

**General information**

Wellbore name	30/9-12 A
Type	EXPLORATION
Purpose	APPRAISAL
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG
Discovery	30/6-1 Oseberg
Well name	30/9-12
Seismic location	NH 8831- ROW 143 & COLUMN 520
Production licence	104
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	683-L
Drilling facility	VILDKAT EXPLORER
Drilling days	27
Entered date	09.05.1991
Completed date	04.06.1991
Release date	04.06.1993
Publication date	29.06.2004
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	INTRA HEATHER FM SS
Kelly bushing elevation [m]	25.0
Water depth [m]	104.0
Total depth (MD) [m RKB]	3061.0
Final vertical depth (TVD) [m RKB]	2927.0
Maximum inclination [°]	24.5
Bottom hole temperature [°C]	110
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	DRAKE FM
Geodetic datum	ED50
NS degrees	60° 25' 57.09" N
EW degrees	2° 51' 34.9" E
NS UTM [m]	6699747.91
EW UTM [m]	492276.08



UTM zone	31
NPDID wellbore	1770

Wellbore history

General

Well 30/9-12 A was designed as a sidetrack from well 30/9-12 on the Alpha South structure on the southern extension of the Oseberg Field. Well 30/9-12 proved a 10 m column of oil in the Tarbert Formation, but as no oil/water contact was established there remained uncertainty as to the amount of hydrocarbon resources within the southern part of the Alpha South structure. The objectives of well 30/9-12A were to sidetrack approximately 700 m down dip south-eastwards in order to establish the water pressure and oil/water contact in the Tarbert Formation in the area as well as to verify the structural mapping and geological model of the area. No drilling hazards were anticipated.

Operations and results

Appraisal well 30/9-12 A was kicked off with the semi-submersible rig Vildkat Explorer on 9 May 1991. Kick-off point was at 1033 m, below the 13 3/8" casing shoe in well 30/9-12. The well bore was drilled to a total depth of 3061 m (2927 m TVD RKB) in the Drake Formation of the Dunlin Group. It was drilled with KCl polymer mud from kick-off to TD.

The well encountered an unexpected Heather Formation sandstone development that proved to be hydrocarbon bearing. A total of 2.63 m net pay sand was calculated, with an average porosity of 23.3% and average water saturation of

31.4%. Sandstones of the Brent Group were penetrated below the regional oil/water contact and were found to be totally water bearing. A total of six conventional cores were cut in this well in the interval 2874 m to 2919 m in the Tarbert and Ness Formations. A total of 30 sidewall cores were attempted and 28 were recovered. Drilling went on without any significant problems to TD. Oil was recovered from RFT samples taken at 2776.3 m and 2776.6 m. Geochemical analyses showed the Heather oil in 30/9-12 A correlate very well with Tarbert oils from 30/9-12 and 30/9-10, indicating a common source and identical maturity.

The well was suspended on 4 June 1991 as a minor oil discovery.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1040.00	3060.00

Cuttings available for sampling?	YES
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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	2874.0	2876.0	[m]
2	2877.0	2887.0	[m]
3	2888.0	2899.0	[m]
4	2901.0	2904.0	[m]
5	2906.0	2912.0	[m]
6	2914.0	2920.0	[m]

Total core sample length [m]	38.0
Cores available for sampling?	YES

Core photos

2874-2880m



2880-2885m



2885-2891m



2891-2896m



2896-2903m



2903-2910m



2911-2917m



2917-2919m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1070.0	[m]	DC	STRAT
1100.0	[m]	DC	STRAT
1130.0	[m]	DC	STRAT
1150.0	[m]	DC	STRAT
1170.0	[m]	DC	STRAT
1200.0	[m]	DC	STRAT
1230.0	[m]	DC	STRAT



1250.0	[m]	DC	STRAT
1290.0	[m]	DC	STRAT
1310.0	[m]	DC	STRAT
1340.0	[m]	DC	STRAT
1360.0	[m]	DC	STRAT
1390.0	[m]	DC	STRAT
1420.0	[m]	DC	STRAT
1450.0	[m]	DC	STRAT
1480.0	[m]	DC	STRAT
1500.0	[m]	DC	STRAT
1530.0	[m]	DC	STRAT
1560.0	[m]	DC	STRAT
1590.0	[m]	DC	STRAT
1620.0	[m]	DC	STRAT
1650.0	[m]	DC	STRAT
1710.0	[m]	DC	STRAT
1810.0	[m]	DC	STRAT
1900.0	[m]	DC	STRAT
1920.0	[m]	DC	STRAT
1950.0	[m]	DC	STRAT
1980.0	[m]	DC	STRAT
2000.0	[m]	DC	STRAT
2030.0	[m]	DC	STRAT
2060.0	[m]	DC	STRAT
2090.0	[m]	DC	STRAT
2120.0	[m]	DC	STRAT
2150.0	[m]	DC	STRAT
2180.0	[m]	DC	STRAT
2210.0	[m]	DC	STRAT
2240.0	[m]	DC	STRAT
2270.0	[m]	DC	STRAT
2300.0	[m]	DC	STRAT
2330.0	[m]	DC	STRAT
2360.0	[m]	DC	STRAT
2390.0	[m]	DC	STRAT
2565.0	[m]	DC	HYDRO
2620.0	[m]	DC	STRAT
2650.0	[m]	DC	STRAT
2675.0	[m]	DC	HYDRO
2680.0	[m]	DC	STRAT



2690.0	[m]	DC	STRAT
2695.0	[m]	DC	STRAT
2700.0	[m]	DC	STRAT
2715.0	[m]	DC	STRAT
2721.0	[m]	SWC	HYDRO
2724.0	[m]	SWC	HYDRO
2728.5	[m]	SWC	HYDRO
2735.8	[m]	SWC	HYDRO
2738.5	[m]	SWC	HYDRO
2745.0	[m]	SWC	HYDRO
2760.0	[m]	DC	STRAT
2763.2	[m]	SWC	HYDRO
2772.0	[m]	SWC	HYDRO
2777.8	[m]	SWC	HYDRO
2780.9	[m]	SWC	HYDRO
2784.0	[m]	SWC	HYDRO
2795.0	[m]	SWC	HYDRO
2805.2	[m]	SWC	HYDRO
2812.0	[m]	DC	STRAT
2822.5	[m]	SWC	HYDRO
2827.8	[m]	SWC	HYDRO
2835.3	[m]	SWC	HYDRO
2848.0	[m]	SWC	HYDRO
2857.0	[m]	SWC	HYDRO
2865.0	[m]	DC	STRAT
2865.5	[m]	SWC	HYDRO
2868.2	[m]	SWC	HYDRO
2871.0	[m]	SWC	HYDRO
2877.8	[m]	C	HYDRO
2879.5	[m]	C	HYDRO
2882.0	[m]	C	HYDRO
2882.4	[m]	C	HYDRO
2883.2	[m]	C	HYDRO
2883.9	[m]	C	HYDRO
2885.2	[m]	C	HYDRO
2888.5	[m]	C	HYDRO
2897.0	[m]	C	HYDRO
2901.4	[m]	C	HYDRO
2901.6	[m]	C	HYDRO
2907.7	[m]	C	HYDRO



2915.4	[m]	C	HYDRO
2917.1	[m]	C	HYDRO
2917.8	[m]	C	HYDRO
2927.0	[m]	DC	STRAT
2937.0	[m]	DC	STRAT
2947.4	[m]	SWC	HYDRO
2955.0	[m]	DC	STRAT
2975.0	[m]	DC	STRAT
2985.0	[m]	DC	STRAT
2995.0	[m]	DC	STRAT
3005.5	[m]	SWC	HYDRO
3007.5	[m]	SWC	HYDRO
3020.0	[m]	SWC	HYDRO
3030.0	[m]	DC	STRAT
3040.0	[m]	DC	STRAT
3050.0	[m]	SWC	HYDRO
3060.0	[m]	DC	STRAT

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
129	NORDLAND GP
646	UTSIRA FM
842	HORDALAND GP
980	SKADE FM
1012	NO FORMAL NAME
1353	GRID FM
1385	NO FORMAL NAME
2088	ROGALAND GP
2088	BALDER FM
2177	SELE FM
2339	LISTA FM
2417	VÅLE FM
2422	SHETLAND GP
2422	HARDRÅDE FM
2638	CROMER KNOLL GP
2638	RØDBY FM
2675	SOLA FM
2676	MIME FM



2691	ÅSGARD FM
2692	VIKING GP
2692	DRAUPNE FM
2734	HEATHER FM
2765	INTRA HEATHER FM SS
2781	HEATHER FM
2869	BRENT GP
2869	TARBERT FM
2887	NESS FM
2963	UNDIFFERENTIATED
3007	DUNLIN GP
3007	DRAKE FM

Composite logs

Document name	Document format	Document size [MB]
1770	pdf	0.41

Geochemical information

Document name	Document format	Document size [MB]
1770_1	pdf	0.53

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

Document name	Document format	Document size [MB]
1770_01_WDSS_General_Information	pdf	0.52
1770_02_WDSS_completion_log	pdf	0.19

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

Document name	Document format	Document size [MB]
1770_30_9_12_A_COMPLETION_REPORT_AND_LOG	pdf	8.61





Logs

Log type	Log top depth [m]	Log bottom depth [m]
CST GR	2721	3050
DIL LSS LDL CNL NGL SP CAL	2718	3062
DIL LSS LDL GR SP AMS	1040	2800
DLL MSFL LDL CNL GR CAL	2718	2918
FMS4 GR	2718	3060
MWD GR RES DIR	1033	3058
RFT HP GR	2776	2903
RFT HP GR	2776	2776
RFT HP GR	2874	2979
VSP	930	3050

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	214.0	36	216.0	0.00	LOT
CONDUCTOR	13 3/8	1002.0	17 1/2	1019.0	0.00	LOT
INTERM.	9 5/8	2717.0	12 1/4	2824.0	1.61	LOT
OPEN HOLE		3061.0	8 1/2	3061.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
300	1.20	13.0	7.0	WATER BASED	04.06.1991
1017	1.26	20.0	12.0	WATER BASED	10.05.1991
1474	1.39	19.0	12.0	WATER BASED	14.05.1991
2100	1.40	20.0	11.0	WATER BASED	14.05.1991
2372	1.40	22.0	10.0	WATER BASED	14.05.1991
2419	1.42	21.0	10.0	WATER BASED	14.05.1991
2482	1.40	20.0	14.0	WATER BASED	15.05.1991
2549	1.40	20.0	13.0	WATER BASED	16.05.1991
2600	1.20	13.0	7.0	WATER BASED	04.06.1991
2617	1.40	20.0	8.0	WATER BASED	21.05.1991



2658	1.40	19.0	11.0	WATER BASED	21.05.1991
2658	1.40	22.0	10.0	WATER BASED	21.05.1991
2681	1.41	12.0	13.0	WATER BASED	21.05.1991
2709	1.40	19.0	7.0	WATER BASED	21.05.1991
2750	1.39	18.0	9.0	WATER BASED	22.05.1991
2750	1.40	18.0	6.0	WATER BASED	23.05.1991
2750	1.40	21.0	8.0	WATER BASED	24.05.1991
2824	1.20	12.0	6.0	WATER BASED	28.05.1991
2877	1.20	12.0	7.0	WATER BASED	28.05.1991
2894	1.20	12.0	6.0	WATER BASED	28.05.1991
2907	1.20	12.0	6.0	WATER BASED	28.05.1991
2919	1.20	13.0	6.0	WATER BASED	29.05.1991
2919	1.20	13.0	6.0	WATER BASED	30.05.1991
3001	1.20	13.0	6.0	WATER BASED	31.05.1991
3061	1.20	13.0	7.0	WATER BASED	04.06.1991
3061	1.20	13.0	7.0	WATER BASED	04.06.1991

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]
1770 Formation pressure (Formasjonstrykk)	pdf	0.22

