General information

Wellbore name	17/12-3
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	17/12-1 Vette
Well name	17/12-3
Seismic location	78-17/12-05 SP.400
Production licence	016
Drilling operator	Phillips Petroleum Company Norway
Drill permit	233-L
Drilling facility	NORTRYM
Drilling days	52
Entered date	12.12.1979
Completed date	03.02.1980
Release date	03.02.1982
Publication date	25.04.2005
Purpose - planned	APPRAISAL
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	111.0
Total depth (MD) [m RKB]	2730.0
Maximum inclination [°]	1.2
Bottom hole temperature [°C]	76
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	58° 11' 32.84'' N
EW degrees	3° 51' 44.06'' E
NS UTM [m]	6450608.34
EW UTM [m]	550694.18
UTM zone	31
NPDID wellbore	341

Wellbore history

General

Well 17/12-3 is located on the northern margin of the Egersund Basin in the North Sea, ca 3 km west of the 17/12-1R Bream Discovery well. The Bream structure is a domal (salt-induced) anticline. The pay zone is the Middle Jurassic sands at a sub-sea depth of 2377 m (7800 feet). The 17/12-1R well was drilled on the crest of the Bream structure. Here Late Jurassic black marine shales with excellent source rock potential overlie a 156 m thick Early - Middle Jurassic sequence of interbedded sands and shales in which net sand thickness totals 38 m. Two 8 m thick sands near the top of the Middle Jurassic section tested oil. The Upper sand was oil saturated and the lower sand contained an oil/water contact between 2337.2 m and 2344 m (2310.4 m and 2317 m MSL). Two overlying sands, however, contained only water, which indicates that individual sands possess independent hydrodynamic characteristics and, therefore, probably are lenticular and laterally discontinuous. It was expected that on the flank of the structure potential reservoir sands would be thicker, and additional sands would be encountered.

Hence, primary objective was Middle Jurassic sands. Estimated top and thickness of the sand was 2313 m (7590 ft) and 91 m (300 ft), respectively. Planned TD was at 2591 m (8500 ft), 120 m into Triassic sediments

Operations and results

Wildcat well 17/12-3 was spudded with the semi-submersible installation Nortrym on 12 December 1979. Due to technical problems it was re-spudded 19 December. The well was then drilled without significant problems to TD at 2730 m in m in the Triassic Skagerrak Formation.

Top Cretaceous (Tor Formation) came inn at 817 m, 28 m deeper than prognosed. The target Middle Jurassic reservoir sand (Sandnes and Bryne Formations) came in at 2370 m (2345 m MSL), which was 57 m deep to prognosis and ca 30 m MSL deeper than the OWC indicated by the DST's in 17/12-1R. No significant shows were encountered in the well other than in a bituminous shale at 2236 m (Tau Formation). Sidewall cores and RFT results from the sand section were not encouraging and no testing program was undertaken. Organic geochemical analyses show moderate to good source rock potential in the Sauda Formation, with the best properties towards the base. Excellent source potential was found in the Tau Formation with TOC typically around 6 % and Hydrogen Index between 500 and 600 mg HC/ g TOC. Below this depth shales and coals in the Sandnes and Bryne formation also show good source potential. Based on the vitrinite reflectance and rock-eval Tmax data the well is immature, possibly early mature (Ro = 0.5 %) at TD of the well.

No conventional core was cut. Sidewall cores were taken from 2225 m to 2701 m. The RFT tool was run in the interval 2373 m to 2678 m. One RFT fluid sample was taken at 2373 m and another at 2687 m. Both recovered water.

The well was permanently abandoned on 3 February 1980 as a dry hole.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
470.00	2720.00

Cuttings available for sampling?	NO

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
137	NORDLAND GP
528	HORDALAND GP
768	ROGALAND GP
768	BALDER FM
790	SELE FM
794	LISTA FM
798	VÅLE FM
801	SHETLAND GP
801	EKOFISK FM
817	TOR FM
1157	HOD FM
1266	CROMER KNOLL GP
1266	RØDBY FM
1388	SOLA FM
1555	ÅSGARD FM
1957	BOKNFJORD GP
1957	FLEKKEFJORD FM
2010	SAUDA FM
2236	TAU FM
2288	EGERSUND FM
2370	VESTLAND GP
2370	SANDNES FM
2396	BRYNE FM
2617	NO GROUP DEFINED
2617	GASSUM FM
2638	NO GROUP DEFINED
2638	SKAGERRAK FM

Composite logs

Document name	Document format	Document size [MB]
341	pdf	0.34

Geochemical information

Document name	Document format	Document size [MB]
341_1	pdf	0.95
341_2	pdf	0.88
341_3	pdf	2.68
341_4	pdf	0.32
341_5	pdf	1.11

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
341_01_WDSS_General_Information	pdf	0.12
341_02_WDSS_completion_log	pdf	0.19

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
341_01_Well_summary	pdf	24.74
341_02_Composite_log	pdf	1.66

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL GR	472	1283
CBL VDL	975	1292
CDM	1302	2722
CDM AP	1318	2721
FDC CNL GR	1302	2728
ISF SONIC GR	143	1277
ISF SONIC GR	1302	2718
MLL ML	1302	2728

MUD	305	2730
RFT	0	0
VELOCITY	486	2728

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	167.0	0.00	LOT
SURF.COND.	20	461.0	26	478.0	1.69	LOT
INTERM.	13 3/8	1278.0	17 1/2	1293.0	1.82	LOT
OPEN HOLE		2730.0	12 1/4	2730.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1475	1.23	46.0		waterbased	
1640	1.21	48.0		waterbased	
1800	1.18	50.0		waterbased	
1975	1.20	43.0		waterbased	
2410	1.23	45.0		waterbased	
2595	1.25	54.0		waterbased	

Pressure plots

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
341_Formation_pressure_(Formasjonstrykk)	pdf	0.22