



General information

Wellbore name	30/9-8 R
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG SØR
Discovery	30/9-3 Oseberg Sør
Well name	30/9-8
Seismic location	NH 8831 - 105 COL. 774
Production licence	104
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	615-L2
Drilling facility	POLAR PIONEER
Drilling days	42
Entered date	15.08.1989
Completed date	25.09.1989
Plugged and abandon date	13.08.2003
Release date	25.09.1991
Publication date	20.06.2011
Purpose - planned	WILDCAT
Reentry	YES
Reentry activity	DRILLING
Content	OIL
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	TARBERT FM
Kelly bushing elevation [m]	23.0
Water depth [m]	104.0
Total depth (MD) [m RKB]	3200.0
Final vertical depth (TVD) [m RKB]	3199.0
Maximum inclination [°]	3.3
Bottom hole temperature [°C]	118
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	DRAKE FM
Geodetic datum	ED50
NS degrees	60° 25' 26.1" N
EW degrees	2° 47' 58.38" E



NS UTM [m]	6698797.68
EW UTM [m]	488962.17
UTM zone	31
NPDID wellbore	1461

Wellbore history

General

Well 30/9-8 R was drilled on the Oseberg Omega structure, which is located between the Gamma structure to the east and the B structure to the west, and extends northwards into 079 license area. The main target of the well was sandstones in the Middle Jurassic Brent Group. The primary objectives were to prove the extension of the Omega oil column into license 104, find the fluid contacts, and test communication and reservoir relationship with the Omega North and B prospects. The well was planned to drill approximately 50 m into the Dunlin Group at a final depth of ca 3182 m RKB. Well 30/9-8 R is a re-entry of well 30/9-8, which was suspended at 1060 m while the rig left location temporary for another contract.

Operations and results

Wildcat well 30/9-8 was re-entered (30/9-8 R) by the semi-submersible rig Polar Pioneer on 15 August 1989. Cement and float collar was drilled from 1007 to 1060 m in 30/9-8. Well 30/9-8 R was then drilled to TD at 3200 m in the Early Jurassic Drake Formation. Drilling proceeded without significant problems. There was no indication of shallow gas. The well was drilled with a KCl/PAC/Polymer mud from 1060 m to TD.

Top reservoir came in at 2814 m, approximately 30 m deeper than prognosed. The reservoir was oil bearing from 2824.5 to 2851 m. Below 2851 m the water saturation gradually increased. RFT data indicated a free water level at 2856 m (2832.5 m MSL). However, the available data do not permit the exact definition of the oil water contact, which is in the range 2856 -2862.5 m. The net pay was determined to be 22 m with average water saturation calculated to 46%. Average porosity was 18.5%. RFT results showed no pressure communication with well 30/9-4 within the Tarbert Formation. Well 30/9-8 is interpreted to be in communication with well 30/9-3a in the Tarbert oil zone but not with well 30/9-7.

Oil shows were described from ditch cuttings in the Lista Formation in intervals 2300 to 2322 m and 2355 to 2360 m, and in the uppermost part of the Shetland Group from 2380 to 2400 m. In the Viking Group sidewall cores from 2765 to 2786 m carried shows and in the Brent Group shows were described both from ditch cuttings, conventional cores and sidewall cores throughout the oil bearing zone. Below the free water level shows occurred intermittently down to 3137 m. No oil shows were recorded below 3137 m

Three cores were cut in the interval 2800 to 2934.2 m in the Tarbert Formation. RFT fluid samples were taken at 2843 m and at 2845.8 m. All sample chambers were filled with water and mud filtrate. The well was suspended on 25 September 1989 as an oil and gas discovery, and will later be converted to a water injector.

Testing

One production test in the water zone and a two stage production test in the oil zone were performed.

Test #1 was conducted in the interval 2904.4 -2913.4 m (Tarbert Formation). It flowed water and gas at an average rate of 441 Sm³/day and 1118 Sm³/day respectively on a



19.05 mm choke. The GWR was 2.5. The density of the water was 1.018 g/cc and the gas gravity 0.70 (air = 1). The flowing well head pressure was 8.75 bars and the bottom hole temperature 110.6 deg C. The well produced 10% CO₂ and less than 0.1 ppm H₂S.

Test #2a tested the interval 2837 - 2848 m and flowed oil at an average rate of 59 Sm³/day on a 25.4 mm choke.

Test #2b tested the intervals 2837 - 2848 m and 2825 - 2834 m and the combined intervals flowed oil and gas at an average rate of 263 Sm³/day and 28184 Sm³/day respectively on a 12.7 mm choke. The GOR was 107 Sm³/Sm³. The oil gravity was 0.867 g/cc and the gas gravity 0.75 (air=1). The flowing well head pressure was 46.6 bars and the bottom hole temperature 107 deg C. The well produced 1.3% CO₂ and no H₂S.

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	2800.0	2836.4	[m]
2	2836.5	2892.2	[m]
3	2892.2	2934.3	[m]

Total core sample length [m]	134.2
Cores available for sampling?	YES

Core photos



2800-2805m



2805-2810m



2810-2815m



2815-2810m



2820-2825m



2825-2830m



2830-2835m



2835-2839m



2839-2844m



2844-2849m



2849-2854m



2854-2859m



2859-2864m



2864-2869m



2869-2874m



2874-2879m



2879-2884m



2884-2889m



2889-2893m



2893-2898m



2903-2908m



2918-2923m



2923-2928m



2928-2933m



2933-2934m



2898-2903m



2908-2913m



2913-2918m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
127	NORDLAND GP
602	UTSIRA FM
890	HORDALAND GP
932	SKADE FM
974	NO FORMAL NAME
1165	NO FORMAL NAME
1190	NO FORMAL NAME
1235	NO FORMAL NAME
1348	NO FORMAL NAME



1425	NO FORMAL NAME
1446	NO FORMAL NAME
2065	ROGALAND GP
2065	BALDER FM
2137	SELE FM
2212	LISTA FM
2372	VÅLE FM
2382	SHETLAND GP
2382	HARDRÅDE FM
2620	KYRRE FM
2704	TRYGGVASON FM
2722	BLODØKS FM
2723	SVARTE FM
2725	CROMER KNOLL GP
2725	RØDBY FM
2750	SOLA FM
2758	ÅSGARD FM
2763	VIKING GP
2763	DRAUPNE FM
2771	HEATHER FM
2788	BRENT GP
2788	TARBERT FM
2882	NESS FM
3120	ETIVE FM
3135	RANNOCH FM
3140	OSEBERG FM
3149	DUNLIN GP
3149	DRAKE FM

Geochemical information

Document name	Document format	Document size [MB]
1461_1	pdf	0.22
1461_2	pdf	0.40
1461_3	pdf	4.62
1461_4	pdf	3.77



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

Document name	Document format	Document size [MB]
1461_01_WDSS_General_Information	pdf	0.35
1461_02_WDSS_completion_log	pdf	0.20

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	2904	2913	19.5
2.0	2837	2848	25.4
3.0	2825	2848	12.7

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				63
2.0				15
3.0				27

Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0		1100		0.700	
2.0	35		0.867		
3.0	405	28667	0.870	0.780	109

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL	2165	2960
CBL VDL	2454	2958
CST	2659	3196
DIL LSS LDL CNL GR SP AMS	1043	2658
DIL LSS LDL CNL GR SP AMS	2654	3197
DLL MSFL GR	2750	3095
MWD	121	2800
NGT	2654	3197





RFT HP AMS	2845	2845
RFT HP AMS	2917	3132
SHDT GR	2654	2840
VSP	1195	2945

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	215.0	36	215.0	0.00	LOT
INTERM.	13 3/8	1044.0	17 1/2	1060.0	1.67	LOT
INTERM.	9 5/8	2651.0	12 1/4	2669.0	1.78	LOT
LINER	7	3198.0	8 1/2	3200.0	0.00	LOT