General information

Wellbore name	2/11-9
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	2/11-9
Seismic location	RITA SURVEY-(90) 684 & X-LINE 1276
Production licence	033
Drilling operator	Amoco Norway Oil Company
Drill permit	764-L
Drilling facility	MÆRSK GALLANT
Drilling days	153
Entered date	24.07.1993
Completed date	23.12.1993
Release date	23.12.1995
Publication date	19.10.2006
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	43.0
Water depth [m]	72.0
Total depth (MD) [m RKB]	4406.0
Final vertical depth (TVD) [m RKB]	4405.0
Maximum inclination [°]	5.5
Bottom hole temperature [°C]	159
Oldest penetrated age	EARLY CARBONIFEROUS
Oldest penetrated formation	NO FORMAL NAME
Geodetic datum	ED50
NS degrees	56° 8' 49.19'' N
EW degrees	3° 27' 15.34'' E
NS UTM [m]	6222670.77
EW UTM [m]	528224.92
UTM zone	31
NPDID wellbore	2153

Wellbore history

General

Well 2/11-9 (South Hod Prospect) is located within production license PL033, which also contains the Hod Field and part of the Valhall field. The South Hod Prospect extends across the Norway/Denmark border. Well 2/11-9 was drilled to test the hydrocarbon potential of pre-Jurassic sandstones contained within a horst block bounded to the east by the major Skrubbe Fault. Lower Hod Chalk and postulated possible Late Jurassic sandstone comprised secondary objectives.

Operations and results

Well 2/11-9 was spudded with the 3 leg jack-up installation Maersk Gallant on 24 July 1993 and drilled to TD at 4406 m in Early Carboniferous sediments. The well was drilled in 139 days versus the planned 103 days. An incident involving the loss of a 2 Curie Cesium 137 source from the MWD tool at 3816 m in the 12 1/4" section and contamination of the drilling fluid system resulted in 51.7 days of unscheduled events during the course of the well. The final solution was to abandon the contaminated section and make a sidetrack from 3760 m. The well was drilled with seawater and bentonite pills down to 1008 m and with PHPA/KCl/glycol/polymer mud (ANCO 2000) from 1008 m to TD.

The prognosed Permian / Devonian sand units similar to Embla field, were not seen. Oil shows were observed in the Ekofisk, Tor and Hod Formations, typically associated with fractures, but the chalks were not of reservoir quality. The well penetrated a 612 m pre-Cretaceous section in which the Late Jurassic was absent. Top Carboniferous was set at 4055 m. Sandstone intervals were present, but there were no shows apart from an isolated show in a black claystone at 4119 m in the Carboniferous. Organic geochemical analyses of cuttings showed that the Carboniferous shales and coal beds were mainly Type III with a poor to fair potential for gas only. Four cores were cut, three from the interval 3038 m in the Våle Formation to 3070 m in the Ekofisk Chalk Formation and one in the Carboniferous Sandstones from 4211 m to 4225 m. No wire line fluid sample was taken.

The well was permanently abandoned on 23 December 1993 as dry with oil shows.

Testing

No drill stem test was performed

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
190.00	3801.00

Cuttings available for sampling?	YES

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	3038.0	3049.0	[m]
3	3060.2	3068.7	[m]
4	4211.0	4224.8	[m]

Total core sample length [m]	33.3
Cores available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
115	NORDLAND GP
1562	HORDALAND GP
2937	ROGALAND GP
2937	BALDER FM
2953	SELE FM
2992	LISTA FM
3047	VÅLE FM
3050	SHETLAND GP
3050	EKOFISK FM
3091	TOR FM
3298	HOD FM
3656	BLODØKS FM
3661	HIDRA FM
3734	CROMER KNOLL GP
3734	RØDBY FM
3795	SOLA FM
3854	TUXEN FM
3935	UNDEFINED GP

Composite logs

Document name	Document format	Document size [MB]
2153	pdf	0.71

Geochemical information

Document name	Document format	Document size [MB]
2153_1	pdf	2.48

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

Document name	Document format	Document size [MB]
2153_2_11_9_COMPLETION_REPORT_AND_LOG	pdf	65.67

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DIPL DAC SGR	2984	4402
DLL GR	946	2985
FMT	2967	3704
FMT	3053	4373
HEXDIP	2984	4405
MAC ZDEN SGR	946	2985
MWD - GR RES DIR	0	0
SGR	2900	3815
SWC	3052	4373
VSP	1000	4360
VSP	2390	2550
ZDEN CN DGR	2989	4403
ZDEN CN DGR	4403	2989

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	194.0	36	197.0	0.00	LOT
INTERM.	20	997.0	26	1008.0	0.00	LOT
INTERM.	14	2989.0	17 1/2	2997.0	0.00	LOT
OPEN HOLE		4406.0	12 1/4	4406.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
1	1.62	18.0	4.8	WATER BASED	10.08.1993
1	1.62	17.0	4.3	WATER BASED	09.08.1993
1	1.70	36.0	9.1	DUMMY	06.10.1993
1	1.70	31.0	8.6	WATER BASED	08.10.1993
1	1.70	29.0	9.1	WATER BASED	11.10.1993
1	1.70	24.0	9.6	WATER BASED	11.10.1993
1	1.70	19.0	12.0	WATER BASED	13.10.1993
1	1.69	21.0	9.6	WATER BASED	14.10.1993
1	1.70	17.0	7.7	WATER BASED	18.10.1993
1	1.70	19.0	8.1	WATER BASED	18.10.1993
1	1.70	21.0	9.1	WATER BASED	19.10.1993
1	1.70	32.0	10.1	WATER BASED	08.11.1993
1	1.70	26.0	9.1	WATER BASED	10.11.1993
1	1.70	25.0	9.6	WATER BASED	11.11.1993
1	1.70	28.0	11.5	WATER BASED	12.11.1993
1	1.70	27.0	11.5	WATER BASED	15.11.1993
1	1.70	27.0	12.0	WATER BASED	15.11.1993
1	1.70	25.0	9.1	WATER BASED	12.10.1993
1	1.69	19.0	8.6	WATER BASED	15.10.1993
1	1.79	32.0	9.6	WATER BASED	23.11.1993
121	1.05			DUMMY	26.07.1993
194	1.05			DUMMY	26.07.1993
194	1.05			DUMMY	28.07.1993
197	1.05			DUMMY	28.07.1993
277	1.10	4.0	14.4	WATER BASED	02.08.1993
345	1.05	4.0	4.8	DUMMY	02.08.1993
493	1.08	6.0	9.6	WATER BASED	02.08.1993
610	1.11	5.0	10.5	WATER BASED	02.08.1993
682	1.78	28.0	5.3	WATER BASED	20.12.1993
920	1.09	5.0	13.4	WATER BASED	02.08.1993
982	1.11	2.0	6.2	WATER BASED	03.08.1993
1008	1.11	4.0	7.7	WATER BASED	04.08.1993
1008	1.13	5.0	7.7	WATER BASED	06.08.1993
1008	1.62	16.0	4.8	WATER BASED	09.08.1993
1008	1.13	5.0	8.6	WATER BASED	05.08.1993

1011	1.62	17.0	4.8	WATER BASED	09.08.1993
1014	1.62	18.0	3.8	WATER BASED	12.08.1993
1285	1.62	25.0	10.1	WATER BASED	12.08.1993
1612	1.62	22.0	10.1	WATER BASED	13.08.1993
1698	1.62	29.0	11.0	WATER BASED	16.08.1993
1698	1.65	30.0	11.5	WATER BASED	20.08.1993
1698	1.62	29.0	10.5	WATER BASED	16.08.1993
1698	1.63	22.0	6.7	WATER BASED	16.08.1993
1698	1.61	22.0	6.7	WATER BASED	18.08.1993
1698	1.62	22.0	7.2	WATER BASED	18.08.1993
1698	1.65	27.0	7.7	WATER BASED	19.08.1993
1877	1.65	26.0	7.7	WATER BASED	23.08.1993
1933	1.65	27.0	7.2	WATER BASED	23.08.1993
1976	1.86	23.0	10.5	WATER BASED	21.10.1993
2256	1.65	25.0	7.2	WATER BASED	23.08.1993
2358	1.79	32.0	6.7	WATER BASED	20.12.1993
2395	1.65	25.0	7.7	WATER BASED	24.08.1993
2405	1.70	18.0	7.2	WATER BASED	22.10.1993
2405	1.86	26.0	12.0	WATER BASED	20.10.1993
2452	1.79	31.0	6.7	WATER BASED	20.12.1993
2714	1.67	29.0	7.7	WATER BASED	25.08.1993
2890	1.67	26.0	7.2	WATER BASED	26.08.1993
2906	1.79	31.0	8.1	WATER BASED	20.12.1993
2997	1.67	25.0	7.2	WATER BASED	27.08.1993
2997	1.67	26.0	7.7	WATER BASED	30.08.1993
2997	1.67	31.0	7.2	WATER BASED	30.08.1993
2997	1.67	28.0	6.7	WATER BASED	30.08.1993
2997	1.67	31.0	7.2	WATER BASED	31.08.1993
2997	1.67	28.0	7.2	WATER BASED	01.09.1993
2997	1.67	32.0	5.7	WATER BASED	02.09.1993
2997	1.67	32.0	5.7	WATER BASED	03.09.1993
2997	1.67	32.0	4.8	WATER BASED	06.09.1993
2997	1.67	29.0	7.2	WATER BASED	06.09.1993
2997	1.67	31.0	6.2	WATER BASED	06.09.1993
3038	1.69	30.0	7.7	WATER BASED	07.09.1993
3038	1.68	29.0	6.7	WATER BASED	08.09.1993
3048	1.68	25.0	7.2	WATER BASED	09.09.1993
3055	1.68	25.0	7.2	WATER BASED	10.09.1993
3058	1.68	28.0	7.2	WATER BASED	13.09.1993
3060	1.68	26.0	7.2	WATER BASED	13.09.1993

3070	1.68	27.0	7.2	WATER BASED	13.09.1993
3096	1.68	23.0	7.7	WATER BASED	14.09.1993
3181	1.70	37.0	8.6	WATER BASED	05.10.1993
3215	1.70	23.0	9.6	WATER BASED	15.09.1993
3264	1.70	28.0	8.1	WATER BASED	01.11.1993
3293	1.70	29.0	10.1	WATER BASED	02.11.1993
3295	1.70	36.0	7.2	WATER BASED	03.11.1993
3306	1.70	27.0	7.7	WATER BASED	04.11.1993
3320	1.70	29.0	10.1	WATER BASED	27.10.1993
3320	1.70	31.0	8.6	WATER BASED	01.11.1993
3322	1.69	28.0	9.6	WATER BASED	16.09.1993
3349	1.70	37.0	9.1	WATER BASED	07.10.1993
3350	1.70	31.0	8.1	WATER BASED	11.10.1993
3352	1.70	23.0	8.6	WATER BASED	08.11.1993
3389	1.70	25.0	12.9	WATER BASED	25.10.1993
3390	1.70	24.0	10.5	WATER BASED	25.10.1993
3399	1.70	26.0	12.4	WATER BASED	25.10.1993
3400	1.79	31.0	7.2	WATER BASED	20.12.1993
3433	1.69	35.0	11.0	WATER BASED	17.09.1993
3434	1.70	24.0	9.6	WATER BASED	28.10.1993
3445	1.70	27.0	10.1	WATER BASED	08.11.1993
3446	1.68	29.0	11.5	WATER BASED	20.09.1993
3451	1.70	29.0	9.6	WATER BASED	08.11.1993
3452	1.68	28.0	10.1	WATER BASED	20.09.1993
3457	1.70	26.0	8.6	WATER BASED	01.11.1993
3468	1.68	29.0	10.1	WATER BASED	20.09.1993
3470	1.70	28.0	11.5	WATER BASED	26.10.1993
3499	1.68	28.0	9.6	WATER BASED	21.09.1993
3499	1.70	30.0	9.1	WATER BASED	01.11.1993
3503	1.70	29.0	9.6	WATER BASED	09.11.1993
3507	1.69	24.0	9.1	WATER BASED	23.09.1993
3529	1.70	28.0	11.5	WATER BASED	15.11.1993
3533	1.70	36.0	10.1	WATER BASED	04.10.1993
3572	1.70	24.0	11.5	WATER BASED	16.11.1993
3576	1.70	31.0	12.0	WATER BASED	17.11.1993
3588	1.69	31.0	9.6	WATER BASED	23.09.1993
3588	1.69	31.0	9.6	WATER BASED	23.09.1993
3588	1.69	31.0	9.6	WATER BASED	23.09.1993
3588	1.69	31.0	9.6	WATER BASED	23.09.1993
3671	1.69	26.0	7.7	WATER BASED	24.09.1993

3671	1.69	26.0	7.7	WATER BASED	24.09.1993
3681	1.68	30.0	8.1	WATER BASED	27.09.1993
3692	1.70	26.0	12.4	WATER BASED	18.11.1993
3701	1.69	25.0	8.1	WATER BASED	27.09.1993
3713	1.69	27.0	7.2	WATER BASED	27.09.1993
3759	1.74	36.0	12.0	WATER BASED	04.10.1993
3761	1.70	34.0	9.6	DUMMY	04.10.1993
3778	1.70	33.0	8.6	WATER BASED	28.09.1993
3785	1.80	29.0	11.0	WATER BASED	24.11.1993
3800	1.70	29.0	11.0	WATER BASED	19.11.1993
3816	1.70	33.0	8.6	WATER BASED	29.09.1993
3816	1.70	33.0	8.6	WATER BASED	30.09.1993
3816	1.70	33.0	9.6	DUMMY	04.10.1993
3847	1.75	28.0	10.1	WATER BASED	22.11.1993
3950	1.75	29.0	10.5	WATER BASED	22.11.1993
3976	1.79	33.0	10.1	WATER BASED	22.11.1993
4023	1.79	34.0	10.5	WATER BASED	25.11.1993
4064	1.79	35.0	8.1	WATER BASED	26.11.1993
4102	1.79	36.0	8.6	WATER BASED	29.11.1993
4102	1.79	38.0	8.6	WATER BASED	29.11.1993
4145	1.79	31.0	8.6	WATER BASED	29.11.1993
4194	1.79	35.0	7.7	WATER BASED	30.11.1993
4210	1.80	37.0	7.7	WATER BASED	01.12.1993
4223	1.79	35.0	7.2	WATER BASED	02.12.1993
4224	1.79	32.0	7.2	WATER BASED	03.12.1993
4228	1.79	32.0	7.7	WATER BASED	06.12.1993
4255	1.79	30.0	6.7	WATER BASED	06.12.1993
4255	1.79	28.0	6.7	WATER BASED	06.12.1993
4293	1.79	30.0	6.2	WATER BASED	07.12.1993
4335	1.79	34.0	7.7	WATER BASED	09.12.1993
4375	1.79	32.0	8.6	WATER BASED	09.12.1993
4406	1.79	36.0	9.1	WATER BASED	13.12.1993
4406	1.79	32.0	6.7	WATER BASED	13.12.1993
4406	1.79	31.0	8.1	WATER BASED	13.12.1993
4406	1.79	35.0	8.1	WATER BASED	13.12.1993
4406	1.79	32.0	6.7	WATER BASED	14.12.1993
4406	1.79	33.0	6.7	WATER BASED	15.12.1993

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]
2153_Formation_pressure_(Formasjonstrykk)	pdf	0.22