



Generell informasjon

Brønnbane navn	16/3-4 A
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Felt	JOHAN SVERDRUP
Funn	16/2-6 Johan Sverdrup
Brønn navn	16/3-4
Seismisk lokalisering	LN0902 xline2440 & crossline 7708
Utvinningstillatelse	501
Boreoperatør	Lundin Norway AS
Boretillatelse	1365-L
Boreinnretning	BREDFORD DOLPHIN
Boredager	21
Borestart	28.06.2011
Boreslutt	18.07.2011
Frigitt dato	18.07.2013
Publiseringsdato	18.07.2013
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	LATE JURASSIC
1. nivå med hydrokarboner, formasjon.	INTRA DRAUPNE FM SS
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	117.0
Totalt målt dybde (MD) [m RKB]	2128.0
Totalt vertikalt dybde (TVD) [m RKB]	1958.6
Maks inklinasjon [°]	32.9
Eldste penetrerte alder	PRE-DEVONIAN
Eldste penetrerte formasjon	BASEMENT
Geodetisk datum	ED50
NS grader	58° 48' 11.36" N
ØV grader	2° 43' 8.3" E



NS UTM [m]	6518317.53
ØV UTM [m]	483761.47
UTM sone	31
NPDID for brønnbanen	6629

Brønnhistorie

General

Well 16/3-4 A is a sidetrack to well 16/3-4, which was drilled to prove the extension of the Avaldsnes Discovery to the north-east of the structural crest of the Avaldsnes structure. Well 16/3-4 proved oil in a 14 m thick Intra-Draupne Formation sandstone overlying weathered basement rock. The oil was proven to be in pressure communication with the 16/2-6 Avaldsnes discovery well. The 16/3-4 A sidetrack was drilled up-flanks (south-south-west) of the main well bore. The objective was to further appraise the Avaldsnes oil discovery and to determine the extent, thickness, and quality of the reservoir in this part of the structure.

Operations and results

Well 16/3-4 A was kicked off from 790 m in the primary well on 28 June 201. I was drilled with the semi-submersible installation Bredford Dolphin to TD at 2128 m (1959 m TVD) in granitic basement. No significant problem was encountered in the operations. The well was drilled with Performadril mud from kick-off to TD.

The geological sidetrack 16/3-4 A encountered top Draupne Formation shales at 2065.5 m (1906.3 m TVD). At 2076.5 m (1915.6 m TVD) a 5 m vertical thickness of Intra-Draupne Formation sandstone was penetrated. The Draupne sandstone was oil bearing down to fractured basement at 2081.6 m (1919.8 m). Slightly different fluid gradients were recorded compared to the main wellbore, however, PVT analysis of the samples showed identical oil to be present in both wellbores. No oil water contact was established. The first oil shows in the sidetrack were observed in the marls of the Åsgard Formation in a sidewall core at 2052.8 m. More extensive oil shows were seen in the underlying Draupne sandstones. The oil shows became weaker in the fractured basement that was recovered in the core. Oil shows were seen in cuttings and sidewall cores below the core down to 2115.5 m; the last observed oil shows.

One core was cut from 2067 m to 2082.5 m in the Draupne Formation shales and reservoir sandstone, and into the basement. MDT oil samples were taken at 2079.2 m.

The well was permanently abandoned on 18 July 2011 as an oil appraisal well.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet



Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
800.00	2128.00

Borekaks tilgjengelig for prøvetaking?	YES
--	-----

Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2067.0	2082.3	[m]

Total kjerneprøve lengde [m]	15.3
Kjerner tilgjengelig for prøvetaking?	YES

Oljeprøver i Sokkeldirektoratet

Test type	Flaske nummer	Topp dyp MD [m]	Bunn dyp MD [m]	Væske type	Test tidspunkt	Prøver tilgjengelig
MDT		2079.20	0.00	OIL	12.07.2011 - 00:00	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
142	NORDLAND GP
801	UTSIRA FM
877	NO FORMAL NAME
934	HORDALAND GP
948	SKADE FM
1010	NO FORMAL NAME
1388	NO FORMAL NAME
1416	ROGALAND GP
1416	BALDER FM
1453	SELE FM
1466	LISTA FM
1553	VÅLE FM
1570	SHETLAND GP



1570	EKOFISK FM
1599	TOR FM
1675	HOD FM
1812	TRYGGVASON FM
1824	BLODØKS FM
1865	SVARTE FM
1915	CROMER KNOLL GP
1915	RØDBY FM
2008	SOLA FM
2034	ÅSGARD FM
2066	VIKING GP
2066	DRAUPNE FM
2077	INTRA DRAUPNE FM SS
2082	BASEMENT

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
6629 01 16 3 4A gch transfer 1	txt	0.00
6629 01 16 3 4A gch transfer 2	txt	0.00
6629 01 16 3 4A gch transfer 3	txt	0.00
6629 02 16 3 4A gch results 1	txt	0.04
6629 02 16 3 4A gch results 2	txt	0.09
6629 02 16 3 4A gch results 3	txt	0.07

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
CMR XPT GR	2012	2123
FMI MSIP GR	1920	2126
MDT GR	2079	2079
MSCT GR	2010	2115
MWD - DIR GR RES PWD	136	757
MWD - DIR GR RES PWD SON DEN NEU	724	2126
PEX HRLA HNGS	1998	2119





Foringsrør og formasjonsstyrketester

Type utforing	Utforing diam. [tommer]	Utforing dybde [m]	Brønnbane diam. [tommer]	Brønnbane dyp [m]	LOT/FIT slam eqv. [g/cm3]	Type formasjonstest
PILOT HOLE		760.0	9 7/8	760.0	0.00	LOT
INTERM.	9 5/8	2000.0	12 1/4	2005.0	0.00	LOT
OPEN HOLE		2128.0	8 1/2	2128.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
860	1.35	28.0		Performadrill	
860	1.30	27.0		Polymer Mud	
2004	1.37	58.0		Performadrill	
2121	1.20	29.0		Performadrill	
2128	1.21	34.0		Performadrill	
2128	1.37	27.0		Performadril	
2128	1.20	30.0		Performadrill	

Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

Dokument navn	Dokument format	Dokument størrelse [KB]
6629 Formation pressure (Formasjonstrykk)	pdf	0.22

