General information

Wellbore name	15/12-13
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	REV
Discovery	15/12-12 Rev
Well name	15/12-13
Seismic location	Varg 2002 Survey x-line888 inline 1875
Production licence	038
Drilling operator	Pertra AS (OLD)
Drill permit	1055-L
Drilling facility	WEST ALPHA
Drilling days	19
Entered date	23.04.2003
Completed date	11.05.2003
Release date	11.05.2005
Publication date	15.06.2005
Purpose - planned	APPRAISAL
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	18.0
Water depth [m]	87.0
Total depth (MD) [m RKB]	3047.0
Final vertical depth (TVD) [m RKB]	3017.0
Maximum inclination [°]	12.2
Bottom hole temperature [°C]	110
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	HUGIN FM
Geodetic datum	ED50
NS degrees	58° 2' 3.83'' N
EW degrees	1° 55' 4.57'' E
NS UTM [m]	6433197.92
EW UTM [m]	436099.90
UTM zone	31
NPDID wellbore	4733

Wellbore history

General

Well 15/12-13 is located approximately 0.8 km northwest of the 15/12-12 (Varg South) Discovery well. The primary objective was to appraise the Varg South discovery: to define the oil/water contact, measure current reservoir pressure and fluid gradients, confirm reservoir quality and geometry, and confirm geophysical model in terms of depth to top and base reservoir. Potential Kimmeridgian Sandstone immediately above the main Oxfordian reservoir was seen as a secondary objective.

Operations and results

Appraisal well 15/12-13 was spudded with the semi-submersible installation West Alpha on 23 April 2003 and drilled to TD at 3047 m in Middle Jurassic Hugin Formation sandstone. The well is classified as vertical, but due to high deviation the difference between measured depth and vertical depth is 17 m at TD. The well was drilled with seawater and hi-vis sweeps down to 1321 m, and with Sodium silicate (Barasil CX) mud from 1321 m to TD.

Well 15/12-13 penetrated the target Oxfordian sandstone (Intra Heather Formation sandstone) at 3013 m (2966 m TVDSS), which was 105 m deeper than prognosed. This was below OWC, and the sand was water-wet. The overlying Draupne and Heather formations were thicker the than prognoses, and the target area proved to be down faulted. The sand encountered was, based on biostratigraphy, the same as in well 15/12-12. As the objectives were not achieved by this well, it was decided to drill a geological sidetrack.

Well bore 15/12-3 was logged by LWD in two runs; no wire line logs were run. No pressure or fluid sampling tools were run. No cores were cut.

The well bore was plugged back to 1279 m and permanently abandoned on 11 May 2003 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]
1330.00	3040.00

Cuttings available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
105	NORDLAND GP
1048	UTSIRA FM
1240	HORDALAND GP
2286	ROGALAND GP
2286	BALDER FM
2297	SELE FM
2370	LISTA FM
2453	SHETLAND GP
2723	CROMER KNOLL GP
2856	VIKING GP
2856	DRAUPNE FM
2944	HEATHER FM
3013	INTRA HEATHER FM SS
3030	VESTLAND GP
3030	HUGIN FM

Logs

Log type	Log top depth [m]	Log bottom depth [m]
LWD - GR RES	171	1320
LWD - GR RES ALD BAT	1320	3047

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	165.0	36	171.0	0.00	LOT
SURF.COND.	13 3/8	1315.0	17 1/2	1320.0	1.71	LOT
OPEN HOLE		3047.0	12 1/4	3047.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
145	1.05	1.0		SPUD MUD	
167	1.05	7.0		SPUD MUD	
1200	1.07	4.0		SPUD MUD	

1320	1.20	11.0		SPUD MUD	
1400	1.39	29.0		BARASILIC	
2087	1.28	19.0		BARASILIC	
2259	1.45	25.0		POLYMER	
2400	1.56	26.0		BARASILC-13B	
2656	1.54	22.0		BARASILC-13B	
2720	1.37	22.0		BARASILIC	
2951	1.57	22.0		BARASILC-13B	
3040	1.38	27.0		BARASILIC	
3150	1.23	17.0		KCL POLYMER	