



Generell informasjon





Brønnbane navn	16/4-5
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Brønn navn	16/4-5
Seismisk lokalisering	UP 96 M07-inline 776 &crossline 3139
Utvinningstillatelse	359
Boreoperatør	Lundin Norway AS
Boretillatelse	1274-L
Boreinnretning	TRANSOCEAN WINNER
Boredager	32
Borestart	04.02.2010
Boreslutt	07.03.2010
Frigitt dato	07.03.2012
Publiseringsdato	01.04.2012
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL SHOWS
Funnbrønnbane	NO
Avstand, boredekk - midlere havflate [m]	26.0
Vanndybde ved midlere havflate [m]	104.0
Totalt målt dybde (MD) [m RKB]	2020.0
Totalt vertikalt dybde (TVD) [m RKB]	2019.8
Maks inklinasjon [°]	1.5
Temperatur ved bunn av brønnbanen [°C]	84
Eldste penetrerte alder	PRE-DEVONIAN
Eldste penetrerte formasjon	BASEMENT
Geodetisk datum	ED50
NS grader	58° 43' 43.92" N
ØV grader	2° 17' 32.19" E
NS UTM [m]	6510227.65
ØV UTM [m]	459018.81
UTM sone	31
NPDID for brønnbanen	6216



Brønnhistorie

General

Well 16/4-5 was drilled on the Luno High prospect located south of the Luno field on the southern Utsira High in the North Sea. The general objectives were to refine the resource potential of the Greater Luno Area and to increase the regional understanding of the sedimentary sequences and fractured basement facies across the Utsira High. The specific objective was to prove the presence of oil bearing sandstones in the Late Jurassic to Early Cretaceous sequence or in conglomerates in the Triassic to Middle Jurassic sequence. The well would test the Luno regional oil-water contact at 1940 m MSL or the alternative oil-water contact established in well 16/1-12, 1928 m MSL. In case of a discovery test production rates in the variable reservoir facies by means of one or more DSTs would be conducted. Planned depth was 2300 m RKB

Operations and results

Wildcat well 16/4-5 was spudded with the semi-submersible installation Transocean Winner on 2 February 2010 and drilled to TD at 2020 m in pre-Devonian basement rock. This was 280 m shallower than planned because the prognosed reservoir conglomerates or fractured basement were not encountered. At TD in the 12 1/4" section at 1790 m large quantities of mechanical and stress-release cavings, thought to originate from the Lista and Sele Formations, were circulated out of the hole. Otherwise there were no mud losses or other hole problems in the well. A very slow ROP of approximately 2.5 m/hr was obtained in the 8 1/2" hole below the core point with an insert bit. This was due to the hard, granitic formation. The well was drilled with seawater and hi-vis pills down to 600 m and with Glydril KCl mud from 600 m to TD.

No Cretaceous or Late Jurassic age sandstones or Middle Jurassic to Triassic age conglomerates were encountered in the well. Well 16/4-5 proved oil shows in faulted/fractured granitic basement underlying red coloured marls of Hauterivian to Valanginian age. The granitic basement was highly fractured, as seen from the FMI log; however, analysis of the core showed that a large majority of these fractures were tightly cemented. Several fractures were open and contained traces of migrated hydrocarbons, mainly characterised by black tarry material, dry and flaky in some cases.

Two cores were cut in the interval 1896 m to 1925.7 m across BCU and into basement. A number of attempts to measure formation pressures and take fluid samples were made using a Schlumberger MDT tool, however, the formation proved too tight. No pressure results were obtained. One MDT fluid sample recovered from 2002.5 m was found to contain drilling fluid only; otherwise no fluid samples were taken.

The well was permanently abandoned on 7 March as a well with shows.

Testing

The fractured granitic basement did not have reservoir characteristics, therefore the well was not production tested.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
610.00	2020.00



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

Borekjerner i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1896.0	1898.7	[m]
2	1898.0	1924.8	[m]

Total kjerneprøve lengde [m]	29.5
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
130	NORDLAND GP
752	UTSIRA FM
912	NO FORMAL NAME
991	HORDALAND GP
991	SKADE FM
1204	NO FORMAL NAME
1677	ROGALAND GP
1677	BALDER FM
1689	SELE FM
1719	LISTA FM
1777	VÅLE FM
1780	SHETLAND GP
1780	EKOFISK FM
1812	TOR FM
1876	HOD FM
1895	CROMER KNOLL GP
1898	BASEMENT

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
6216 16 4 5	pdf	0.39





Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
6216 01 16 4 5 gch transfer 1	txt	0.00
6216 02 16 4 5 gch results 1	txt	0.25

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
FMI PPC MSIP	1765	2026
FMI PPC MSIP CBL VDL	893	1777
HRLT PEX ECS HNGS	1764	2021
MDT GR	1876	2002
MWD LWD - GR RES PWD DIR	125	605
MWD LWD - GR RES PWD DIR	1785	1892
MWD LWD - GR RES PWD DIR DEN NEU	595	1785
MWD LWD - GR RES PWD DIR DEN NEU	1785	2016
VSI	705	2000

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
CONDUCTOR	30	207.0	36	207.0	0.00	LOT
SURF.COND.	13 3/8	594.0	17 1/2	600.0	1.70	LOT
PILOT HOLE		606.0	9 7/8	606.0	0.00	LOT
INTERM.	9 5/8	1785.0	12 1/4	1790.0	1.50	LOT
OPEN HOLE		2020.0	8 1/2	2020.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
209	1.50			Water	
209	1.05			Water	





600	1.30			Water	
1440	1.35			Water	
1617	1.20			Water	
1790	1.38			Water	
1898	1.20			Water	
2020	1.20			Water	