

**General information**

Wellbore name	30/9-19 A
Type	EXPLORATION
Purpose	APPRAISAL
Status	P&A
Press release	link to press release
Factmaps in new window	link to map
Main area	NORTH SEA
Field	OSEBERG
Discovery	30/9-19
Well name	30/9-19
Seismic location	NH 9201- INLINE 439 & X-LINE 1341
Production licence	079
Drilling operator	Norsk Hydro Produksjon AS
Drill permit	942-L
Drilling facility	WEST DELTA
Drilling days	55
Entered date	28.10.1998
Completed date	21.12.1998
Release date	21.12.2000
Publication date	24.01.2014
Purpose - planned	APPRAISAL
Reentry	NO
Content	OIL/GAS
Discovery wellbore	NO
1st level with HC, age	MIDDLE JURASSIC
1st level with HC, formation	TARBERT FM
Kelly bushing elevation [m]	29.0
Water depth [m]	105.0
Total depth (MD) [m RKB]	3775.0
Final vertical depth (TVD) [m RKB]	3632.0
Maximum inclination [°]	36
Bottom hole temperature [°C]	132
Oldest penetrated age	EARLY JURASSIC
Oldest penetrated formation	DRAKE FM
Geodetic datum	
NS degrees	60° 27' 35.38" N
EW degrees	2° 41' 38.94" E
NS UTM [m]	6702819.74



EW UTM [m]	483176.89
UTM zone	31
NPDID wellbore	3593

Wellbore history

General

Well 30/9-19 A is a geological sidetrack to well 30/9-19 on the Delta structure west of the Oseberg Field in the North Sea. Well 30/9-19 found gas and oil in two separately pressured compartments within the Tarbert Formation. The objective of the sidetrack was to test the hydrocarbon potential in the deltaic sands of the Tarbert Formation in the DeltaS1 structure, west of the structure drilled by the primary 30/9-19 well bore.

Operations and results

Appraisal well 30/9-19 A was kicked off from 2322 m in well 30/9-19 on 28 October 1998. The semi-submersible installation West Delta drilled the sidetrack to TD at 3775 m (3632 m TVD) in the Early Jurassic Drake Formation. Drilling proceeded without significant problems using ANCO 2000 mud from kick-off to TD.

Top Tarbert Formation was penetrated at 3210 m (3127 m TVD). The upper part of the Tarbert Formation down to 3277 m (Tarbert 4) is tight with no pay, while the section from 3277 m to 3310 m (Tarbert 3) has only 2 m net pay. The Tarbert 2 main reservoir was penetrated at 3310.5 m (3208.5 m TVD). The gradients from MDT pressure points showed that gas, oil and water are present in the Tarbert 2 reservoir with densities respectively 0.25 g/cc, 0.66 g/cc and 0.99 g/cc. Between the gas and the oil columns there is a carbonate-cemented layer. The gas and oil columns are not in pressure communication and a gas down to is set to 3344 m MD (3235.8 m TVD) and an oil up to at 3347.5 m (3238.7 m TVD). The oil water contact was observed from logs at 3368 m (3255.5 m TVD). The oil column is thus 16.8 m TVD thick. The only oil show outside of the hydrocarbon-bearing reservoir was recorded on sandstone cuttings at 3710 m.

One core was cut from 3300 m to 3342 m in the Tarbert Formation with 98% recovery. MDT fluid samples were taken at 3331.5 m, 3359 m, and at 3442 m.

The well was permanently abandoned on 21 December 1998 as a gas and oil appraisal well.

Testing

A drill stem test over the interval 3347.4 - 3363.4 m (3238.5 - 3251.5 m TVD) was performed. The test produced at maximum flow 895 Sm³ oil/per day through a 64/64" choke. The GOR was 415 Sm³/Sm³ (solution GOR approximately 210 Sm³/Sm³), the oil density was 0.84 g/cm³, and the gas gravity was 0.71 (air = 1) with 2 % CO₂ and 2.5 ppm H₂S. Free gas from the gas zone above the test interval is thought to enter the wellbore area through fractures in the carbonate-cemented layer above.

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Cuttings at the Norwegian Offshore Directorate

Cutting sample, top depth [m]	Cutting samples, bottom depth [m]
2330.00	3775.00



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	3300.0	3341.5	[m]

Total core sample length [m]	41.5
Cores available for sampling?	YES

Oil samples at the Norwegian Offshore Directorate

Test type	Bottle number	Top depth MD [m]	Bottom depth MD [m]	Fluid type	Test time	Samples available
DST	TEST1	3347.00	3363.00	OIL	05.12.1998 - 22:15	YES

Lithostratigraphy

Top depth [mMD RKB]	Lithostrat. unit
134	NORDLAND GP
645	UTSIRA FM
933	HORDALAND GP
933	NO FORMAL NAME
1257	GRID FM
2119	ROGALAND GP
2119	BALDER FM
2172	SELE FM
2249	LISTA FM
2395	VÅLE FM
2410	SHETLAND GP
2410	HARDRÅDE FM
2441	JORSALFARE FM
2659	KYRRE FM
3062	TRYGGVASON FM
3140	CROMER KNOLL GP



3140	RØDBY FM
3180	VIKING GP
3180	DRAUPNE FM
3188	HEATHER FM
3210	BRENT GP
3210	TARBERT FM
3473	NESS FM
3712	ETIVE FM
3715	NO FORMAL NAME
3730	DUNLIN GP
3730	DRAKE FM

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

Document name	Document format	Document size [MB]
3593 30 9 19 A COMPLETION REPORT	.pdf	28.37

Drill stem tests (DST)

Test number	From depth MD [m]	To depth MD [m]	Choke size [mm]
1.0	3347	3363	25.4

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

Test number	Oil [Sm ³ /day]	Gas [Sm ³ /day]	Oil density [g/cm ³]	Gas grav. rel.air	GOR [m ³ /m ³]
1.0	910	370000			

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]
3593 Formation pressure (Formasjonstrykk)	pdf	0.21

