

**General information**

Wellbore name	6507/12-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6507/12-1
Seismic location	803-472 SP.590
Production licence	059
Drilling operator	Saga Petroleum ASA
Drill permit	255-L
Drilling facility	BYFORD DOLPHIN
Drilling days	118
Entered date	01.07.1980
Completed date	26.10.1980
Release date	26.10.1982
Publication date	29.06.2004
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	225.0
Total depth (MD) [m RKB]	3720.0
Final vertical depth (TVD) [m RKB]	3712.0
Maximum inclination [°]	19.6
Bottom hole temperature [°C]	131
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	RED BEDS (INFORMAL)
Geodetic datum	ED50
NS degrees	65° 7' 1.62" N
EW degrees	7° 42' 42.61" E
NS UTM [m]	7222304.75
EW UTM [m]	439520.78
UTM zone	32
NPDID wellbore	202



Wellbore history

General

Wildcat well 6507/12-1 was the first well to be drilled offshore Mid-Norway. It was drilled to test the stratigraphic sequence between seabed and at least 500 m below "reflector E" as defined in the licence agreement. The primary target was a mapped Intra Jurassic seismic reflector at a depth of approximately 2575 m. This reflector was interpreted to be associated with a Middle to Early Jurassic sandstone sequence. The secondary target was represented by possible sandstone sequences between the mapped Base Cretaceous reflector and the Intra Jurassic reflector. Thirdly there was a small vertical closure in the basal part of the Tertiary sequence that could have prospective interest.

The well is Type Well for the Båt Group, the Tare Formation and the Naust Formation. It is Reference Well for the Fangst Group.

Operations and results

The well was spudded with the semi-submersible installation Byford Dolphin on 1 July 1980 in a water depth of 225 m, and drilled to a total depth of 3713 m in Late Triassic Red Beds. The well was drilled with spud mud down to 778 m, with Gypsum PAC mud from 778 m to 1448 m, and with Lignosulfonate/PAC mud from 1448 m to TD.

The well penetrated a section of 1105 m below reflector E and thus meets the requirement set in the work programme for licence 059.

The well encountered a Cenozoic sequence of 1679 m and the Tertiary succession was, at the time the well was drilled, subdivided into lithostratigraphic units according to Deegan & Scull's nomenclature for the northern North Sea. The well proved a slightly thicker Tertiary sequence than expected. The seismic leg interpreted to represent Base Tertiary proved to be related to a tuff sequence (Tare Formation).

The Top Cretaceous reflector was easily determined from acoustic and density logs. The base of the Cretaceous was encountered in the well at 2032 m. The prognosed depth was 1975 m. The Cretaceous sequence is composed of Late Cretaceous variegated claystones and Early Cretaceous red marls overlying a basal limestone. Total Cretaceous thickness is 103 m. The sequence of primary interest below the Base Cretaceous unconformity starts with a 20 m thick black shale equivalent to the Kimmeridge Clay Formation (Spekk Formation). At 2052 m a very fine-grained marginal marine silty sandstone/clay-stone of Bathonian-Callovian/Oxfordian age was encountered (Melke Formation). Below this section the well penetrated several sandstone sections with good to excellent reservoir quality (Fangst and Båt Groups). The reflector that defined the top of the primary target was penetrated at 2660 m. It fell within a succession of coals and coaly claystones interstratified with sandstones of delta plain character (+re Formation). The base of the Coal Unit is of Late Rhaetian age while the top is defined well into the Early Jurassic. No hiatuses were recorded at the Triassic-Jurassic boundary. Below the coal sequence the well found a thick late Triassic continental succession, of which the lower 653 m is of red bed facies similar to the Cormorant Unit as seen in the northern North Sea. The well was extended to a TD of 3713 m, 213 m deeper than the planned maximum total depth of 3500 m in order to obtain more stratigraphic information. With the exception of slight traces of apparently dead oil reported at 2550 - 2560 m (by EXLOG), and a weak cut reaction seen on a sidewall core 2743.5 m and 2766 m, no oil shows were reported during the drilling of this well. There were no indications of hydrocarbons seen from the E-logs. Four conventional cores were cut in the "Coal Unit". The first was cut from 2404 m to 2410 m in the Tilje Formation, cores two and three were cut in the "Coal Unit" (+re Formation) in the intervals 2520.5 m to 2538 m and 2707 m to 2716 m, respectively, and core number 4 was cut from 3708 m to 3720 m in the Red Beds. One attempt was made to sample



formation water. Due to sampling problems, the retrieved sample was a mixture of fluid from 2451.5 m and 2840 m. The well was permanently abandoned on 26 October 1980 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]
380.00	3717.00

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	2404.0	2405.7	[m]
2	2520.0	2537.3	[m]
3	2707.0	2715.8	[m]
4	3708.0	3719.0	[m]

Total core sample length [m]	38.7
Cores available for sampling?	YES

Core photos

2404-2405m



2520-2522m



2523-2525m



2526-2528m



2529-2530m



2531-2533m



2534-2536m



2537-2538m



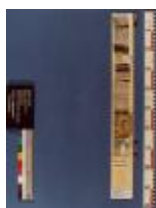
2707-2709m



2710-2712m



2713-2715m



2715-2716m



3708-3710m



3710-3713m



3714-3716m



3716-3718m



3719-3719m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1560.0	[m]	DC	IKU
1590.0	[m]	DC	IKU
1600.0	[m]	DC	IKU
1620.0	[m]	DC	IKU
1640.0	[m]	DC	IKU
1660.0	[m]	DC	IKU
1680.0	[m]	DC	IKU
1700.0	[m]	DC	IKU
1720.0	[m]	DC	IKU
1740.0	[m]	DC	IKU
1760.0	[m]	DC	IKU
1780.0	[m]	DC	IKU
1800.0	[m]	DC	IKU
1820.0	[m]	DC	IKU
1840.0	[m]	DC	IKU
1860.0	[m]	DC	IKU
1880.0	[m]	DC	IKU
1900.0	[m]	DC	IKU
1920.0	[m]	DC	IKU
1930.0	[m]	DC	IKU
1940.0	[m]	DC	IKU
1960.0	[m]	DC	IKU



1970.0	[m]	DC	IKU
1980.0	[m]	DC	IKU
1985.0	[m]	DC	IKU
1990.0	[m]	DC	IKU
1995.0	[m]	DC	IKU
2005.0	[m]	DC	IKU
2015.0	[m]	DC	IKU
2020.0	[m]	DC	IKU
2025.0	[m]	DC	IKU
2030.0	[m]	DC	IKU
2035.0	[m]	DC	IKU
2055.0	[m]	DC	IKU
2060.0	[m]	DC	IKU
2070.0	[m]	DC	IKU
2075.0	[m]	DC	IKU
2085.0	[m]	DC	IKU
2095.0	[m]	DC	IKU
2115.0	[m]	DC	IKU
2130.0	[m]	DC	IKU
2135.0	[m]	DC	IKU
2140.0	[m]	DC	IKU
2155.0	[m]	DC	IKU
2175.0	[m]	DC	IKU
2193.0	[m]	DC	IKU
2214.0	[m]	DC	IKU
2235.0	[m]	DC	IKU
2256.0	[m]	DC	IKU
2277.0	[m]	DC	IKU
2298.0	[m]	DC	IKU
2319.0	[m]	DC	IKU
2340.0	[m]	DC	IKU
2361.0	[m]	DC	IKU
2382.0	[m]	DC	IKU
2421.0	[m]	DC	IKU
2442.0	[m]	DC	IKU
2445.0	[m]	DC	IKU
2463.0	[m]	DC	IKU
2481.0	[m]	DC	IKU
2502.0	[m]	DC	IKU
2514.0	[m]	DC	IKU



2520.0	[m]	DC	IKU
2541.0	[m]	DC	IKU
2562.0	[m]	DC	IKU
2583.0	[m]	DC	IKU
2601.0	[m]	DC	IKU
2622.0	[m]	DC	IKU
2643.0	[m]	DC	IKU
2664.0	[m]	DC	IKU
2685.0	[m]	DC	IKU
2703.0	[m]	DC	IKU
2724.0	[m]	DC	IKU
2766.0	[m]	DC	IKU
2787.0	[m]	DC	IKU
2805.0	[m]	DC	IKU
2826.0	[m]	DC	IKU
2847.0	[m]	DC	IKU
2850.0	[m]	DC	IKU
2871.0	[m]	DC	IKU
2892.0	[m]	DC	IKU
2913.0	[m]	DC	IKU
2925.0	[m]	DC	IKU
2946.0	[m]	DC	IKU
2964.0	[m]	DC	IKU
2985.0	[m]	DC	IKU
3003.0	[m]	DC	IKU
3024.0	[m]	DC	IKU
3045.0	[m]	DC	IKU
3066.0	[m]	DC	IKU
3087.0	[m]	DC	IKU
3105.0	[m]	DC	IKU
3126.0	[m]	DC	IKU
3147.0	[m]	DC	IKU
3165.0	[m]	DC	IKU
3228.0	[m]	DC	IKU
3249.0	[m]	DC	IKU
3267.0	[m]	DC	IKU
3270.0	[m]	DC	IKU

Lithostratigraphy



Top depth [mMD RKB]	Lithostrat. unit
250	NORDLAND GP
250	NAUST FM
1342	KAI FM
1495	HORDALAND GP
1495	BRYGGE FM
1826	ROGALAND GP
1826	TARE FM
1884	TANG FM
1929	SHETLAND GP
1929	SPRINGAR FM
2012	CROMER KNOLL GP
2012	LYR FM
2032	VIKING GP
2032	SPEKK FM
2052	MELKE FM
2094	FANGST GP
2094	GARN FM
2128	NOT FM
2143	ILE FM
2213	BÅT GP
2213	ROR FM
2303	TILJE FM
2412	ÅRE FM
2920	GREY BEDS (INFORMAL)
3060	RED BEDS (INFORMAL)

Composite logs

Document name	Document format	Document size [MB]
202	pdf	0.67

Geochemical information





Document name	Document format	Document size [MB]
202 1 MATURITY MEASUREMENTS ON COAL SAMPLES FROM CORES FROM WEL 6507 12 1	pdf	0.33
202 2 RESULTS OF ROCK EVAL PYROLYSIS ANALYSES OF CUTTINGS AND CORE SAMPLES FROM HALTENBANKEN WELL6507 12 1	pdf	1.39
202 3 SOURCE ROCK ANALYSIS OF WELL6507 12 1	pdf	3.59
202 4 MATURATION STUDY USING VITRINITE REFLECTANCE WELL6507 12 1	pdf	0.52
202 5 Source Rock Analysis and Evaluation of Well6507 12 1	pdf	0.57
202 6	pdf	3.92

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

Document name	Document format	Document size [MB]
202 01 WDSS General Information	pdf	0.12
202 02 WDSS completion log	pdf	0.25

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

Document name	Document format	Document size [MB]
202 1 Completion Report & Completion log	pdf	105.80

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL	248	2396
CST	1430	2402
CST	2396	3713
FDC CNL NGT GR CAL	1430	3713
FDC GR CAL	700	1192
HDT	1430	3713
ISF LSS GR	700	1448
ISF SON GR	365	778





ISF SON MSFL GR SP CAL	1430	3713
RFT	1430	2402
RFT	2396	3713
WST	2980	3699
WST/VSP	590	2911

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	351.0	36	353.0	0.00	LOT
SURF.COND.	20	747.0	26	753.0	1.48	LOT
INTERM.	13 3/8	1405.0	17 1/2	1423.0	1.82	LOT
INTERM.	9 5/8	2370.0	12 1/4	2378.0	1.65	LOT
LINER	7	3720.0	8 1/2	3720.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
639	1.08	59.0		water based	
797	1.10	49.0		water based	
1167	1.22	50.0		water based	
1448	1.32	42.0		water based	
1695	1.33	45.0		water based	
2065	1.45	45.0		water based	
3263	1.32	50.0		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]
202_Formation pressure (Formasjonstrykk)	pdf	0.29

