General information

Wellbore name	2/5-9
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	2/5-9
Seismic location	SGT 8606 - 2203 SP 4203
Production licence	006
Drilling operator	Amoco Norway Oil Company
Drill permit	697-L
Drilling facility	WEST VANGUARD
Drilling days	131
Entered date	10.09.1991
Completed date	18.01.1992
Release date	18.01.1994
Publication date	26.10.2009
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	22.0
Water depth [m]	69.0
Total depth (MD) [m RKB]	5460.0
Final vertical depth (TVD) [m RKB]	5443.0
Maximum inclination [°]	12.5
Bottom hole temperature [°C]	167
Oldest penetrated age	LATE JURASSIC
Oldest penetrated formation	HAUGESUND FM
Geodetic datum	ED50
NS degrees	56° 32' 7.18'' N
EW degrees	3° 33' 13.43'' E
NS UTM [m]	6265939.43
EW UTM [m]	534057.55
UTM zone	31
NPDID wellbore	1834

Wellbore history

Well 2/5-9 is located in the vicinity of the 2/5-3 Sørøst Tor and the 2/5-4discoveries on the Steinbit Terrace in the southern North Sea. The main objective was to test the hydrocarbon potential of the Late Jurassic sands in a rotated fault block, designated as the Magne structure. Secondary objectives were to determine the reservoir quality of any sand prone intervals penetrated in the well, to determine the Jurassic stratigraphy in this easterly part of the Central Graben, and to establish seismic well ties into prospective acreage surrounding the Magne prospect.

Operations and results

Wildcat well 2/5-9 was spudded with the semi-submersible installation West Vanguard on 10 September 1991 and drilled to TD at 5460 m (5443 m TVD) in the Late Jurassic Haugesund Formation. Pore pressure reached a maximum estimated value of 15.9 ppg at TD. The well was kept vertical down to 4350 m, where angle started to build up to a maximum of 12.5 deg deviation at 4744 m. The deviation at TD was 10.4 deg. The well took 131 days to to complete, from spud to abandonment. A total of 36.8 days was unscheduled events, of which rig repair, malfunction of drilling equipment, and hole problems were the major contributors. Also an additional deepening from the authorized TD at 5337 m to 5460 m in order to penetrate a reflector identified by wire line seismic logging (QSST checkshot) increased the pre-drill schedule. The well was drilled with seawater and bentonite pills down to 960 m, with KCl polymer mud from 960 m to 2880 m, and with PHPA/KCl polymer mud from 2880 m to TD. No shallow gas zones were penetrated in the well.

The top Rogaland at 3126 m and top Shetland Group at 3259 m came in 10 m and 17 m shallow to prognosis, respectively. The top Early Cretaceous at 4083 m came in 64 m shallow to prognosis and was 54 in thick, 31 m thicker than prognosed. The top Jurassic Tyne Group came in at 4137 m, 33 m shallow to prognosis, and after that a total of 1323m of Jurassic section were penetrated without encountering any sandstone. The Mandal Formation and uppermost section of the Farsund Formation were absent, represented by the Base Cretaceous unconformity.

In the Nordland and Hordaland Groups very poor oil shows were noted in silty claystones and shales at 1215 - 1250 m and at 2740 - 2800, respectively. An oil bearing section of 33.5 m consisting of interbedded marly limestones, claystones and thin sandstone stringers was encountered at 4074 - 4107.5 m in the lowermost Shetland Group and uppermost Cromer Knoll Group. Good shows were recorded in the section, but it was tight and non-productive with a net pay of only 8.6 m. Weak shows were recorded also throughout the shales of the Tyne Group, but these are interpreted as in-situ generated hydrocarbons typical of these source rocks, when sufficiently buried.

No cores were cut and no wire line fluid samples were taken.

The well was permanently abandoned on 18 January 1992 as a dry well with shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
970.00	5460.00

Cuttings available for sampling?	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
91	NORDLAND GP
1707	HORDALAND GP
3126	ROGALAND GP
3126	BALDER FM
3148	SELE FM
3195	LISTA FM
3243	VÅLE FM
3259	SHETLAND GP
3259	EKOFISK FM
3378	TOR FM
3703	HOD FM
4079	BLODØKS FM
4081	HIDRA FM
4083	CROMER KNOLL GP
4083	TUXEN FM
4108	ÅSGARD FM
4137	TYNE GP
4137	FARSUND FM
4313	HAUGESUND FM

Composite logs

Document name	Document format	Document size [MB]
1834	pdf	0.97

Geochemical information

Document name	Document format	Document size [MB]
1834_1	pdf	0.67

1834_2	pdf	2.79

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

Document name	Document format	Document size [MB]
1834_01_WDSS_General_Information	pdf	0.62
1834_02_WDSS_completion_log	pdf	0.29

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

Document name	Document format	Document size [MB]
1834_2_5_9_COMPLETION_LOG	pdf	2.70
1834_2_5_9_COMPLETION_REPORT	pdf	23.95

Logs

Log type	Log top depth [m]	Log bottom depth [m]
FMS GR	2872	4532
FMS GR	4518	5342
GR CNL LDL	4518	5342
GR DLL LSS	950	2880
GR LDL CNL NGT AS	2872	4532
GR MSFL DLL LDL AS	2872	4150
GR MSFL PIL	4000	4532
GR PIL AS	4518	5342
GR PIL AS	5275	5468
QSST	1022	2875
QSST	3978	4500
QSST	4500	5320
RFT	3342	4314
WA VSP	2422	2650
ZO VSP	2592	4140

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	187.0	36	190.0	0.00	LOT
INTERM.	20	950.0	26	960.0	1.75	LOT
INTERM.	13 3/8	2872.0	17 1/2	2880.0	2.02	LOT
INTERM.	9 5/8	4515.0	12 1/4	4525.0	2.23	LOT
OPEN HOLE		5460.0	8 1/2	5460.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
96	1.03			WATER BASED	
145	1.20	10.0		WATER BASED	
190	1.20	10.0		WATER BASED	
960	1.02			WATER BASED	
1903	1.53	31.0		WATER BASED	
1909	1.62	25.0		WATER BASED	
2108	1.62	26.0		WATER BASED	
2185	1.62	38.0		WATER BASED	
2233	1.70	46.0		WATER BASED	
2347	1.72	37.0		WATER BASED	
2416	1.70	50.0		WATER BASED	
2423	1.70	38.0		WATER BASED	
2849	1.74	64.0		WATER BASED	
2880	1.74	25.0		WATER BASED	
2880	1.75	24.0		WATER BASED	
2897	1.67	18.0		WATER BASED	
3070	1.68	27.0		WATER BASED	
3730	1.61	24.0		WATER BASED	
3860	1.61	30.0		OIL BASED	
3978	1.74	31.0		WATER BASED	
4090	1.80	33.0		WATER BASED	
4150	1.80	32.0		WATER BASED	
4171	1.80	30.0		WATER BASED	
4225	1.80	31.0		WATER BASED	
4372	1.80	24.0		WATER BASED	
4437	1.84	25.0		WATER BASED	
4438	1.74	17.0		WATER BASED	

4485	1.78	22.0		WATER BASED	
4485	1.82	26.0		WATER BASED	
4525	1.79	23.0		WATER BASED	
4525	1.78	24.0		WATER BASED	
4591	1.78	21.0		WATER BASED	
4641	1.79	20.0		WATER BASED	
4730	1.08	17.0		WATER BASED	
4732	1.79	20.0		WATER BASED	
4959	1.85	18.0		WATER BASED	
5031	1.85	19.0		WATER BASED	
5147	1.91	21.0		WATER BASED	
5194	1.92	21.0		WATER BASED	
5280	1.92	24.0		WATER BASED	
5337	1.92	29.0		WATER BASED	
5460	1.98	25.0		WATER BASED	