

**General information**

Wellbore name	15/9-6
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	15/9-6
Seismic location	510-169 SP.265
Production licence	046
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	244-L
Drilling facility	NORSKALD
Drilling days	124
Entered date	07.05.1980
Completed date	07.09.1980
Release date	07.09.1982
Publication date	08.04.2015
Purpose - planned	APPRAISAL
Reentry	NO
Content	DRY
Discovery wellbore	NO
Kelly bushing elevation [m]	25.0
Water depth [m]	112.0
Total depth (MD) [m RKB]	3946.0
Final vertical depth (TVD) [m RKB]	3945.0
Maximum inclination [°]	3.3
Bottom hole temperature [°C]	107
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	58° 27' 13.5" N
EW degrees	1° 41' 31.4" E
NS UTM [m]	6480120.13
EW UTM [m]	423668.06
UTM zone	31
NPDID wellbore	231

**Wellbore history****General**

Well 15/9-6 was drilled in the Sleipner Vest area in the Viking Graben of the North Sea. The objective of the well was to test possible hydrocarbons in Middle Jurassic sandstones on the northern flank of the 15/9-Beta structure, and to get more information about the sand distribution in this area.

Operations and results

Appraisal well 15/9-6 was spudded with the semi-submersible installation Nordskald on 7 May 1980 and drilled to TD at 3946 m in the Triassic Skagerrak Formation. No significant problem was encountered in the operations. The well was drilled with seawater and pre-hydrated gel down to 465 m, with sweater/gel and SSP lubricant (a vegetable oil) from 465 m to 1140 m, and with gel lignosulphonate/SSP lubricant from 140 m to TD.

Top of the target reservoir sandstones (Callovian age Hugin Formation) was found at 3762 m. This was deeper than expected and below the field gas-water contact. The sandstones were also thinner than expected. Isolated spots of shows on sandstones were described on cuttings and cores from the Hugin and Sleipner formations and the Upper part of the Skagerrak Formation. One cuttings sample from 3346 m in the Blodøks Formation was described with good show on sandstone.

Two cores were cut. Core 1 was cut from 3768.5 m to 3781.4 m in the Hugin Formation (75% recovery) and core 2 was cut from 3810 m to 3814.5 m in the Sleipner Formation (37% recovery). An RFT fluid sample was taken at 3774 m in the Hugin Formation. Laboratory analysis indicated the content to be a mixture of formation water, mud, and fresh water from the water cushion in the sampler.

The well was permanently abandoned on 7 September 1980 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]
200.00	3946.00

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	3768.5	3778.2	[m]



2	3810.0	3811.6	[m]
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Total core sample length [m]	11.3
Cores available for sampling?	YES

Core photos



3768-3771m



3771-3773m



3773-3776m



3776-3778m



3810-3811m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3451.0	[m]	DC	
3478.0	[m]	DC	
3505.0	[m]	DC	
3532.0	[m]	DC	
3541.0	[m]	DC	
3550.0	[m]	DC	
3559.0	[m]	DC	
3586.0	[m]	DC	
3613.0	[m]	DC	
3640.0	[m]	DC	
3667.0	[m]	DC	
3685.0	[m]	SWC	
3694.0	[m]	DC	
3707.5	[m]	SWC	
3721.0	[m]	DC	
3748.0	[m]	DC	
3754.5	[m]	SWC	
3757.0	[m]	DC	
3763.0	[m]	DC	
3774.5	[m]	SWC	
3775.0	[m]	DC	



3777.5 [m]	C	
3784.0 [m]	DC	
3793.0 [m]	DC	
3793.5 [m]	SWC	
3802.0 [m]	DC	
3810.0 [m]	C	
3810.2 [m]	C	
3810.5 [m]	C	
3811.0 [m]	DC	
3820.0 [m]	DC	
3822.0 [m]	SWC	
3829.0 [m]	DC	
3838.0 [m]	DC	
3839.0 [m]	SWC	
3856.0 [m]	DC	
3862.0 [m]	SWC	
3883.0 [m]	DC	
3910.0 [m]	DC	
3928.0 [m]	DC	
3946.0 [m]	DC	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
137	NORDLAND GP
834	UTSIRA FM
1063	HORDALAND GP
1807	FRIGG FM
2228	ROGALAND GP
2228	BALDER FM
2278	SELE FM
2338	LISTA FM
2381	HEIMDAL FM
2617	LISTA FM
2650	TY FM
2665	VÅLE FM
2722	SHETLAND GP
2722	EKOFISK FM
2765	TOR FM



2952	HOD FM
3317	BLODØKS FM
3350	HIDRA FM
3392	CROMER KNOLL GP
3392	RØDBY FM
3470	VIKING GP
3470	DRAUPNE FM
3700	HEATHER FM
3762	VESTLAND GP
3762	HUGIN FM
3786	SLEIPNER FM
3828	SKAGERRAK FM

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

Document name	Document format	Document size [MB]
231 01 WDSS General Information	pdf	0.12
231 02 WDSS completion log	pdf	0.25

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

Document name	Document format	Document size [MB]
231 15 9 6 Completion report and log	pdf	19.30

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3671	3674	0.0
2.0	3637	3638	0.0
3.0	3555	3565	0.0

Test number	Final shut-in pressure [MPa]	Final flow pressure [MPa]	Bottom hole pressure [MPa]	Downhole temperature [°C]
1.0				
2.0				





3.0				
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Test number	Oil [Sm3/day]	Gas [Sm3/day]	Oil density [g/cm3]	Gas grav. rel.air	GOR [m3/m3]
1.0					
2.0					
3.0					

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL	1140	3946
FDC CNL GR	2750	3946
FDC GR	440	2773
HDT	2750	3946
ISF SON GR	186	3946
VELOCITY	840	3940

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	161.0	36	161.0	0.00	LOT
SURF.COND.	20	425.0	26	440.0	1.42	LOT
INTERM.	13 3/8	1099.0	17 1/2	1115.0	2.00	LOT
INTERM.	9 5/8	2729.0	12 1/4	2749.0	1.73	LOT
LINER	7	3096.0	8 1/2	3096.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
490	1.04	32.0		waterbased	
1030	1.17	34.0		waterbased	
1580	1.21	54.0		waterbased	
3292	1.35	62.0		waterbased	
3500	1.45	55.0		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]
231 Formation pressure (Formasjonstrykk)	pdf	0.21

