

**General information**

Wellbore name	30/6-4
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG
Discovery	30/6-1 Oseberg
Well name	30/6-4
Seismic location	703 122 SP:477.
Production licence	053
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	277-L
Drilling facility	DEEPSEA SAGA
Drilling days	84
Entered date	17.02.1981
Completed date	11.05.1981
Release date	11.05.1983
Publication date	28.03.2014
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	BRENT GP
Kelly bushing elevation [m]	25.0
Water depth [m]	110.0
Total depth (MD) [m RKB]	2942.0
Final vertical depth (TVD) [m RKB]	2942.0
Maximum inclination [°]	1.6
Bottom hole temperature [°C]	111
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	BURTON FM
Geodetic datum	ED50
NS degrees	60° 30' 35.66" N
EW degrees	2° 50' 53.78" E
NS UTM [m]	6708367.97
EW UTM [m]	491667.13



UTM zone	31
NPDID wellbore	383

Wellbore history

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.

Cuttings at the Norwegian Offshore Directorate



Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
190.00	2939.00

Cuttings available for sampling?	NO
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Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
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 core sample length [m]	41.8
Cores available for sampling?	YES

Core photos



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

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
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

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
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](#)

Geochemical information

Document name	Document format	Document size [MB]
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

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
383_01_WDSS_General_Information	pdf	0.10
383_02_WDSS_completion_log	pdf	0.27

Documents - reported by the production licence (period for duty of secrecy expired)

Document name	Document format	Document size [MB]
383_30_6_4_COMPLETION_REPORT_AND_LOG	pdf	24.32

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2655	2665	19.5
2.0	2630	2638	24.8

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				
2.0				





Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0	753	84600	0.855		112
2.0	888	89200	0.850		100

Logs

Log type	Log top depth [m]	Log bottom depth [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

Casing and leak-off tests

Casing type	Casing diam. [inch]	Casing depth [m]	Hole diam. [inch]	Hole depth [m]	LOT/FIT mud eqv. [g/cm3]	Formation test type
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

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
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	

**Pressure plots**

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

Document name	Document format	Document size [MB]
383 Formation pressure (Formasjonstrykk)	pdf	0.22

