



Generell informasjon

Brønnbane navn	30/6-4
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	OSEBERG
Funn	30/6-1 Oseberg
Brønn navn	30/6-4
Seismisk lokalisering	703 122 SP:477.
Utvinningstillatelse	053
Boreoperatør	Den norske stats oljeselskap a.s
Boretillatelse	277-L
Boreinnretning	DEEPSEA SAGA
Boredager	84
Borestart	17.02.1981
Boreslutt	11.05.1981
Frigitt dato	11.05.1983
Publiseringsdato	28.03.2014
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	110.0
Totalt målt dybde (MD) [m RKB]	2942.0
Totalt vertikalt dybde (TVD) [m RKB]	2942.0
Maks inklinasjon [°]	1.6
Temperatur ved bunn av brønnbanen [°C]	111
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	BURTON FM
Geodetisk datum	ED50
NS grader	60° 30' 35.66" N



ØV grader	2° 50' 53.78" E
NS UTM [m]	6708367.97
ØV UTM [m]	491667.13
UTM sone	31
NPDID for brønnbanen	383

Brønnhistorie

General

Well 30/6-4 was drilled on the Alpha structure on the Gullfaks fault block in the North Sea. The primary objective was to test hydrocarbon accumulations in Middle Jurassic sandstones and to define the hydrocarbon contacts. Gas was the expected hydrocarbon phase.

Operations and results

Well 30/6-4 was spudded with the semi-submersible installation Deepsea Saga on 17 February 1981 and drilled to TD at 2942 m in the Early Jurassic Amundsen Formation. Total depth for the well was reached 10 days before prognosed although 5 days were spent on rig repair when the heave compensator fell down. Apart from this accident no major problems were encountered in the drilling phase. The well was drilled in favourable weather condition. The well was drilled with spud mud down to 962 m, with KCl/polymer mud from 962 m to 1862 m, and with gel/lignosulphonate mud from 1862 m to TD.

Sporadic fluorescence was recorded on cuttings from limestone/siltstone stringers in the Paleocene and Cretaceous. Top Cretaceous had good shows on cuttings and sidewall core in the interval 2300 - 2305 m, and two valid RFT pressure points indicated a gas gradient over the interval.

Top Brent Group, Ness Formation was encountered at 2597 m with an oil-filled Etive Formation from 2630 m to 2686 m. No oil/water contact was found, but combined pressure data from the well and three previous wells on the structure indicated a gas/oil contact at 2528 m.

Four cores were cut from 2638 m in the Etive Formation to 2692.5 m, a few meters into the underlying Drake Formation. One RFT oil sample of good quality was taken at 2633 m.

The well was permanently abandoned on 11 May 1981 as an oil appraisal.

Testing

Two drill stem tests were performed in the Etive Formation.

DST 1 tested the interval 2655 m to 2665 m. It produced 712 Sm³ oil and 84400 Sm³ gas /day through a 48/64" choke. The GOR was 118 Sm³/Sm³, the oil density was 0.855 g/cm³ and the gas gravity was 0.678 (air = 1).

DST 2 tested the interval 2630.5 m to 2638 m. It produced 715 Sm³ oil and 81550 Sm³ gas /day through a 48/64" choke. The GOR was 113 Sm³/Sm³, the oil density was 850 g/cm³ and the gas gravity was 0.675. Maximum bottom hole flowing temperature was 101.7 deg C.



Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
190.00	2939.00

Borekaks tilgjengelig for prøvetaking?	NO
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Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2638.0	2643.6	[m]
2	2654.0	2672.6	[m]
3	2672.0	2682.4	[m]
4	2685.5	2692.7	[m]

Total kjerneprøve lengde [m]	41.8
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



2638-2640m



2640-2643m



2643-2643m



2654-2656m



2656-2659m



2659-2662m



2662-2664m



2664-2667m



2667-2670m



2670-2672m





2672-2674m 2677-2680m 2680-2682m 2685-2688m 2688-2690m



2690-2692m

Oljeprøver i Sökkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
DST		0.00	0.00			YES
DST	DST 1	2655.00	2665.00		25.04.1981 - 20:15	YES
DST	DST 2	2630.50	2638.00		04.05.1981 - 20:30	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
135	NORDLAND GP
655	UTSIRA FM
857	HORDALAND GP
2016	ROGALAND GP
2016	BALDER FM
2130	SELE FM
2218	LISTA FM
2297	SHETLAND GP
2415	VIKING GP
2415	DRAUPNE FM
2430	HEATHER FM
2597	BRENT GP
2597	NESS FM
2630	ETIVE FM
2686	DUNLIN GP



2686	DRAKE FM
2855	COOK FM
2893	AMUNDSEN FM

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
383_1	pdf	1.31
383_2	pdf	3.47
383_3	pdf	2.51
383_4	pdf	2.45
383_5	pdf	4.74
383_6	pdf	1.32

Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

Dokument navn	Dokument format	Dokument størrelse [KB]
383_01_WDSS_General_Information	pdf	0.10
383_02_WDSS_completion_log	pdf	0.27

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
383_30_6_4_COMPLETION_REPORT_AND_LOG	pdf	24.32

Borestrengtester (DST)

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	2655	2665	19.5
2.0	2630	2638	24.8





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

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	753	84600	0.855		112
2.0	888	89200	0.850		100

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CBL VDL CCL GR	598	1850
CBL VDL CCL GR	1600	2752
CBL VDL CCL GR	2140	2309
CBL VDL CCL GR	2500	2674
DLL MSFL GR	1860	2765
FDC CNL GR CAL	192	2944
HDT	1860	2766
HDT	2755	2940
ISF SON GR SP	192	2944

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	192.0	36	192.0	0.00	LOT
SURF.COND.	20	962.0	26	975.0	1.50	LOT
INTERM.	13 3/8	1862.0	17 1/2	1867.5	1.86	LOT
INTERM.	9 5/8	2756.0	12 1/4	2765.0	1.65	LOT
OPEN HOLE		2942.0	8 1/2	2942.0	0.00	LOT

Boreslam



Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
360	1.09	45.0		waterbased	
925	1.07	46.0		waterbased	
1225	1.13	52.0		waterbased	
1675	1.35	53.0		waterbased	
2160	1.55	73.0		waterbased	
2380	1.54	59.0		waterbased	

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]
383 Formation pressure (Formasjonstrykk)	pdf	0.22

