



Generell informasjon

Brønnbane navn	35/8-2
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	VEGA
Funn	35/8-2 Vega
Brønn navn	35/8-2
Seismisk lokalisering	79-1-4C SP: 478
Utvinningstillatelse	058
Boreoperatør	Norwegian Gulf Exploration Company AS
Boretillatelse	299-L
Boreinnretning	SEDCO 704
Boredager	265
Borestart	30.08.1981
Boreslutt	21.05.1982
Frigitt dato	21.05.1984
Publiseringsdato	15.12.2006
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	GAS/CONDENSATE
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	26.0
Vanndybde ved midlere havflate [m]	376.0
Totalt målt dybde (MD) [m RKB]	4336.0
Totalt vertikalt dybde (TVD) [m RKB]	4334.0
Temperatur ved bunn av brønnbanen [°C]	151
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	STATFJORD GP
Geodetisk datum	ED50
NS grader	61° 16' 15.42" N
ØV grader	3° 21' 58.17" E



NS UTM [m]	6793184.26
ØV UTM [m]	519635.98
UTM sone	31
NPDID for brønnbanen	434

Brønnhistorie

**General**

Wildcat well 35/8-2 is located in the Sogn Graben north of the Fram Field. The main objectives were to test the Middle Jurassic Brent Group as well as sands in the Early Jurassic Dunlin Group and Statfjord Formation on a structure located in the south western corner of the block. No reservoirs were anticipated above the Late Kimmeridge Unconformity.

Operations and results

Well 35/8-2 was spudded with the semi-submersible installation Sedco 704 on 30 August 1981 and drilled to TD at 4336 m in the Early Jurassic Statfjord Formation. During hole opening of the 36" section, the drill string parted and left the bit, opener and drill collars in the hole. Fishing was unsuccessful. The well was re-spudded 11 September 1981 and the 17 1/2" pilot hole was drilled without problems. When opening to 36" washing and reaming was required. Few problems were encountered in the 26" section. While drilling the 17 1/2" hole one experienced problems with tight hole at 830 to 883 m, 1610 -1720 m and 1915 - 1940 m. Repairs of the BOP and other unrelated rig problems occurred for 13 days during the drilling of this section. Tight hole was also experienced in the upper part of the 12 1/4" section and at 3100 m where pore pressure also started increasing. Some problems were experienced when coring in the 8 1/2" section. When running in hole with a new bit, the pipe became stuck at 3662 m. Twenty-one days were spent fishing before the hole was plugged back into the 9 5/8" casing. The well was then sidetracked from 3482 m and the 8 1/2" hole was drilled down to 3954 m. Some minor problems with tight hole and differential sticking occurred. A 6 1/8" hole was then drilled to TD at 4336 m. The well was drilled with seawater / pre-hydrated bentonite / gel down to 2155 m and with seawater/bentonite/polymer/LF-5 mud from 2155 m to 3538 m. From 3538 to TD the well was drilled with KCl/polymer mud, which was converted to a lignite/lignosulphonate mud with up to 5% peanut oil.

Indications of hydrocarbons while drilling occurred in Late Jurassic sandstones and shales, and in Middle and Early Jurassic sandstones. Log analyses indicated a gross hydrocarbon column of 60 m in the Brent Group down to a hydrocarbon/water contact at 3726 m, in a gross hydrocarbon sand thickness of 52 m. On the cores, the contact was indicated at 3733 m. The Early Jurassic sands (Cook and Statfjord Formations) had hydrocarbon shows while drilling. Subsequent log evaluation indicated that these sands were water-bearing.

A total of 7 cores were taken in the original, unlogged hole (ca 8 m from the logged sidetrack). One core was cut in the Heather sand and six cores were cut in the Middle Jurassic Brent Sand reservoir. Coring continued from 3667.2 to 3753.4 m, through the Tarbert Formation and into the Ness Formation, until hydrocarbon shows were no longer encountered. An RFT run was made in the well, but no fluid samples were obtained.

The well was permanently abandoned on 21 May 1982 as a gas/condensate discovery.

Testing

The well was tested over three intervals. DST 1 in Brent (3694 - 3703 m) tested 447400 Sm³/day gas with 305.3 Sm³ condensate during a 945 minutes flow period before being shut-in for 1560 min. The gas/condensate ratio was 1467 Sm³/Sm³, with condensate density = 0.797 and gas gravity = 0.67 (air = 1). DST 2 (3306 - 3315 m) was considered as an invalid Heather test - the Brent section was inadvertently retested behind casing. However, DST 2 likely tested a different Brent sand than DST 1; with a lower flow capacity and a higher CGR than in DST1. Cement was squeezed before beginning the next test. DST 2A (3306 - 3315 m + 3321 - 3327 m) proved permeability in the Heather formation to be too small to allow fluids to be recovered in the drill pipe.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
580.00	4332.00

Borekaks tilgjengelig for prøvetaking?	NO
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Borekjerter i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	3316.9	3318.5	[m]
2	3667.2	3685.5	[m]
3	3685.5	3689.4	[m]
4	3689.4	3706.3	[m]
5	3706.5	3725.8	[m]
6	3725.1	3743.8	[m]
7	3743.8	3753.4	[m]

Total kjerneprøve lengde [m]	88.3
Kjerter tilgjengelig for prøvetaking?	YES

Kjernebilder



3316-3317m



3667-3668m



3669-3671m



3672-3674m



3675-3678m



3678-3681m



3681-3683m



3683-3685m



3685-3688m



3688-3691m



3691-3693m



3693-3695m



3695-3698M



3698-3700M



3701-3703M



3703-3706M



3706-3708M



3708-3711M



3711-3713M



3713-3716M



3716-3718M



3718-3721M



3721-3724M



3724-3726M



3726-2738M



3728-3720M



3731-3733M



3733-3736M



3736-3738M



3738-3741M



3741-3743M



3743-3746M



3746-3749M



3749-3752M



3752-3753M

Palynologiske preparater i Sokkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
2770.0	[m]	DC	RRI
2790.0	[m]	DC	RRI
2810.0	[m]	DC	RRI



2820.0 [m]	DC	RRI
2840.0 [m]	DC	RRI
2860.0 [m]	DC	RRI
2880.0 [m]	DC	RRI
2900.0 [m]	DC	RRI
2916.0 [m]	DC	RRI
2940.0 [m]	DC	RRI
2956.0 [m]	DC	RRI
2972.0 [m]	DC	RRI
2992.0 [m]	DC	RRI
3008.0 [m]	DC	RRI
3028.0 [m]	DC	RRI
3044.0 [m]	DC	RRI
3060.0 [m]	DC	RRI
3078.0 [m]	DC	RRI
3668.4 [m]	C	GEOSTRAT
3677.8 [m]	C	GEOSTR
3689.6 [m]	C	GEOSTR
3692.2 [m]	C	GEOSTR
3712.8 [m]	C	GEOSTR
3719.9 [m]	C	GEOSTR
3725.5 [m]	C	GEOSTR
3730.6 [m]	C	GEOSTR
3741.6 [m]	C	GEOSTR
3748.6 [m]	C	GEOSTR
3751.0 [m]	C	GEOSTR

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
406	NORDLAND GP
791	UTSIRA FM
969	HORDALAND GP
1675	ROGALAND GP
1675	BALDER FM
1778	SELE FM
1782	LISTA FM
1928	VÅLE FM
1941	SHETLAND GP



1941	JORSALFARE FM
2089	KYRRE FM
2947	TRYGGVASON FM
3059	BLODØKS FM
3060	CROMER KNOLL GP
3060	RØDBY FM
3074	ÅSGARD FM
3079	VIKING GP
3079	DRAUPNE FM
3204	HEATHER FM
3666	BRENT GP
3666	TARBERT FM
3717	NESS FM
3786	ETIVE FM
3814	RANNOCH FM
3868	BROOM FM
3885	DUNLIN GP
3885	DRAKE FM
3932	COOK FM
4064	BURTON FM
4095	AMUNDSEN FM
4203	STATFJORD GP

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
434_1	pdf	1.38
434_2	pdf	4.06
434_3	pdf	8.79

Dokumenter - eldre Sökkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
434_01_WDSS_General_Information	pdf	0.22
434_02_WDSS_completion_log	pdf	0.30

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)





Dokument navn	Dokument format	Dokument størrelse [KB]
434 01 35 8 2 Completion report	pdf	14.38
434 02 35 8 2 Completion log	pdf	2.59

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	3694	3703	17.5
2.0	3306	3315	17.5

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				133
2.0				126

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	305	447000	0.797	0.670	1467
2.0	205	214000	0.797	0.670	1044

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL	400	2137
CCL GR	416	417
CCL GR	423	425
CCL GR	449	451
CCL GR	2136	2137
CCL PR	484	485
CST	3210	3392
CST	3958	4332
DENS	578	841
DENS CNL GR CAL	829	4331
DLL MSFL GR	2143	3533
DLL MSFL GR SP CAL	3531	3952





HDT	2143	3537
HDT	3480	3953
HDT	3952	4321
HRT	400	1154
HRT	4330	400
ISF SONIC GR SP	578	4330
LSS WAVEFORM	3300	3951
NGT	3952	4331
VSP	0	0

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	578.0	36	579.0	0.00	LOT
SURF.COND.	20	830.0	26	842.0	1.42	LOT
INTERM.	13 3/8	2142.0	17 1/2	2156.0	1.65	LOT
INTERM.	9 5/8	3531.0	12 1/4	3538.0	1.96	LOT
LINER	7	3954.0	8 1/2	3954.0	2.02	LOT
OPEN HOLE		4335.0	6 1/4	4335.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
785	1.10	57.0		WATER BASED	
1160	1.11	58.0		WATER BASED	
1890	1.20	70.0		WATER BASED	
2410	1.22	53.0		WATER BASED	
2855	1.25	52.0		WATER BASED	
3080	1.44	50.0		WATER BASED	
3230	1.51	55.0		WATER BASED	
3570	1.70	55.0		WATER BASED	
3680	1.77	55.0		WATER BASED	
3980	1.70	65.0		WATER BASED	

Tynnslip i Sökkeldirektoratet



Dybde	Enhet
3318.20	[m]

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]
434 Formation pressure (Formasjonstrykk)	pdf	0.23

