

**General information**

Wellbore name	24/12-6 S
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	24/12-6
Seismic location	SurveyWGS2413R06 PSDM inline 2513 & crossline 1519
Production licence	341
Drilling operator	Det norske oljeselskap ASA
Drill permit	1297-L
Drilling facility	SONGA DELTA
Drilling days	127
Entered date	16.08.2010
Completed date	20.12.2010
Release date	01.04.2012
Publication date	01.04.2012
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	29.0
Water depth [m]	116.0
Total depth (MD) [m RKB]	5207.0
Final vertical depth (TVD) [m RKB]	5076.0
Maximum inclination [°]	21.7
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	SLEIPNER FM
Geodetic datum	ED50
NS degrees	59° 3' 54.14" N
EW degrees	1° 45' 15.24" E
NS UTM [m]	6548111.45
EW UTM [m]	428561.94
UTM zone	31
NPDID wellbore	6328



Wellbore history

General

Well 24/12-6 S was drilled on the Stirby prospect in the Vana Sub-basin of the Viking Graben in the North Sea. Stirby was a potential multipay structure and the main target was the Late Jurassic Intra Draupne Formation Sandstones ("Stirby Upper"). The secondary target was the Middle Jurassic Hugin/Sleipner Formation sandstones ("Stirby Deep"). Additional targets was possible in the Heather Formation with potential for reservoir sands deposited from the east as encountered in the Gudrun Field south of the Stirby location.

Operations and results

Wildcat well 24/12-6 S was spudded with the semi-submersible installation Songa Delta on 16 August 2010 and drilled to TD at 5207 m (5076 m TVD) in the Middle Jurassic Sleipner Formation. Severe hole problems with excessive cavings and tight hole was experienced in the 17 1/2" section from 1279 m to 2771 m. The reason for this was believed to be too high concentrations of KCl, drying out the claystone. Due to these problems the well was plugged back and sidetracked from 1300 m. The well was drilled with Spud mud down to 1279 m, and with KCl brine from 1279 m to 2771 m. After sidetracking the well was drilled with Carbotech oil based mud from 1300 m to 4330, and with Magmatech oil based mud from 4330 m to TD.

The Draupne Formation was encountered at from 4417 m (4286 m TVD), the Heather Formation at 4788 m (4657 m TVD), and top Vestland Group, Hugin Formation at 5029 m (4898 m TVD). Only rare traces of sand were seen at the expected primary target, the Late Jurassic Intra Draupne Sand (Stirby Upper). This part of the well contained organic rich shale with thin beds of limestone. These limestone beds correspond to the strong amplitudes which defined the main target as a basin floor fan in the prognosis. The secondary target, the Middle Jurassic Vestland Group (Stirby Deep), came in 7.8 m deeper than prognosed. An upper sandstone, probably belonging to the Hugin Formation, was described as silica cemented. Only one stable pressure point was collected here and thereby no gradient defining hydrocarbon or water was obtained. In the lower sandstone just above TD of the well another pressure point reading was obtained, 33 bar lower than the one in "Upper sandstone". Scanning evaluation with the RCI tool in the lower sandstone gave the conclusion that this sand was water filled. No oil shows were reported above BCU. Direct and cut fluorescence was observed on traces of sandstone grains/aggregates from top Hugin Formation and downwards. The fluorescence on the aggregates was however difficult to interpret due to possible interference from mineral fluorescence, oil base and rock flour.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 20 December 2010 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]
1290.00	2770.00

Cuttings available for sampling?	YES
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Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
145	NORDLAND GP
504	UTSIRA FM
681	NO FORMAL NAME
848	HORDALAND GP
848	SKADE FM
1043	NO FORMAL NAME
1356	GRID FM
1682	NO FORMAL NAME
2162	ROGALAND GP
2162	BALDER FM
2208	SELE FM
2262	LISTA FM
2273	HEIMDAL FM
2693	VÅLE FM
2761	SHETLAND GP
2761	JORSALFARE FM
3080	KYRRE FM
3741	TRYGGVASON FM
3913	BLODØKS FM
3917	SVARTE FM
4148	CROMER KNOLL GP
4148	RØDBY FM
4222	SOLA FM
4281	ÅSGARD FM
4417	VIKING GP
4417	DRAUPNE FM
4788	HEATHER FM
5029	VESTLAND GP
5029	HUGIN FM



5120 [SLEIPNER FM](#)

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CALI MRCH GR CCL MFC	100	4268
CBL MRCH GR CCL SBT MFC	3778	4263
DEN NEU MRCH JAR TTRM GR ZDL CN	4317	5204
LWD - GR REMP AC	196	2770
MWD - GR REMP AC	196	4326
MWD - GR REMP DEN NEU AC	4300	4767
MWD - GR REMP DEN NEU AC FMP	4738	5204
PRES MRCH JAR TTRM GR RCI PVT	5030	5207
RES MRCH JAR TTRM DSL HDIL MREX	4300	5187
VSP GR GEOWAVE	205	4135

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	225.0	36	229.0	0.00	LOT
SURF.COND.	20	1273.0	26	1279.0	0.00	LOT
PILOT HOLE		1279.0	9 7/8	1279.0	0.00	LOT
INTERM.	13 5/8	2812.0	17 1/2	2828.0	2.20	LOT
INTERM.	9 5/8	4321.0	12 1/4	4330.0	0.00	LOT
OPEN HOLE		5207.0	8 1/2	5207.0	1.77	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
174	1.05			SPUD MUD	
226	1.05			SPUD MUD	
990	1.05			SPUD MUD	
1120	1.05			SPUD MUD	
1223	1.36	39.0		CARBO TECH	
1279	1.45			SPUD MUD	



1445	1.45	13.0		KCL BRINE	
1720	1.25	16.0		KCL BRINE	
2500	1.39	42.0		CARBO TECH	
2653	1.32	14.0		KCL BRINE	
2711	1.32	18.0		KCL BRINE	
2746	1.39	41.0		CARBO TECH	
2828	1.39	39.0		CARBO TECH	
3051	1.60	37.0		CARBO TECH	
3800	1.60	37.0		CARBO TECH	
4150	1.60	45.0		CARBO TECH	
4276	1.65	53.0		CARBO TECH	
4276	1.65	42.0		CARBO TECH	
4330	1.65	41.0		CARBO TECH	
4772	2.00	47.0		MAGMA TECH	
5101	2.00	50.0		MAGMA TECH	
5207	2.02	51.0		MAGMA TECH	