vis cut, strng bri yel-bl wh fluor Res, no vis Res.
Sltst: dk gry-olv blk, hd. brit, sbblky-plty, non calc, abdt carb, com micromic, com v f sdy. No Shw.
Sst: pl-dk yel brn, clr-trnsl-occ smky Qtz, f-m, r crs, pred m, ang-sbrnd, sbspher, mod srt, mod hd, fri, blky, non calc, slty Mtrx, loc wh slty Mtrx, Tr Mic, r carb, pr vis por
Sltst: dk-m dk gry, hd, brit, sbplty, non calc, loc dsm vf sdy, loc vf sdy in irr intercal, loc abdt vf sdy lam grad Sst, abdt mic, com carb.

— OWC at 3137 m MD / 3136.6 m TVD RKB —

Sst: gen a.a. bcm m gry.

Sst: clr-trnsl Qtz, f-m-loc crs-r v crs, pred m, ang-sbrnd, sbspher, pr-loc wl srt, lse, loc wh arg Mtrx, loc wh calc Mtrx grad Ls, r Mic, n/s.

Sltst: olv blk -dk gry, mod hd, fri, sbblky, non calc, pt vf sdy, pred v micromic, carb.

3205 - 3291.5 m
Siltstone with limestone stringers
Sltst: olv blk -dk gry, frm-mod hd, fri, plty-sbblky, non calc, pt vf sdy, pt arg, micromic, carb. loc Tr C Frag.
Ls: pl yel brn, frm-mod hd, sbblky, pt sdy, pt arg, crpxln.

Sltst: gen a. bcm mod calc I.P.

Sltst: grysh blk, frm - mod hd, sbblky - sbfis, I.P. m dk gry, sft - frm, sbblky - amor, slily calc - calc, Mic, carb, micropyr, sl sdy
Sst: clr - mky wh Qtz, lse, vf - v crs, pr srt, ang - sbrndd, occ vf - f calc agg

Ls: m lt gry - lt brnsh gry, frm, blky, arg, sl sdy I.P.

Sltst: dk gry - olv gry - brnsh gry, frm, I.P. sft, stky, sbblky, gen slily calc, loc calc, mic, slily carb, micropyr, slily sdy

— TD Driller at 3291.5 m MD / 3291.1 m TVD RKB —

— TD Logger at 3295 m MD / 3294.6 m TVD RKB —