

**General information**

Wellbore name	6608/10-9
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Field	URD
Discovery	6608/10-9 Lerke
Well name	6608/10-9
Seismic location	ST0103-inline 1268 & crossline 2342
Production licence	128
Drilling operator	Statoil ASA (old)
Drill permit	1049-L
Drilling facility	DEEPSEA BERGEN
Drilling days	27
Entered date	23.01.2003
Completed date	18.02.2003
Release date	18.02.2005
Publication date	22.04.2005
Purpose - planned	WILDCAT
Reentry	NO
Content	OIL
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	INTRA MELKE FM SS
Kelly bushing elevation [m]	23.0
Water depth [m]	377.0
Total depth (MD) [m RKB]	2400.0
Final vertical depth (TVD) [m RKB]	2400.0
Bottom hole temperature [°C]	94
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	ÅRE FM
Geodetic datum	ED50
NS degrees	66° 3' 44.15" N
EW degrees	8° 13' 19.57" E
NS UTM [m]	7327254.45
EW UTM [m]	464778.94



UTM zone	32
NPDID wellbore	4668

Wellbore history

General

Well 6608/10-9 is located northeast of the Norne Field on the Dønna Terrace. The main objective of the well was to prove hydrocarbons in the Early Jurassic sandstones of the Tilje and Åre Formations in the Lerke prospect. The secondary objective was to prove hydrocarbons in the Late Jurassic sandstones of the Melke Formation.

Operations and results

Exploration well 6608/10-9 was spudded with the semi-submersible installation Deepsea Bergen and drilled to TD at 2400 m in the Early Jurassic Åre Formation. The well was drilled without significant problems, apart from some harsh weather, which caused 83.5 hours WOW down time. No shallow gas was observed by the ROV at the wellhead. The well was drilled with seawater and high-viscosity sweeps down to 1311 m and with Glydril (water based KCl/glycol/polymer) from 1311 m to TD.

Well 6608/10-9 penetrated rocks of Quaternary, Tertiary, Cretaceous and Jurassic age. Weak shows were recorded at 1815.5 and 1819 m in slightly sandy claystones in the Cretaceous Springar Formation. Three oil-bearing sandstones were penetrated from 2133 m to ca 2180 m in the Melke Formation. No oil- water contact was proven. Pressure gradients in the reservoir indicated an oil-down-to situation in the Melke Formation. This was verified both by shows in cores, logs, samples, and laboratory studies of the cores. The Not, Tilje and Åre Formations were water filled. This was verified by wire line logs and MDT pressure points, which proved a water gradient. Weak shows were recorded in the Not and Tilje Formations, decreasing to no shows at 2323 m in the Åre Formation.

Two conventional cores were cut in the interval 2140 m to 2174 m, the main part of the oil bearing reservoir zone in the Melke Formation. MDT oil samples were collected at 2152.5 m and at 2169.5 m in the Melke sandstones. The oil in the samples confirmed a composition very similar to the Norne oil.

The well was suspended as an oil discovery on 19 February 2003.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
1320.00	2400.00

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	2140.0	2163.0	[m]
2	2164.0	2174.3	[m]

Total core sample length [m]	33.3
Cores available for sampling?	YES

Core photos

2140-2145m



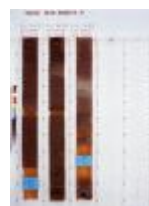
2145-2150m



2150-2155m



2155-2160m



2160-2163m



2164-2169m



2169-2174m



2174-2174m

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST		2169.00	0.00	OIL		YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
400	NORDLAND GP
400	NAUST FM



1385	KAI FM
1517	HORDALAND GP
1517	BRYGGE FM
1684	ROGALAND GP
1684	TARE FM
1757	TANG FM
1780	SHETLAND GP
1780	SPRINGAR FM
1821	CROMER KNOLL GP
1821	LYR FM
2047	VIKING GP
2047	SPEKK FM
2055	MELKE FM
2133	INTRA MELKE FM SS
2188	FANGST GP
2188	NOT FM
2222	BÅT GP
2222	TILJE FM
2228	ÅRE FM

Composite logs

Document name	Document format	Document size [MB]
4668	pdf	0.34

Geochemical information

Document name	Document format	Document size [MB]
4668_1	pdf	6.64

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

Document name	Document format	Document size [MB]
4668_6608_10_9_COMPLETION_LOG	.pdf	7.29
4668_6608_10_9_COMPLETION_REPORT	.pdf	2.59





Logs

Log type	Log top depth [m]	Log bottom depth [m]
ASI GR	500	2382
CST GR	1712	2370
DSI FMI GR	592	2385
MDT GR	1743	2346
MDT GR (DST)	2144	2169
MWD - MPR	1311	2140
MWD - MPR	2140	2400
MWD - MPR LITE	460	1311
PEX HALS HNGS	1305	2385
VSP ASI	500	2382

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	458.0	36	460.0	0.00	LOT
SURF.COND.	13 3/8	1305.0	17 1/2	1311.0	1.72	LOT
OPEN HOLE		2400.0	8 1/2	2400.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
461	1.60			SEAWATER/CMC	
770	1.03			SEAWATER/CMC	
1311	1.03			SEAWATER/CMC	
1314	1.34	19.0		GLYDRIL 10	
1700	1.34	18.0		GLYDRIL 74	

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]
4668 Formation pressure (Formasjonstrykk)	pdf	0.28

