General information

Wellbore name	6507/11-2
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6507/11-2
Seismic location	SG 8158-401 x-over 713-477
Production licence	062
Drilling operator	Saga Petroleum ASA
Drill permit	325-L
Drilling facility	WEST VENTURE OLD
Drilling days	43
Entered date	18.04.1982
Completed date	30.05.1982
Release date	30.05.1984
Publication date	28.06.2007
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	33.0
Water depth [m]	243.0
Total depth (MD) [m RKB]	2905.0
Final vertical depth (TVD) [m RKB]	2905.0
Maximum inclination [°]	1.5
Bottom hole temperature [°C]	88
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	GREY BEDS (INFORMAL)
Geodetic datum	ED50
NS degrees	65° 10' 59.7'' N
EW degrees	7° 36' 39.84'' E
NS UTM [m]	7229774.55
EW UTM [m]	434952.38
UTM zone	32
NPDID wellbore	51

Wellbore history

General

Wildcat well 6507/11-2 was drilled as the fourth well offshore Mid-Norway in the Møre/Trøndelag II area. The well was drilled on a symmetric, north-south trending horst called Y-1 in the northeastern part of the block, where seismic line SG 8158-401 indicated a possible minor rollover trending north-south at the Base Cretaceous level. The objective of well 6507/11-2 was to test the stratigraphic sequence below the Top Palaeocene reflector. The targets, represented by expected minor vertical closures, were sandstone reservoirs of Early - Middle Jurassic age. The entrapment of major petroleum accumulations was dependent upon a lateral sealing mechanism in the northern part of the Y-I horst.

Operations and results

Well 6507/11-2 was spudded with the semi-submersible installation West Venture on 18 April 1982 and drilled to TD at 2905 m in the Late Triassic Grey Beds. No significant problems were encountered during operations. The well was drilled with seawater and slugs of spud mud down to 412 m, with gypsum mud from 412 m to 857 m, with "Pro-mud" gypsum polymer mud from 857 m to 1775 m, and with Lignosulphonate mud from 1775 m to TD. In the Jurassic and Triassic section from 1898 to TD, sandstones with a total net porous sand thickness of 395 m was found. They were all water bearing. The Net-Gross ratio of the Jurassic interval, 1898-2622 m is 0.45. The Middle/Early Jurassic Ile Formation (1948-2040 m) was fine to medium grained and well sorted sandstone. A net sand thickness of 65 m was defined in Ile, with porosity of 31% and permeabilities ranging from 100 mD to 28 D. The upper part was clean and showed extremely good reservoir rock properties. The lower part of the sand contained significant amounts of mica. Although this part was less permeable than the top, this too was a very good reservoir rock. The Early Jurassic sand (2117 - 2289 m) was less sorted than the Middle Jurassic sand. It was very fine grained and contained some shale. A net thickness of 120 m with an average porosity of 26% was estimated. The permeability was around 60 mD. The sandstones in the Coal Unit (2289-2761 m) and Triassic grey beds (2761-2905 m) had estimated average porosity of 29% and a total net thickness of 210 m.

The logs showed that the sands in the well were all water wet. No shows were reported from this well. The formation pressures of the Jurassic and Triassic sandstones gave a gradient of 0.44 psi/ft. All sandstones seemed to belong to the same pressure regime.

Six conventional cores were cut, four in the Middle/Early - and two in Early Jurassic Sandstone reservoirs. A full suit of logs including RFT pressure measurements were run in the Jurassic and Triassic. No fluid samples were collected. The bottom hole temperature at final TD can be estimated to 88 deg C based on Horner corrected wire line BHT's. The Triassic was only partly penetrated by this well.

The well was permanently abandoned on 30 May 1982 as a dry well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
420.00	2905.00

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	1965.5	1975.0	[m]
2	1976.0	1977.2	[m]
3	1991.4	2001.0	[m]
4	2002.9	2014.9	[m]
5	2119.0	2124.5	[m]
6	2126.0	2127.9	[m]

Total core sample length [m]	39.6
Cores available for sampling?	YES

Core photos


1965-1969m


1969-1972m


1972-1975m


1976-1977m


1991-1994m


1994-1998M


1998-2001M


2002-2006M


2006-2010M


2010-2013m


2013-2014m


2119-2022m


2122-2124m


2126-2127m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
276	NORDLAND GP
1380	HORDALAND GP
1380	BRYGGE FM
1791	ROGALAND GP
1791	TARE FM
1838	TANG FM
1864	SHETLAND GP
1892	CROMER KNOLL GP
1898	VIKING GP
1898	SPEKK FM
1908	MELKE FM
1948	FANGST GP
1948	ILE FM
2040	BÅT GP
2040	ROR FM
2117	TILJE FM
2290	ÅRE FM
2761	GREY BEDS (INFORMAL)

Geochemical information

Document name	Document format	Document size [MB]
51_1	pdf	0.26
51_2	pdf	0.99
51_3	pdf	0.40
51_4	pdf	4.82

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

Document name	Document format	Document size [MB]
51_01_WDSS_General_Information	pdf	0.16
51_02_WDSS_completion_log	pdf	0.22

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

Document name	Document format	Document size [MB]
51_01_6507_11_2_Completion_Report_and_Composite_Well_Log	pdf	13.51
51_6507_11_2_COMPLETION_REPORT_AND_LOG	pdf	13.51

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL GR BI	300	1764
CHKSHOT	450	2900
CST	1178	2904
HDT	1763	2904
ISF LSS MSFL GR	410	856
ISF LSS MSFL GR	845	1768
ISF LSS MSFL GR	1764	2425
ISF LSS MSFL GR	2405	2903
LDL CNL GR	410	857
LDL CNL GR	1764	2425
LDL CNL GR	2415	2904
LDT CNL GR	845	1774
NGS	1764	2406
PEF NGS PB	1875	2160
RFT	1955	2194

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	410.0	36	420.0	0.00	LOT
SURF.COND.	20	845.0	26	860.0	1.57	LOT
INTERM.	13 3/8	1764.0	17 1/2	1770.0	1.82	LOT
OPEN HOLE		2905.0	12 1/4	2905.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
412	1.06			seawater	
1310	1.12	38.0		waterbased	
1800	1.22	42.0		waterbased	
2003	1.23	50.0		waterbased	
2905	1.23	50.0		waterbased	

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]
51_Formation_pressure_(Formasjonstrykk)	pdf	0.28