Generell informasjon

Brønnbane navn	25/8-8 B
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	JOTUN
Funn	25/8-8 S Jotun
Brønn navn	25/8-8
Seismisk lokalisering	ES 9403- INLINE 2672 & CDP 2131
Utvinningstillatelse	027 P
Boreoperatør	Esso Exploration and Production Norway A/S
Boretillatelse	831-L
Boreinnretning	VILDKAT EXPLORER
Boredager	13
Borestart	12.10.1995
Boreslutt	24.10.1995
Frigitt dato	24.10.1997
Publiseringsdato	20.10.2003
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	PALEOCENE
1. nivå med hydrokarboner, formasjon.	HEIMDAL FM
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	126.5
Totalt målt dybde (MD) [m RKB]	2510.0
Totalt vertikalt dybde (TVD) [m RKB]	2178.0
Maks inklinasjon [°]	46.6
Eldste penetrerte alder	PALEOCENE
Eldste penetrerte formasjon	LISTA FM
Geodetisk datum	ED50
NS grader	59° 25' 51.87'' N
ØV grader	2° 24' 18.73'' E

NS UTM [m]	6588357.70
ØV UTM [m]	466254.24
UTM sone	31
NPDID for brønnbanen	2696

Brønnhistorie

General

Well 25/8-8 S was drilled to test the Paleocene Heimdal Formation sandstones (Tau Prospect) located southeast of the Jotun Field and north east of the Balder Field on the east margin of the South Viking Graben. The well was planned with flexibility to be sidetracked into two other reservoir segments from the same 13 3/8" casing. The well proved oil in the target and two sidetracks were drilled. Well 25/8-8 A was the first sidetrack and the objective was to appraise the discovery in the primary well and to evaluate the sand quality in the eastern segment of the Tau Structure. Well 25/8-8 B was the second sidetrack and the objective was to appraise and evaluate resource potential in the western segment of the 25/8-8 S Discovery and to confirm oil-water and possibly gas-oil contacts.

Operations and results

Exploration well 25/8-8 S was spudded with the semi-submersible installation "Vildkat Explorer" on 22 August 1995 and drilled deviated to TD at 2592 m (2343.7 m TVD SS) in the Late Jurassic Draupne Formation. The well was drilled to 1058 m with seawater and high viscosity gel pills. From 1058 m to TD the well was drilled using an oil-based mud, "Safemul". MWD-GR-Res was used during drilling. MWD-resistivity failed at 872 m and the hole was drilled to 1058 m without resistivity log. No shallow gas was observed. The 13 3/8" casing was set at 1046.5 m.

When the second run with the MDT was done, the MDT cable became stuck. The cable broke at the casing shoe, leaving the tool and about 1000 m of cable in the hole. A fishing job was performed to get the tool and cable out. The fishing job was successful and the rest of the logging program was completed.

The target Heimdal Formation was penetrated at 2236 m and was found hydrocarbon bearing. A GOC is indicated within the interval 2244.9-2252.0 m (2057.0-2063.0 m TVD SS) based on ELAN log analysis, pressure analysis and geochemical analyses. Available well data indicate an OWC at 2283.5 m (2089.3 m TVD SS) with oil saturation up to 5 m TVD deeper. Three 27-metre cores were cut in the Lista and Heimdal Formations in the interval 2228 m to 2309 m. Fluid samples were taken in the first MDT run at 2244.2 m (gas) and 2260.0 m (oil). After testing the well was plugged back to the 13 3/8" casing and the casing pulled to get ready for the first sidetrack, 25/8-8 A.

Sidetrack 25/8-8 A was kicked off from below the 13 3/8" casing shoe at 1080 m on 26 September 1995 and drilled to a TD of 2601.3 m (2158.1 m TVD SS) in the Early Paleocene Ty Formation. The wellbore was drilled with "Safemul" oil based mud from kick off to TD. Based on MDT pressures and extensive MDT sampling 25/8-8 A confirmed oil and gas in the Heimdal Formation with a GOC estimated at 2057.8 m TVD SS and an OWC estimated at 2094.5 m TVD SS. It also proved the amount of sand and reservoir quality decrease eastwards from the original 25/8-8 S well location. Borehole 25/8-8 A was not drill stem tested. Four conventional cores were cut in the Lista and Heimdal Formations in the interval 2414 m to 2522 m. MDT fluid samples were recovered from the Heimdal Formation at depths 2430 m (gas),& 2445.6 m (gas), 2453 m (oil), and 2457.8 m (oil). Post-well organic geochemical analyses indicated some "diesel" contamination in the oil samples. After logging sidetrack 25/8-8A was plugged and abandoned as an oil and gas appraisal well.

The second sidetrack, 25/8-8 B, was kicked off from 1080 m on 11 October 1995 and drilled to a total depth of 2510 m (2152 m TVD SS) in the Paleocene Lista Formation. The well was drilled with oil-based mud from kick off to TD.

Pressures and extensive MDT sampling confirmed the oil and water gradients and defined the OWC in the Heimdal Formation. The oil water contact was found at 2428.9 m (2094.7 m TVD SS). The well was not drill stem tested. Three cores were cut in the Lista and Heimdal Formations from 2375 m to 2441 m. After logging sidetrack 25/8-8 B was plugged back and abandoned as an oil and gas appraisal well.

The primary wellbore 25/8-8 S was permanently abandoned on October 24, 1995 as an oil and gas discovery, named the 25/8-8 S Jotun Discovery.

Testing

Well 25/8-8 S was drill stem tested. The main interval 2258 m - 2267 m produced a little sand (1%) at 795 Sm3/day and was chocked back to 628 Sm3/day for the main flow. GOR was 70 Sm3/Sm3.& After the main flow, a lower interval 2275-2279 m was perforated with tubing conveyed gun and the two intervals were flowed co-mingled at 1065 Sm3/day with traces of sand. GOR was 70 Sm3/Sm3.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1060.00	2510.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2375.0	2381.1	[m]
2	2387.0	2414.0	[m]
3	2414.0	2441.8	[m]

Total kjerneprøve lengde [m]	60.8
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1060.0	[m]	DC	STRAT
1160.0	[m]	DC	STRAT
1220.0	[m]	DC	STRAT

1241.0	[m]	SWC	STRAT
1260.0	[m]	DC	STRAT
1280.0	[m]	SWC	STRAT
1311.0	[m]	SWC	STRAT
1330.0	[m]	DC	STRAT
1350.0	[m]	DC	STRAT
1390.0	[m]	DC	STRAT
1425.0	[m]	SWC	STRAT
1430.0	[m]	DC	STRAT
1470.0	[m]	DC	STRAT
1490.0	[m]	DC	STRAT
1510.0	[m]	DC	STRAT
1550.0	[m]	DC	STRAT
1590.0	[m]	DC	STRAT
1630.0	[m]	DC	STRAT
1670.0	[m]	DC	STRAT
1710.0	[m]	DC	STRAT
1724.0	[m]	SWC	STRAT
1760.0	[m]	DC	STRAT
1812.0	[m]	SWC	STRAT
1850.0	[m]	DC	STRAT
1903.0	[m]	SWC	STRAT
1940.0	[m]	DC	STRAT
1980.0	[m]	DC	STRAT
2010.0	[m]	SWC	STRAT
2050.0	[m]	DC	STRAT
2090.0	[m]	DC	STRAT
2132.0	[m]	SWC	STRAT
2150.0	[m]	DC	STRAT
2173.4	[m]	SWC	STRAT
2180.0	[m]	DC	STRAT
2180.0	[m]	DC	STRAT
2190.0	[m]	DC	STRAT
2205.3	[m]	SWC	STRAT
2220.0	[m]	DC	STRAT
2240.0	[m]	DC	STRAT
2242.7	[m]	SWC	STRAT
2252.0	[m]	SWC	STRAT
2268.0	[m]	SWC	STRAT
2278.7	[m]	SWC	STRAT

2290.0	[m]	DC	STRAT
2300.0	[m]	DC	STRAT
2310.0	[m]	DC	STRAT
2316.1	[m]	SWC	STRAT
2325.4	[m]	SWC	STRAT
2331.5	[m]	SWC	STRAT
2339.5	[m]	SWC	STRAT
2351.4	[m]	SWC	STRAT
2360.0	[m]	DC	STRAT
2375.0	[m]	DC	STRAT
2375.0	[m]	C	STRAT
2380.0	[m]	C	STRAT
2394.0	[m]	C	STRAT
2408.0	[m]	C	STRAT
2419.0	[m]	C	STRAT
2421.0	[m]	C	STRAT
2438.0	[m]	C	STRAT
2441.0	[m]	C	STRAT
2451.0	[m]	SWC	STRAT
2460.0	[m]	DC	STRAT
2469.0	[m]	SWC	STRAT
2482.0	[m]	SWC	STRAT
2490.0	[m]	DC	STRAT
2500.0	[m]	DC	STRAT
2510.0	[m]	DC	STRAT

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
152	NORDLAND GP
474	UTSIRA FM
610	NO FORMAL NAME
668	HORDALAND GP
668	SKADE FM
1025	NO FORMAL NAME
1191	SKADE FM
1233	NO FORMAL NAME
1313	GRID FM
1336	NO FORMAL NAME

2173	ROGALAND GP
2173	BALDER FM
2243	SELE FM
2327	LISTA FM
2382	HEIMDAL FM
2446	LISTA FM

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
2696_25_8_8_B_COMPLETION_REPORT_AND_LOG	pdf	38.86

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
AIT IPL EPT HNGS	1046	2508
CST GR	1241	2497
MDT GR	2383	2445
MDT GR	2402	2402
MULTISHOT SURVEY	1062	2503
MWD - GR RES DIR	1046	2502
UBI DSI GR	1046	2500
VSP	500	2490

Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
CONDUCTOR	30	214.0	36	214.0	0.00	LOT
SURF.COND.	13 3/8	1046.0	17 1/2	1047.0	1.72	LOT
OPEN HOLE		2510.0	8 1/2	2510.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
1078	0.00			OIL BASED	

Tynnslip i Sokkeldirektoratet

Dybde	Enhet
2441.65	[m]
2434.25	[m]
2436.25	[m]
2430.50	[m]
2427.50	[m]
2425.30	[m]
2422.50	[m]
2418.75	[m]
2418.50	[m]
2417.50	[m]
2412.25	[m]
2406.25	[m]
2409.30	[m]
2402.25	[m]
2401.10	[m]
2399.85	[m]
2397.25	[m]
2383.25	[m]
2391.75	[m]
2391.00	[m]
2390.60	[m]
2369.25	[m]
2387.50	[m]

Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
2696_Formation_pressure_(Formasjonstrykk)	pdf	0.22