Generell informasjon

Brønnbane navn	33/9-21 A
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	1247-L
Boreinnretning	MURCHISON A
Boredager	14
Borestart	17.04.2009
Boreslutt	30.04.2009
Frigitt dato	30.04.2011
Publiseringsdato	30.04.2011
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]	56.0
Vanndybde ved midlere havflate [m]	156.0
Totalt målt dybde (MD) [m RKB]	6392.0
Totalt vertikalt dybde (TVD) [m RKB]	3027.0
Maks inklinasjon [°]	93.8
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	6109

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 TVDSS 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 with an OWC in the Etive Formation.

The horizontal sidetrack 33/9-21 A was drilled to further appraise the oil-bearing sands.

The well was drilled from the Murchison Platform on the UK side of the border, where the well name is UK211/19a-M75y.

Operations and results

After two unsuccessful attempts to kick off appraisal well 33/9-21 A was finally kicked off on 17 April 2009 at 5185 m (2687 m TVD SS) in well 33/9-21 S. Kick-off point was in the Shetland Group. The well was drilled as a horizontal producer and reached TD at 6392 m (2971 m TVD SS) in the Late Jurassic Heather Formation. The well was drilled with Versaclean oil based mud from kick-off to TD.

Top target reservoir came in at 5902 m (2970 m TVD SS). The well penetrated 465 m MD of Tarbet and Ness sands and it became evident that the reservoir dipped downwards so that the Etive Formation came below the OWC. After drilling through the top of the reservoir back into the Heather Formation a second sidetrack was decided in order to reach the Etive sands within the hydrocarbon-bearing zone. 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 permanently abandoned on 30 April 2009 as an oil appraisal.

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
5902	BRENT GP
5902	TARBERT FM
5939	NESS FM
6366	VIKING GP
6366	HEATHER FM

Logger

Type logg	Topp dyp for logg [m]	Bunn dyp for logg [m]
MWD - DI GR RES APWD NEU DEN	6219	6219
MWD - DI GR RES APWD NEU DEN SON	5201	6392
MWD - GR DI	5184	5201

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
INTERM.	13 3/8	1570.0	17 1/2	1580.0	1.61	LOT
INTERM.	9 5/8	5144.0	12 1/4	5156.0	1.78	LOT
OPEN HOLE		6392.0	8 1/2	6392.0	0.00	LOT