



Generell informasjon

Brønnbane navn	6506/11-8
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORWEGIAN SEA
Felt	MORVIN
Funn	6506/11-7 Morvin
Brønn navn	6506/11-8
Seismisk lokalisering	3d survey ST02M04-inline 2660 & crossline 2648
Utvinningstillatelse	134 B
Boreoperatør	Statoil ASA (old)
Boretillatelse	1110-L
Boreinnretning	WEST ALPHA
Boredager	115
Borestart	24.03.2006
Boreslutt	16.07.2006
Frigitt dato	16.07.2008
Publiseringsdato	15.08.2008
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	GARN FM
2. nivå med hydrokarboner, alder	EARLY JURASSIC
2. nivå med hydrokarboner, formasjon	TOFTE FM
Avstand, boredekk - midlere havflate [m]	18.0
Vanndybde ved midlere havflate [m]	380.0
Totalt målt dybde (MD) [m RKB]	4990.0
Totalt vertikalt dybde (TVD) [m RKB]	4988.0
Maks inklinasjon [°]	6.2
Temperatur ved bunn av brønnbanen [°C]	178



Eldste penetrerte alder	EARLY JURASSIC
Eldste penetrerte formasjon	TILJE FM
Geodetisk datum	ED50
NS grader	65° 7' 13.6" N
ØV grader	6° 26' 49.3" E
NS UTM [m]	7224481.28
ØV UTM [m]	380172.20
UTM sone	32
NPDID for brønnbanen	5295

Brønnhistorie



Block 6506/11 is situated on the north-western part of the Halten Terrace offshore Mid-Norway. The well 6506/11-8 was drilled to appraise the 6506/11-7 Morvin Discovery, approximately 10 km north of the Kristin field. The primary objective of the well was to prove extra recoverable oil in structure, explore potential better reservoir properties and reduce depth uncertainties. The primary target was Bathonian age sandstones in the Garn and Ile Formations. Potential targets in the Tofte and Tilje Formations were also investigated by this drilling.

Operations and results

Appraisal well 6506/11-8 was spudded with the semi-submersible installation West Alpha on 24 March 2006 and drilled to TD at 4990 m in the early Jurassic Tilje Formation (extended from 4893 m, which was the planned TD of the well). No significant technical problems were encountered in the operations. The well was drilled with seawater and bentonite down to 2150 m, with Glydril water based mud (with glycols) from 2150 m to 4500 m, and with Paratherm oil based mud from 4500 m to TD. No shallow gas was observed by the ROV at the wellhead or by the MWD while drilling the 26" hole.

The well penetrated rocks of Quaternary, Tertiary, Cretaceous, and Jurassic age. Small gas peaks of up to 3.67% were observed in the lower Lange Sandstone Unit, similar to those observed in the 6506/11-7 well, indicating slight hydrocarbon charging. In the lower Lange Sandstones from 4449 m to 4479 m, very weak shows were observed. The well penetrated the Garn reservoir section at 4622.9 m and the Ile reservoir section at 4734.8 m, both formations shallower than prognosed. A HC discovery was proven both in the Garn and Ile Formations, but the MDT results suggested the formations to be tight. A MDT mini-DST was run in Tofte Formation and confirmed that it contained HC, but was very tight. The MDT data had insufficient resolution to assess gradients and fluid contacts. However, sufficient good pressure points were achieved to conclude that the pressure regime was the same as in the 6506/11-7 well for both the Garn and Ile Formation.

Eight cores with a total recovered length of 278 m were cut in the well; one was cut in the Spekk/Melke Formation and seven were cut in the Bathonian sandstones. Oil sampling was performed in the Garn (4679 and 4680.7 m), Ile (4773 m) and Tofte (4845.2 m) Formations. Water sampling was performed at 4692.5 m in the Garn Formation. A disappointing high level of contamination in the oil sampling was registered with 10 - 23 % contamination.

The well was permanently abandoned on 1 July 2006 as an oil appraisal.

Testing

No drill stem test was performed.

Borekaks i Sokkeldirektoratet

Borekaksprøve, topp dybde [m]	Borekaksprøve, bunn dybde [m]
1350.00	4989.00

Borekaks tilgjengelig for prøvetaking?	YES
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Borekjerter i Sokkeldirektoratet



Kjerneprøve nummer	Kjerneprøve - topp dybde	Kjerneprøve - bunn dybde	Kjerneprøve dybde - enhet
2	4624.0	4658.4	[m]
3	4658.4	4671.4	[m]
4	4671.4	4674.2	[m]
5	4674.4	4699.8	[m]
6	4743.0	4753.0	[m]
7	4753.0	4769.4	[m]
8	4769.4	4775.4	[m]

Total kjerneprøve lengde [m]	108.1
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
DST	2C	4773.00	0.00	CONDE NSATE		YES
DST	2B	0.00	4578.00	CONDE NSATE		YES

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
398	NORDLAND GP
398	NAUST FM
1493	KAI FM
1894	HORDALAND GP
1894	BRYGGE FM
2183	ROGALAND GP
2183	TARE FM
2252	TANG FM
2311	SHETLAND GP
2311	SPRINGAR FM
2503	NISE FM
2704	KVITNOS FM
3393	CROMER KNOLL GP



3393	LYSING FM
3557	LANGE FM
4257	NO FORMAL NAME
4402	LANGE FM
4586	LYR FM
4599	VIKING GP
4599	SPEKK FM
4600	MELKE FM
4623	FANGST GP
4623	GARN FM
4702	NOT FM
4735	ILE FM
4798	BÅT GP
4798	ROR FM
4839	TOFTE FM
4928	TILJE FM

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
AIT IPLT DSI GR ECRD	4758	4989
CMR APLT ECS ACTS ECRD	4504	4897
DSI AIT APLT ACTS ECRD	1413	4505
MDT MINI DST SAMPLE	4692	4782
MDT MINI DST SAMPLE	4845	4845
MDT PQ SAMPLE	4500	4830
MDT PRESS	4623	4870
MDT SAMPLE MINI DST	4679	4679
MSCT GR	4599	4981
MSCT GR	4623	4877
MWD - ON TRACK	440	4990
PPC MSIP PPC IS AIT ACTS ECRD	4504	4897
VSI GR	2859	4985
VSP GR	1322	3554

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	446.0	36	448.0	0.00	LOT
SURF.COND.	20	1341.0	26	1350.0	1.72	LOT
INTERM.	14	2139.0	17 1/2	2150.0	1.86	LOT
INTERM.	9 7/8	4500.0	12 1/4	4500.0	2.06	LOT
OPEN HOLE		4980.0	8 1/2	4980.0	0.00	LOT

Boreslam

Dybde MD [m]	Egenvekt, slam [g/cm3]	Viskositet, slam [mPa.s]	Flytegrense [Pa]	Type slam	Dato, måling
446	1.06			SW / BENTONITE 1	
1350	1.30			SW / BENTONITE 1	
1823	1.53	23.0		GLYDRIL 18	
2150	1.62	25.0		GLYDRIL 18	
2320	1.70	38.0		PARATHERM	
4500	1.78	29.0		PARATHERM	
4606	1.86	34.0		PARATHERM	
4620	1.86	42.0		PARATHERM	
4624	1.86	34.0		PARATHERM	
4679	1.86	43.0		PARATHERM	
4775	1.86	39.0		PARATHERM	

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]
5295 Formation pressure (Formasjonstrykk)	pdf	0.28

