General information

Wellbore name	6507/7-10
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6507/7-10
Seismic location	ST 9102-3D - INLINE1152 & CROSSLINE 1390
Production licence	095
Drilling operator	Conoco Norway Inc.
Drill permit	771-L
Drilling facility	ARCADE FRONTIER
Drilling days	32
Entered date	28.09.1993
Completed date	29.10.1993
Release date	29.10.1995
Publication date	13.12.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	23.5
Water depth [m]	394.5
Total depth (MD) [m RKB]	3309.0
Final vertical depth (TVD) [m RKB]	3306.0
Maximum inclination [°]	7.8
Bottom hole temperature [°C]	107
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	GREY BEDS (INFORMAL)
Geodetic datum	ED50
NS degrees	65° 23' 26.83'' N
EW degrees	7° 19' 56.32'' E
NS UTM [m]	7253215.71
EW UTM [m]	422511.29
UTM zone	32
NPDID wellbore	2182

Wellbore history

General

Well 6507/7-10 was the third and last of the commitment wells to be drilled on PL 095. The well was located 200 km off the mid-Norwegian coast and approximately 7.5 km north of the Heidrun Field. The structure drilled was a graben down faulted from the Heidrun Field. The primary objective of well 6507/7-10 was to test the presence of commercial hydrocarbons in Middle Jurassic Fangst Group Sandstones. The Early Jurassic Tilje and Åre Formations were secondary objectives. Both Tilje and Are formations would be encountered below the known hydrocarbon contacts observed within the Heidrun and Heidrun Nord Fields, and the potential for hydrocarbons in these formations would depend on fault seal for closure. TD was planned in Triassic strata or 4000 m.

Operations and results

Wildcat well was spudded with the semi-submersible installation Arcade Frontier on 28 September 1993 and drilled to TD at 3309.5 m in the Triassic Grey Beds. The well was drilled with spud mud down to 1150 m and with KCl/polymer mud from 1150 m to TD.

A 56 m thick Fangst section (Garn, Not and Ile) was penetrated with top Fangst at 2507 m, 61 m below prognosed top. The BÅt group consisted of 42.5 m Ror Formation, 155 m Tilje Formation and 412 m of Åre Formation. Good sands with average log porosities from 24% to 29% were found in the Garn, Ile, Tilje, and Åre Formations. Unexpected Late Jurassic (Spekk and Melke) sections with thin sand zones with traces of hydrocarbons were penetrated. Apart from these shows all sands in the well were found 100% water wet. Geochemical analyses of an extract from 2477 m in the thin Melke Formation sand indicated that the hydrocarbons here were generated in a more mature source rock (%Ro = 0.75 - 0.80) than the in-situ shales at this level (Ro = 0.6%).

Three cores were cut with 85%, 80% and 100% recovery respectively. The two first cores were cut in the thin Late Jurassic sand zones (2448.5-2454.5 m and 2476.5-2481.0 m). The third core was cut in the Middle Jurassic Fangst Group (2525.0-2551.0 m). Weak to no shows were reported from all cores. A total of 20 FMT pressure tests were successfully obtained, the first pressure point was recorded at 2511 m in the Fangst Group and the last at 3280 m in the Triassic. A fluid sample was planned in the Late Jurassic to test out the shows encountered in the thin sand zones. It was however excluded since the density log indicated that the horizon was too tight to give any successful fluid sample. Otherwise no sample was considered and none were taken.

The well was permanently abandoned on 29 October as a well with shows.

Testing

No drill stem test was performed in the well.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1170.00	3308.00

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	2448.0	2453.1	[m]
2	2476.5	2480.1	[m]
3	2525.0	2551.0	[m]

Total core sample length [m]	34.7
Cores available for sampling?	YES

Core photos


2448-2453m


2453-2453m


2476-2480m


2525-2530m


2530-2535m


2535-2540m


2540-2545m


2545-2550m


2550-2551m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
1170.0	[m]	DC	RRI
1200.0	[m]	DC	RRI
1230.0	[m]	DC	RRI
1260.0	[m]	DC	RRI
1290.0	[m]	DC	RRI
1330.0	[m]	DC	RRI
1360.0	[m]	DC	RRI
1390.0	[m]	DC	RRI
1420.0	[m]	DC	RRI

1450.0	[m]	DC	RRI
1480.0	[m]	DC	RRI
1520.0	[m]	DC	RRI
1550.0	[m]	DC	RRI
1580.0	[m]	DC	RRI
1610.0	[m]	DC	RRI
1640.0	[m]	DC	RRI
1670.0	[m]	DC	RRI
1700.0	[m]	DC	RRI
1730.0	[m]	DC	RRI
1760.0	[m]	DC	RRI
1790.0	[m]	DC	RRI
1820.0	[m]	DC	RRI
1850.0	[m]	DC	RRI
1880.0	[m]	DC	RRI
1910.0	[m]	DC	RRI
1940.0	[m]	DC	RRI
1970.0	[m]	DC	RRI
1990.0	[m]	DC	RRI
2019.5	[m]	SWC	RRI
2052.5	[m]	SWC	RRI
2097.0	[m]	SWC	RRI
2103.0	[m]	SWC	RRI
2113.0	[m]	SWC	RRI
2126.0	[m]	SWC	RRI
2154.5	[m]	SWC	RRI
2168.0	[m]	SWC	RRI
2195.0	[m]	SWC	RRI
2222.0	[m]	SWC	RRI
2268.0	[m]	SWC	RRI
2288.5	[m]	SWC	RRI
2303.0	[m]	SWC	RRI
2319.0	[m]	SWC	RRI
2335.0	[m]	SWC	RRI
2342.5	[m]	SWC	RRI
2362.5	[m]	SWC	RRI
2373.5	[m]	SWC	RRI
2379.0	[m]	SWC	RRI
2384.0	[m]	SWC	RRI
2390.5	[m]	SWC	RRI

2420.0	[m]	SWC	RRI
2438.0	[m]	DC	RRI
2448.0	[m]	C	RRI
2452.0	[m]	C	RRI
2461.0	[m]	SWC	RRI
2468.0	[m]	SWC	RRI
2470.0	[m]	SWC	RRI
2472.0	[m]	SWC	RRI
2474.0	[m]	SWC	RRI
2476.5	[m]	C	RRI
2477.0	[m]	C	RRI
2477.2	[m]	C	RRI
2480.0	[m]	DC	RRI
2480.0	[m]	C	RRI
2487.0	[m]	SWC	RRI
2502.0	[m]	SWC	RRI
2505.0	[m]	SWC	RRI
2510.0	[m]	SWC	RRI
2515.0	[m]	SWC	RRI
2525.1	[m]	C	RRI
2534.7	[m]	C	RRI
2546.7	[m]	C	RRI
2550.5	[m]	C	RRI
2557.0	[m]	SWC	RRI
2558.0	[m]	SWC	RRI
2560.5	[m]	SWC	RRI
2562.0	[m]	SWC	RRI
2565.0	[m]	SWC	RRI
2580.0	[m]	SWC	RRI
2590.0	[m]	SWC	RRI
2595.0	[m]	SWC	RRI
2599.0	[m]	SWC	RRI
2601.0	[m]	SWC	RRI
2618.0	[m]	DC	RRI
2632.0	[m]	SWC	RRI
2648.0	[m]	DC	RRI
2660.0	[m]	DC	RRI
2672.0	[m]	DC	RRI
2681.0	[m]	DC	RRI
2696.0	[m]	DC	RRI

2708.0	[m]	DC	RRI
2720.0	[m]	DC	RRI
2730.0	[m]	DC	RRI
2738.0	[m]	SWC	RRI
2747.0	[m]	DC	RRI
2759.0	[m]	DC	RRI
2771.0	[m]	DC	RRI
2783.0	[m]	DC	RRI
2795.0	[m]	DC	RRI
2810.0	[m]	DC	RRI
2822.0	[m]	DC	RRI
2831.0	[m]	DC	RRI
2843.0	[m]	DC	RRI
2858.0	[m]	DC	RRI
2870.0	[m]	DC	RRI
2882.0	[m]	DC	RRI
2893.0	[m]	SWC	RRI
2894.0	[m]	DC	RRI
2906.0	[m]	DC	RRI
2918.0	[m]	DC	RRI
2930.0	[m]	DC	RRI
2942.0	[m]	DC	RRI
2954.0	[m]	DC	RRI
2966.0	[m]	DC	RRI
2978.0	[m]	DC	RRI
2993.0	[m]	DC	RRI
3005.0	[m]	DC	RRI
3014.0	[m]	DC	RRI
3026.0	[m]	DC	RRI
3044.0	[m]	DC	RRI
3056.0	[m]	SWC	RRI
3068.0	[m]	DC	RRI
3080.0	[m]	DC	RRI
3092.0	[m]	DC	RRI
3110.0	[m]	DC	RRI
3122.0	[m]	DC	RRI
3134.0	[m]	DC	RRI
3146.0	[m]	DC	RRI
3158.0	[m]	DC	RRI
3165.0	[m]	SWC	RRI

3177.0	[m]	SWC	RRI
3193.0	[m]	SWC	RRI
3212.5	[m]	SWC	RRI
3223.0	[m]	SWC	RRI
3237.0	[m]	SWC	RRI
3257.0	[m]	DC	RRI
3272.0	[m]	DC	RRI
3284.0	[m]	DC	RRI
3299.0	[m]	DC	RRI

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
418	NORDLAND GP
418	NAUST FM
1485	KAI FM
1866	HORDALAND GP
1866	BRYGGE FM
2015	ROGALAND GP
2015	TARE FM
2067	TANG FM
2106	SHETLAND GP
2106	SPRINGAR FM
2138	NISE FM
2439	VIKING GP
2439	SPEKK FM
2471	MELKE FM
2507	FANGST GP
2507	GARN FM
2532	NOT FM
2534	ILE FM
2563	BÅT GP
2563	ROR FM
2604	TILJE FM
2759	ÅRE FM
3171	GREY BEDS (INFORMAL)

Composite logs

Document name	Document format	Document size [MB]
2182	pdf	0.33

Geochemical information

Document name	Document format	Document size [MB]
2182_1	pdf	6.89

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

Document name	Document format	Document size [MB]
2182_6507_7_10_COMPLETION_REPORT_AND_LOG	pdf	79.23

Logs

Log type	Log top depth [m]	Log bottom depth [m]
DPIL DAC ZDL CN SL	2403	3305
FMT GR	2471	3280
GR DIFL ACL	1150	2410
HDIP GR	2403	3291
MWD CDR - GR RES DIR	500	2416
MWD CDR - GR RES DIR	2400	3310
SWC GR	1972	2390
SWC GR	2420	3287
VSP	1290	3280
ZDL GR	2403	3305

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	518.0	36	519.0	0.00	LOT
INTERM.	13 3/8	1150.0	17 1/2	1161.0	1.60	LOT
INTERM.	9 5/8	2407.0	12 1/4	2416.0	1.75	LOT

OPEN HOLE		3309.5	8 1/2	3309.5	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
521	1.07	120.0		Hi Vis mud	
1160	1.20	55.0		Hi Vis mud	
1700	1.42	52.0		waterbased	
2290	1.42	53.0		waterbased	
2416	1.46	57.0		waterbased	
3309	1.20	159.0		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]
2182_Formation_pressure_(Formasjonstrykk)	pdf	0.28