

**General information**

Wellbore name	6510/2-1 R
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORWEGIAN SEA
Well name	6510/2-1
Seismic location	SH 9601-2-409 & CDP 1316
Production licence	214
Drilling operator	A/S Norske Shell
Drill permit	901-L2
Drilling facility	MÆRSK JUTLANDER
Drilling days	47
Entered date	05.11.1997
Completed date	21.12.1997
Plugged and abandon date	12.12.1997
Release date	21.12.1999
Publication date	29.05.2002
Purpose - planned	WILDCAT
Reentry	YES
Reentry activity	DRILLING
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	325.0
Total depth (MD) [m RKB]	4707.0
Final vertical depth (TVD) [m RKB]	4700.0
Maximum inclination [°]	4.7
Oldest penetrated age	EARLY TRIASSIC
Oldest penetrated formation	GREY BEDS (INFORMAL)
Geodetic datum	ED50
NS degrees	65° 47' 15.6" N
EW degrees	10° 25' 51.33" E
NS UTM [m]	7297173.23
EW UTM [m]	565483.13
UTM zone	32
NPDID wellbore	3263



Wellbore history

General

The main objective of well 6510/2-1 was to test the hydrocarbon potential of tidal to shoreface Lower Jurassic deposits in the "Vega" prospect, a large structure fault bounded to the East and South-East by the Ylvingen fault complex. Secondary objectives were Upper Permian shallow marine sand units expected to be sealed by Upper Permian source shales and Mid-Triassic aeolian sands sealed by Triassic Evaporites.

Operations and results

The well 6510/2-1 was spudded on 16 August 1997 with the semi-submersible installation "Mærsk Jutlander" and reached a total depth of 4700 m in shales of Early Triassic age. It was drilled with seawater and bentonite with hi-vis pills from the surface to 1210 m and with BARASILC sodium silicate mud from 1210 m to 2926 m. From 2926 m to TD the Sodium silicate mud was gradually depleted to a glycol enhanced mud (GEM). At 3102 m the well was suspended and the rig taken to Kristiansund for repair due to riser tensioner difficulties. Further problems with the acoustic BOP control system caused a total 53 days delay before well 6510/2-1 R was re-entered.

Formation tops were penetrated within the prognosed range, except for the Top Permian, which was not encountered. The well found the Lower Jurassic to be developed in a more proximal facies than anticipated, possibly an intra tidal plain deposit. The sequence was predominantly shales, with interbedded coal layers and a few thin sandy intervals. Weak hydrocarbon shows were recorded intermittently in the Lower Jurassic sequence, but logs, core material and sidewall samples show the reservoir intervals to be water bearing.

Sand development in the Mid Triassic objective below the evaporites was also poor with no hydrocarbon indications. The Permian was not penetrated, and the Triassic sequence was found to be much thicker than expected. The well reached a total depth of 4707 m in shales of Early Triassic age. The well TD commitment was to drill to Early Permian or 5000 m, but as there was no seismic evidence for any reflector in the remaining section, it was decided not to drill further.

Two cores were cut at 1827 - 1837 m and 2126 - 2134 m in Early Jurassic, and one at 4083.5 - 4100.5 m in Middle Triassic. The main reason for the well being dry is considered to be the lack of charge. The well was plugged and abandoned as a dry well with weak shows on the 21 December 1997.

Testing

No drill stem test was performed.

Cores at the Norwegian Offshore Directorate

Core sample number	Core sample - top depth	Core sample - bottom depth	Core sample depth - uom
1	4082.5	4101.7	[m]

Total core sample length [m]	19.2
Cores available for sampling?	YES

**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
348	NORDLAND GP
348	NAUST FM
441	MOLO FM
480	HORDALAND GP
480	BRYGGE FM
593	ROGALAND GP
593	TARE FM
655	TANG FM
727	SHETLAND GP
848	CROMER KNOLL GP
1013	NO FORMAL NAME
1160	UNDEFINED GP
1292	VIKING GP
1292	SPEKK FM
1319	MELKE FM
1543	FANGST GP
1543	GARN FM
1654	NOT FM
1688	ILE FM
1722	BÅT GP
1722	ROR FM
1823	TILJE FM
1945	ÅRE FM
2236	GREY BEDS (INFORMAL)

Composite logs

Document name	Document format	Document size [MB]
3263	pdf	0.92

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





Document name	Document format	Document size [MB]
3263_6510_2_1_COMPLETION_REPORT_DRILLING	pdf	74.35

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CST GR	2957	4695
DLL MSFL LDL CNL GR	2919	4692
FMI DSI NGT	2919	4702
MWD LWD CDR	2919	4707
RFT RPQS	3893	4436
VSP GR	2835	4690

