

**General information**

Wellbore name	6406/6-2
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6406/6-2
Seismic location	HW95M in line:4860 trace = x-line:2000
Production licence	255
Drilling operator	A/S Norske Shell
Drill permit	1118-L
Drilling facility	WEST ALPHA
Drilling days	131
Entered date	23.09.2006
Completed date	31.01.2007
Release date	31.01.2009
Publication date	09.03.2009
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	18.0
Water depth [m]	253.0
Total depth (MD) [m RKB]	4670.0
Final vertical depth (TVD) [m RKB]	4669.0
Maximum inclination [°]	2.5
Bottom hole temperature [°C]	172
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	TILJE FM
Geodetic datum	ED50
NS degrees	64° 31' 0.51" N
EW degrees	6° 53' 8.53" E
NS UTM [m]	7156474.06
EW UTM [m]	398508.77
UTM zone	32
NPDID wellbore	5359



Wellbore history

General

Well 6406/6-2 was drilled on the Onyx West prospect in the Halten Terrace, Norwegian Sea. Onyx West is an Early - Middle Jurassic fault block prospect. The primary objective of well 6406/6-2 was to determine the presence of commercial volumes of hydrocarbons in the Early to Middle Jurassic reservoirs of the Tilje, Tofte, Ile, and Garn

Formations, and potentially the Åre Formation. There were no secondary objective levels in the Cretaceous or Tertiary. The location of the 6406/6-2 well was chosen to penetrate all reservoir intervals within closure without leaving economic volumes up dip.

Operations and results

Well 6406/6-2 was spudded with the semi-submersible installation West Alpha on 23 September 2006 and drilled to TD at 4670 m in the Lower Tilje Formation. The well was planned for 109 days, and the actual days were 135 days. Major Non Productive Time events were due to weather (25%), and two shoe repair events and pack off events in the 17.5" hole section. The well was drilled with seawater down to 383, with Spud mud / KCL brine-SW pills / Glydril from 383 m to 1430 m, with Ultradrill water based mud from 1430 m to 2340 m, and with Paratherm oil based mud from 2340 m to TD. The site survey indicated no shallow gas at the well location. As predicted, no shallow gas was encountered in this well.

The lithology encountered came in as prognosed except for the Garn Formation, which was found to be shaled out. The Ile, Tofte and Tilje Formations were all found to be entirely water bearing. Shows were observed on sandstones and siltstones of the Ile Formation. There were indications of residual gas in low porosity sands in the Upper Ile and Upper Tilje Formations.

MDT pressure points were acquired. Clear water gradients were established in the Lower Ile and Tofte formations. MDT water samples were collected in the Lower Ile formation and confirmed Onyx West as dry. No cores were taken.

The well was permanently abandoned on 31 January 2007 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]
1450.00	4668.00

Cuttings available for sampling?	YES
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Lithostratigraphy



Top depth [mMD RKB]	Lithostrat. unit
271	NORDLAND GP
271	NAUST FM
1287	KAI FM
1700	HORDALAND GP
1700	BRYGGE FM
2225	ROGALAND GP
2225	TARE FM
2317	TANG FM
2400	SHETLAND GP
2400	SPRINGAR FM
2503	NISE FM
2712	KVITNOS FM
2861	CROMER KNOLL GP
2861	LANGE FM
3679	NO FORMAL NAME
3900	LANGE FM
4032	LYR FM
4051	VIKING GP
4051	SPEKK FM
4068	MELKE FM
4164	FANGST GP
4164	GARN FM
4233	NOT FM
4282	ILE FM
4390	BÅT GP
4390	ROR FM
4417	TOFTE FM
4450	ROR FM
4561	TILJE FM

Composite logs

Document name	Document format	Document size [MB]
5359	pdf	0.65





Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL	2175	2330
CBL	2951	3846
GPIT PPC DSI EMS AIT LDT APS GR	3940	4655
IPLT PPC AIT DSI GPIT	2330	3922
MDT APS GR	4171	4614
USIT CBL	1775	2280
VSI	1681	3659

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	380.0	36	385.0	0.00	LOT
SURF.COND.	20	1410.0	26	1422.0	1.71	LOT
INTERM.	13 3/8	2330.0	17 1/2	2340.0	1.90	LOT
INTERM.	9 7/8	3944.0	12 1/4	3950.0	2.10	LOT
OPEN HOLE		4670.0	8 1/2	4670.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
383	1.20			SPUD MUD	
1435	1.50	27.0		ULTRADRIL	
1922	1.63	36.0		ULTRADRIL	
2349	1.71	46.0		ULTRADRIL	
2354	1.81	35.0		PARATHERM	
3920	1.85	43.0		PARATHERM	
3934	1.84	39.0		PARATHERM	
3950	1.84	39.0		PARATHERM	
3951	1.84	39.0		PARATHERM	