



General information





Wellbore name	17/12-4
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	17/12-1 Vette
Well name	17/12-4
Seismic location	Bream 3D:inline 1504 & crossline 3822
Production licence	407
Drilling operator	BG Norge AS
Drill permit	1252-L
Drilling facility	WEST ALPHA
Drilling days	24
Entered date	17.06.2009
Completed date	10.07.2009
Release date	10.07.2011
Publication date	10.07.2011
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRYNE FM
Kelly bushing elevation [m]	18.0
Water depth [m]	110.0
Total depth (MD) [m RKB]	2470.0
Final vertical depth (TVD) [m RKB]	2470.0
Maximum inclination [°]	0.75
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	58° 10' 37.58" N
EW degrees	3° 55' 11.05" E
NS UTM [m]	6448944.03
EW UTM [m]	554097.84
UTM zone	31
NPDID wellbore	6137



Wellbore history

General

Well 17/12-4 was drilled on a crestal location on the 17/12-1 R Bream Discovery in the north-western part of the Egersund Basin in the North Sea. The Bream discovery well, 17/12-1R was drilled in 1972 by Phillips Petroleum. Two more wells (17/12-2 (Brisling oil discovery) and 17/12-3 (dry)) have previously been drilled by Phillips Petroleum on the 17/12 block during the 1970's and early 1980's. Oil was also found in the nearby 18/10-1 well. The primary objectives of all these wells were the Middle Jurassic fluvio-deltaic Bryne Formation sandstones.

The purpose of the 17/12-4 well was to investigate the hydrocarbon potential in reservoirs up dip of the discovery well, in order to make decisions regarding a future development of the Bream Discovery. Planned TD of the well was into the Bryne Formation, at approximately 2440 m TVD MSL.

Operations and results

Well 17/12-4 was spudded with the semi-submersible installation West Alpha on 17 June 2009 and drilled to TD at 2470 m in the Triassic Skagerrak Formation. Drilling proceeded without significant technical problems. The well was drilled with spud mud down to 1212 m and with Versatec DW oil based mud from 1212 m to TD.

The Vestland Group, Sandnes Formation came in at 2276.5 m, 5.5 m deep to prognosis, while top Bryne Formation was picked at the first coal at 2297.8 m, 10.8 m deep to prognosis. The Sandnes Formation contained some good quality sands with average porosity of approximately 23%, but was water-bearing with only few and weak shows. The Bryne Formation contained several sands of good quality, and was oil-bearing down to a common OWC at 2334.5 m (2316.5 m TVD MSL). Below the main OWC there were further oil bearing sands with possibly three OWC's, but these sands were too thin to provide conclusive pressure data. No shows or other hydrocarbon indications were recorded above or below the Vestland Group.

Pressure data was obtained through Sandnes water bearing sands, and Bryne hydrocarbon and water bearing sands. Two cores were cut, beginning from just above the Sandnes Formation and continuing through to below the Bryne OWC. MDT water and oil samples were taken from main water and hydrocarbon bearing sands in the Sandnes Formation at 2284.81m (water), and in the Bryne Formation at 2308.24 m (oil), 2312.99 m (oil), 2331.00 m (oil), 2331.02 m (oil), 2358.00 m (water), and at 2379.01 m (oil).

The 17/12-4 well bore was plugged back to 13 3/8 casing shoe for sidetracking on 10 July 2009. After sidetracking the well was permanently abandoned on 27 August 2009 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]
1220.00	2470.00



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	2268.0	2295.6	[m]
2	2295.6	2349.3	[m]

Total core sample length [m]	81.3
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
128	NORDLAND GP
486	HORDALAND GP
744	ROGALAND GP
744	BALDER FM
773	VÅLE FM
780	SHETLAND GP
780	EKOFISK FM
799	TOR FM
984	HOD FM
1209	BLODØKS FM
1216	CROMER KNOLL GP
1216	RØDBY FM
1335	ÅSGARD FM
1992	BOKNFJORD GP
1992	FLEKKEFJORD FM
2017	SAUDA FM
2149	TAU FM
2198	EGERSUND FM
2277	VESTLAND GP
2277	SANDNES FM
2298	BRYNE FM
2398	FJERRITSLEV FM
2439	NO GROUP DEFINED



2439 [SKAGERRAK FM](#)

Logs

Log type	Log top depth [m]	Log bottom depth [m]
AIT TLD APS ECS HNGS	1202	2462
LWD - GR RES	201	1212
LWD - GR RES	1212	2470
MDT	2284	2396
MDT	2308	2380
OBTI DSI	1202	2460
VSI	279	2455
XPT CMR	2237	2463

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	200.0	36	200.0	0.00	LOT
SURF.COND.	13 3/8	1202.0	17 1/2	1222.0	0.00	LOT
OPEN HOLE		2470.0	8 1/2	2470.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1190	1.25	26.0		Versatec DW OBM	
2470	1.29	27.0		Versatec DW OBM	
2470	1.27	25.0		Versatec DW OBM	
2470	1.26	26.0		Versatec DW OBM	
3253	1.40	34.0		Versamud	