



Generell informasjon

Brønnbane navn	16/1-8
Type	EXPLORATION
Formål	WILDCAT
Status	SUSPENDED
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	EDVARD GRIEG
Funn	16/1-8 Edvard Grieg
Brønn navn	16/1-8
Seismisk lokalisering	ST9511M06 3085 & x-line ST9511M06 2334
Utvinningstillatelse	338
Boreoperatør	Lundin Norway AS
Boretillatelse	1152-L
Boreinnretning	BREDFORD DOLPHIN
Boredager	67
Borestart	08.09.2007
Boreslutt	13.11.2007
Frigitt dato	13.11.2009
Publiseringsdato	13.11.2009
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	JURASSIC
1. nivå med hydrokarboner, formasjon.	NO GROUP DEFINED
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	108.0
Totalt målt dybde (MD) [m RKB]	2200.0
Totalt vertikalt dybde (TVD) [m RKB]	2200.0
Maks inklinasjon [°]	1.7
Temperatur ved bunn av brønnbanen [°C]	87
Eldste penetrerte alder	LATE TRIASSIC
Eldste penetrerte formasjon	NO GROUP DEFINED



Geodetisk datum	ED50
NS grader	58° 50' 8.63" N
ØV grader	2° 14' 6.36" E
NS UTM [m]	6522162.97
ØV UTM [m]	455844.01
UTM sone	31
NPDID for brønnbanen	5612

Brønnhistorie

**General**

Well 16/1-8 was drilled on the Luno Prospect on the eastern margin of the South Viking Graben on the south-western part of the Utsira High in the North Sea. The Luno prospect is situated between well 16/1-5 with oil shows in Late Jurassic and 16/1-4 with gas/condensate discovery in fractured basement rocks and up dip from the 16/1-7 Jurassic discovery. The primary objective of well 16/1-8 was to test the hydrocarbon potential in Late Jurassic sandstones of the Viking Group. Secondary objectives were to assess the quality of the Eocene Grid Formation and Permo-Triassic sandstones. Total depth was planned in basement at 2173 +/- 50 m.

Operations and results

Well 16/1-8 was spudded with the semi-submersible installation Bredford Dolphin on 8 September 2007 and drilled to TD at 2200 m in undefined Triassic formations consisting of conglomerates, sandstones and claystone. A shallow gas zone was warned and encountered in a thin sand from 634 - 638 m. Downtime (NPT) for the operations was as much as 33% of total rig time. Forty-four per cent of the total NPT was due to WOW before anchor handling. Another 14 % of NPT was caused by problems with cementing the 13 3/8" casing. In addition formation characteristics in the reservoir made operations challenging, and combined with increased formation evaluation scope; time spent on coring, logging and drilling to TD drastically increased compared to plan. The well was drilled with seawater and hi-vis pills down to 400 m, with KCl/glycol enhanced mud (GEM) from 400 to 1196 m, and with Performadril mud from 1196 m to TD. Performadril may contain up to 5% polyakylene glycols.

The Eocene sandstones of the Grid Formation at 1556 m were found water bearing with normal pressure gradient. Top Jurassic was encountered at 1925 m and contained sandstones and conglomerates with hydrocarbon shows. A 2 m thick and questionable Late Jurassic sequence was seen on top. Palynoflora at 1930.7 m suggested a Middle to Early Jurassic age. Hydrocarbons were encountered from 1925 m down to an OWC based on MDT pressure data at ca 1965 m, which gives an oil column of ca 40 m. Shows on cores continued down to 1966.3 m. No shows were recorded below this depth or above 1925 m. The reservoir was not easily characterized by log data as these were affected by feldspar rich conglomerates and other electrically conductive materials.

Three conventional cores were cut. The first two were taken in the hydrocarbon bearing interval and the third in the water bearing interval. MDT pressure and fluid sampling was carried out and the fluid gradients were determined (oil and water). The fluid samples were taken at 1933.6 m, 1939.4 m, 1952.8 m, and 1956.4 m (oil), and at 1982 m (water).

The plan was to permanently abandon the well, but due to the characteristics of the discovery, a decision was made to temporarily abandon the well with the purpose of re-entering to perform a DST at a later stage.

The well was suspended on 13 November 2007 as an oil discovery.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
410.00	2201.00



Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1930.0	1935.3	[m]
2	1944.0	1945.6	[m]
3	1965.5	1973.0	[m]

Total kjerneprøve lengde [m]	14.4
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1880.0	[m]	DC	NETWORK
1890.0	[m]	DC	NETWOR
1900.0	[m]	DC	NETWOR
1910.0	[m]	DC	NETWOR
1919.0	[m]	DC	NETWOR
1925.0	[m]	DC	NETWOR
1931.0	[m]	DC	NETWOR
1940.0	[m]	DC	NETWOR
1946.0	[m]	DC	NETWOR
1952.0	[m]	DC	NETWOR
1958.0	[m]	DC	NETWOR
1965.0	[m]	DC	NETWOR
1971.0	[m]	DC	NETWOR
1977.0	[m]	DC	NETWOR
1983.0	[m]	DC	NETWOR
1989.0	[m]	DC	NETWOR
1995.0	[m]	DC	NETWOR
2000.0	[m]	DC	NETWOR
2006.0	[m]	DC	NETWOR
2012.0	[m]	DC	NETWOR
2018.0	[m]	DC	NETWOR
2024.0	[m]	DC	NETWOR
2030.0	[m]	DC	NETWOR



2036.0	[m]	DC	NETWOR
2042.0	[m]	DC	NETWOR
2045.0	[m]	DC	NETWOR
2048.0	[m]	DC	NETWOR
2051.0	[m]	DC	NETWOR
2054.0	[m]	DC	NETWOR
2060.0	[m]	DC	NETWOR
2066.0	[m]	DC	NETWOR
2072.0	[m]	DC	NETWOR
2078.0	[m]	DC	NETWOR
2084.0	[m]	DC	NETWOR
2087.0	[m]	DC	NETWOR
2090.0	[m]	DC	NETWOR
2093.0	[m]	DC	NETWOR
2096.0	[m]	DC	NETWOR
2099.0	[m]	DC	NETWOR
2102.0	[m]	DC	NETWOR
2105.0	[m]	DC	NETWOR
2108.0	[m]	DC	NETWOR
2111.0	[m]	DC	NETWOR
2114.0	[m]	DC	NETWOR
2117.0	[m]	DC	NETWOR
2120.0	[m]	DC	NETWOR
2126.0	[m]	DC	NETWOR
2132.0	[m]	DC	NETWOR
2138.0	[m]	DC	NETWOR
2144.0	[m]	DC	NETWOR
2150.0	[m]	DC	NETWOR
2156.0	[m]	DC	NETWOR
2162.0	[m]	DC	NETWOR
2168.0	[m]	DC	NETWOR
2174.0	[m]	DC	NETWOR
2180.0	[m]	DC	NETWOR
2186.0	[m]	DC	NETWOR
2192.0	[m]	DC	NETWOR
2198.0	[m]	DC	NETWOR

Litostratigrafi



Topp Dyb [mMD RKB]	Litostrat. enhet
133	NORDLAND GP
745	UTSIRA FM
882	HORDALAND GP
963	SKADE FM
1157	NO FORMAL NAME
1556	GRID FM
1713	NO FORMAL NAME
1765	ROGALAND GP
1765	BALDER FM
1781	SELE FM
1801	LISTA FM
1891	VÅLE FM
1897	SHETLAND GP
1897	EKOFISK FM
1913	HOD FM
1925	NO GROUP DEFINED
1964	NO GROUP DEFINED

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
5612	pdf	0.39

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CMR HRLA PEX ECS	1900	2195
CMR MDT	1875	2060
FMI MSIP	1886	2060
MDT	1933	1939
MDT	1952	1956
MDT	1978	1939
MSCT	1350	1959
MSCT	1906	2010
MSCT	1923	1939
MSCT	1940	2115





MSCT	1951	1957
MSCT	1958	2110
MWD LWD - GR RES PESS	133	1194
MWD LWD - GR RES PR DENS POR SON	1196	2200
VSP	335	2173

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
180	0.00	110.0		WATER BASED	
212	1.25	65.0		WATER BASED	
220	0.00	110.0		WATER BASED	

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]
5612 Formation pressure (Formasjonstrykk)	PDF	0.22

