



Generell informasjon

Brønnbane navn	7220/11-4
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	BARENTS SEA
Funn	7220/11-1 (Alta)
Brønn navn	7220/11-4
Seismisk lokalisering	Survey LN15M02. Inline 2313. crossline 2669
Utvinningstillatelse	609
Boreoperatør	Lundin Norway AS
Boretillatelse	1653-L
Boreinnretning	LEIV EIRIKSSON
Boredager	69
Borestart	10.05.2017
Boreslutt	17.07.2017
Plugget dato	17.07.2017
Frigitt dato	17.07.2019
Publiseringsdato	17.07.2019
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL/GAS
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	LATE PERMIAN
1. nivå med hydrokarboner, formasjon.	UNDEFINED GP
2. nivå med hydrokarboner, alder	EARLY TRIASSIC
2. nivå med hydrokarboner, formasjon	UNDEFINED GP
Avstand, boredekk - midlere havflate [m]	25.0
Vanndybde ved midlere havflate [m]	402.0
Totalt målt dybde (MD) [m RKB]	2282.0
Totalt vertikalt dybde (TVD) [m RKB]	2280.0
Maks inklinasjon [°]	9.33
Temperatur ved bunn av brønnbanen [°C]	84



Eldste penetrerte alder	CARBONIFEROUS
Eldste penetrerte formasjon	UGLE FM
Geodetisk datum	ED50
NS grader	72° 2' 27.88" N
ØV grader	20° 33' 7.97" E
NS UTM [m]	8002536.65
ØV UTM [m]	690843.65
UTM sone	33
NPDID for brønnbanen	8126

Brønnhistorie

**General**

Well 7220/11-4 was drilled to appraise the Alta discovery on the southern Loppa High in the Barents Sea. The primary objective was to delineate the eastern extent of the Alta discovery and prove the presence of hydrocarbon columns and fluid contacts similar to those established in the discovery well.

Operations and results

Appraisal well 7220/11-4 was spudded with the semi-submersible installation Leiv Eiriksson on 10 May 2017 and drilled to TD at 2282 m in the Carboniferous Ugle Formation. Operations proceeded without significant problems. The well was drilled with seawater and sweeps down to 471 m, with KCl/Polymer/GEM mud from 471 to 648 m and with Performadril mud with 3.0 – 3.6% glycol from 648 m to TD.

The top of the reservoir was encountered at 1903 m. The well encountered a gross hydrocarbon column of 46.3 m, comprising 1.6 m of gas and 44.7 m of oil in a sequence of Permian-Triassic clastic carbonate sediments, conglomerates and breccias. The gas-oil contact (GOC) was found at 1904.6 m and the free-water level (FWL) at 1949.3 m. The pressure data confirmed similar fluid contacts and gradients to those observed in the previous wells drilled on the Alta discovery, suggesting good communication across the large Alta structure.

Above the oil-bearing reservoir there were oil shows in the Snadd Formation at 620 m, 860 – 930 m, and 1080 – 1288 m. These were described with direct, cut and residue fluorescence. The strongest shows, at 620 m, were associated with high gas levels between 600 and 650 m. Below the oil reservoir oil shows were described down to 2061 m.

Seven cores were cut in the interval 1904 to 1994 m. Cores 1 – 5 were cut in the 8 ½" section, while cores 6 and 7 were cut in the 6" section. MDT fluid samples were taken in the 8 ½" section at 1903.2 m (gas), 1912.6 m (oil), 1920.52 m (oil), and 1934.71 m (oil). One XPT water sample was taken in the 6" section at 1988.49.

The well was permanently abandoned on 17 July 2017 as an oil and gas appraisal.

Testing

A DST was performed in the oil zone, the perforated interval was from 1923 to 1936.3 m in the oil zone. In the main flow the test produced 960 sm³ oil and 93800 Sm³ gas /day through a 56/64" choke. The GOR was 97 Sm³/Sm³, the oil density was 0.825 g/cm³ and the gas gravity was 0.706 (air = 1). Measured CO₂ and H₂S was up to 3% and 1.4 ppm, respectively. The static formation temperature estimated from Metrol Prolog test data is 71 °C at 1939.3 m.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
500.00	2282.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerter i Sokkeldirektoratet



Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	1904.0	1914.7	[m]
2	1915.7	1934.0	[m]
3	1934.0	1941.8	[m]
4	1942.0	1960.2	[m]
5	1960.2	1970.4	[m]
6	1972.6	1990.8	[m]
7	1990.6	1991.8	[m]

Total kjerneprøve lengde [m]	84.7
Kjerner tilgjengelig for prøvetaking?	YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
427	NORDLAND GP
427	NAUST FM
500	SOTBAKKEN GP
500	TORSK FM
564	ADVENTDALEN GP
564	KOLJE FM
589	KAPP TOSCANA GP
589	SNADD FM
1842	SASSENDALEN GP
1842	KOBBE FM
1874	KLAPPMYSS FM
1886	HAVERT FM
1903	UNDEFINED GP
1956	GIPSDALEN GP
1956	ØRN FM
2015	FALK FM
2233	UGLE FM

Borestrengtester (DST)



Faktasider

Brønnbane / Leting

Utskriftstidspunkt: 15.5.2024 - 13:59

Test nummer	Fra dybde MD [m]	Til dybde MD [m]	Reduksjonsven til størrelse [mm]
1.0	1923	1936	22.2

Test nummer	Endelig avstengningstrykk [MPa]	Endelig strømningstrykk [MPa]	Bunnhullstrykk [MPa]	Borehullstemperatur [°C]
1.0				

Test nummer	Olje produksjon [Sm3/dag]	Gass produksjon [Sm3/dag]	Oljetetthet [g/cm3]	Gasstyngde rel. luft	GOR [m3/m3]
1.0	960	93800	0.825	0.706	97

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
ADT HRLA GR JAR	1823	1969
FMI PPC MSIP GR JAR	425	1970
FMI PPC MSIP GR JAR	1968	2264
MSCT GR	1836	1903
MSCT GR	1976	2118
MSCT GR	1983	2246
MWD - OTII BCPM	427	669
MWD - OTII LT BCPMII	2149	2282
MWD - OTII ST LT BCPMII	1994	2149
MWD - ZT RG OT BCPMII	1830	1904
MWD - ZT RG OT BCPMII	1970	1970
MWD - ZT RG OTII BCPM LT ST	669	1830
NEXT XMR GR JAR	1823	1961
PQ HY PO SRP IFA MS PC JAR	1988	2101
PQ HY PO SRP PQ IFA MS PC JAR	1902	1968
UBI ADT HRLA PEX HNGS GR JAR	1968	2254
UBI PEX GPIT PPC GR JAR	1823	1959
UIB GPIT PPC GR JAR	1967	2265
USIT CBL	1250	1964
VSI GR	436	2260
VSI GR	457	1965
XPT NEXT CMR GR JAR	1968	2251



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	493.0	36	493.0	0.00	
SURF.COND.	20	657.4	26	664.0	1.30	FIT
INTERM.	9 5/8	1823.8	12 1/4	1830.0	1.62	LOT
LINER	7	1968.6	8 1/2	1977.4	1.35	FIT
OPEN HOLE		2282.0	6	2282.0	0.00	

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
426	1.05	45.0		SWEEPS	
453	1.50	22.0		KCl/Gem	
471	1.05	45.0		SWEEPS	
493	1.50	22.0		KCl/Polymer/GEM	
493	1.35	15.0		KCl/Polymer/GEM	
620	1.17	9.0		KCl/Gem/Polymer	
620	1.36	17.0		KCl/Polymer/GEM	
648	1.39	19.0		KCl/Polymer/GEM	
658	1.17	19.0		Performadril	
664	1.17	19.0		Performadril	
664	1.39	19.0		KCl/Polymer/GEM	
669	1.17	19.0		Performadril	
860	1.18	19.0		Performadril	
1018	1.17	19.0		Performadril	
1100	1.18	19.0		Performadril	
1270	1.20	19.0		Performadril	
1350	1.18	19.0		Performadril	
1452	1.17	9.0		KCl/Gem/Polymer	
1452	1.14	10.0		KCl/Gem/Polymer	
1475	1.20	19.0		Performadril	
1570	1.21	20.0		Performadril	
1788	1.14	10.0		KCl/Gem/Polymer	
1794	1.20	19.0		Performadril	
1830	1.14	20.0		Performadril	



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1830	1.20	19.0		Performadril	
1835	1.14	21.0		Performadril	
2282	1.14	11.0		KCl/Gem/Polymer	
2282	1.13	1.0		KCl	