



Generell informasjon

Brønnbane navn	25/5-5
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	25/5-5 (Tir)
Brønn navn	25/5-5
Seismisk lokalisering	EL 9201- CROSSLINE 1086 & inline 491
Utvinningstillatelse	102
Boreoperatør	Elf Petroleum Norge AS
Boretillatelse	827-L
Boreinnretning	VILDKAT EXPLORER
Boredager	28
Borestart	27.10.1995
Boreslutt	23.11.1995
Frigitt dato	23.11.1997
Publiseringsdato	15.02.2006
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]	122.0
Totalt målt dybde (MD) [m RKB]	2600.0
Totalt vertikalt dybde (TVD) [m RKB]	2596.0
Maks inklinasjon [°]	8.3
Temperatur ved bunn av brønnbanen [°C]	89
Eldste penetrerte alder	PALEOCENE
Eldste penetrerte formasjon	VÅLE FM
Geodetisk datum	ED50
NS grader	59° 33' 16.17" N
ØV grader	2° 20' 40.46" E



NS UTM [m]	6602133.73
ØV UTM [m]	462949.90
UTM sone	31
NPDID for brønnbanen	2661

Brønnhistorie

General

Exploration well 25/5-5 is located a few km east-southeast of the Heimdal field. The objective was the turbiditic sands of the Heimdal Formation, which is the reservoir for the Heimdal gas field. The Jotun oil discovery (8 km south) and a minor oil discovery on 25/4 -2 (5 km north-northwest) are also in Heimdal turbiditic sands. The prognosed TD of the well was 2600 m in the Ty / Våle Formations in case of a discovery, or 2250 m in the Heimdal Formation, in case of a dry well. The chosen location was on the highest structural point of the 25/5-5 closure. Oil with a possible gas cap was the anticipated reservoir fluid

Operations and results

Wildcat well 25/5-5 was spudded with the semi-submersible installation Vildkat Explorer on 27 October 1995 and drilled to TD at 2600 m in the Paleocene Våle Formation. No significant operational problems were encountered in this well and TD was reached in less than 9 days after spud. The well was drilled with seawater and hi-vis pills down to 1206 m and with Safemul oil based mud from 1206 m to TD. Due to the choice of OBM system, the 8 1/2" diameter was drilled in preference to 12 1/4" to minimize mud and cuttings volumes.

Top Heimdal Formation was found at 2158.5 m, 13 m above prognosis. The formation was 334 m thick. The reservoir was oil-bearing, with an OWC at 2176.3 m. There was no recognised gas cap. As prognosed, the reservoir properties were very good. Two cores were cut from 2162.5 m to 2199.75 m in sandstone of the Heimdal Formation. The cored interval was hydrocarbon bearing, with the OWC clearly defined on the lower core. The MDT tool was run to obtain pressure and fluid samples from the reservoir. Pressure depletion from production of the Heimdal Field was confirmed. From the pressure plot some vertical barrier effects were evident in the deeper part of the aquifer zone, below 2206 m. In the upper part of the Heimdal Sand, however, no pressure barriers could be seen. Four sample bottles from 2172.1 m were transported onshore for transfer to PVT bottles. It was confirmed that the sample quality was satisfactory. Two samples from 2160.5 and 2161.6 m plugged during filling, probably due to sand production. To check for hydrocarbon fluid the samples were drained on the rig.

The well was permanently abandoned on 23 November 1995 as an oil discovery.

Testing

One test was performed in the interval 2158.50 - 2169.50 m in the reservoir. The test produced 428 m3 / day of oil and 15578 m3 /day of gas on 96/64" choke. The GOR was 36.4 m3/m3 with a wellhead pressure of 8.9 bars. The API gravity was near 35 deg.

Borekaks i Sokkeldirektoratet



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1220.00	2600.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2162.5	2172.3	[m]
2	2172.3	2199.8	[m]

Total kjerneprøve lengde [m]	37.3
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2162-2167m



2167-2172m



2172-2172m



2172-2177m



2177-2182m



2182-2187m



2187-2192m



2192-2197m



2197-2199m

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST		2169.50	2158.80		15.11.1995 - 00:00	YES



Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
147	NORDLAND GP
430	UTSIRA FM
947	HORDALAND GP
1032	SKADE FM
1044	NO FORMAL NAME
1420	GRID FM
1433	NO FORMAL NAME
2023	ROGALAND GP
2023	BALDER FM
2075	SELE FM
2123	LISTA FM
2159	HEIMDAL FM
2493	LISTA FM
2531	VÅLE FM

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
2661	pdf	0.34

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
2661_1	pdf	1.57

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
2661_25_5_5_COMPLETION_REPORT_AND_LOG	pdf	45.37





Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2170	2159	38.1

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0	2.000	1.000	20.000	

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstygde rel. luft	GOR [m3/m3]
1.0	428	15578	0.880	0.700	36

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
AIT DSI GR	1198	2596
CBL VDL CCL GR	1586	2206
CCL GR	2045	2145
CCL GR	2045	2145
IPL CNL EPT	1198	2599
MDT GR	2158	2275
MWD LWD - DGR EWR	213	1206
MWD LWD - DGR EWR 4	1209	2600
SWC GR	2040	2555
UIB GR	1198	2580
VSP	490	2580

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	208.0	36	210.0	0.00	LOT
SURF.COND.	13 3/8	1198.0	17 1/2	1200.0	0.00	LOT
OPEN HOLE		2600.0	8 1/2	2600.0	1.81	LOT



Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
145	1.02			WATER BASED	
212	1.02			WATER BASED	
693	1.02			WATER BASED	
920	1.03			WATER BASED	
2160	1.26	35.0		OIL BASED	
2217	1.03			WATER BASED	
2600	1.26	39.0		OIL 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]
2661 Formation pressure (Formasjonstrykk)	pdf	0.22

