

General information

Wellbore name	31/3-4
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	31/3-4
Seismic location	Survey NH9401WIM11:IL3673 & XL4904
Production licence	551
Drilling operator	Tullow Oil Norge AS
Drill permit	1452-L
Drilling facility	TRANSOCEAN BARENTS
Drilling days	44
Entered date	22.11.2013
Completed date	05.01.2014
Release date	05.01.2016
Publication date	05.01.2016
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	40.0
Water depth [m]	348.0
Total depth (MD) [m RKB]	2122.0
Final vertical depth (TVD) [m RKB]	2122.0
Maximum inclination [°]	1.7
Bottom hole temperature [°C]	80
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	ETIVE FM
Geodetic datum	ED50
NS degrees	60° 57' 51.3" N
EW degrees	3° 41' 16.85" E
NS UTM [m]	6759161.09
EW UTM [m]	537255.02
UTM zone	31
NPID wellbore	7292

Wellbore history

General

Well 31/3-4 was drilled to test the Mantra prospect, ca 2 km northeast of the northern end of the Troll Field in the North Sea. The primary objective was to test Late Jurassic sandstones of the Sognefjord, Fensfjord and Krossfjord formations, secondary to test the Middle Jurassic Brent Group, tertiary to test injectite sands in the Paleocene.

Operations and results

Wildcat well 31/3-4 was spudded with the semi-submersible installation Transocean Barents on 22 November 2013 and drilled to TD at 2122 m in the Middle Jurassic Etive Formation. The 9 7/8" pilot hole did not encounter any boulders or shallow gas. Due to severe mud losses in Ness Formation coal beds, the well did not fulfil the objective to drill through the complete Brent section, but all target reservoir levels were tested by the well. The well was drilled with seawater and bentonite sweeps down to 747 m, and with Glydril mud from 747 m to TD.

Reservoirs with good to excellent quality were found in Paleocene Lista Formation, Sognefjord Formation, Krossfjord Formation, and Fensfjord Formation and in the Brent Group. All target reservoirs were dry. Only very weak shows were described on a junk basket core from undifferentiated intra-Lista Formation sandstone at 1353 m, and on cuttings from the Sognefjord and Fensfjord formations.

A junk basket core was recovered from 1353 to 1353.4 m. No fluid sample was taken.

The well was permanently abandoned on 5 January 2014 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
760.00	2121.00

Cuttings available for sampling?	YES
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Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	1353.0	1353.4	[m]

Total core sample length [m]	0.4
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
388	NORDLAND GP
388	UNDIFFERENTIATED
601	UTSIRA FM
652	NO FORMAL NAME
1096	ROGALAND GP
1096	BALDER FM
1148	SELE FM
1213	LISTA FM
1330	UNDIFFERENTIATED
1398	LISTA FM
1416	SHETLAND GP
1416	HARDRÅDE FM
1502	KYRRE FM
1545	TRYGGVASON FM
1592	SVARTE FM
1617	CROMER KNOLL GP
1617	RØDBY FM
1635	VIKING GP
1635	DRAUPNE FM
1658	SOGNEFJORD FM
1669	HEATHER FM
1850	FENSFJORD FM
1996	KROSSFJORD FM
2010	HEATHER FM
2064	BRENT GP
2064	NESS FM
2114	ETIVE FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
LWD-DI	387	750
LWD-DI ECD RES GR SON	750	1294
LWD-DI GR ECD	450	747

LWD-DI NEU DEN GVR SON	1294	2122
MSIP FMI	1288	2050
PEX HRLA XPT	0	0

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
CONDUCTOR	30	446.8	36	450.5	0.00	
SURF.COND.	20	742.2	26	747.0	0.00	
INTERM.	9 5/8	1288.0	12 1/4	1294.0	0.00	
OPEN HOLE		2122.0	8 1/2	2122.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
485	1.04	50.0		Spud mud	
787	1.39	17.0		Glydril	
1172	1.29	19.0		Glydril WBM	
1294	1.29	20.0		Glydril WBM	
1354	1.29	17.0		Glydril WBM	
1716	1.29	17.0		Glydril WBM	
2122	1.29	19.0		Glydril WBM	