General information

Wellbore name	25/8-18 S
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	BREIDABLIKK
Discovery	25/8-4 Breidablikk
Well name	25/8-18
Seismic location	NH9301R07 inline 1118 & crossline 738
Production licence	169
Drilling operator	Statoil Petroleum AS
Drill permit	1503-L
Drilling facility	TRANSOCEAN LEADER
Drilling days	24
Entered date	29.09.2014
Completed date	23.10.2014
Release date	23.10.2016
Publication date	23.10.2016
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	PALEOCENE
1st level with HC, formation	HEIMDAL FM
Kelly bushing elevation [m]	23.5
Water depth [m]	129.0
Total depth (MD) [m RKB]	1890.0
Final vertical depth (TVD) [m RKB]	1884.0
Maximum inclination [°]	11
Bottom hole temperature [°C]	74
Oldest penetrated age	LATE CRETACEOUS
Oldest penetrated formation	TOR FM
Geodetic datum	ED50
NS degrees	59° 15' 1.15'' N
EW degrees	2° 37' 0.57'' E
NS UTM [m]	6568140.53

EW UTM [m]	478144.69
UTM zone	31
NPDID wellbore	7388

Wellbore history

General

Well 25/8-18 S was drilled to appraise the 25/8-4 Hedila discovery on the Utsira High, east of the Ringhorne and Grane Fields in the North Sea. The primary objective was to test the Hydrocarbon potential in Lower Heimdal sands. Secondary objective was to test the upper Heimdal Formation, in a structurally high location.

Operations and results

Appraisal well 25/8-18 S was spudded with the semi-submersible installation Transocean Leader on 29 September 2014 and drilled to TD at 1890 m in the Late Cretaceous Tor Formation. The well was drilled as a J shape well, consisting of three hole sections: 36", 17 1/2" and 12 1/4". To reach the target location, the well was drilled with an inclination of up to 11 deg in the 12 1/4 section. There were no indication of shallow gas in the well. No significant problem was encountered in the operations. The well was drilled with seawater/spud mud down to 1165 m and with XP-07 oil based mud from 1165 m to TD.

The well encountered a 25 m oil column in sandstones with good reservoir properties from top Lower Heimdal Formation at 1759.0 m (1755.5 m TVD) and down to the OWC at 1785 m (1780.5 m TVD). In addition, several thin hydrocarbon-filled stringers, interpreted as Upper Heimdal injectites, were found within the Lista Formation. The pressure points indicate a continuous oil gradient through the upper and lower sands, inferring vertical communication between the Upper- and Lower Heimdal Formation. Additionally, the well found a gas-filled sand stringer at 1704 to 1707 m within the Balder Formation. Hydrocarbon shows were seen only inn association with the hydrocarbon-filled intervals.

Two 27 m cores were cut from 1737.5 to 1792 m in the Heimdal Formation, covering the thinner injectite sandstones of the Upper Heimdal Formation, and the transition into the thick sandstone unit of the Lower Heimdal Formation. The last 5.6 m of the first core was lost, due to a failure of the full closure catcher system. Sampling and pressure points were sampled on wireline in the interval from 1706 to 1796 m. Oil was samples at 1760 m in the Heimdal Formation, and gas was sampled in the Balder Formation at 1706.1 m. The samples contained less than 1% mud contamination. Geochemical analyses of the Balder sample showed a biodegraded gas with characteristic heavy carbon-13 isotopes in propane. The Heimdal oil sample is indicated to be a mix of earlier biodegraded oil and fresh, non-degraded oil.

The well was permanently abandoned on 23 October as an oil and gas 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]
1170.00	1890.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	1737.5	1758.9	[m]
2	1765.0	1792.1	[m]

Total core sample length [m]	48.5
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1170.0	[m]	DC	ROBERTSO
1200.0	[m]	DC	ROBERT
1220.0	[m]	DC	ROBERT
1230.0	[m]	DC	ROBERT
1260.0	[m]	DC	ROBERT
1290.0	[m]	DC	ROBERT
1320.0	[m]	DC	ROBERT
1350.0	[m]	DC	ROBERT
1380.0	[m]	DC	ROBERT
1410.0	[m]	DC	ROBERT
1440.0	[m]	DC	ROBERT
1470.0	[m]	DC	ROBERT
1500.0	[m]	DC	ROBERT
1530.0	[m]	DC	ROBERT
1560.0	[m]	DC	ROBERT
1590.0	[m]	DC	ROBERT
1620.0	[m]	DC	ROBERT
1650.0	[m]	DC	ROBERT
1660.0	[m]	DC	ROBERT
1670.0	[m]	DC	ROBERT
1680.0	[m]	DC	ROBERT
1692.0	[m]	DC	ROBERT

1698.0	[m]	DC	ROBERT
1704.0	[m]	DC	ROBERT
1710.0	[m]	DC	ROBERT
1719.0	[m]	DC	ROBERT
1728.0	[m]	DC	ROBERT
1734.0	[m]	DC	ROBERT
1737.5	[m]	C	ROBERT
1741.0	[m]	C	ROBERT
1743.0	[m]	C	ROBERT
1744.0	[m]	C	ROBERT
1745.0	[m]	C	ROBERT
1749.0	[m]	DC	ROBERT
1749.4	[m]	C	ROBERT
1752.0	[m]	C	ROBERT
1756.0	[m]	C	ROBERT
1757.0	[m]	C	ROBERT
1758.9	[m]	C	ROBERT
1764.0	[m]	DC	ROBERT
1767.3	[m]	C	ROBERT
1794.0	[m]	DC	ROBERT
1809.0	[m]	DC	ROBERT
1818.0	[m]	DC	ROBERT
1833.0	[m]	DC	ROBERT
1842.0	[m]	DC	ROBERT
1848.0	[m]	DC	ROBERT
1854.0	[m]	DC	ROBERT
1860.0	[m]	DC	ROBERT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
153	NORDLAND GP
713	UTSIRA FM
1034	HORDALAND GP
1078	SKADE FM
1698	ROGALAND GP
1698	BALDER FM
1725	SELE FM
1730	LISTA FM

1759	HEIMDAL FM
1815	LISTA FM
1854	VÅLE FM
1860	SHETLAND GP
1860	EKOFISK FM
1865	TOR FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT PPC SS PEX	1155	1884
MDT	1706	1796
MWD - ARCVRES9 TELE	1730	1890
MWD - PDX5 ARCVRES9 TELE	1165	1735
MWD - PDX5 ARCVRES9 TELE675	201	1165
ZOVSP	100	1884

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	202.4	36	205.6	0.00	
INTERM.	13 3/8	1154.7	17 1/2	1165.0	1.44	FIT
OPEN HOLE		1890.0	12 1/4	1890.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1165	1.20	16.0		XP-07 - #14	
1165	1.35	21.0		XP-07 - #14	
1747	1.20	17.0		XP-07 - #14	
1890	1.20	19.0		XP-07 - #14	