



Generell informasjon

Brønnbane navn	34/7-3
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	SNORRE
Funn	34/4-1 Snorre
Brønn navn	34/7-3
Seismisk lokalisering	G/E - 153 SP. 440
Utvinningstillatelse	089
Boreoperatør	Saga Petroleum ASA
Boretillatelse	436-L
Boreinnretning	VILDKAT EXPLORER
Boredager	111
Borestart	14.09.1984
Boreslutt	02.01.1985
Frigitt dato	02.01.1987
Publiseringsdato	01.04.2012
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	EARLY JURASSIC
1. nivå med hydrokarboner, formasjon.	STATFJORD GP
2. nivå med hydrokarboner, alder	LATE TRIASSIC
2. nivå med hydrokarboner, formasjon	LUNDE FM
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	303.0
Totalt målt dybde (MD) [m RKB]	3414.0
Totalt vertikalt dybde (TVD) [m RKB]	3413.0
Maks inklinasjon [°]	2.8
Temperatur ved bunn av brønnbanen [°C]	113
Eldste penetrerte alder	LATE TRIASSIC



Eldste penetrerte formasjon	LUNDE FM
Geodetisk datum	ED50
NS grader	61° 25' 54.08" N
ØV grader	2° 7' 43.89" E
NS UTM [m]	6811345.10
ØV UTM [m]	453522.97
UTM sone	31
NPDID for brønnbanen	442

Brønnhistorie

**General**

Well 34/7-3 was drilled on the Snorre E structure in the northern part of block 34/7. The purpose was to further appraise the reservoir potential of the Statfjord Formation and upper Lunde Formation in the E-structure extension of the Snorre Discovery and to test the oil/water contact found in wells 34/4-4 and 34/7-1.

Operations and results

Well 34/7-3 was spudded with the semi-submersible installation Vildcat Explorer on 14 September 1984 and drilled to TD at 3414 m in the Late Triassic Lunde Formation. Drilling proceeded without significant problems. The well was drilled with spud mud down to 454 m, with gel mud from 454 m to 1165 m, with KCl/Polymer mud from 1165 m to 2769 m, and with ligno/lignosulphonate mud from 2769 m to TD.

The well consisted mainly of claystones in the Tertiary and Cretaceous sections, with the exception of sand development in the Utsira Formation (Miocene), and an Early Oligocene sand development (1288 - 1323 m). The rest of the well, the Jurassic and Triassic sections, was mainly composed of alternating claystone/sandstone sequences. Top Statfjord was encountered at 2414 m. The Statfjord and Lunde Formations were oil filled down to a common OWC at 2610 m based on pressure gradients. Strong shows on cores continued down to 2622 m, below this depth the shows became weak and spotted. Apart from this oil shows, of variable quality, started in silty claystones at 2180 m in the Late Cretaceous and continued down to 2755 m in the Lunde Formation.

A total of 19 cores were taken in the interval 2396 - 2643 m in the Jurassic (Dunlin- and Statfjord Formations) and the Triassic sequence (Upper Lunde Formation). The core recovery was 91.5%. Core depth for core 17 was 0.5 m deeper than logger's depth and core depth for core 19 was 2.0 m shallower than logger's depth. Otherwise core depths were found equal to logger's depth. In addition to conventional cores 240 sidewall cores were recovered in this well. RFT fluid samples were taken at 2418 m (oil), 2475 m (oil/water/mud), and 2605 (water and mud filtrate with small amount of oil)

The well was permanently abandoned on 2 January 1985 as an oil appraisal well.

Testing

Three drill stem tests were carried out.

DST 1 tested the interval 2601.0 to 2607.5 m in the upper Lunde Formation. It produced 293 Sm³ oil/day through an 8 mm choke. The separator GOR was 28.5 Sm³/Sm³, the oil density was 0.840 g/cm³, and the gas gravity was . The down hole temperature measured in the test was 94.4 deg C.

DST 2 tested the interval 2505.0 to 2513 m in the Statfjord Formation. It produced 666 Sm³ oil/day through an 11 mm choke. The separator GOR was 26 Sm³/Sm³, the oil density was 0.836 g/cm³, and the gas gravity was . The down hole temperature measured in the test was 91.4 deg C

DST 3 tested the interval 2440.9 to 2449 m in the Statfjord Formation. It produced 1390 Sm³ oil/day through a 12.7 mm choke. The separator GOR was 32 Sm³/Sm³, the oil density was 0.838 g/cm³, and the gas gravity was . The down hole temperature measured in the test was 89.4 deg C.

All tests produced clean oil with no water or sand. The initial oil formation volume factor ranged from 1.23 m³ /Sm³ to 1.35 m³ /Sm³ in DST1 to DST3 test intervals respectively.



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
460.00	3379.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerne i Søkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2396.0	2414.0	[m]
2	2414.0	2414.5	[m]
3	2414.5	2425.5	[m]
4	2425.5	2434.1	[m]
5	2439.0	2449.8	[m]
6	2450.0	2458.8	[m]
7	2459.5	2467.8	[m]
8	2469.0	2470.7	[m]
9	2471.0	2481.5	[m]
10	2481.5	2486.8	[m]
11	2487.5	2505.5	[m]
13	2506.5	2515.5	[m]
14	2515.5	2518.0	[m]
15	2519.0	2527.0	[m]
16	2527.5	2528.4	[m]
17	2549.5	2553.0	[m]
18	2606.0	2623.0	[m]
19	2625.0	2643.0	[m]

Total kjerneprøve lengde [m]	160.4
Kjerner tilgjengelig for prøvetaking?	YES

Palynologiske preparater i Søkeldirektoratet

Prøve dybde	Dybde enhet	Prøve type	Laboratorie
1095.0	[m]	SWC	RRI
1125.0	[m]	SWC	RRI
1135.0	[m]	SWC	RRI
1155.0	[m]	SWC	RRI
1170.0	[m]	DC	RRI



1180.0	[m]	DC	RRI
1195.0	[m]	SWC	RRI
1220.0	[m]	DC	RRI
1235.0	[m]	SWC	RRI
1240.0	[m]	DC	RRI
1260.0	[m]	DC	RRI
1275.0	[m]	SWC	RRI
1290.0	[m]	DC	RRI
1300.0	[m]	DC	RRI
1330.0	[m]	DC	RRI
1360.0	[m]	DC	RRI
1380.0	[m]	DC	RRI
1395.0	[m]	SWC	RRI
1415.0	[m]	SWC	RRI
1425.0	[m]	DC	RRI
1440.0	[m]	DC	RRI
1455.0	[m]	SWC	RRI
1470.0	[m]	DC	RRI
1485.0	[m]	DC	RRI
1495.0	[m]	SWC	RRI
1515.0	[m]	DC	RRI
1535.0	[m]	SWC	RRI
1545.0	[m]	DC	RRI
1560.0	[m]	DC	RRI
1605.0	[m]	DC	RRI
1620.0	[m]	DC	RRI
1740.0	[m]	DC	RRI
1770.0	[m]	DC	RRI
1790.0	[m]	DC	RRI
1800.0	[m]	SWC	RRI
1828.0	[m]	SWC	RRI
1850.0	[m]	SWC	RRI
1860.0	[m]	DC	RRI
1875.0	[m]	SWC	RRI
1890.0	[m]	DC	RRI
1900.0	[m]	SWC	RRI
2240.0	[m]	SWC	RRI
2260.0	[m]	DC	RRI
2330.0	[m]	SWC	RRI
2355.1	[m]	SWC	RRI



2362.0	[m]	DC	RRI
2364.0	[m]	SWC	RRI
2380.0	[m]	SWC	RRI
2388.0	[m]	SWC	RRI
2396.0	[m]	C	RRI
2414.7	[m]	C	RRI
2429.2	[m]	C	RRI
2449.8	[m]	SWC	RRI
2452.3	[m]	C	RRI
2454.9	[m]	C	RRI
2656.0	[m]	DC	RRI
2671.0	[m]	DC	RRI
2683.0	[m]	DC	RRI
2884.0	[m]	DC	RRI

Oljeprøver i Sökkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST	DST1	2601.00	2607.50		05.12.1984 - 06:07	YES
DST	DST3B	2440.90	2449.40	OIL	25.12.1984 - 22:10	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
328	NORDLAND GP
1123	UTSIRA FM
1133	HORDALAND GP
1288	NO FORMAL NAME
1323	NO FORMAL NAME
1672	ROGALAND GP
1672	BALDER FM
1688	LISTA FM
1831	SHETLAND GP
1831	JORSALFARE FM
1940	KYRRE FM
2353	CROMER KNOLL GP



2353	SOLA FM
2357	MIME FM
2363	DUNLIN GP
2363	AMUNDSEN FM
2414	STATFJORD GP
2513	HEGRE GP
2513	LUNDE FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
442_1	pdf	1.43
442_2	pdf	1.73
442_3	pdf	0.71
442_4	pdf	0.19
442_5	pdf	2.90

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
442_01_WDSS_General_Information	pdf	0.30
442_02_WDSS_completion_log	pdf	0.26

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
442_34_7_3_COMPLETION_REPORT_AND_LOG	pdf	17.12

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2601	2607	8.0
2.0	2505	2513	11.0
3.0	2441	2449	12.7





Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				
2.0				
3.0				

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	300	8400	0.840		28
2.0	680	17680	0.836		26
3.0	1370	43872	0.838		32

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
	0	0
BGL CAL GR	1153	1924
BGL GR	451	1158
CDR CAL GR	1152	1826
CDR CAL GR	1153	1924
CNL EPL PCT NGT	1921	2761
CNL GR	2752	3412
CST	0	0
DLL MSFL GR	2335	2764
GR	322	451
ISF LSS GR	451	1162
ISF LSS GR	1153	1923
ISF LSS MSFL GR	2752	3411
ISF MSFL BHC GR	1921	2543
LDL	1921	2767
LDL GR	451	1163
LDL GR	1153	1924
LDL NGL	2752	3412
RFT HP GR	1921	2543
RFT HP GR	1921	2768
RFT HP GR	2752	3413
SHDT GR	1921	2768



SHDT GR	2752	3413
VSP	451	3412

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	451.0	36	454.0	0.00	LOT
SURF.COND.	20	1153.0	26	1168.0	1.62	LOT
INTERM.	13 3/8	1922.0	17 1/2	1940.0	1.70	LOT
INTERM.	9 5/8	2753.0	12 1/4	2786.0	1.96	LOT
OPEN HOLE		3414.0	8 1/2	3414.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
354	1.03			WATER BASED	16.09.1984
652	1.07			WATER BASED	16.09.1984
1021	1.13	46.0	31.0	WATER BASED	17.09.1984
1165	1.19	45.0	30.0	WATER BASED	25.09.1984
1165	1.14	48.0	31.0	WATER BASED	20.09.1984
1165	1.19	45.0	30.0	WATER BASED	25.09.1984
1165	1.24	52.0	34.0	WATER BASED	25.09.1984
1165	1.26	53.0	35.0	WATER BASED	25.09.1984
1165	1.13	48.0	32.0	WATER BASED	20.09.1984
1165	1.14	48.0	31.0	WATER BASED	20.09.1984
1165	1.24	52.0	34.0	WATER BASED	25.09.1984
1165	1.26	53.0	35.0	WATER BASED	25.09.1984
1165	1.26	50.0	28.0	WATER BASED	25.09.1984
1165	1.26	50.0	28.0	WATER BASED	25.09.1984
1168	1.26	48.0	22.0	WATER BASED	25.09.1984
1168	1.13	44.0	10.0	WATER BASED	01.10.1984
1168	1.13	44.0	10.0	WATER BASED	01.10.1984
1430	1.13	44.0	10.0	WATER BASED	01.10.1984
1575	1.28	50.0	20.0	WATER BASED	01.10.1984
1860	1.37	50.0	20.0	WATER BASED	03.10.1984
1940	1.46	55.0	19.0	WATER BASED	03.10.1984
1940	1.50	59.0	20.0	WATER BASED	04.10.1984



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 20.5.2024 - 09:37

1940	1.50	54.0	18.0	WATER BASED	07.10.1984
1940	1.50	58.0	20.0	WATER BASED	07.10.1984
1940	1.50	59.0	20.0	WATER BASED	04.10.1984
1940	1.50	54.0	18.0	WATER BASED	07.10.1984
1940	1.50	58.0	20.0	WATER BASED	07.10.1984
1945	1.50	55.0	18.0	WATER BASED	07.10.1984
2214	1.67	17.0	18.0	WATER BASED	11.10.1984
2309	1.68	21.0	18.0	WATER BASED	14.10.1984
2376	1.73	24.0	15.0	WATER BASED	14.10.1984
2396	1.73	24.0	15.0	WATER BASED	14.10.1984
2428	1.70	23.0	14.0	WATER BASED	31.10.1984
2428	1.70	24.0	14.0	WATER BASED	01.11.1984
2428	1.70	24.0	14.0	WATER BASED	01.11.1984
2611	1.70	24.0	16.0	WATER BASED	02.11.1984
2699	1.70	52.0	16.0	WATER BASED	03.12.1984
2699	1.70	52.0	16.0	WATER BASED	03.12.1984
2699	1.61	70.0	20.0	WATER BASED	03.12.1984
2786	1.63	20.0	14.0	WATER BASED	15.11.1984
2846	1.61	20.0	14.0	WATER BASED	19.11.1984
2934	1.61	70.0	20.0	WATER BASED	03.12.1984
3034	1.61	19.0	14.0	WATER BASED	19.11.1984
3197	1.61	19.0	14.0	WATER BASED	21.11.1984
3318	1.61	63.0	12.0	WATER BASED	21.11.1984
3372	1.61	63.0	12.0	WATER BASED	23.11.1984
3414	1.61	67.0	12.0	WATER BASED	26.11.1984
3414	1.61	69.0	12.0	WATER BASED	26.11.1984
3414	1.61	70.0	10.0	WATER BASED	27.11.1984
3414	1.61	70.0	10.0	WATER BASED	29.11.1984
3414	1.61	65.0	12.0	WATER BASED	26.11.1984
3414	1.61	69.0	10.0	WATER BASED	27.11.1984
3414	1.61	67.0	12.0	WATER BASED	26.11.1984
3414	1.61	69.0	12.0	WATER BASED	26.11.1984
3414	1.61	69.0	10.0	WATER BASED	27.11.1984
3414	1.61	70.0	10.0	WATER BASED	29.11.1984
3414	1.61	70.0	10.0	WATER BASED	27.11.1984

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 brønnspar. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
442 Formation pressure (Formasjonstrykk)	pdf	0.22

