

**General information**

Wellbore name	34/3-3 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	34/3-3
Seismic location	inline 5024 & crossline 2782
Production licence	373 S
Drilling operator	BG Norge AS
Drill permit	1385-L
Drilling facility	WEST ALPHA
Drilling days	44
Entered date	21.11.2011
Completed date	03.01.2012
Release date	03.01.2014
Publication date	03.01.2014
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]	18.0
Water depth [m]	400.0
Total depth (MD) [m RKB]	5013.0
Final vertical depth (TVD) [m RKB]	3962.0
Maximum inclination [°]	57.5
Bottom hole temperature [°C]	139
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	BURTON FM
Geodetic datum	ED50
NS degrees	61° 47' 42.49" N
EW degrees	2° 43' 4.38" E
NS UTM [m]	6851554.92



EW UTM [m]	485123.66
UTM zone	31
NPDID wellbore	6745

Wellbore history

General

Well 34/3-3 A is a sidetrack to well 34/3-3 S on the Jordbær Vest west of the Knarr field (formerly called Jordbær) in the northern part of the North Sea. The objective of the 34/3-3A sidetrack was to delineate the 34/3-3 S discovery by confirming the extent of reservoir rocks and also proving oil in the lower part of the Cook formation up-dip and north of well 34/3-3 S.

Operations and results

Appraisal well 34/3-3 A was kicked off at 2245 m in the primary well bore 34/3-3 S on 21 November 2011. It was drilled with the semi-submersible installation West Alpha to TD at 5013 m (3962 m TVD) in the Early Jurassic Burton Formation. It was drilled deviated with a sail angle of 57 deg to the Jordbær Vest A compartment of the Jordbær Vest structure. The well was drilled with Versatec oil based mud from kick-off to 4687 m and with Versatherm oil based mud from 4687 m to TD.

Sandstones belonging to the Cook Formation were penetrated at 4809 m (3840.4 m TVD). The Cook Formation consisted of two main sandstone packages. Light oil was encountered in the Upper Cook interval and this proved to be entirely oil-charged while the Lower Cook has a thin oil column and an observed Oil-Water contact (OWC) around 4874 m (3877.7 m TVD). Pressure survey data supported a Free Water Level (FWL) around 4876.2 m (3879 m TVD). Recorded formation pressures also proved that the Upper Cook reservoir has 1 bar (15 psi) lower pressure compared to the Lower Cook reservoir at the time of logging. Reliable oil shows on cuttings above the OBM was recorded only in the oil bearing part of the Cook Formation.

No cores were cut in the 34/3-3 A sidetrack. MDT fluid samples were taken at 4824.97 m in the Upper Cook Formation (oil), 4870.04 in the Lower Cook Formation (Oil), and at 4880.05 m in the Lower Cook Formation (water).

The well was suspended on 3 January 2011 for later conversion to development well (water injector). It is classified 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]
2240.00	5013.00

Cuttings available for sampling?	YES
----------------------------------	-----

**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
418	NORDLAND GP
1388	UTSIRA FM
1484	HORDALAND GP
1964	ROGALAND GP
1964	BALDER FM
1988	SELE FM
2005	LISTA FM
2090	SHETLAND GP
2090	JORSALFARE FM
2267	KYRRE FM
4042	TRYGGVASON FM
4726	CROMER KNOLL GP
4726	MIME FM
4743	DUNLIN GP
4743	DRAKE FM
4809	COOK FM
4968	BURTON FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
LWD - APWD SON DEN NEU	2245	4687
LWD - ECO TELE STET SON VIS	4687	5013
LWD - PDGR GR RES DI...	2245	4687
MDT GR	4824	4880
XPT GR	4810	4880

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.	9 5/8	4687.0	12 1/4	4687.0	2.00	LOT
OPEN HOLE		5013.0	8 1/2	5013.0	0.00	LOT

**Drilling mud**

Depth MD [m]	Mud weight [g/cm ³]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
2935	0.00	44.0		Versamud	
3178	0.00	44.0		Versamud	
3907	0.00	44.0		Versamud	
4210	0.00	49.0		Versamud	
4224	0.00	52.0		Versamud	
4685	0.00	53.0		Versamud	
4945	0.00	53.0		Versamud	