



General information





Wellbore name	34/7-29 S
Type	EXPLORATION
Purpose	APPRAISAL
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Discovery	34/7-29 S
Well name	34/7-29
Seismic location	CMT-94R95: ROW 2038 & COLUMN 993
Production licence	089
Drilling operator	Saga Petroleum ASA
Drill permit	923-L
Drilling facility	TRANSOCEAN LEADER
Drilling days	42
Entered date	04.03.1998
Completed date	14.04.1998
Release date	14.04.2000
Publication date	11.04.2003
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	NO
1st level with HC, age	LATE JURASSIC
1st level with HC, formation	INTRA DRAUPNE FM SS
Kelly bushing elevation [m]	24.0
Water depth [m]	250.0
Total depth (MD) [m RKB]	2927.0
Final vertical depth (TVD) [m RKB]	2846.0
Maximum inclination [°]	20.7
Bottom hole temperature [°C]	100
Oldest penetrated age	MIDDLE JURASSIC
Oldest penetrated formation	TARBERT FM
Geodetic datum	ED50
NS degrees	61° 21' 51.69" N
EW degrees	2° 2' 23.37" E
NS UTM [m]	6803911.99
EW UTM [m]	448662.75
UTM zone	31
NPDID wellbore	3313



Wellbore history



General

Exploration well 34/7-29 S was drilled in the west central part of block 34/7 on the H-North prospect. The H-North prospect was located SSE of the Vigdis field and NE of the Statfjord East field. The main objective of well 34/7-29 S was to test a northerly extension of the oil bearing Upper Jurassic Top Draupne Sands penetrated in wells 34/7-21, 21 A, 23 S & 23 A. The well was designed to test the presence of reservoir, hydrocarbons and pressure communication with the other H-Area segments. Reservoir presence was considered the primary risk. Seismic interpretation of the reservoir interval indicated communication with the H-West area, and pressure, sample and DST data were considered important to test this interpretation. In addition the well was to test for the presence of sands and possible hydrocarbons in the Middle and Lower Draupne Formation. Secondary objectives were to test the lithology and depositional model of the Palaeocene Lista Formation and tie the Top Brent seismic marker.

Operations and results

Exploration well 34/7-29 S was spudded with the semi-submersible installation "Transocean Leader" on 4 March 1998 and drilled and cored to TD at 2927 m (2848 m TVD RKB) in the 8 1/2" hole section 30 m into the Middle Jurassic Brent Group. A 7" liner was set and cemented. The well was drilled with Sea water and bentonite sweeps down to 1211 m and with "AQUACOL D" KCI / Glycol mud from 1211 m to 2558 m, and with "ANTISOL D" PAC mud from 2558 m to TD. Due to the presence of hydrocarbons and the requirement for the rig to go on contract for Norsk Hydro, the well was suspended on 14 April 1998 as an oil discovery. The semi-submersible drilling installation "Deepsea Bergen" re-entered well 34/7-29 S R on 22 February 1999 for testing.

In the Nordland, Hordaland and Rogaland Groups the well penetrated mainly clay/claystones with some beds of sand. The Heimdal equivalent Member between 1928 -1999 m (1864 -1933 m TVD RKB) contained thick water wet sands. In the Shetland Group claystones and limestone beds were penetrated. The condensed Cromer Knoll Group consisted of marls, limestones and minor claystones. Core point was reached in the Cromer Knoll Group at 2701 m. The first core (2701 - 2718 m) penetrated the top of the Top intra Draupne Sand at 2705 m (2627 m TVD RKB) and contained oil bearing sands at the base. A second core was cut from 2718 to 2726 m from within the intra Draupne Sands and into the Draupne Shale. In total 17,7 m of sands were penetrated. MDT pressure samples acquired during logging indicated that the sands were all oil bearing and oil down to (ODT) of 2723 m (2622 m TVD MSL) was proved. No sands were penetrated within the Draupne Shale. Fluid samples proved the reservoir fluid to be undersaturated oil. The fluid samples were taken during the MDT run, using the Pump-Out module in combination with the Optical Fluid Analyser to limit contamination of mud filtrate. All fluid samples were taken at 2706.5 m. The quality of the samples and analyses was assumed to be good, because no significant differences were observed between the experimental results. Well 34/7-29 S R was permanently abandoned as an oil discovery on 17 March 1999.

Testing

One zone in the intra Draupne Sandstone was tested, from 2704 - 2716 m. After clean-up pressure build-up period of 6.2 hours, the well was opened on a 6,4 mm (16/64") adjustable choke, for the main flow, through the heater. The choke size was increased in steps to 17,5 mm (44/64") fixed choke in about 1.5 hours. The flow was directed through the separator 0.75 hours after the well was opened. The main flow had a duration of 72 hours during which the oil rate decreased gradually from 920 Sm³/d to 875 m³/d. The wellhead pressure decreased from 84.0 bars to 80.6 bars during the same period. Final gas rate was 120000 m³/day, giving a GOR of 137 m³/m³. The oil density was 0.842 g/cm³. Bottom hole sampling after flowing was cancelled.



Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1220.00	2927.00

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	2701.0	2717.9	[m]
2	2718.0	2724.7	[m]

Total core sample length [m]	23.6
Cores available for sampling?	YES

Core photos



2701-2706m



2706-2711m



2711-2716m



2716-2718m



2718-2723m



2723-2724m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1240.0	[m]	DC	RRI
1280.0	[m]	DC	RRI
1320.0	[m]	DC	RRI



1360.0	[m]	DC	RRI
1400.0	[m]	DC	RRI
1450.0	[m]	DC	RRI
1480.0	[m]	DC	RRI
1520.0	[m]	DC	RRI
1560.0	[m]	DC	RRI
1600.0	[m]	DC	RRI
1640.0	[m]	DC	RRI
1680.0	[m]	DC	RRI
1720.0	[m]	DC	RRI
1760.0	[m]	DC	RRI
1800.0	[m]	DC	RRI
1840.0	[m]	DC	RRI
1920.0	[m]	DC	RRI
1960.0	[m]	DC	RRI
2000.0	[m]	DC	RRI
2040.0	[m]	DC	RRI
2080.0	[m]	DC	RRI
2120.0	[m]	DC	RRI
2130.0	[m]	DC	RRI
2150.0	[m]	DC	RRI
2170.0	[m]	DC	RRI
2190.0	[m]	DC	RRI
2210.0	[m]	DC	RRI
2230.0	[m]	DC	RRI
2250.0	[m]	DC	RRI
2270.0	[m]	DC	RRI
2290.0	[m]	DC	RRI
2310.0	[m]	DC	RRI
2330.0	[m]	DC	RRI
2350.0	[m]	DC	RRI
2370.0	[m]	DC	RRI
2390.0	[m]	DC	RRI
2410.0	[m]	DC	RRI
2430.0	[m]	DC	RRI
2450.0	[m]	DC	RRI
2470.0	[m]	DC	RRI
2490.0	[m]	DC	RRI
2510.0	[m]	DC	RRI
2530.0	[m]	DC	RRI



2550.0	[m]	DC	RRI
2570.0	[m]	DC	RRI
2590.0	[m]	DC	RRI
2609.0	[m]	DC	RRI
2630.0	[m]	DC	RRI
2651.0	[m]	DC	RRI
2669.0	[m]	DC	RRI
2702.0	[m]	C	RRI
2703.0	[m]	C	RRI
2704.0	[m]	DC	RRI
2705.0	[m]	C	RRI
2706.0	[m]	C	RRI
2707.0	[m]	C	RRI
2708.0	[m]	DC	RRI
2708.0	[m]	C	RRI
2709.0	[m]	C	RRI
2710.0	[m]	C	RRI
2710.0	[m]	C	RRI
2711.0	[m]	C	RRI
2712.0	[m]	C	RRI
2713.0	[m]	C	RRI
2714.0	[m]	C	RRI
2715.0	[m]	C	RRI
2716.0	[m]	C	RRI
2718.0	[m]	C	RRI
2719.0	[m]	C	RRI
2720.0	[m]	C	RRI
2721.0	[m]	C	RRI
2722.0	[m]	C	RRI
2723.0	[m]	C	RRI
2724.0	[m]	C	RRI
2726.0	[m]	DC	RRI
2729.0	[m]	DC	RRI
2732.0	[m]	DC	RRI
2735.0	[m]	DC	RRI
2738.0	[m]	DC	RRI
2741.0	[m]	DC	RRI
2744.0	[m]	DC	RRI
2750.0	[m]	DC	RRI
2753.0	[m]	DC	RRI



2756.0 [m]	DC	RRI
2759.0 [m]	DC	RRI
2762.0 [m]	DC	RRI
2765.0 [m]	DC	RRI
2768.0 [m]	DC	RRI
2771.0 [m]	DC	RRI
2774.0 [m]	DC	RRI
2777.0 [m]	DC	RRI
2780.0 [m]	DC	RRI
2783.0 [m]	DC	RRI
2786.0 [m]	DC	RRI
2789.0 [m]	DC	RRI
2792.0 [m]	DC	RRI
2795.0 [m]	DC	RRI
2798.0 [m]	DC	RRI
2801.0 [m]	DC	RRI
2804.0 [m]	DC	RRI
2807.0 [m]	DC	RRI
2810.0 [m]	DC	RRI
2813.0 [m]	DC	RRI
2816.0 [m]	DC	RRI
2822.0 [m]	DC	RRI
2825.0 [m]	DC	RRI
2831.0 [m]	DC	RRI
2840.0 [m]	DC	RRI
2843.0 [m]	DC	RRI
2846.0 [m]	DC	RRI
2849.0 [m]	DC	RRI
2852.0 [m]	DC	RRI
2855.0 [m]	DC	RRI
2858.0 [m]	DC	RRI
2861.0 [m]	DC	RRI
2864.0 [m]	DC	RRI
2867.0 [m]	DC	RRI
2870.0 [m]	DC	RRI
2873.0 [m]	DC	RRI
2876.0 [m]	DC	RRI
2879.0 [m]	DC	RRI
2885.0 [m]	DC	RRI
2888.0 [m]	DC	RRI



2891.0	[m]	DC	RRI
2894.0	[m]	DC	RRI
2897.0	[m]	DC	RRI
2900.0	[m]	DC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
274	NORDLAND GP
1075	UTSIRA FM
1083	HORDALAND GP
1283	NO FORMAL NAME
1335	NO FORMAL NAME
1398	NO FORMAL NAME
1447	NO FORMAL NAME
1748	ROGALAND GP
1748	BALDER FM
1814	LISTA FM
1928	NO FORMAL NAME
1999	SHETLAND GP
1999	JORSALFARE FM
2260	KYRRE FM
2693	CROMER KNOLL GP
2693	RØDBY FM
2701	MIME FM
2706	VIKING GP
2706	INTRA DRAUPNE FM SS
2723	DRAUPNE FM
2774	HEATHER FM
2894	BRENT GP
2894	TARBERT FM

Composite logs

Document name	Document format	Document size [MB]
3313	pdf	0.27





Geochemical information

Document name	Document format	Document size [MB]
3313_1	pdf	1.81
3313_2	pdf	1.96
3313_3	pdf	0.21

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

Document name	Document format	Document size [MB]
3313_34_7_29_S_COMPLETION_REPORT	pdf	35.13

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DSI NGT	2547	2926
FMI GPIT	2547	2931
HALS PEX CMR	2547	2928
MDT GR	2706	2916
MSCT	2600	2920
MWD - DIR	274	322
MWD - MPR DIR GR	322	2927
VSP	1180	2929

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	321.0	36	322.0	0.00	LOT
SURF.COND.	13 3/8	1202.0	17 1/2	1211.0	1.69	LOT
INTERM.	9 5/8	2547.0	12 1/4	2558.0	1.80	LOT
LINER	7	2927.0	8 1/2	2927.0	0.00	LOT

Drilling mud





Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1211	1.20	35.0		WATER BASED	
1475	1.45	33.0		WATER BASED	
2057	1.56	32.0		WATER BASED	
2115	1.56	32.0		WATER BASED	
2272	1.57	31.0		WATER BASED	
2558	1.57	28.0		WATER BASED	
2701	1.56	28.0		WATER BASED	
2718	1.56	27.0		WATER BASED	
2726	1.56	26.0		WATER BASED	
2909	1.03			WATER BASED	
2927	1.56	39.0		WATER BASED	

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]
3313 Formation pressure (Formasjonstrykk)	pdf	0.22

