

**General information**

Wellbore name	6407/2-1
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6407/2-1
Seismic location	715 - 259 SP 840
Production licence	074
Drilling operator	Saga Petroleum ASA
Drill permit	332-L
Drilling facility	WEST VENTURE OLD
Drilling days	65
Entered date	03.06.1982
Completed date	06.08.1982
Release date	06.08.1984
Publication date	13.12.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	33.0
Water depth [m]	266.0
Total depth (MD) [m RKB]	3870.0
Final vertical depth (TVD) [m RKB]	3869.0
Maximum inclination [°]	3
Bottom hole temperature [°C]	130
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	RED BEDS (INFORMAL)
Geodetic datum	ED50
NS degrees	64° 58' 4.97" N
EW degrees	7° 28' 28.12" E
NS UTM [m]	7205942.44
EW UTM [m]	427977.33
UTM zone	32
NPDID wellbore	76



Wellbore history

General

Wildcat well 6407/2-1 was drilled in the Møre-Trøndelag II area offshore Mid-Norway, approximately 215 km NW of Trondheim. The overall goal with this early well was to establish the total stratigraphic column down to Late Triassic. The primary targets were Middle and the Early Jurassic Sandstone units. Secondary targets were the sequence below the Top Palaeocene reflector, the Early Cretaceous sequence, which could show development of sand, and the Triassic sandstones/siltstones immediately below the Åre Formation.

The well is Type Well for the Spekk and Ror Formations.

Operations and results

Well 6407/2-1 was spudded with the semi-submersible installation West Venture on 3 June 1982 and drilled to TD at 3870 m, 40 into the Late Triassic Red Beds. Operations went without significant problems. The well was drilled with spud mud down to 409 m. The 26" section was first drilled as a 14 3/3" pilot hole from 409 m to 1013 m using gel/gypsum mud. At this point 30 bbl of diesel was added to reduce mud weight. The hole section was then opened up with a 26" underreamer using gel/gypsum mud with further diesel addition. The 17 1/2 section was drilled with polymer/gypsum/lignosulphonate from 1013 m to 2215 m, and the remaining well was drilled with a lignite/lignosulphonate mud down to TD.

The well proved mainly claystones down to Middle and Early Jurassic Sandstones. The Tertiary with a total thickness of 1848.5 m, rested unconformably on the Late Cretaceous where the topmost Maastrichtian was missing. Otherwise the Cretaceous section was nearly complete, and relatively thick (ca 700 m) compared to other wells in the area. High gas readings were experienced in the upper part of the Cretaceous (Santonian - Campanian) with weak oil shows on cuttings and two SWCs. A study of wire line logs, sidewall cores and hole response indicated that the gas was overpressured, and trapped in a non-reservoir lithology. The base Cretaceous unconformity (base Lyr Formation) was penetrated at 2842.5 m, overlying a 65.5 m thick Jurassic shale sequence similar to the Kimmeridgian Clay Formation (Spekk Formation). The two Jurassic Sandstone units were 133 m (Fangst Group) and 169 m (Tilje Formation) thick. In contrast to what is seen in the other wells in the area, the upper unit contains a shaly sequence of about 30 m thickness. A "Coal Unit" (Åre Formation) of 378 m thickness, mainly composed of interbedded carbonaceous claystone/shale, fine sand and silt, overlies the Triassic Grey and Red beds.

Six conventional cores were cut, one in the Late Cretaceous, two in the Fangst Group, one in the Ror Formation and two in the Åre Formation Coal Unit, with a total recovery of 66.11 m. No fluid sample was taken.

The well was permanently abandoned on 6 August 1982 as a 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]
410.00	3871.00

Cuttings available for sampling?	NO
----------------------------------	----

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	2417.0	2434.4	[m]
2	2940.0	2940.3	[m]
3	2943.0	2957.7	[m]
4	3085.0	3100.4	[m]
5	3478.0	3479.6	[m]
6	3480.0	3496.8	[m]

Total core sample length [m]	66.1
Cores available for sampling?	YES

Core photos



2417-2422m



2422-2427m



2427-2432m



2432-2434m



2940-2941m



2943-2948m



2948-2953m



2953-2957m



3085-3090m



3090-3095m



3095-3100m



3100-3101m



3478-3479m



3480-3485m



3485-3490m



3490-3495m



3495-3497m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1790.0	[m]	DC	OD
2120.0	[m]	DC	OD
2130.0	[m]	DC	OD
2140.0	[m]	DC	OD
2150.0	[m]	DC	OD
2155.0	[m]	DC	SAGA
2160.0	[m]	DC	OD
2170.0	[m]	DC	SAGA
2170.0	[m]	DC	OD
2180.0	[m]	DC	SAGA
2180.0	[m]	DC	OD
2190.0	[m]	DC	OD
2200.0	[m]	DC	SAGA
2200.0	[m]	DC	OD
2210.0	[m]	DC	OD
2213.5	[m]	SWC	SAGA
2220.0	[m]	DC	OD
2225.5	[m]	SWC	SAGA
2230.0	[m]	DC	OD
2240.0	[m]	DC	OD
2240.5	[m]	SWC	SAGA
2250.0	[m]	DC	OD
2259.0	[m]	SWC	SAGA
2260.0	[m]	DC	OD
2270.0	[m]	DC	OD
2272.7	[m]	SWC	SAGA
2280.0	[m]	DC	OD
2284.5	[m]	SWC	SAGA



2290.0 [m]	DC	OD
2300.0 [m]	DC	OD
2302.0 [m]	SWC	SAGA
2310.0 [m]	DC	OD
2320.0 [m]	DC	OD
2330.0 [m]	DC	OD
2335.0 [m]	DC	SAGA
2340.0 [m]	DC	OD
2348.0 [m]	SWC	SAGA
2350.0 [m]	DC	OD
2360.0 [m]	DC	OD
2365.5 [m]	SWC	SAGA
2370.0 [m]	DC	OD
2380.0 [m]	DC	OD
2384.5 [m]	SWC	SAGA
2390.0 [m]	DC	OD
2395.0 [m]	DC	SAGA
2400.0 [m]	DC	OD
2410.0 [m]	DC	OD
2410.0 [m]	DC	SAGA
2417.0 [m]	C	OD
2418.0 [m]	C	OD
2418.1 [m]	C	OD
2419.5 [m]	C	OD
2419.5 [m]	C	OD
2420.0 [m]	DC	OD
2420.0 [m]	SWC	OD
2420.7 [m]	C	OD
2421.7 [m]	C	OD
2422.7 [m]	C	OD
2423.5 [m]	C	OD
2424.5 [m]	C	OD
2424.5 [m]	C	OD
2424.7 [m]	C	OD
2425.6 [m]	C	OD
2427.1 [m]	C	OD
2428.1 [m]	C	OD
2428.6 [m]	C	OD
2429.0 [m]	C	OD
2429.3 [m]	C	OD



2430.0 [m]	DC	OD
2430.3 [m]	C	OD
2430.7 [m]	C	OD
2431.7 [m]	C	OD
2432.2 [m]	C	OD
2433.6 [m]	C	OD
2434.3 [m]	C	OD
2434.4 [m]	C	OD
2434.4 [m]	C	OD
2440.0 [m]	DC	OD
2450.0 [m]	DC	OD
2453.0 [m]	SWC	OD
2460.0 [m]	DC	OD
2470.0 [m]	DC	OD
2473.0 [m]	SWC	OD
2480.0 [m]	DC	OD
2485.0 [m]	DC	OD
2490.0 [m]	DC	OD
2500.0 [m]	DC	OD
2509.0 [m]	DC	OD
2511.0 [m]	SWC	OD
2521.0 [m]	DC	OD
2530.0 [m]	DC	OD
2530.0 [m]	SWC	OD
2533.0 [m]	DC	OD
2539.0 [m]	DC	OD
2541.0 [m]	SWC	OD
2548.0 [m]	DC	OD
2557.0 [m]	SWC	OD
2560.0 [m]	DC	OD
2572.0 [m]	DC	OD
2575.0 [m]	DC	OD
2581.0 [m]	DC	OD
2590.0 [m]	DC	OD
2592.0 [m]	SWC	OD
2599.0 [m]	DC	OD
2611.0 [m]	DC	OD
2618.0 [m]	SWC	OD
2620.0 [m]	DC	OD
2629.0 [m]	DC	OD



2632.0	[m]	SWC	OD
2641.0	[m]	DC	OD
2650.0	[m]	DC	OD
2652.0	[m]	SWC	OD
2662.0	[m]	DC	OD
2668.0	[m]	SWC	OD
2671.0	[m]	DC	OD
2680.0	[m]	DC	OD
2682.0	[m]	SWC	OD
2691.5	[m]	SWC	OD
2692.0	[m]	DC	OD
2701.0	[m]	DC	OD
2703.0	[m]	SWC	OD
2710.0	[m]	DC	OD
2719.0	[m]	DC	OD
2721.0	[m]	SWC	OD
2731.0	[m]	DC	OD
2737.0	[m]	DC	OD
2743.0	[m]	DC	OD
2752.0	[m]	DC	OD
2761.0	[m]	DC	OD
2767.0	[m]	DC	OD
2770.0	[m]	DC	OD
2779.0	[m]	DC	OD
2788.0	[m]	DC	OD
2797.0	[m]	DC	OD
2800.0	[m]	DC	OD
2812.0	[m]	DC	OD
2821.0	[m]	DC	OD
2830.0	[m]	DC	OD
2839.0	[m]	DC	OD
2842.0	[m]	DC	OD
2848.0	[m]	SWC	OD
2851.0	[m]	DC	OD
2859.0	[m]	SWC	OD
2872.0	[m]	DC	OD
2880.0	[m]	SWC	OD
2902.0	[m]	DC	OD
2904.5	[m]	SWC	OD
2907.0	[m]	SWC	OD



2913.0	[m]	SWC	OD
2932.0	[m]	DC	OD
2947.0	[m]	DC	OD
2962.0	[m]	DC	OD
2977.0	[m]	DC	OD
2992.0	[m]	DC	OD
3008.0	[m]	SWC	OD
3014.0	[m]	SWC	OD
3022.0	[m]	DC	OD
3037.0	[m]	DC	OD
3052.0	[m]	DC	OD
3061.0	[m]	DC	OD
3082.0	[m]	DC	OD
3112.0	[m]	DC	OD
3127.0	[m]	DC	OD
3142.0	[m]	DC	OD
3187.0	[m]	DC	OD
3202.0	[m]	DC	OD
3217.0	[m]	DC	OD
3232.0	[m]	DC	OD
3247.0	[m]	DC	OD
3262.0	[m]	DC	OD
3277.0	[m]	DC	OD
3292.0	[m]	DC	OD
3322.0	[m]	DC	OD
3357.0	[m]	SWC	OD
3367.0	[m]	DC	OD
3427.0	[m]	DC	OD
3457.0	[m]	DC	OD
3472.0	[m]	DC	OD
3487.0	[m]	DC	OD
3502.0	[m]	DC	OD
3517.0	[m]	DC	OD
3562.0	[m]	DC	OD
3577.0	[m]	DC	OD
3592.0	[m]	DC	OD
3612.5	[m]	SWC	OD
3622.0	[m]	DC	OD
3637.0	[m]	DC	OD
3652.0	[m]	DC	OD



3667.0	[m]	DC	OD
3682.0	[m]	DC	OD
3694.0	[m]	SWC	OD
3731.0	[m]	SWC	OD
3762.5	[m]	SWC	OD
3772.0	[m]	DC	OD
3802.0	[m]	DC	OD
3817.0	[m]	DC	OD

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
299	NORDLAND GP
299	NAUST FM
1392	KAI FM
1650	HORDALAND GP
1650	BRYGGE FM
1997	ROGALAND GP
1997	TARE FM
2096	TANG FM
2147	SHETLAND GP
2147	SPRINGAR FM
2255	NISE FM
2424	KVITNOS FM
2535	CROMER KNOLL GP
2535	LANGE FM
2827	LYR FM
2843	VIKING GP
2843	SPEKK FM
2908	MELKE FM
2939	FANGST GP
2939	GARN FM
2984	NOT FM
3015	ILE FM
3072	BÅT GP
3072	ROR FM
3176	TILJE FM
3345	ÅRE FM
3723	GREY BEDS (INFORMAL)

3830 [RED BEDS \(INFORMAL\)](#)**Composite logs**

Document name	Document format	Document size [MB]
76	pdf	0.80

Geochemical information

Document name	Document format	Document size [MB]
76_1	pdf	0.41
76_2	pdf	7.23
76_3	pdf	1.72
76_4	pdf	1.31
76_5	pdf	0.56
76_6	pdf	0.28
76_7	pdf	0.55
76_8	pdf	1.42

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

Document name	Document format	Document size [MB]
76_01_WDSS_General_Information	pdf	0.16
76_02_WDSS_completion_log	pdf	0.27

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

Document name	Document format	Document size [MB]
76_01_CompletionReport_&_Completionlog	pdf	23.86

Logs





Log type	Log top depth [m]	Log bottom depth [m]
CBL VDL GR	780	2200
CBL VDL GR CCL	1785	2717
CST	2206	2725
CST	2730	3870
DIPMETER	2717	3869
FDC CNL GR	2201	2722
HDT	2201	2727
ISF LSS MSFL GR	409	1011
ISF LSS MSFL GR	2201	2573
ISF LSS MSFL GR	2500	2726
ISF LSS MSFL GR	2717	3869
LDL CNL GR	2717	3869
LDT CNL CAL GR	409	1010
RFT	2259	2278
RFT	2947	3774
TEMP	600	2160
VSP WST	408	3869

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	409.0	36	409.0	0.00	LOT
SURF.COND.	20	1004.0	26	1013.0	1.64	LOT
INTERM.	13 3/8	2203.0	17 1/2	2215.0	1.74	LOT
INTERM.	9 5/8	2718.0	12 1/4	2729.0	1.83	LOT
OPEN HOLE		3870.0	8 1/2	3870.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
400	1.09	36.0		waterbased	
1000	1.14	38.0		waterbased	
1230	1.14	39.0		waterbased	
1960	1.20	54.0		waterbased	
2270	1.36	47.0		waterbased	



2830	1.26	56.0		waterbased	
3800	1.23	50.0		waterbased	

Thin sections at the Norwegian Offshore Directorate

Depth	Unit
2418.10	[m]
2428.60	[m]
2424.50	[m]
2434.30	[m]
2429.00	[m]

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]
76 Formation pressure (Formasjonstrykk)	PDF	0.29

