General information

Wellbore name	15/9-2
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	15/9-2
Seismic location	Line 510-314.Sp 785
Production licence	046
Drilling operator	Den norske stats oljeselskap a.s
Drill permit	194-L
Drilling facility	ROSS RIG (1)
Drilling days	67
Entered date	12.04.1978
Completed date	17.06.1978
Release date	17.06.1980
Publication date	20.05.2015
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS/CONDENSATE
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	HUGIN FM
Kelly bushing elevation [m]	25.0
Water depth [m]	108.0
Total depth (MD) [m RKB]	3764.0
Bottom hole temperature [°C]	107
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	SKAGERRAK FM
Geodetic datum	ED50
NS degrees	58° 25' 34.06'' N
EW degrees	1° 42' 28.2'' E
NS UTM [m]	6477027.07
EW UTM [m]	424529.68
UTM zone	31
NPDID wellbore	323

Wellbore history

General

Well 15/9-2 was drilled on the Sleipner Vest Field in the North Sea. The primary objective was to test the "beta closure" on the 15/6-3 Sleipner Vest discovery. The target was Middle Jurassic sandstones.

Operations and results

Well 15/9-2 was spudded with the semi-submersible installation Ross Rig on 12 April 1978 and drilled to TD at 3764 m in Late Triassic sediments in the Skagerrak Formation. The main problem in operations was the discovery of a washout in the well head 18 3/4" ax seal area after setting 9 5/8" casing. This was repaired so that drilling could proceed, but it was decided not to do the planned DST due to possible leak. Otherwise, operations proceeded without significant problem. The well was drilled with seawater and gel down to 644 m and with gel and lignosulphonate from 644 m to TD.

The Vestland Group, Hugin Formation was encountered at 3483 m. The Hugin Formation contained gas/condensate down to the OWC between 3652 and 3654 m based on logs and pressure gradients. Weak shows continued down to 3659 m, 2 meters into top Sleipner Formation. Two spots of dead oil and fluorescence on limestone/siltstone cuttings at 2788 and 2812 m in the upper Shetland Group were the only other shows described in the well.

A total of 186.3 m core was recovered in 11 cores from the interval 3498 m to 3692 m. RFT fluid samples were taken at 3490 m ((gas, condensate, water), 3535,7 m (gas and condensate), 3601.6 m (gas, condensate, water), 3640.4 m (gas, condensate, water), 3641 m (gas, condensate, water), 3641.5 m (gas, condensate, water), 3644 m (gas, condensate, water), 3652 m (gas, condensate, water), and 3654 m (water). The condensate gravity in the samples varied from 50.3 °API in the shallowest sample to 45.5 °API in the sample just above the OWC.

The well was permanently abandoned on 17 June 1978 as a gas/condensate well.

Testing

No drill stem test was performed.

Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
170.00	3834.00

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	3498.0	3514.6	[m]
2	3515.0	3533.3	[m]
3	3533.3	3551.6	[m]
4	3551.6	3569.9	[m]
5	3569.9	3588.2	[m]
6	3588.2	3606.2	[m]
7	3606.2	3625.7	[m]
8	3624.5	3642.5	[m]
9	3645.7	3661.1	[m]
10	3661.1	3669.0	[m]
11	3674.0	3690.8	[m]

Total core sample length [m]	185.3
Cores available for sampling?	YES

Core photos

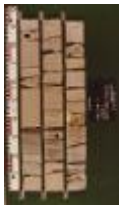

3498-3500m


3500-3503m


3503-3506m


3506-3508m


3508-3511m


3511-3514m


3514-3515m


3515-3517m


3517-3520m


3520-3523m


3523-3525m


3525-3528m


3528-3531m


3531-3533m


3533-3535m


3535-3538m


3538-3541m


3541-3544m


3544-3546m


3546-3549m


3549-3551m


3551-3554m


3554-3556m


3556-3559m


3559-3562m


3562-3565m


3565-3567m


3567-3569m


3569-3572m


3572-3575m


3575-3577m


3577-3580m


3580-3583m


3583-3586m


3586-3588m


3588-3590m


3590-3593m


3593-3596m


3596-3598m


3598-3601m


3601-3604m


3604-3606m


3606-3608m

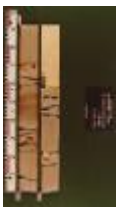

3608-3611m


3611-3614m


3614-3616m


3616-3619m


3619-3622m


3622-3623m


3624-3627m


3627-3629m


3629-3632m


3632-3635m


3635-3637m


3637-3640m


3640-3642m


3642-3645m


3645-3648m


3648-3650m


3650-3653m


3653-3656m


3656-3658m


3658-3660m

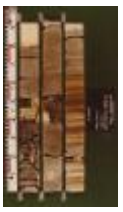

3661-3663m


3663-3666m


3666-3669m


3674-3676m


3676-3679m


3679-3682m


3682-3684m


3684-3687m


3687-3690m


3690-3691m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3148.0	[m]	DC	
3178.0	[m]	DC	
3208.0	[m]	DC	
3238.0	[m]	DC	
3262.0	[m]	SWC	
3298.0	[m]	DC	
3327.0	[m]	SWC	
3359.0	[m]	SWC	
3365.0	[m]	SWC	
3370.0	[m]	SWC	
3390.0	[m]	SWC	
3397.0	[m]	SWC	
3400.0	[m]	SWC	
3410.0	[m]	SWC	
3420.0	[m]	SWC	
3425.0	[m]	SWC	
3430.0	[m]	SWC	
3438.0	[m]	SWC	
3442.0	[m]	SWC	
3445.0	[m]	SWC	
3452.0	[m]	SWC	
3455.0	[m]	SWC	
3458.0	[m]	SWC	
3460.0	[m]	SWC	
3468.0	[m]	SWC	
3471.0	[m]	SWC	
3475.0	[m]	SWC	
3482.0	[m]	SWC	
3485.0	[m]	SWC	
3495.2	[m]	C	
3501.5	[m]	C	
3507.0	[m]	C	
3512.9	[m]	C	
3517.4	[m]	C	
3522.5	[m]	C	
3528.0	[m]	C	

3532.0	[m]	C	
3537.0	[m]	C	
3542.0	[m]	C	
3547.0	[m]	C	
3551.8	[m]	C	
3551.8	[m]	C	
3557.6	[m]	C	
3562.0	[m]	C	
3567.0	[m]	C	
3572.0	[m]	C	
3577.0	[m]	C	
3582.0	[m]	C	
3587.0	[m]	C	
3592.0	[m]	C	
3597.0	[m]	C	
3601.5	[m]	C	
3607.0	[m]	C	
3613.5	[m]	C	
3617.0	[m]	C	
3622.0	[m]	C	
3627.0	[m]	C	
3632.0	[m]	C	
3636.3	[m]	C	
3642.0	[m]	C	
3647.0	[m]	C	
3652.0	[m]	C	
3657.0	[m]	C	
3662.0	[m]	C	
3666.0	[m]	C	
3672.0	[m]	C	
3677.0	[m]	C	
3682.0	[m]	C	
3687.3	[m]	C	
3700.0	[m]	SWC	
3708.0	[m]	SWC	
3723.0	[m]	SWC	
3735.0	[m]	SWC	
3750.0	[m]	SWC	
3755.0	[m]	SWC	
3760.0	[m]	SWC	

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
133	NORDLAND GP
861	UTSIRA FM
1028	UNDIFFERENTIATED
1094	HORDALAND GP
1246	SKADE FM
1319	UNDIFFERENTIATED
1438	SKADE FM
1469	UNDIFFERENTIATED
2287	ROGALAND GP
2287	BALDER FM
2324	SELE FM
2387	LISTA FM
2419	HEIMDAL FM
2684	VÅLE FM
2762	SHETLAND GP
2762	EKOFISK FM
2798	TOR FM
3041	HOD FM
3214	BLODØKS FM
3263	HIDRA FM
3303	CROMER KNOLL GP
3303	RØDBY FM
3324	SOLA FM
3345	ÅSGARD FM
3396	VIKING GP
3396	DRAUPNE FM
3478	HEATHER FM
3483	VESTLAND GP
3483	HUGIN FM
3657	SLEIPNER FM
3699	HEGRE GP
3699	SKAGERRAK FM

Geochemical information

Document name	Document format	Document size [MB]
323_GCH_1	pdf	0.58
323_GCH_2	pdf	1.26

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

Document name	Document format	Document size [MB]
323_01_WDSS_General_Information	pdf	0.21
323_03_WDSS_lithlog	pdf	0.09

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

Document name	Document format	Document size [MB]
323_15_9_2_COMPLETION_LOG	pdf	1.95
323_15_9_2_COMPLETION_REPORT	pdf	22.47

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CBL GR	399	1176
CBL GR	1908	2785
CBL VDL CCL GR	2686	2721
CPI	3460	3750
DLL MSFL GR	3450	3675
FDC CNL GR	2784	3760
FDC GR	399	2800
GEODIP	3476	3660
HDT	2784	3760
ISF SON	171	3760
LCS SON	2784	3750
MLL	3475	3760
NGS	3450	3760
TDT	3475	3758

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	171.0	36	171.0	0.00	
SURF.COND.	20	399.0	26	415.0	0.00	
INTERM.	13 3/8	1181.0	17 1/2	1195.0	0.00	
INTERM.	9 5/8	2788.0	12 1/4	2819.0	0.00	
LINER	7	3763.0	8 1/2	3764.0	0.00	

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
171	0.00			spud mud	
530	1.09			water based	
1573	1.24			water based	
2517	1.24			water based	
2819	1.25			water based	
3578	1.35			water based	
3693	1.35			water based	
3764	1.25			water based	

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]
323_Formation_pressure_(Formasjonstrykk)	pdf	0.21