

**General information**

Wellbore name	15/5-2
Type	EXPLORATION
Purpose	WILDCAT
Status	SUSPENDED
Factmaps in new window	link to map
Main area	NORTH SEA
Field	EIRIN
Discovery	15/5-2 Eirin
Well name	15/5-2
Seismic location	
Production licence	048
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	200-L
Drilling facility	TREASURE SEEKER
Drilling days	123
Entered date	16.08.1978
Completed date	16.12.1978
Release date	16.12.1980
Publication date	05.01.2015
Purpose - planned	WILDCAT
Reentry	NO
Content	GAS
Discovery wellbore	YES
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	VESTLAND GP
2nd level with HC, age	TRIASSIC
2nd level with HC, formation	HEGRE GP
Kelly bushing elevation [m]	25.0
Water depth [m]	121.0
Total depth (MD) [m RKB]	4322.0
Maximum inclination [°]	5.75
Bottom hole temperature [°C]	127
Oldest penetrated age	TRIASSIC
Oldest penetrated formation	HEGRE GP
Geodetic datum	ED50
NS degrees	58° 38' 36.74" N
EW degrees	1° 36' 16.48" E
NS UTM [m]	6501352.42



EW UTM [m]	419002.37
UTM zone	31
NPDID wellbore	316

Wellbore history

**General**

Well 15/5-2 was drilled in the Ve Sub-basin in the North Sea, north of the Sleipner Vest Field and 15/5-1 Gina Krog Discovery. The main objective of the well was to test possible hydrocarbon accumulations in Middle to Late Jurassic Bathonian/Callovia transgressive sandstones and Middle Jurassic Bajocian deltaic sandstones. The well was located in a purposely off-crestal position on an approximately 16 km² large structure some 7 km north-west of the 15/5-1 discovery.

The well was planned to penetrate into the Triassic with a projected total depth of 4500 m.

Operations and results

Wildcat well 15/5-2 was spudded with the semi-submersible installation Treasure Seeker on 16 August 1978 and drilled to TD at 4322 m in the Triassic Hegre Group. At 1267 m, the string unscrewed in a tight section, but it was fished without problems. After drilling to 2293 m, the string stuck when pulling out of hole. This time the fish was not recovered and a sidetrack was performed with kick-off at 1775 m. Heavy weather caused further delays, otherwise the drilling went forth without significant problems to TD. The well was drilled with seawater mud mixed with gel and Spersene down to 454 m, and with a Spersene/XP-20 (lignosulphonate) mud from 454 m to TD. At 2232 m 1% Diesel was added to the mud.

Two hydrocarbon bearing sandstone intervals were penetrated by the well. In the Jurassic, only a thin Early to Middle Bathonian sandstone development was penetrated between 4035 m and 4055 m. Interbeds of siltstones and shales reduced the 20 m gross pay to a net pay of 7.3 m from wireline log interpretation. Average porosity and average water saturation over the pay interval was calculated to 14.3 and 41.7% respectively. The top of the Triassic sandstones was encountered at 4141.3 m and continued with interbeds of varicoloured shales and siltstones to TD. From wireline log evaluation hydrocarbon bearing sandstones were seen down to 4158.1 m. Below this a tight cemented sandstone appears, masking the exact hydrocarbon - water contact. Proven gross pay interval is thus 16.8 m while the net pay is 12.8 m. Average porosity over this interval has been calculated to 14.6 % and the average water saturation to 43 %.

Above top Jurassic weak oil shows were observed on limestones at 2792 and 2828 m in the Tor Formation, between 3488 m and 3517 m in the Lower Hod and Blodøks formations, and between 3707 m and 3723 m in the Rødby Formation. In the Jurassic oil shows were recorded on sandstones from 4008 m to 4055 m. In the Triassic, no oil shows were seen despite the hydrocarbon saturation (gas) in the sandstones shown by the logs.

Two cores were cut in the Middle Jurassic sequence. Core 1 was taken from 4013.6 m to 4020.6 m and recovered 5.1 m (72.8 %). The core was decided to be cut based on sandstone occurrence in the ditch cuttings, but only shale and coal beds were found in the core. Core 2 was cut from 4032.5 m to 4043.0 m and recovered 9.8 m (93.3 %). The core to log depth shift is ca +4.5 m for both cores. RFT fluid samples were attempted at 4148.5 m, 4145 m, 4053 m, and 4157.5 m. Only mud filtrate was retrieved at all depths.

The well was suspended on 16 December 1978 for future re-entry and testing. It is classified as a gas discovery.

Testing

No drill stem test was performed.

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**Cuttings at the Norwegian Offshore Directorate**

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
195.00	4323.00

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	4013.6	4018.8	[m]
2	4032.5	4042.3	[m]

Total core sample length [m]	15.0
Cores available for sampling?	YES

Core photos

4013-4015m



4015-4018m



4032-4034m



4034-4035m



4035-4037m



4037-4039m



4039-4041m



4041-4042m

Palynological slides at the Norwegian Offshore Directorate

Sample depth	Depth unit	Sample type	Laboratory
3765.0	[m]	DC	RRI
3820.0	[m]	DC	RRI
3850.0	[m]	DC	RRI
4034.1	[m]	C	RRI

**Lithostratigraphy**

Top depth [mMD RKB]	Lithostrat. unit
145	NORDLAND GP
758	UTSIRA FM
910	HORDALAND GP
1608	FRIGG FM
2128	ROGALAND GP
2128	BALDER FM
2162	SELE FM
2204	LISTA FM
2252	HEIMDAL FM
2606	LISTA FM
2650	TY FM
2705	SHETLAND GP
2705	EKOFISK FM
2782	TOR FM
2967	HOD FM
3507	BLODØKS FM
3588	HIDRA FM
3647	CROMER KNOLL GP
3647	RØDBY FM
3759	VIKING GP
3759	DRAUPNE FM
3831	HEATHER FM
3960	VESTLAND GP
3960	HUGIN FM
3995	SLEIPNER FM
4113	HEGRE GP

Geochemical information

Document name	Document format	Document size [MB]
316_GCH_1	pdf	0.64
316_GCH_2	pdf	0.09
316_GCH_3	pdf	1.10
316_GCH_4	pdf	0.64





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

Document name	Document format	Document size [MB]
316_01_WDSS_General_Information	pdf	0.21
316_03_WDSS_lithlog	pdf	0.10

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

Document name	Document format	Document size [MB]
316_15_5_2_Completionlog	pdf	3.12
316_15_5_2_Completion_report	pdf	13.18

Logs

Log type	Log top depth [m]	Log bottom depth [m]
CCL	0	3696
CPI	4005	4295
CST	1655	2990
CST	3000	3710
CST	3720	3992
CST	3753	4288
CST	3753	4315
CST	3758	4140
CST	3912	4147
CST	3925	3964
CST	3968	4323
DLL MSFL	4000	4324
FDC CNL	455	4325
HDT	1593	3712
HDT	3690	4323
HRT	541	1589
HRT	2655	3652
ISF SON	192	4326
RFT	3990	4292
RFT	4053	0





RFT	4148	0
RFT	4157	0
VELOCITY	500	4323

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	194.0	36	194.5	0.00	LOT
SURF.COND.	20	454.0	26	469.0	0.00	LOT
INTERM.	13 3/8	1598.0	17 1/2	1615.0	0.00	LOT
INTERM.	9 5/8	3696.0	12 1/4	3714.0	0.00	LOT
LINER	7	4300.0	8 1/2	4322.0	0.00	LOT

Drilling mud

Depth MD [m]	Mud weight [g/cm3]	Visc. [mPa.s]	Yield point [Pa]	Mud type	Date measured
194	1.20			waterbased	
469	1.14			waterbased	
1462	1.20			waterbased	
3682	1.34			waterbased	
3872	1.43			waterbased	
4013	1.59			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]
316 Formation pressure (Formasjonstrykk)	pdf	0.21

