## Generell informasjon

| | |
|---|---|
| Brønnbane navn | 15/12-13 |
| Type | EXPLORATION |
| Formål | APPRAISAL |
| Status | P&A |
| Faktakart i nytt vindu | lenke til kart |
| Hovedområde | NORTH SEA |
| Felt | REV |
| Funn | 15/12-12 Rev |
| Brønn navn | 15/12-13 |
| Seismisk lokalisering | Varg 2002 Survey x-line888 inline 1875 |
| Utvinningstillatelse | 038 |
| Boreoperatør | Pertra AS (OLD) |
| Boretillatelse | 1055-L |
| Boreinnretning | WEST ALPHA |
| Boredager | 19 |
| Borestart | 23.04.2003 |
| Boreslutt | 11.05.2003 |
| Frigitt dato | 11.05.2005 |
| Publiseringsdato | 15.06.2005 |
| Opprinnelig formål | APPRAISAL |
| Gjenåpnet | NO |
| Innhold | DRY |
| Funnbrønnbane | NO |
| Avstand, boredekk - midlere havflate [m] | 18.0 |
| Vanndybde ved midlere havflate [m] | 87.0 |
| Totalt målt dybde (MD) [m RKB] | 3047.0 |
| Totalt vertikalt dybde (TVD) [m RKB] | 3017.0 |
| Maks inklinasjon [°] | 12.2 |
| Temperatur ved bunn av brønnbanen [°C] | 110 |
| Eldste penetrerte alder | LATE JURASSIC |
| Eldste penetrerte formasjon | HUGIN FM |
| Geodetisk datum | ED50 |
| NS grader | 58° 2' 3.83'' N |
| ØV grader | 1° 55' 4.57'' E |
| NS UTM [m] | 6433197.92 |
| ØV UTM [m] | 436099.90 |

| | |
|---|---|
| UTM sone | 31 |
| NPDID for brønnbanen | 4733 |

## Brønnhistorie

### General

Well 15/12-13 is located approximately 0.8 km northwest of the 15/12-12 (Varg South) Discovery well. The primary objective was to appraise the Varg South discovery: to define the oil/water contact, measure current reservoir pressure and fluid gradients, confirm reservoir quality and geometry, and confirm geophysical model in terms of depth to top and base reservoir. Potential Kimmeridgian Sandstone immediately above the main Oxfordian reservoir was seen as a secondary objective.

### Operations and results

Appraisal well 15/12-13 was spudded with the semi-submersible installation West Alpha on 23 April 2003 and drilled to TD at 3047 m in Middle Jurassic Hugin Formation sandstone. The well is classified as vertical, but due to high deviation the difference between measured depth and vertical depth is 17 m at TD. The well was drilled with seawater and hi-vis sweeps down to 1321 m, and with Sodium silicate (Barasil CX) mud from 1321 m to TD.

Well 15/12-13 penetrated the target Oxfordian sandstone (Intra Heather Formation sandstone) at 3013 m (2966 m TVDSS), which was 105 m deeper than prognosed. This was below OWC, and the sand was water-wet. The overlying Draupne and Heather formations were thicker the than prognoses, and the target area proved to be down faulted. The sand encountered was, based on biostratigraphy, the same as in well 15/12-12. As the objectives were not achieved by this well, it was decided to drill a geological sidetrack.

Well bore 15/12-3 was logged by LWD in two runs; no wire line logs were run. No pressure or fluid sampling tools were run. No cores were cut.

The well bore was plugged back to 1279 m and permanently abandoned on 11 May 2003 as a dry well.

### Testing

No drill stem test was performed.

## Borekaks i Sokkeldirektoratet

| Borekaksprøve, topp dybde [m] | Borekaksprøve, bunn dybde [m] |
|---|---|
| 1330.00 | 3040.00 |

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

## Litostratigrafi

| Topp Dyb [mMD RKB] | Litostrat. enhet |
|---|---|
| 105 | NORDLAND GP |
| 1048 | UTSIRA FM |
| 1240 | HORDALAND GP |
| 2286 | ROGALAND GP |
| 2286 | BALDER FM |
| 2297 | SELE FM |
| 2370 | LISTA FM |
| 2453 | SHETLAND GP |
| 2723 | CROMER KNOLL GP |
| 2856 | VIKING GP |
| 2856 | DRAUPNE FM |
| 2944 | HEATHER FM |
| 3013 | INTRA HEATHER FM SS |
| 3030 | VESTLAND GP |
| 3030 | HUGIN FM |

### Dokumenter - rapportert av utvinningstillatelsen (frigitt ihht til regelverk)

| Dokument navn | Dokument format | Dokument størrelse [KB] |
|---|---|---|
| 4733_15_12_13_COMPLETION_LOG | .pdf | 0.95 |
| 4733_15_12_13_COMPLETION_REPORT | .PDF | 14.48 |

### Logger

| Type logg | Topp dyp for logg [m] | Bunn dyp for logg [m] |
|---|---|---|
| LWD - GR RES | 171 | 1320 |
| LWD - GR RES ALD BAT | 1320 | 3047 |

### 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 | 165.0 | 36 | 171.0 | 0.00 | LOT |
| SURF.COND. | 13 3/8 | 1315.0 | 17 1/2 | 1320.0 | 1.71 | LOT |
| OPEN HOLE | | 3047.0 | 12 1/4 | 3047.0 | 0.00 | LOT |

**Boreslam**

| Dybde MD [m] | Egenvekt, slam [g/cm3] | Viskositet, slam [mPa.s] | Flytegrense [Pa] | Type slam | Dato, måling |
|---|---|---|---|---|---|
| 145 | 1.05 | 1.0 | | SPUD MUD | |
| 167 | 1.05 | 7.0 | | SPUD MUD | |
| 1200 | 1.07 | 4.0 | | SPUD MUD | |
| 1320 | 1.20 | 11.0 | | SPUD MUD | |
| 1400 | 1.39 | 29.0 | | BARASILIC | |
| 2087 | 1.28 | 19.0 | | BARASILIC | |
| 2259 | 1.45 | 25.0 | | POLYMER | |
| 2400 | 1.56 | 26.0 | | BARASILC-13B | |
| 2656 | 1.54 | 22.0 | | BARASILC-13B | |
| 2720 | 1.37 | 22.0 | | BARASILIC | |
| 2951 | 1.57 | 22.0 | | BARASILC-13B | |
| 3040 | 1.38 | 27.0 | | BARASILIC | |
| 3150 | 1.23 | 17.0 | | KCL POLYMER | |