HYDRO

COMPLETION LOG
STETIND

Scale: 1 / 500

Well: 6605/8-1

Location Map

KB Elevation	23,5 m	Country	Norway
Water Depth	838 m	Licence	PL 283
Depth Reference	RKB	Owners	Hydro ASA, ChevronTexaco, ConocoPhillips, Petoro
Total Depth (Driller)	4513 m MD RKB 4508.4 m TVD RKB		
Total Depth (Logger)	4514.5 m MD RKB 4510.0 m TVD RKB	Field	Stetind
Formation at Total Depth	Lange Formation	Platform	Transocean Leader
Date Spudded	14.06.2005 18:30 hrs	Drilling Contractor	Transocean
Date Reached TD	24.08.2005	Mudlogging Company	Geoservices
Date Abandoned	24.10.2005	Logging Company	Schlumberger
Well Status	Plugged and Abandoned	MWD Company	Schlumberger
Well Classification	Exploration	Geologists	B.Schønningsen, A.Hiksdal, E Skottlien, M.Henderson, M.Tillung, F.Johansen, K.L.Kalgraff
Prepared by	F.Johansen.		
Controlled by	K.Hevrøy		
Date	31.03.2006		
Revision	1.0		
Well Coordinates	Seabed Location	Deg: 66° 21' 51.93" N	05° 34' 39.23" E
	ED50, UTM Zone 32.	UTM: 7 364 907.6 m N	346 941.0 m E

Output log file created : 2006-04-20 10:14:59
Winlog well ID : 6605_8_1
Hydro (BORE) well ID : 905017
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	955.5	955.5
20" Casing shoe	1999.0	1997.9
13 3/8" Casing shoe	2887.5	2883.4
9 5/8" Casing shoe	4099.0	4094.7
7" Liner hanger	4021.0	4016.7
7" Liner shoe	4512.5	4507.9

LOT / FIT

Type	Result g/cc	Depth m MD RKB	Depth m TVD RKB
FIT	1.44	1999.0	1997.9
LOT	1.62	2887.5	2883.4
LOT	1.94	4099.0	4094.7
LOT Minifrac	1.76	4200.0	4195.7

Comments

A Pilot hole was drilled from 957mMD to 2000mMD due to shallow gas warnings. LWD data from the pilot are used in this Completion log

The whole well was drilled with a waterbased mud system.

A separate combined Gas Chromatograph / Mass Spectrometre analysis of the return mud was performed realtime by HRH for Geochemical studies.

Biostratigraphy analysis was performed by PetroStrat Ltd

50 pretest and 2 fluid samples were acquired in 5 wireline MDT logging run.
MDT stuck twice after extensive open hole sampling, resulting in one fishing job and one "self release" by deflating dual packers.
MSCT results: 44 attempts, 25 recoverd cores, 19 empty.

Perforation I: Pipe conveyed 4 5/8" Perforation Guns in 7" liner.
Perforation II: Wireline High Shot Density Perforation Gun (HSD) with 5 shots/ft for cased hole MDT dual packer sampling in 7" liner.

LOT Minifrac pressure: BHP = 240bar @ 4200m TVD

Logs

Run no.	Log type	Logged interval
	MWD - LWD	
1	DIR	862.0 - 957.0
2	ARC(GR-RES-APWD)-DIR-ADN-ISONIC	957.0 - 2000.0
3	ARC-DIR	957.0 - 1343.0
4	ARC-DIR	1343.0 - 2005.0
5	RAB-ARC-DIR-ISONIC	2005.0 - 2597.0
6	RAB-ARC-DIR-ISONIC	2597.0 - 2734.0
7	RAB-ARC-DIR-ISONIC	2734.0 - 2900.0
8	ARC-DIR	2005.0 - 2900.0
9	ARC-DIR-ISONIC	2900.0 - 3163.0
10	ARC-DIR-ISONIC	3163.0 - 3175.0
11	ARC-DIR-ISONIC	3175.0 - 3521.0
12	ARC-DIR-ISONIC	3521.0 - 4100.0
13	GVR-ARC-DIR-ISONIC	4100.0 - 4100.0
14	GVR-ARC-DIR-ISONIC	4100.0 - 4190.0
15	GVR-ARC-DIR-ISONIC	4190.0 - 4513.0
	WIRELINE (open hole)	
1A	PEX-HRLA-ECS-DSI	3385.0 - 1998.0
2B	PEX-HRLA-ECS-DSI	4514.5 - 3687.0
2A	MDT (PS-PG=Standard Probe-Guard Probe)	4252.7 - 4246.8
2B	MDT (PS-PG-2xMultiSampl-2xSamplChamb)	4246.8 - 4238.5
2A	VSP	4510.0 - 2710.0
2C	MDT (PS-PG-2MS-2SC)	4237.5 - 4191.7
2A	FMI	4514.0 - 4100.0
2D	MDT Dual Packer(PS-1MS-2SC)	4211.5 - 4191.0
2E	MDT Dual Packer(PS-2MS)	4228.5 - 4244.0
2A	MSCT (50 cores)	4438.5 - 4148.0
	WIRELINE (in 7"casing/8½" hole)	
2A	CBL	4405.0 - 4020.0
2B	CBL	4013.0 - 2825.0
2A	CCL	
2B	CCL	
2C-2A	CCL-USIT	
2A	HSD	4230.0 - 4230.6
2F	MDT Dual packer (PS-1MS-1SC)	4230.0 - 4230.6

Cores

Core no.	Cored interval m MD RKB		Recovered interval m MD RKB		Rec. mMD	Rec. %
1	4190	4199	4190	4199	9	100

Perforated Intervals

Interval no.	Perforation top m MD RKB	Perforation bottom m MD RKB
I	4184	4211.5
II	4230	4230.6

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
3	4246.8	4242.4	1.526	51	4209.4	4205.1	1.483
4	4246.2	4241.8	1.518	52	4209.5	4205.2	1.484
5	4245.4	4241.0	1.530	56	4253.5	4249.1	1.527
10	4232.3	4227.9	1.480	57	4253.5	4249.1	1.527
11	4230	4225.6	1.481	58	4253.2	4248.8	1.527
21	4210.8	4206.5	1.486	59	4253.2	4248.8	1.527
22	4209.1	4204.8	1.484	64	4253.7	4249.3	1.529
11	4231.4	4227.0	1.480	65	4253.4	4249.0	1.528
11	4231.4	4227.0	1.481	66	4253.4	4249.0	1.527
48	4209.4	4205.1	1.484	67	4246	4241.6	1.524
49	4209.4	4205.1	1.484	70	4246.5	4242.1	1.523
50	4209.4	4205.1	1.484	74	4253	4248.6	1.518

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, CARBONACEOUS MAT., CHERT, GLAUCONITE, MICA, PYRITE, TUFFACEOUS, BITUMINOUS, ANHYDRITIC, CHLORITE, MACROFOSSILS, MACROFOSSILS FRAG, MICROFOSSILS, PLANT REMAINS, CEMENT: QUARTZ, CEMENT: CARBONATE, 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

STRATIGRAPHY	GAMMA RAY	Depths m MD RKB	RESISTIVITY	NEUTRON/DENSITY	LITHOLOGICAL DESCRIPTION	SONIC

