Generell informasjon

Brønnbane navn	33/9-21 B
Type	EXPLORATION
Formål	APPRAISAL
Status	P&A
Pressemelding	lenke til pressemelding
Faktakart i nytt vindu	lenke til kart
Hovedområde	NORTH SEA
Funn	33/9-6 DELTA
Brønn navn	33/9-21
Seismisk lokalisering	inline 2222 & crossline 5494
Utvinningstillatelse	037 D
Boreoperatør	Wintershall Norge ASA
Boretillatelse	1254-L
Boreinnretning	MURCHISON A
Boredager	43
Borestart	30.04.2009
Boreslutt	11.06.2009
Frigitt dato	11.06.2011
Publiseringsdato	11.06.2011
Opprinnelig formål	APPRAISAL
Gjenåpnet	NO
Innhold	OIL
Funnbrønnbane	NO
1. nivå med hydrokarboner, alder	MIDDLE JURASSIC
1. nivå med hydrokarboner, formasjon.	BRENT GP
Avstand, boredekk - midlere havflate [m]	56.4
Vanndybde ved midlere havflate [m]	156.1
Totalt målt dybde (MD) [m RKB]	6882.0
Totalt vertikalt dybde (TVD) [m RKB]	3038.0
Maks inklinasjon [°]	94.9
Eldste penetrerte alder	MIDDLE JURASSIC
Eldste penetrerte formasjon	NESS FM
Geodetisk datum	ED50
NS grader	61° 23' 48.26'' N
ØV grader	1° 44' 27.25'' E
NS UTM [m]	6807790.25

ØV UTM [m]	432751.22
UTM sone	31
NPDID for brønnbanen	6142

Brønnhistorie

General

The Delta discovery, made by well 33/9-6 in 1976, is situated approximately 4.5 km east of the Murchison platform. Well 33/9-6 had good oil shows, but was not tested due to mechanical problems. An oil down-to at 2998 m TV DSS corresponding to the top Mid Ness shale was seen in the well. The well had moderate reservoir quality within the Tarbert/Ness Formations, and excellent reservoir quality within the water-bearing Etive Formation.

Appraisal well 33/9-21 S confirmed the reservoir properties found in 33/9-6 and found OWC within the Etive Formation.

The horizontal sidetrack 33/9-21 A was drilled to further appraise the oil-bearing sands, but discovered that the reservoir dipped downwards so that the Etive Formation came below the OWC.

The objective with well bore 33/9-21 B was to reach the Etive sand at 6513.6 m and drill it horizontally.

The well was drilled from the Murchison Platform on the UK side of the border, where the well name is UK211/19a-M75x.

Operations and results

Appraisal well 33/9-21 B was kicked off on 30 April 2009 at 6222 m (2980 m TVD SS) in well 33/9-21 A. Kick-off point was in the Ness Formation. The well was drilled as a horizontal producer and reached TD at 6882 m (2982 m TVD SS) in the stratigraphically younger Late Jurassic Heather Formation. The well was drilled with Versaclean oil based mud from kick-off to TD.

The Etive could never be identified on the logs or in the samples and a water bearing Ness Formation Sand encountered at 6621.8 m made clear that the OWC was higher than prognosed. The decision was therefore taken to build the inclination to 95deg. At 6784.8 m an oil bearing sand was encountered, which appeared to be the Tarbert Formation. Drilling continued to 6807.7 m where the well entered the Heather Formation Claystone. Shows were reported as "no shows above OBM" throughout the well bore.

No cores were cut and no wire line fluid samples were taken.

The well was completed on 11 June 2009 as an oil appraisal. It was reclassified to development well and on 25 July 2009 it was put on production

Testing

No drill stem test was performed.

Litostratigrafi

Topp Dyb [mMD RKB]	Litostrat. enhet
213	NORDLAND GP
971	UTSIRA FM
1093	HORDALAND GP
2618	ROGALAND GP
2618	BALDER FM
2728	SELE FM
2846	LISTA FM
3056	VÅLE FM
3112	SHETLAND GP
5502	CROMER KNOLL GP
5502	RØDBY FM
5518	SOLA FM
5546	ÅSGARD FM
5617	MIME FM
5662	VIKING GP
5662	DRAUPNE FM
5819	HEATHER FM
5901	BRENT GP
5901	TARBERT FM
5939	NESS FM
6784	TARBERT FM
6808	VIKING GP
6808	HEATHER FM

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
MWD - DI	6222	6230
MWD - GR RES NEU DEN	6230	6882

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
LINER	7	6225.0	8 1/2	6225.0	0.00	LOT
LINER	6	6879.0	4 1/2	6882.0	0.00	LOT