



Generell informasjon

Brønnbane navn	6608/10-8
Type	EXPLORATION
Formål	WILDCAT
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Felt	URD
Funn	6608/10-8 Stær
Brønn navn	6608/10-8
Seismisk lokalisering	ST9203R98- Inline1165 & Crossline2220
Utvinningstillatelse	128
Boreoperatør	Statoil ASA (old)
Boretillatelse	1024-L
Boreinnretning	STENA DON
Boredager	105
Borestart	29.12.2001
Boreslutt	12.04.2002
Frigitt dato	12.04.2004
Publiseringsdato	18.05.2004
Opprinnelig formål	WILDCAT
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	YES
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	INTRA MELKE FM SS
2. nivå med hydrokarboner, alder	MIDDLE JURASSIC
2. nivå med hydrokarboner, formasjon	FANGST GP
3. nivå med hydrokarboner, alder	EARLY JURASSIC
3. nivå med hydrokarboner, formasjon	BÅT GP
Avstand, boredekk - midlere havflate [m]	24.0
Vanndybde ved midlere havflate [m]	376.0
Totalt målt dybde (MD) [m RKB]	2652.0
Totalt vertikalt dybde (TVD) [m RKB]	2650.0



Maks inklinasjon [°]	5.6
Temperatur ved bunn av brønnbanen [°C]	97
Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	ÅRE FM
Geodetisk datum	ED50
NS grader	66° 3' 34.07" N
ØV grader	8° 10' 42.92" E
NS UTM [m]	7326967.49
ØV UTM [m]	462804.74
UTM sone	32
NPDID for brønnbanen	4439

Brønnhistorie

**General**

Well 6608/10-8 was drilled in the Nordland II area on the Stør structure, ca 3 km north east of the Norne Field. Geologically the structure is part of the Dønna Terrace. The primary objective of the well was to prove hydrocarbons in sandstones of the Middle to Early Jurassic Garn, Ile, Tofte, and Åre Formations. The hydrocarbon potential of the Melke Formation of Late Jurassic age was considered as secondary objective.

Operations and results

Exploration well 6608/10-8 was spudded with the semi-submersible installation Stena Don on 29 December 2001 and drilled to TD at 2652 m (2626 m TVD MSL) in the Early Jurassic Åre Formation. The well was drilled with seawater down to 1315 m, and with Aquadril (KCl / polymer / glycol mud) from 1315 m to TD. No shallow gas was encountered and drilling went without significant technical difficulties.

Top Melke sandstone came in at 2224 m, top Not sandstone at 2348 m, top Ile Formation at 2389 m, top Tilje Formation at 2391 m, and top Åre Formation at 2402.5 m. Oil was encountered in sandstones of the Melke, Not, Ile, Tilje, and Åre Formations. An OWC was found at 2483.7 m (2458.1 m TVD MSL) in the Åre Formation, based on petrophysical interpretation. Wire line MDT pressure measurements were not useful for establishing the OWC. The oil was verified by shows and laboratory analyses of cores, logs, and fluid samples. Oil samples were taken on wire line in all oil bearing reservoir zones in the well. Good oil shows were reported from 2226 m down to 2486 m. The composition of the oil samples from the Not and Åre Formations was very similar to that of the oil on the Norne Field.

Seven cores were cut in the Melke, Not, Ile, Tilje, and Åre Formations, recovering a total of 94.1 m. Coring in Åre proved difficult due to a heterogeneous sand/shale lithology. Three MDT runs were performed. Forty-six pressure points were taken in the first. In the second oil samples were taken in the Not Formation at 2407.5 m MSL, in the Tilje Formation at 2439.5 m MSL, and in the Åre Formation at 2351.5 m MSL. The third run was conducted with dual packer in the Melke Formation and a "Mini-DST" was carried out. Oil samples were taken at 2271 m MSL. All samples were of good quality. Results from the testing proved pressure depletion in the Middle and Lower Jurassic section as a result of the production on the Norne Field. The Not Formation showed the largest pressure depletion. The degree of pressure depletion varied between the different sand stone layers in the reservoir, making it difficult to establish fluid gradients. The most reliable gradients are assumed to be those established by PVT analyses. The Melke Formation sandstones did not exhibit pressure depletion.

The well bore was plugged back to 10 m into the 13 3/8" casing and prepared for side-tracking. Well bore 6608/10-8 was abandoned as an oil discovery on 12 April 2002.

Testing

No drill stem test was performed

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1320.00	2652.00

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



Borekjerne i Sokkeldirektoratet

Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
1	2295.0	2319.5	[m]
2	2371.0	2397.1	[m]
3	2398.0	2412.2	[m]
4	2424.0	2433.6	[m]
5	2435.0	2437.8	[m]
6	2438.0	2451.7	[m]
7	2452.0	2455.4	[m]

Total kjerneprøve lengde [m]	94.2
Kjerner tilgjengelig for prøvetaking?	YES

Kjernebilder



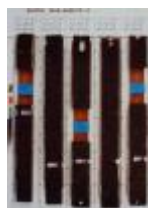
2295-2300m



2300-2305m



2305-2310m



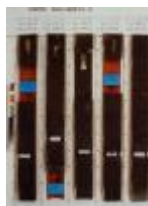
2310-2315m



2315-2319m



2371-2376m



2376-2381m



2381-2386m



2386-2391m



2391-2396m



2396-2397m



2398-2403m



2403-2408m



2408-2412m



2424-2429m



2429-2433m



2435-2437m



2438-2443m



2443-2448m



2448-2451m



2452-2455m

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
400	NORDLAND GP
400	NAUST FM
1418	KAI FM
1560	HORDALAND GP
1560	BRYGGE FM
1778	ROGALAND GP
1778	TARE FM
1863	TANG FM
1894	SHETLAND GP
1894	SPRINGAR FM
2088	CROMER KNOLL GP
2088	LYR FM
2222	VIKING GP
2222	SPEKK FM
2224	MELKE FM
2294	INTRA MELKE FM SS
2341	MELKE FM
2348	FANGST GP
2348	NOT FM
2389	ILE FM
2391	BÅT GP
2391	TILJE FM



2403 [ÅRE FM](#)

Spleisede logger

Dokument navn	Dokument format	Dokument størrelse [KB]
4439	pdf	0.41

Geokjemisk informasjon

Dokument navn	Dokument format	Dokument størrelse [KB]
4439_1	pdf	5.45

Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

Dokument navn	Dokument format	Dokument størrelse [KB]
4439_6608_10_8_COMPLETION_LOG	.pdf	6.87
4439_6608_10_8_COMPLETION_REPORT	.PDF	14.55

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
ECS HNGS CMR+	2215	2519
FMI DSI GR	0	0
FMI DSI GR	473	1974
FMI DSI GR	1289	2478
FMI DSI GR	1940	2620
MDT DPS	2295	2332
MDT PRE	2295	2535
MDT SMP	2375	2464
MWD - LWD MPT	459	1303
MWD - LWD MPT	1315	2652
PEX HRLA	1292	2650
VSP GR	1260	2615





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	459.0	36	460.0	0.00	LOT
SURF.COND.	13 3/8	1290.0	17 1/2	1315.0	1.57	LOT
OPEN HOLE		2652.0	8 1/2	2652.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	flytegrense [Pa]	Type slam	Dato, måling
451	1.03			SEAWATER/PAC	
459	1.03			SEAWATER/PAC	
1303	1.03			SEAWATER/PAC	
1341	1.37	33.0		KCL/GLYCOL/POLY	
1835	1.35	23.0		KCL/GLYCOL/POLY	
1871	1.35	26.0		KCL/GLYCOL/POLY	

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]
4439 Formation pressure (Formasjonstrykk)	pdf	0.27

