Generell informasjon

Brønnbane navn	35/11-1
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Brønn navn	35/11-1
Seismisk lokalisering	SG 8043 - 205 SP. 2360
Utvinningstillatelse	090
Boreoperatør	Mobil Exploration Norway INC
Boretillatelse	417-L
Boreinnretning	NORTRYM
Boredager	76
Borestart	23.05.1984
Boreslutt	06.08.1984
Frigitt dato	06.08.1986
Publiseringsdato	15.06.2005
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	DRY
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	360.0
Totalt målt dybde (MD) [m RKB]	3361.0
Totalt vertikalt dybde (TVD) [m RKB]	3360.0
Maks inklinasjon [°]	1.6
Temperatur ved bunn av brønnbanen [°C]	108
Eldste penetrerte alder	TRIASSIC
Eldste penetrerte formasjon	HEGRE GP
Geodetisk datum	ED50
NS grader	61° 10' 59.27'' N
ØV grader	3° 39' 44.95'' E
NS UTM [m]	6783527.21
ØV UTM [m]	535626.01
UTM sone	31
NPDID for brønnbanen	128

Brønnhistorie

General

Wildcat well 35/11-1 was drilled on the "A" structure close to the border between Block 35/11 and Block 35/12, and ca 25 km north of the Troll Field. Its primary objective was to assess the hydrocarbon potential in Middle to Upper Jurassic strata on the "A" structure that straddles the border between Block 35/11 and the unlicensed Block 35/12. Sands of Lower Jurassic age were regarded as secondary objectives. Planned TD was into the Triassic.

Operations and results

A total of 317 pockmarks were identified in the area from the site survey. The average density was estimated to 20 per square kilometre. The average depth of these was 1-2 m, though some were of greater depth. None of the pockmarks were seen to be active.

Wildcat well 35/11-1 was spudded with the semi-submersible installation on 23 May 1984 and drilled to TD at 3361 m, approximately 100 meters into in the Triassic Hegre Group. The 36" hole section was drilled through boulder beds causing the bit to build angle. Because of high deviation the well was re-spudded. After drilling the 26" hole, the well flowed several times. Although the well would not stay static, it was decided to run the 20" casing in an attempt to seal off the water flow. This resulted in the 20" casing parting at the wellhead, but was successfully recovered. After reaming some tight spots the 20" casing was set and cement was squeezed to seabed to stop the water flow in annulus. Some tight spots were experienced in the 17 1/2" and 12 1/4" hole sections. Lost circulation occurred at 2439 m, due to this the 9 5/8" casing was run. The well was drilled with gelled seawater spotted with hi-vis pills down to 1015 m and with KCl/polymer mud from 1015 m to TD.

Top Jurassic was encountered at 2018 m. The 451 meter thick Viking Group was dominated by argillaceous material, but water-wet arenaceous sections with a net reservoir thickness of 78 m were found scattered throughout. Average porosity in the reservoir sections is 20.6 %. Top Brent Group was penetrated at 2469 meters. Interbedded coals, clays and thin sands dominated the Ness Formation. The Etive Formation and large parts of the Dunlin Group were mainly arenaceous. The gross thickness is 502.5 meters. The net reservoir thickness between the top Brent Group and the Statfjord Formation is 255.2 m with an average porosity of 17.2%. The Early Jurassic to Triassic section consisted to a great extent of sandy intervals. The net reservoir section was 209 m meters over a gross interval of 384 m. The average porosity was 13.7%.

The background gas increased dramatically at 2018 m at Top Viking Group with 8.1 % methane, 0.3 % ethane, and 0.15 % propane, dropping rapidly to normal background levels at 2030 m. No significant shows were recorded on cuttings, sidewall cores or conventional cores in the well. From the logs as all sands had high water saturations, and RFT pressure data from the Jurassic sands showed water gradients. One core was recovered in the Brent Group in the interval from 2552.8 to 2562 m. One RFT run was performed in the Late Jurassic and one in the Middle to Early Jurassic. Formation pressures were recorded from permeable zones, and a sample of the formation fluids were recovered in both runs. The two samples, one taken at 2113 the other at 2535 m, both contained formation water contaminated by a potassium chloride based mud filtrate.

The well was permanently abandoned on 6 August 1984 as a dry hole.

Testing

No drill stem test was performed.

ml>

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
510.00	3361.00

Borekaks tilgjengelig for prøvetaking?	YES

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2552.8	2562.1	[m]

Total kjerneprøve lengde [m]	9.3
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder


2552-2556m


2556-2560m


2560-2562m

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
385	NORDLAND GP
548	UTSIRA FM
710	HORDALAND GP
1307	ROGALAND GP
1307	BALDER FM
1368	SELE FM
1454	LISTA FM
1739	VÅLE FM

1765	SHETLAND GP
2018	VIKING GP
2018	HEATHER FM
2113	FENSFJORD FM
2180	HEATHER FM
2233	KROSSFJORD FM
2469	BRENT GP
2469	NESS FM
2534	ETIVE FM
2557	RANNOCH FM
2583	DUNLIN GP
2583	DRAKE FM
2648	COOK FM
2684	AMUNDSEN FM
2764	JOHANSEN FM
2995	STATFJORD GP
3265	HEGRE GP

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
128	pdf	0.55

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
128_1	pdf	2.84
128_2	pdf	2.32

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
128_01_WDSS_General_Information	pdf	0.18
128_02_WDSS_completion_log	pdf	0.31

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
128_01_Completion_report_and_Composite_log	pdf	13.19

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CST GR	1035	2027
CST GR	2114	2428
HRT	380	2390
IDF LSS MAFL GR	2426	3361
ISF LSS GR	506	2438
LDL CAL GR	1003	2436
LDL CNL NGS	2426	3361
NGS	2027	2430
NGS	2426	3361
RFT	2113	2276
RFT	2426	3242
SHDT GR	2026	2438
SHDT HR	2426	3361
TEMPERATURE	375	2010
VSP CHSCKSHOT	550	3361

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	506.5	36	510.0	0.00	LOT
SURF.COND.	20	1002.5	26	1015.0	1.38	LOT
INTERM.	13 3/8	2026.0	17 1/2	2029.0	1.80	LOT
INTERM.	9 5/8	2426.0	12 1/4	2439.5	1.65	LOT
OPEN HOLE		3361.0	8 1/2	3361.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
800	1.08	5.0	23.0	WATER BASED	
1050	1.21	11.0	18.0	WATER BASED	
1260	1.22	14.0	19.0	WATER BASED	
1500	1.27	28.0	14.0	WATER BASED	
1820	1.29	23.0	19.0	WATER BASED	
1885	1.32	28.0	17.0	WATER BASED	
2060	1.45	24.0	15.0	WATER BASED	
2230	1.56	34.0	8.0	WATER BASED	
2310	1.57	36.0	23.0	WATER BASED	
2360	1.56	37.0	25.0	WATER BASED	
2460	1.50	21.0	14.0	WATER BASED	
2510	1.56	26.0	12.0	WATER BASED	
2685	1.45	22.0	14.0	WATER BASED	
2770	1.42	21.0	14.0	WATER BASED	
2880	1.35	15.0	14.0	WATER BASED	
2990	1.32	15.0	14.0	WATER BASED	
3100	1.33	27.0	19.0	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]
128_Formation_pressure_(Formasjonstrykk)	pdf	0.24