General information

Wellbore name	15/12-11 S
Type	EXPLORATION
Purpose	WILDCAT
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Well name	15/12-11
Seismic location	SG-9501- INLINE 700 & CROSSLINE 1176
Production licence	116
Drilling operator	Saga Petroleum ASA
Drill permit	881-L
Drilling facility	DEEPSEA BERGEN
Drilling days	40
Entered date	10.04.1997
Completed date	19.05.1997
Release date	19.05.1999
Publication date	31.10.2003
Purpose - planned	WILDCAT
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	23.0
Water depth [m]	99.0
Total depth (MD) [m RKB]	3597.0
Final vertical depth (TVD) [m RKB]	3464.0
Maximum inclination [°]	26.7
Bottom hole temperature [°C]	137
Oldest penetrated age	LATE TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	58° 12' 9.78'' N
EW degrees	1° 42' 39.38'' E
NS UTM [m]	6452151.08
EW UTM [m]	424234.79
UTM zone	31
NPDID wellbore	3074

Wellbore history

General

Exploration well 15/12-11 S was a joint operation of Production Licence 038 and 116. It was drilled in the northwestern area of block 15/12 and north of the Varg Field. Well 15/12-1 nearby to the northwest had shows in the Middle Jurassic Hugin Formation, but this was inconclusive with respect to moveable hydrocarbons. Block 15/12 is structurally located in the junction between the Jµren High to the southeast, the Ling Depression to the east, the Sleipner Terrace towards the north and the Witch Ground Graben to the west. The prospect was defined as a multi-target structure, situated on a rotated fault block. Primary targets were Tertiary sandstones of the Heimdal Formation in a genuine closure, in addition to sandstones of the Middle Jurassic Hugin Formation. Secondary high-risk targets were sandstones of Eocene, Late Jurassic and Triassic age.

Operations and results

Exploration well 15/12-11 S was spudded with the semi-submersible drilling installation "Deepsea Bergen" on 10 April 1997 and drilled to TD at 3597 m (3464 m TVD RKB) in sandstones of the Triassic Skagerrak Formation. The well was drilled with seawater and hi-vis pills down to 407 m and with KCl / polymer / Glycol (ANCO 208) mud from 407 m to TD.

Sandstone was encountered in all of the possible prospective levels except in the Late Jurassic. The two primary targets however, were more silt/shale dominated than expected. The upper part of the Heimdal Formation, penetrated at 2680 m had a lower reservoir quality than expected. These distal parts of the formation were relatively shaly/silty. More massive and porous sand of the Heimdal Formation was penetrated deeper, but too deep with respect to a Maureen Field oil spill. The lower reservoir, the Hugin Formation was penetrated at 3395 m, and was slightly thicker than prognosed. The only indications of hydrocarbons observed during drilling of 15/12-11 S were weak shows in the Hegre and Vestland Groups and a very weak cut fluorescence on the core from the Heimdal Formation. The gas values stayed constantly low during drilling through the reservoirs. Some gas peaks were measured while drilling the Hugin Formation, but these were associated closely to coal layers. Both the Heimdal and Hugin Formations were proved water bearing through wire line logging.

A total of two cores were cut. The first coring recovered only 0.5 m from the Heimdal Formation (2724 m to 2724.5 m). The second coring recovered 18.6 m from the Hugin Formation (3399.4 m to 3418.0 m).

Pressure tests were carried out in the Middle Jurassic Hugin and Sleipner formations and in the Triassic Skagerrak Formation. No fluid sample was taken.

The well was permanently abandoned as a dry well with weak shows on 19 May 1997.

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	2850.00

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	2724.0	2724.5	[m]
2	3400.0	3418.6	[m]

Total core sample length [m]	19.1
Cores available for sampling?	YES

Core photos


2724-2725m


3400-3405m


3405-3410m


3410-3415m


3415-3418m

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
122	NORDLAND GP
967	UTSIRA FM
1130	NO FORMAL NAME
1323	HORDALAND GP
2270	GRID FM
2309	NO FORMAL NAME
2530	ROGALAND GP
2530	BALDER FM
2572	SELE FM
2612	LISTA FM
2680	HEIMDAL FM
2813	MAUREEN FM
2825	VÅLE FM

2840	SHETLAND GP
2840	EKOFISK FM
2856	TOR FM
2922	HOD FM
3128	BLODØKS FM
3146	SVARTE FM
3221	CROMER KNOLL GP
3221	RØDBY FM
3234	ÅSGARD FM
3241	VIKING GP
3241	DRAUPNE FM
3322	HEATHER FM
3395	VESTLAND GP
3395	HUGIN FM
3419	SLEIPNER FM
3544	NO GROUP DEFINED
3544	SKAGERRAK FM

Composite logs

Document name	Document format	Document size [MB]
3074	pdf	0.58

Geochemical information

Document name	Document format	Document size [MB]
3074_1	pdf	1.89
3074_2	pdf	1.78
3074_3	pdf	1.86
3074_4	pdf	1.77

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

Document name	Document format	Document size [MB]
3074_15_12_11_S_COMPLETION_LOG	pdf	3.16
3074_15_12_11_S_COMPLETION_REPORT	pdf	34.47

Logs

Log type	Log top depth [m]	Log bottom depth [m]
ARI MSFL LDL CNL GR AMS	2879	3597
FMI GPIT DSI NGT AMS	2879	3597
FMI GPIT GR AMS	1386	2860
FMI NGT DSI AMS	1386	2866
FMS GR ACTS	2879	3597
HALS PEX AMS	1386	2866
MDT ACTS GR	3398	3570
MDT GR ACTS	3398	3570
MDT GR AMS	2274	2704
MSCT GR	2310	2695
MSCT GR	2310	2690
MSCT GR	2770	2810
MSCT GR	2818	2838
MSCT GR	2818	2842
MSCT GR	3229	3582
MWD - GR RES DIR	407	2886
MWD - GR RES DIR	2886	3597
VSP	1910	3578

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	169.0	36	170.0	0.00	LOT
SURF.COND.	18 5/8	394.0	26	400.0	1.69	LOT
INTERM.	13 3/8	1386.0	17 1/2	1390.0	1.85	LOT
INTERM.	9 5/8	2879.0	12 1/4	2880.0	1.85	LOT
OPEN HOLE		3597.0	8 1/2	3597.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
407	1.04			SPUD MUD	

632	1.26	23.0		KCL MUD	
1395	1.32	19.0		KCL MUD	
1435	1.42	24.0		KCL MUD	
2726	1.45	31.0		KCL MUD	
2886	1.45	31.0		KCL MUD	
2888	1.48	40.0		KCL MUD	
3053	1.51	41.0		KCL MUD	
3091	1.50	36.0		KCL MUD	
3264	1.50	36.0		KCL MUD	
3317	1.50	33.0		KCL MUD	
3399	1.53	28.0		KCL MUD	
3400	1.50	27.0		KCL MUD	
3420	1.50	27.0		KCL MUD	
3597	1.50	27.0		KCL MUD	

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]
3074_Formation_pressure_(Formasjonstrykk)	pdf	0.22