General information

Wellbore name	34/3-1 A
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	KNARR
Discovery	34/3-1 S Knarr
Well name	34/3-1
Seismic location	inline 5174 & crossline 3090
Production licence	373 S
Drilling operator	BG Norge AS
Drill permit	1196-L
Drilling facility	BREDFORD DOLPHIN
Drilling days	51
Entered date	10.09.2008
Completed date	30.10.2008
Release date	30.10.2010
Publication date	23.12.2010
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	EARLY JURASSIC
1st level with HC, formation	COOK FM
Kelly bushing elevation [m]	25.0
Water depth [m]	410.0
Total depth (MD) [m RKB]	4162.0
Final vertical depth (TVD) [m RKB]	3999.0
Maximum inclination [°]	41.2
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	AMUNDSEN FM
Geodetic datum	ED50
NS degrees	61° 48' 46.49'' N
EW degrees	2° 46' 47.16'' E
NS UTM [m]	6853522.80
EW UTM [m]	488393.54

UTM zone	31
NPDID wellbore	5921

Wellbore history

General

Well 34/3-1 A was drilled on the Jordbær structure on the Tampen Spur on the Norwegian Continental Shelf. The primary well 34/3-1 S encountered an oil-down-to situation in the Cook Formation before reaching TD in the Statfjord Formation at 4081 m TVD RKB. The down flank sidetrack 34/3-1 A was carried out in order to define the oil-water contact and to prove economic reserves.

Operations and results

Appraisal well 34/3-1 A was kicked off on 10 September 2008 at the 13 3/8" casing shoe at 2203 m in the primary well. The well was drilled with the semi-submersible installation Bredford Dolphin to TD at 4162 m (3999 m TVD) in the Early Jurassic Amundsen Formation. At 3670 m the mud weight was increased to 1.77 sg resulting in total losses of the mud return. After cutting back the mud weight 1.67 sg full returns were regained. The well was drilled with XP-07 LT oil based mud from kick-off to TD.

The Cook Formation was encountered at 3954 m (3833 m TVD). From pressure gradient evaluation the oil-water contact was set at ca 4018 m (3886 m TVD).

No cores were cut in the side track. MDT fluid samples were taken in the Cook Formation. Oil samples were collected at 3955.9 m, 3964.9 m, and at 3993.7 m, while water samples were collected at 4013.5 m. The mud contamination in the oil samples varied from 1% to 16%.

The well was permanently abandoned on 30 October 2008 as an oil appraisal well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
2220.00	4162.00

Cuttings available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
436	NORDLAND GP
1421	UTSIRA FM

1464	NO FORMAL NAME
1494	HORDALAND GP
2002	ROGALAND GP
2002	BALDER FM
2030	SELE FM
2050	LISTA FM
2141	SHETLAND GP
2141	JORSALFARE FM
2315	KYRRE FM
3450	TRYGGVASON FM
3776	CROMER KNOLL GP
3776	MIME FM
3782	DUNLIN GP
3782	DRAKE FM
3954	COOK FM
4067	BURTON FM
4131	AMUNDSEN FM

Composite logs

Document name	Document format	Document size [MB]
5921	pdf	0.48

Geochemical information

Document name	Document format	Document size [MB]
5921_01_34_3_1A_gch_transfer_1	txt	0.00
5921_02_34_3_1A_gch_results_1	txt	0.05

Logs

Log type	Log top depth [m]	Log bottom depth [m]
ADR PWD DGR DDS SGR ALD CTN	3780	4162
GEOTAP BAT MRIL	3780	4162
MDT PA-PQ GR	3955	4013
MSCT	3788	4078

VSI	850	4150

Casing and leak-off tests

Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT/FIT mud eqv. [g/cm3]	Formation test type
INTERM.	13 3/8	2203.0	17 1/2	2210.0	2.18	LOT
INTERM.	9 5/8	3774.0	12 1/4	3780.0	2.05	LOT
OPEN HOLE		4162.0	8 1/2	4162.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
2089	1.41	23.0		KCL/Polymer	
2187	1.70	30.0		XP-07	
2515	1.70	26.0		XP-07	
3112	1.70	30.0		XP-07	
3550	1.70	27.0		XP-07	
3591	1.41	23.0		Water based	
3670	1.70	25.0		XP-07	
3780	1.66	26.0		XP-07	
3833	1.87	36.0		XP-07	
4162	1.66	28.0		XP-07	
4162	1.87	40.0		XP-07	