



Generell informasjon

Brønnbane navn	6507/8-1
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Felt	HEIDRUN
Funn	6507/7-2 Heidrun
Brønn navn	6507/8-1
Seismisk lokalisering	CN 8502 - 518 SP. 127
Utvinningstillatelse	124
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	529-L
Boreinnretning	DYVI DELTA
Boredager	43
Borestart	28.10.1986
Boreslutt	09.12.1986
Frigitt dato	09.12.1988
Publiseringsdato	17.09.2007
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	FANGST GP
2. nivå med hydrokarboner, alder	EARLY JURASSIC
2. nivå med hydrokarboner, formasjon	TILJE FM
Avstand, boredekk - midlere havflate [m]	29.0
Vanndybde ved midlere havflate [m]	342.0
Totalt målt dybde (MD) [m RKB]	2600.0
Totalt vertikalt dybde (TVD) [m RKB]	2600.0
Maks inklinasjon [°]	2.6
Temperatur ved bunn av brønnbanen [°C]	86
Eldste penetrerte alder	EARLY JURASSIC



Eldste penetrerte formasjon	ÅRE FM
Geodetisk datum	ED50
NS grader	65° 18' 35.03" N
ØV grader	7° 20' 52.8" E
NS UTM [m]	7244164.64
ØV UTM [m]	423003.38
UTM sone	32
NPDID for brønnbanen	933

Brønnhistorie

**General**

Well 6507/8-1 was drilled on the eastern part of the Heidrun Discovery. The primary objective was to ascertain that the Heidrun field extension into the 6507/8 block and to verify reserve calculations. Secondary objectives were to verify geological model and structural interpretation, and define oil water contact in the Tilje Formation. It was also intended to provide more information on reservoir characteristics and hydrocarbon fluids, and maximum input of data for reservoir simulation studies. The Fangst Group was expected at 2245 m, and the Tilje Formation at 2340 m. Prognosed TD was 2590 m.

Operations and results

Wildcat well 6507/8-1 was spudded with the semi-submersible installation Dyvi Delta on and drilled to TD at 2600 m in Early Jurassic sediments of the Åre Formation. Drilling proceeded without significant problems. The well was drilled with seawater and hi-vis pills down to 1063 m, with KCl/polymer mud from 1063 m to 2235 m, and with gel/polymer/lingo mud from 2235 m to TD.

The only oil shows reported above the target reservoir were on sandstone in a cuttings sample at 2235, and on limestone in a SWC at 2238 m, both samples from the Melke Formation. The Middle Jurassic Fangst Group was penetrated at 2248 m and the Early Jurassic Tilje Formation at 2386.5 m. These reservoir sandstones were found to be hydrocarbon bearing with a gas/oil contact at 2312 m and an oil/water contact at 2480 m.

A total of 9 cores were cut from 2249 m to 2469 m in the Garn, Not, Ile, Ror, and Tilje Formations. Core no 1 from the Garn Formation was loose sand and was lost on the drill floor while recovering from core barrel. One relatively good RFT fluid sample was taken at 2317 m. It contained oil with a density of 0.88 g/cc (29 deg API).

The well was permanently abandoned on 9 December 1986 as a gas and oil appraisal.

Testing

Two DST tests were performed in the Tilje Formation.

DST 1 tested the interval 2444 - 2463 m and produced 715 Sm³ oil and 31460 Sm³ gas /day through a 3.81 cm choke. The GOR was 44 Sm³/Sm³, the stock tank oil gravity was 0.933 g/cm³ (22.8 deg API), and the gas gravity was 0.600 (air=1). This test produced no sand.

DST 2 tested the interval 2386.4 -2405.4 m and produced 906 Sm³ oil and 50080 Sm³ gas /day through a 1.91 cm choke. The GOR was 55 Sm³/Sm³, the stock tank oil gravity was 0.917 g/cm³ (22.8 deg API), and the gas gravity was 0.615 (air=1) with 0.5 ppm H₂S and 1.5 % CO₂. This test also produced some sand. The down-hole temperatures recorded during the tests were 84.9 and 81 deg C in DST 1 and DST 2, respectively.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1050.00	2600.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerter i Sokkeldirektoratet



Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
2	2262.0	2272.3	[m]
3	2290.0	2314.5	[m]
4	2316.0	2343.9	[m]
5	2369.0	2386.9	[m]
6	2398.0	2411.6	[m]
7	2417.0	2434.3	[m]
8	2439.0	2466.9	[m]
9	2467.0	2494.8	[m]

Total kjerneprøve lengde [m]	167.1
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2267-2271m



2262-2266m



2272-2293m



2294-2298m



2299-2303m



2304-2308m



2309-2313m



2314-2319m



2320-2324m



2325-2329m



2330-2334m



2335-2339m



2340-2369m



2370-2374m



2375-2379m



2380-2384m



2385-2400m



2401-2405m



2406-2410m



2411-2420m



2421-2425m



2426-2430m



2431-2439m



2440-2444m



2445-2449m



2450-2454m



2455-2459m



2460-2464m



2465-2469m



2470-2474m



2475-2479m



2480-2484m



2485-2489m



2490-2494m

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1700.0	[m]	DC	STATO
1730.0	[m]	DC	STATO
1740.0	[m]	DC	STATO
1760.0	[m]	DC	STATO
1770.0	[m]	DC	STATO
1790.0	[m]	DC	STATO
1800.0	[m]	DC	STATO
1820.0	[m]	DC	STATO
1830.0	[m]	DC	STATO



1850.0 [m]	DC	STATO
1860.0 [m]	DC	STATO
1880.0 [m]	DC	STATO
1890.0 [m]	DC	STATO
1910.0 [m]	DC	STATO
1920.0 [m]	DC	STATO
1940.0 [m]	DC	STATO
1950.0 [m]	DC	STATO
1970.0 [m]	DC	STATO
1980.0 [m]	DC	STATO
2000.0 [m]	DC	STATO
2010.0 [m]	DC	STATO
2030.0 [m]	DC	STATO
2040.0 [m]	DC	STATO
2060.0 [m]	DC	STATO
2070.0 [m]	DC	STATO
2090.0 [m]	DC	STATO
2100.0 [m]	DC	STATO
2120.0 [m]	DC	STATO
2130.0 [m]	DC	STATO
2150.0 [m]	DC	STATO
2160.0 [m]	DC	STATO
2180.0 [m]	DC	STATO
2190.0 [m]	DC	STATO
2210.0 [m]	DC	STATO
2220.0 [m]	DC	STATO
2223.0 [m]	SWC	STATO
2227.0 [m]	SWC	STATO
2234.0 [m]	SWC	STATO
2239.0 [m]	SWC	STATO
2244.0 [m]	SWC	STATO
2247.0 [m]	SWC	STATO
2266.0 [m]	SWC	STATO
2271.4 [m]	C	STATO
2298.6 [m]	C	STATO
2305.8 [m]	C	STATO
2323.1 [m]	C	STATO
2343.7 [m]	C	STATO
2350.0 [m]	DC	STATO
2361.0 [m]	DC	STATO



2372.2	[m]	C	STATO
2383.6	[m]	C	STATO
2398.5	[m]	C	STATO
2403.8	[m]	C	STATO
2418.9	[m]	C	STATO
2426.5	[m]	C	STATO
2444.4	[m]	C	STATO
2454.7	[m]	C	STATO
2463.8	[m]	C	STATO
2477.8	[m]	C	STATO
2489.5	[m]	C	STATO
2499.0	[m]	DC	STATO
2505.0	[m]	DC	STATO
2511.0	[m]	DC	STATO
2517.0	[m]	DC	STATO
2529.0	[m]	DC	STATO
2535.0	[m]	DC	STATO
2541.0	[m]	DC	STATO
2553.0	[m]	DC	STATO
2565.0	[m]	DC	STATO
2577.0	[m]	DC	STATO
2595.0	[m]	DC	STATO
2600.0	[m]	DC	STATO

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	DST1	2444.00	2462.50		30.11.1986 - 00:00	YES
DST	DST2	2386.00	2406.00		04.12.1986 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
371	NORDLAND GP
1462	KAI FM
1885	HORDALAND GP



1885	BRYGGE FM
1970	ROGALAND GP
1970	TARE FM
2020	TANG FM
2060	SHETLAND GP
2233	VIKING GP
2233	MELKE FM
2248	FANGST GP
2248	GARN FM
2294	NOT FM
2307	ILE FM
2324	BÅT GP
2324	ROR FM
2387	TILJE FM
2559	ÅRE FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
933_1	pdf	0.36
933_2	pdf	1.17
933_3	pdf	0.09

Dokumenter - eldre Søkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
933_01_WDSS_General_Information	pdf	0.25
933_02_WDSS_completion_log	pdf	0.20

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
933_01_Completion_Report	pdf	9.60
933_02_Completion_log	pdf	1.73

Borestrengtester (DST)





Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2444	2463	38.1
2.0	2386	2406	19.1

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0	3.000	2.000	17.000	85
2.0	6.000	5.000		81

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	715	31460	0.932	0.600	44
2.0	906	50080	0.925		55

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL GR	900	2214
CBL VDL GR	2063	2552
CBL VDL GR	2240	2421
CST GR	2232	2241
DITE SDT GR	2217	2596
DLL MSFL GR	2217	2591
LDL CNL GR	2217	2600
MWD - GR RES DIR	371	2600
NGS	2217	2600
RFT	2250	2580
RFT HP GR	2250	2580
RLL	1033	2600
SDT GR	1185	2217
SHDT GR	2217	2600
VELOCITY	1000	2600

Foringsrør og formasjonsstyrketester



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 2.6.2024 - 11:53

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
CONDUCTOR	30	444.0	36	610.0	0.00	LOT
INTERM.	13 3/8	1033.0	17 1/2	1050.0	1.64	LOT
INTERM.	9 5/8	2217.0	12 1/4	2235.0	1.60	LOT
LINER	7	2598.5	8 1/2	2600.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
1053	1.12	6200.0	6.8	WATER BASED	04.11.1986
1398	1.14	6300.0	5.9	WATER BASED	05.11.1986
1675	1.35	6000.0	6.3	WATER BASED	06.11.1986
1700	1.35	5100.0	4.7	WATER BASED	10.11.1986
2131	1.35	5500.0	5.9	WATER BASED	07.11.1986
2217	1.20	9999.0	6.3	WATER BASED	12.11.1986
2217	1.21	9999.0	6.3	WATER BASED	17.11.1986
2217	1.20	9500.0	5.5	WATER BASED	18.11.1986
2217	1.20		6.3	WATER BASED	19.11.1986
2217	1.20	2000.0	4.2	WATER BASED	24.11.1986
2217	1.20	1500.0	4.7	WATER BASED	24.11.1986
2217	0.00	1200.0	3.5	WATERBASED	27.11.1986
2217	1.20	3900.0	3.0	WATER BASED	28.11.1986
2217	1.20	9000.0	5.5	WATER BASED	13.11.1986
2217	1.20	9999.0	6.3	WATER BASED	14.11.1986
2217	1.20	9500.0	5.9	WATER BASED	17.11.1986
2217	0.00	1500.0	3.4	WATERBASED	25.11.1986
2217	0.00	1400.0	3.8	WATERBASED	26.11.1986
2235	1.35	5000.0	3.8	WATER BASED	10.11.1986
2262	1.20	3600.0	6.8	WATER BASED	11.11.1986

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]
933 Formation pressure (Formasjonstrykk)	pdf	0.27

