



Generell informasjon

Brønnbane navn	34/7-16 R
Type	EXPLORATION
Formål	APPRAISAL
Status	SUSPENDED
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	VIGDIS
Funn	34/7-8 Vigdis
Brønn navn	34/7-16
Seismisk lokalisering	G/E 83 (RP) RAD 253& KOL 933.
Utvinningstillatelse	089
Boreoperatør	Saga Petroleum ASA
Boretillatelse	640-L2
Boreinnretning	TREASURE SAGA
Boredager	42
Borestart	04.09.1990
Boreslutt	15.10.1990
Frigitt dato	15.10.1992
Publiseringsdato	28.02.2008
Opprinnelig formål	WILDCAT
Gjenåpnet	YES
Årsak til gjenåpning	DRILLING
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	ETIVE FM
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	RANNOCH FM
Avstand, boredekk - midlere havflate [m]	26.0
Vanndybde ved midlere havflate [m]	286.0
Totalt målt dybde (MD) [m RKB]	2980.0
Totalt vertikalt dybde (TVD) [m RKB]	2978.0
Maks inklinasjon [°]	5.3
Temperatur ved bunn av brønnbanen [°C]	106



Eldste penetrerte alder	LATE TRIASSIC
Eldste penetrerte formasjon	LUNDE FM
Geodetisk datum	ED50
NS grader	61° 23' 13.06" N
ØV grader	2° 6' 59.12" E
NS UTM [m]	6806371.84
ØV UTM [m]	452792.04
UTM sone	31
NPDID for brønnbanen	1677

Brønnhistorie



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General

Well 34/7-16 R is a re-entry of well 34/7-16, which was suspended due to time schedule for the rig. The well is located between the Statfjord and Snorre Fields on Tampen Spur in the Northern North Sea. The purpose of the re-entry was to test the hydrocarbon-bearing Brent Group reservoir and also to drill through and test the Statfjord Formation.

Operations and results

Well 34/7-16 was re-entered (34/7-16 R) on 4 September 1990 by the semi-submersible rig Treasure Saga and drilled through the Statfjord formation to TD at 2980 m, 35 m into the Late Triassic Lunde Formation. The well was drilled with KCl mud.

Both the Statfjord formation and the Lunde Formation proved to be water bearing. The Statfjord Formation (2821 - 2945 m) had an estimated average log porosity of 21.7% and a net to gross ratio of 0.56.

The well suspended on 15 October 1990 as an oil appraisal.

Testing

Three DST tests were performed in well 34/7-16 R.

DST 1 tested the interval 2821 - 2837 m in the Statfjord Formation. The test was mainly designed to get representative samples of Statfjord Formation water. The initial pressure and temperature at the top perforation was 406 bar and 102 deg C. Clean water with very little gas was produced. The gas gravity was 0.64 (air = 1). It was not possible to maintain stable flowing conditions due to plugging at the choke manifold, but a flow-rate of 1450 m3/day at a wellhead pressure of 105 bar was measured at the end of the 12 hrs flow period.

DST 2 tested a four metres zone from 2454 - 2458 m in the Rannoch Formation. The main objective was to evaluate the lateral extension of the two calcite cemented layers (2451 - 2453 and 2459 - 2461 m). The initial pressure and temperature at the top perforation was 366 bar and 90 deg C. Oil with a GOR of 55 Sm3/Sm3 was produced. The gas gravity was 0.75 (air = 1) and the CO2 content was 0.27%. After a clean-up period, the well was flowed for 26 hours followed by a 25 hours build-up. At the end of the flow, the measured flow rate was 950 Sm3/day through an 11.1 mm choke at a wellhead pressure of 132 bar.

DST 3 tested the interval 2401 - 2414 m in the Etive Formation in order to investigate reservoir heterogeneities. The initial pressure and temperature at the top perforation was 362 bar and 89 deg C. Oil with a GOR of 47 Sm3/Sm3 was produced. The gas gravity was 0.71 (air = 1) and the CO2 content was 0.28%. After a clean-up period, the well was flowed for 25 hours followed by a 24 hours build-up period. At the end of the flow, the measured flow rate was 1310 Sm3/day through a 12.7 mm choke at a wellhead pressure of 159 bar.

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	DST2	2454.00	2458.00	OIL	30.09.1990 - 09:25	YES



Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
312	NORDLAND GP
1066	UTSIRA FM
1083	HORDALAND GP
1272	NO FORMAL NAME
1308	NO FORMAL NAME
1514	NO FORMAL NAME
1561	NO FORMAL NAME
1679	ROGALAND GP
1679	BALDER FM
1735	LISTA FM
1862	SHETLAND GP
1862	JORSALFARE FM
2151	KYRRE FM
2380	CROMER KNOLL GP
2380	RØDBY FM
2387	MIME FM
2391	BRENT GP
2391	ETIVE FM
2435	RANNOCH FM
2515	DUNLIN GP
2515	DRAKE FM
2604	COOK FM
2661	BURTON FM
2686	AMUNDSEN FM
2821	STATFJORD GP
2945	HEGRE GP
2945	LUNDE FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
1677_1	pdf	0.29
1677_2	pdf	5.75





Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
1677 34 7 16 R COMPLETION REPORT AND LOG	pdf	13.67

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsventil størrelse [mm]
1.0	2454	2458	111.0
2.0	2401	2414	12.7
3.0	2821	2837	0.0

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0	13.200		36.600	90
2.0	15.900		36.200	89
3.0				102

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	950	52250	0.860	0.710	55
2.0	1310	62040	0.860	0.710	47
3.0					

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL GR	1900	2684
CDL CNL GR	2684	2977
DIFL ACL GR	2684	2977
DIPLOG	2686	2978
FMT	2832	2943
MWD - GR RES DIR TEMP	2701	2980





VELOCITY	850	3000
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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
LINER	7	2976.0	8 1/2	2980.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
362	1.55	21.0	9.0	WATER BASED	07.09.1990
2400	1.68	16.0	22.0	DUMMY	30.06.1994
2400	1.68	17.0	22.0	DUMMY	01.07.1994
2400	1.45	20.0	13.0	DUMMY	04.07.1994
2400	1.68	27.0	23.0	DUMMY	04.07.1994
2400	1.53	17.0	17.0	DUMMY	04.07.1994
2686	1.65	37.0	14.0	WATER BASED	14.09.1990
2686	1.65	34.0	13.0	WATER BASED	18.09.1990
2686	1.65	28.0	15.0	WATER BASED	08.10.1990
2686	1.67	29.0	15.0	WATER BASED	15.10.1990
2686	1.65	39.0	18.0	WATER BASED	18.09.1990
2686	1.65	39.0	20.0	WATER BASED	18.09.1990
2686	1.65	36.0	17.0	WATER BASED	21.09.1990
2686	1.65	39.0	18.0	WATER BASED	21.09.1990
2686	1.65	39.0	20.0	WATER BASED	21.09.1990
2686	1.65	34.0	12.0	WATER BASED	25.09.1990
2686	1.65	33.0	13.0	WATER BASED	25.09.1990
2686	1.65	42.0	22.0	WATER BASED	25.09.1990
2686	1.65	33.0	18.0	WATER BASED	25.09.1990
2686	1.65	33.0	18.0	WATER BASED	26.09.1990
2686	1.65	36.0	21.0	WATER BASED	28.09.1990
2686	1.65	36.0	19.0	WATER BASED	02.10.1990
2686	1.65	36.0	21.0	WATER BASED	02.10.1990
2686	1.65	36.0	21.0	WATER BASED	02.10.1990
2686	1.65	36.0	17.0	WATER BASED	03.10.1990
2686	1.65	29.0	14.0	WATER BASED	05.10.1990
2686	1.65	28.0	16.0	WATER BASED	05.10.1990



2686	1.65	29.0	14.0	WATER BASED	08.10.1990
2686	1.65	28.0	15.0	WATER BASED	08.10.1990
2686	1.65	28.0	14.0	WATER BASED	10.10.1990
2686	1.65	28.0	14.0	WATER BASED	11.10.1990
2686	1.65	28.0	14.0	WATER BASED	11.10.1990
2686	1.67			WATER BASED	16.10.1990
2686	1.67			WATER BASED	16.10.1990
2686	1.65	26.0	20.0	WATER BASED	16.10.1990
2885	1.65	54.0	14.0	WATER BASED	14.09.1990
2885	1.65	54.0	14.0	WATER BASED	13.09.1990

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]
1677 Formation pressure (Formasjonstrykk)	pdf	0.22

