Generell informasjon

Brønnbane navn	25/8-9
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	25/8-9
Brønn navn	25/8-9
Seismisk lokalisering	ES 9403 INLINE - 1173 & CROSSLINE - 259
Utvinningstillatelse	189
Boreoperatør	Amerada Hess Norge AS
Boretillatelse	871-L
Boreinnretning	BYFORD DOLPHIN
Boredager	24
Borestart	05.01.1997
Boreslutt	28.01.1997
Plugget dato	28.01.1997
Frigitt dato	28.01.1999
Publiseringsdato	29.08.2003
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
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]	125.0
Totalt målt dybde (MD) [m RKB]	2548.0
Totalt vertikalt dybde (TVD) [m RKB]	2540.0
Maks inklinasjon [°]	10.5
Temperatur ved bunn av brønnbanen [°C]	91
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	AMUNDSEN FM
Geodetisk datum	ED50

NS grader	59° 28' 6.08'' N
ØV grader	2° 30' 24.9'' E
NS UTM [m]	6592462.13
ØV UTM [m]	472055.66
UTM sone	31
NPDID for brønnbanen	2988

Brønnhistorie

General

Well 25/8-9 is located East-Northeast of the Jotun Field. The two main objectives for drilling well 25/8-9 were to test the hydrocarbon potential of Early Palaeocene Heimdal Formation sandstones (Krap prospect) and secondly sandstones of the Middle Jurassic Hugin Formation. The well found oil in the Early Heimdal Formation and it was decided to sidetrack (25/8-9 A) to appraise and test the hydrocarbon potential in this discovery.

Operations and results

Exploration well 25/8-9 was spudded with the semi-submersible installation "Byford Dolphin" on 5 January 1997 and drilled to TD at 2548 m in the Early Jurassic Amundsen Formation. The well was drilled with seawater and pre-hydrated bentonite sweeps down to 1110 m and with "Ancovert" oil based mud from 1110 m to TD. No shallow gas or boulder beds were encountered in the uppermost well section. Well 25/8-9 penetrated mainly clays and claystones in the Nordland, Hordaland, and Rogaland groups with both the Utsira (694 m to 905 m) and Grid (1300.5 m to1345.0 m) Formation sandstones being present. Interbedded shales and thin Heimdal Formation sands were encountered between 2096 and 2189 m and hydrocarbons were found present in the uppermost reservoir section, however reservoir quality proved very poor. A FWL/OWC was not possible to define either from MDT (pressure) or logs, but an ODT at 2069 m TVD SS was established. Top Ty Formation was reached at 2228 m, consisting of upper clean sand divided by a shaly unit from a lower clean sandstone divided by a thin shale bed. It continued down to top Shetland Group at 2323 m. No hydrocarbons were found in the Ty Formation. The Shetland Group consisted mainly of chalk with the Cromer Knoll Group consisting of limestones interbedded with claystones and marls.

The Hugin Formation sandstones came in at 2432 m and were found to be water bearing. One core totalling 27 metres was cut in the interval 2098 m to 2126 m in the Heimdal Formation. Two cores totalling 50 metres were cut from 2440 m to 2490 m in the Hugin and Sleipner Formations, showing excellent reservoir parameters. Two MDT fluid samples were taken in the Heimdal Formation at 2097.9 m (oil) and 2110.8 m (water). PVT analysis showed the fluid was 99% formation oil and 1% oil phase filtrate in the oil sample. It was impossible to keep sample pressure above 2300 PSI due to tight formation. Pressure increased very slowly after chamber was filled.

After plugging back to 1107 m the geological sidetrack, well 25/8-9A, commenced on 29 January 1997. The sidetrack was kicked off at 1122 m and drilled to a total depth of 2687 m (2223 m TVD RKB) as prognosed, 49 metres (true vertical thickness) into sediments of the Late Paleocene Lower Lista Formation. The sidetrack was drilled oil-based ("ANCOVERT") from kick off to TD. The well penetrated mainly clays and claystones in the Hordaland and Rogaland groups with the Grid Formation sandstones being present from 1292 m to 1355.0 m. Interbedded shales and thin Heimdal Formation sands were encountered between 2478.0 m and 2607 m. Hydrocarbons (oil) were found present in the uppermost reservoir section, however, reservoir quality proved very poor. Two cores totalling 53.8 metres were cut in the interval 2495 m to 2551 m in the Heimdal Formation. Two MDT fluid samples were taken in the Heimdal Formation at 2492.1 m (oil) and 2508.3 m (water). Laboratory analysis indicated 20 - 25 % mud filtrate in the oil sample. Again, as in the primary wellbore, a FWL/OWC was not possible to define due to high shale/calcification content and tight formation. In this wellbore ODT was established at 2078 m TVD SS. Due to low productivity none of the wellbores were drill stem tested. Wellbore 25/8-9 A was plugged on 14 February 1997. Wellbore 25/8-9 was permanently plugged and abandoned as an oil discovery on 14 February 1997.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1120.00	2548.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2098.0	2125.0	[m]
2	2440.0	2468.0	[m]
3	2468.0	2490.4	[m]

Total kjerneprøve lengde [m]	77.4
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder


2098-2103m


2103-2108m


2108-2113m


2113-2118m


2118-2123m


2123-2125m


2440-2445m


2445-2450m


2450-2455m


2455-2460m


2460-2465m


2465-2468m


2468-2473m


2473-2478m


2478-2483m

2483-2488m

2488-2490m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1298.0	[m]	SWC	RRI
1324.5	[m]	SWC	RRI
1348.0	[m]	SWC	RRI
1413.0	[m]	SWC	RRI
1454.0	[m]	SWC	RRI
1592.0	[m]	SWC	RRI
1656.0	[m]	SWC	RRI
1736.0	[m]	SWC	RRI
1750.0	[m]	DC	RRI
1760.0	[m]	DC	RRI
1770.0	[m]	DC	RRI
1780.0	[m]	DC	RRI
1790.0	[m]	DC	RRI
1800.0	[m]	DC	RRI
1808.0	[m]	SWC	RRI
1820.0	[m]	DC	RRI
1830.0	[m]	DC	RRI
1840.0	[m]	DC	RRI
1854.0	[m]	SWC	RRI
1860.0	[m]	DC	RRI
1870.0	[m]	DC	RRI
1880.0	[m]	DC	RRI
1890.5	[m]	SWC	RRI
1900.0	[m]	DC	RRI
1908.0	[m]	SWC	RRI
1920.0	[m]	DC	RRI
1930.0	[m]	DC	RRI
1938.0	[m]	SWC	RRI
1950.0	[m]	DC	RRI

1961.5	[m]	SWC	RRI
1970.0	[m]	DC	RRI
1980.0	[m]	DC	RRI
1990.0	[m]	DC	RRI
1997.5	[m]	SWC	RRI
2010.0	[m]	DC	RRI
2020.0	[m]	DC	RRI
2031.0	[m]	SWC	RRI
2041.0	[m]	DC	RRI
2049.0	[m]	SWC	RRI
2059.0	[m]	DC	RRI
2068.0	[m]	DC	RRI
2076.0	[m]	SWC	RRI
2088.0	[m]	SWC	RRI
2091.5	[m]	SWC	RRI
2095.0	[m]	DC	RRI
2098.0	[m]	C	RRI
2113.0	[m]	C	RRI
2125.0	[m]	C	RRI
2131.0	[m]	DC	RRI
2138.5	[m]	SWC	RRI
2148.0	[m]	SWC	RRI
2161.0	[m]	DC	RRI
2168.0	[m]	SWC	RRI
2176.0	[m]	SWC	RRI
2191.0	[m]	SWC	RRI
2200.0	[m]	DC	RRI
2209.0	[m]	DC	RRI
2218.0	[m]	DC	RRI
2227.5	[m]	SWC	RRI
2234.0	[m]	SWC	RRI
2240.5	[m]	SWC	RRI
2251.0	[m]	DC	RRI
2261.0	[m]	SWC	RRI
2269.0	[m]	DC	RRI
2281.0	[m]	DC	RRI
2287.0	[m]	SWC	RRI
2299.0	[m]	DC	RRI
2313.0	[m]	SWC	RRI
2320.0	[m]	DC	RRI

2359.0	[m]	DC	RRI
2380.0	[m]	DC	RRI
2383.0	[m]	DC	RRI
2386.0	[m]	DC	RRI
2389.0	[m]	DC	RRI
2401.0	[m]	DC	RRI
2410.0	[m]	DC	RRI
2419.0	[m]	DC	RRI
2431.5	[m]	SWC	RRI
2434.0	[m]	DC	RRI
2437.0	[m]	DC	RRI
2438.5	[m]	SWC	RRI
2440.0	[m]	C	RRI
2442.0	[m]	C	RRI
2449.0	[m]	SWC	RRI
2452.0	[m]	DC	RRI
2458.0	[m]	DC	RRI
2460.0	[m]	DC	RRI
2464.0	[m]	DC	RRI
2467.0	[m]	DC	RRI
2470.0	[m]	DC	RRI
2473.0	[m]	DC	RRI
2476.0	[m]	C	RRI
2477.0	[m]	C	RRI
2478.0	[m]	C	RRI
2479.0	[m]	C	RRI
2488.0	[m]	DC	RRI
2491.0	[m]	DC	RRI
2494.0	[m]	DC	RRI
2497.0	[m]	DC	RRI
2500.0	[m]	DC	RRI
2502.0	[m]	SWC	RRI
2506.0	[m]	DC	RRI
2509.0	[m]	DC	RRI
2512.5	[m]	SWC	RRI
2515.0	[m]	DC	RRI
2530.0	[m]	DC	RRI
2542.5	[m]	SWC	RRI
2548.0	[m]	DC	RRI

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
150	NORDLAND GP
550	UTSIRA FM
780	NO FORMAL NAME
790	HORDALAND GP
790	SKADE FM
905	NO FORMAL NAME
1301	GRID FM
1345	NO FORMAL NAME
1905	ROGALAND GP
1905	BALDER FM
1988	SELE FM
2037	LISTA FM
2096	HEIMDAL FM
2189	LISTA FM
2228	TY FM
2304	VÅLE FM
2323	SHETLAND GP
2323	SVARTE FM
2355	CROMER KNOLL GP
2355	RØDBY FM
2369	SOLA FM
2376	MIME FM
2379	ÅSGARD FM
2383	VIKING GP
2383	DRAUPNE FM
2392	HEATHER FM
2432	VESTLAND GP
2432	HUGIN FM
2477	SLEIPNER FM
2515	DUNLIN GP
2515	AMUNDSEN FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
2988	pdf	0.38

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
2988_1	pdf	1.57
2988_2	pdf	1.16

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
2988_25_8_9_COMPLETION_REPORT	pdf	110.86

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
AIT DSI GPIT GR AMS SP	1096	2550
CST GR	1298	2542
MDT GR AMS	2092	2476
MWD - DIR	151	1110
MWD - DIR FE	1070	2440
MWD - DIR FE	2490	2548
UBI IPL GR AMS	1096	2526
VSP	504	2544

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	222.0	36	222.0	0.00	LOT
SURF.COND.	9 5/8	1100.0	12 1/4	1100.0	1.60	LOT
OPEN HOLE		2548.0	8 1/2	2548.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
1110	0.00			SW/BENTONITE	
1940	1.29	28.0		ANCOVERT OBM	
2440	1.31	31.0		ANCOVERT OBM	
2468	1.31	29.0		ANCOVERY OBM	
2507	1.31	31.0		ANCOVERT OBM	
2548	1.29	33.0		ANCOVERT OBM	

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]
2988_Formation_pressure_(Formasjonstrykk)	pdf	0.22