

**General information**

Wellbore name	15/6-5
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Factmaps in new window	link to map
Main area	NORTH SEA
Field	SLEIPNER VEST
Discovery	15/6-3 Sleipner Vest
Well name	15/6-5
Seismic location	line 175 Shot point 310
Production licence	029
Drilling operator	Esso Exploration and Production Norway A/S
Drill permit	185-L
Drilling facility	DRILLMASTER
Drilling days	51
Entered date	10.10.1977
Completed date	29.11.1977
Release date	29.11.1979
Publication date	28.03.2014
Purpose - planned	APPRAISAL
Reentry	NO
Content	SHOWS
Discovery wellbore	NO
Kelly bushing elevation [m]	24.0
Water depth [m]	108.0
Total depth (MD) [m RKB]	3824.0
Bottom hole temperature [°C]	109
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	NO GROUP DEFINED
Geodetic datum	ED50
NS degrees	58° 30' 29.87" N
EW degrees	1° 45' 50.74" E
NS UTM [m]	6486113.57
EW UTM [m]	427983.66
UTM zone	31
NPDID wellbore	320



Wellbore history

General

Well 15/6-5 was drilled in the north-eastern part of the Sleipner Field (Sleipner West). The objective was to confirm structural and stratigraphic interpretations as well as define the hydrocarbon content and contacts and the reservoir properties in this part of the Field.

The well is reference well for the Hugin Formation.

Operations and results

Appraisal well 15/6-5 was spudded with the semi-submersible installation Drillmaster on 10 October 1977 and drilled to TD at 3824 m in Triassic sediments. No significant problems were encountered during the drilling of the well. Initial drilling from the sea floor to 166.5 m was with fresh water and lignosulphonate. Below this depth and down to 1197.5 m a seawater gel with carboxymethyl-cellulose (CMC) mud system was used. Below 1197.5 m the above mud with lignosulphonate was used.

The Hugin Formation (Upper Dogger Sandstone) was encountered at 3627 meters. This was six meters below the lowest gas seen in the main Sleipner reservoir to that date, 3597 m MSL in 15/9-1. The Hugin Formation is 53 meters thick in the well and essentially 100% sandstone. Electric log analysis and RFT pressure data show the section to be water bearing, although the presence of residual hydrocarbons down to 3655 m was indicated by bleeding gas and excellent liquid hydrocarbon shows in the cores. No hydrocarbon indications were present below 3655 m. The Sleipner Formation (Lower Dogger) came in at 3580 m with several massive coals beds. The well established that the potential lower limit of hydrocarbons in the main Sleipner reservoir was 3627 m (3603 m MSL).

Four conventional cores were cut from 3629 m to 3683 m in the Middle Jurassic sandstones (Dogger). Five FIT wire line fluid samples were taken between 3632.6 m and 3655.5 m. They all contained mud filtrate.

The well was permanently abandoned on 29 November 1977 as a dry well with shows.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
374.00	3825.00

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	3629.0	3647.5	[m]
2	3647.5	3655.7	[m]
3	3656.4	3674.0	[m]
4	3674.1	3682.3	[m]

Total core sample length [m]	52.5
Cores available for sampling?	YES

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
2999.0	[m]	C	
3029.0	[m]	C	
3059.0	[m]	C	
3089.0	[m]	C	
3119.0	[m]	C	
3149.0	[m]	DC	
3179.0	[m]	DC	
3209.0	[m]	DC	
3239.0	[m]	DC	
3269.0	[m]	DC	
3301.7	[m]	SWC	
3303.7	[m]	SWC	
3307.5	[m]	SWC	
3333.3	[m]	SWC	
3338.0	[m]	DC	
3356.0	[m]	C	
3362.0	[m]	C	
3368.0	[m]	C	
3380.0	[m]	C	
3401.0	[m]	DC	
3419.0	[m]	DC	
3428.0	[m]	DC	
3440.0	[m]	C	
3461.0	[m]	C	
3473.0	[m]	C	
3491.0	[m]	C	
3500.0	[m]	DC	



3503.0 [m]	DC	
3509.0 [m]	DC	
3527.0 [m]	DC	
3542.0 [m]	DC	
3548.0 [m]	DC	
3560.0 [m]	DC	
3569.0 [m]	DC	
3578.0 [m]	DC	
3590.0 [m]	C	
3601.3 [m]	SWC	
3602.2 [m]	SWC	
3603.1 [m]	SWC	
3612.1 [m]	SWC	
3614.0 [m]	C	
3620.5 [m]	SWC	
3629.2 [m]	C	
3631.6 [m]	C	
3632.9 [m]	C	
3635.3 [m]	C	
3638.6 [m]	C	
3642.1 [m]	C	
3645.0 [m]	C	
3647.4 [m]	C	
3648.1 [m]	C	
3649.0 [m]	C	
3652.5 [m]	C	
3654.4 [m]	C	
3657.8 [m]	C	
3660.0 [m]	C	
3662.0 [m]	C	
3666.2 [m]	C	
3668.5 [m]	C	
3672.0 [m]	C	
3672.7 [m]	C	
3676.2 [m]	C	
3677.0 [m]	C	
3678.8 [m]	C	RRI
3679.6 [m]	C	
3679.6 [m]	C	
3681.4 [m]	C	



3706.9	[m]	SWC	
3707.9	[m]	SWC	
3710.3	[m]	SWC	
3746.1	[m]	SWC	
3747.1	[m]	SWC	
3748.5	[m]	SWC	
3769.0	[m]	SWC	
3770.0	[m]	SWC	
3782.0	[m]	SWC	
3783.0	[m]	SWC	
3805.0	[m]	SWC	
3806.0	[m]	SWC	
3823.0	[m]	C	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
132	NORDLAND GP
813	UTSIRA FM
1055	HORDALAND GP
1891	GRID FM
2239	ROGALAND GP
2239	BALDER FM
2307	SELE FM
2358	LISTA FM
2401	HEIMDAL FM
2673	LISTA FM
2707	TY FM
2765	SHETLAND GP
2765	EKOFISK FM
2800	TOR FM
3018	HOD FM
3285	BLODØKS FM
3302	SVARTE FM
3337	CROMER KNOLL GP
3337	RØDBY FM
3361	VIKING GP
3361	DRAUPNE FM
3385	HEATHER FM



3627	VESTLAND GP
3627	HUGIN FM
3680	SLEIPNER FM
3723	HEGRE GP
3723	SKAGERRAK FM

Documents - older Norwegian Offshore Directorate WDSS reports and other related documents

Document name	Document format	Document size [MB]
320_01_WDSS_General_Information	pdf	0.25

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

Document name	Document format	Document size [MB]
320_15_6_5_COMPLETION_LOG	pdf	2.47
320_15_6_5_COMPLETION_REPORT	pdf	10.63

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL	372	1165
CBL	505	1143
CDM	2839	3823
FDC CNL	2839	3719
IES	3250	3824
ISF SON	167	3822
MUD	370	3824
TEMP	1800	2738
VELOCITY	166	3822

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	167.0	36	167.0	0.00	





SURF.COND.	20	374.0	26	385.0	0.00	
INTERM.	13 3/8	1198.0	17 1/2	1210.0	0.00	
INTERM.	9 5/8	2840.0	12 1/4	2853.0	0.00	
OPEN HOLE		3824.0	8 1/2	3824.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
351	1.10			waterbased	
1082	1.10			waterbased	
1210	1.09			waterbased	
2007	1.13			waterbased	
2580	1.21			waterbased	
3274	1.25			waterbased	
3420	1.32			waterbased	
3629	1.37			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]
320_Formalion_pressure_(Formasjonstrykk)	pdf	0.21

