



## Generell informasjon

|                                          |                                      |
|------------------------------------------|--------------------------------------|
| Brønnbane navn                           | 34/10-33 CR                          |
| Type                                     | EXPLORATION                          |
| Formål                                   | APPRAISAL                            |
| Status                                   | P&A                                  |
| Faktakart i nytt vindu                   | <a href="#">lenke til kart</a>       |
| Hovedområde                              | NORTH SEA                            |
| Felt                                     | <a href="#">GULLFAKS SØR</a>         |
| Funn                                     | <a href="#">34/10-2 Gullfaks Sør</a> |
| Brønn navn                               | 34/10-33                             |
| Seismisk lokalisering                    | ST 8134 - 156 SP.329                 |
| Utvinningstillatelse                     | <a href="#">050</a>                  |
| Boreoperatør                             | Den norske stats oljeselskap a.s     |
| Boretillatelse                           | 614-L2                               |
| Boreinnretning                           | <a href="#">DEEPSEA BERGEN</a>       |
| Boredager                                | 63                                   |
| Borestart                                | 24.02.1990                           |
| Boreslutt                                | 27.04.1990                           |
| Frigitt dato                             | 27.04.1992                           |
| Publiseringsdato                         | 01.01.2012                           |
| Opprinnelig formål                       | APPRAISAL                            |
| Gjenåpnet                                | YES                                  |
| Årsak til gjenåpning                     | TESTING/PLUGGING                     |
| Innhold                                  | OIL/GAS                              |
| Funnbrønnbane                            | NO                                   |
| 1. nivå med hydrokarboner, alder         | MIDDLE JURASSIC                      |
| 1. nivå med hydrokarboner, formasjon.    | BRENT GP                             |
| Avstand, boredekk - midlere havflate [m] | 23.0                                 |
| Vanndybde ved midlere havflate [m]       | 134.0                                |
| Totalt målt dybde (MD) [m RKB]           | 3752.0                               |
| Totalt vertikalt dybde (TVD) [m RKB]     | 3587.0                               |
| Maks inklinasjon [°]                     | 46.1                                 |
| Temperatur ved bunn av brønnbanen [°C]   | 129                                  |
| Eldste penetrerte alder                  | EARLY JURASSIC                       |
| Eldste penetrerte formasjon              | DRAKE FM                             |
| Geodetisk datum                          | ED50                                 |



|                      |                 |
|----------------------|-----------------|
| NS grader            | 61° 7' 34.44" N |
| ØV grader            | 2° 12' 57.1" E  |
| NS UTM [m]           | 6777262.00      |
| ØV UTM [m]           | 457756.18       |
| UTM sone             | 31              |
| NPDID for brønnbanen | 1530            |

## Brønnhistorie

**General**

Well 34/10-33 CR was the last in a cluster well bores drilled to appraise the Gullfaks South discovery beginning with well 34/10-33. Well 34/10-33 CR is the re-entry of well 34/10-33 C, which served as a host well for the long-term production test 34/10-T-33 C.

In this test the production logging tools failed and the bottom hole pressure recorders were only partly functioning in the long-term production test. Furthermore, an unexpected increase in GOR occurred during the test, and this could not be interpreted based on the available data. Therefore the programme for the re-entry included a new test from the same perforation interval. A further objective of the re-entry was to retrieve and read two pressure recorders that were left in the well 34/10-33 C after the test production. The mean reservoir pressure should be estimated from these data. After testing the well bore would be permanently abandoned.

**Operations and results**

Appraisal well 34/10-33C was re-entered with the semi-submersible installation Deepsea Bergen on 24 February 1990.

The pressure recorders were retrieved, but both had failed to work.

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

After testing the well was permanently abandoned on 27 April 1990 as an oil and gas appraisal well.

**Testing**

Three drill stem tests were attempted from perforations in the interval 3448 to 3517 m (3347.3 to 3395.4 m TVD MSL).

DST 1 was not initiated due to technical reasons.

DST1 A was terminated mid-way due to stuck wire line tools. This test produced 1624 Sm<sup>3</sup> oil and 313300 Sm<sup>3</sup> gas/day through a 52/64" choke in the clean-up flow. The GOR was 193 Sm<sup>3</sup>/Sm<sup>3</sup>. The flowing BHP was 40234 kPa and the flow temperature was 124.3 deg C.

DST1 B was a complete test with PLT logging in the main flow period. It produced at maximum flow 1634 Sm<sup>3</sup> oil and 305558 Sm<sup>3</sup> gas through a 52/64" choke. The duration of this flow was 19.6 hours. The GOR was 187 Sm<sup>3</sup>/Sm<sup>3</sup>, slightly lower than in the periods with more restricted flow. The flowing BHP was 40454 kPa and the flow temperature was 125.0 deg C. Final shut-in BHP was 44061 kPa.

**Litostratigrafi**



| Topp Dyb<br>[mMD RKB] | Litostrat. enhet                |
|-----------------------|---------------------------------|
| 157                   | <a href="#">NORDLAND GP</a>     |
| 909                   | <a href="#">UTSIRA FM</a>       |
| 950                   | <a href="#">NO FORMAL NAME</a>  |
| 974                   | <a href="#">HORDALAND GP</a>    |
| 1029                  | <a href="#">NO FORMAL NAME</a>  |
| 1139                  | <a href="#">NO FORMAL NAME</a>  |
| 1247                  | <a href="#">NO FORMAL NAME</a>  |
| 1514                  | <a href="#">NO FORMAL NAME</a>  |
| 1562                  | <a href="#">NO FORMAL NAME</a>  |
| 1610                  | <a href="#">NO FORMAL NAME</a>  |
| 1821                  | <a href="#">ROGALAND GP</a>     |
| 1821                  | <a href="#">BALDER FM</a>       |
| 1897                  | <a href="#">LISTA FM</a>        |
| 2048                  | <a href="#">SHETLAND GP</a>     |
| 2048                  | <a href="#">JORSALFARE FM</a>   |
| 2340                  | <a href="#">KYRRE FM</a>        |
| 3008                  | <a href="#">CROMER KNOLL GP</a> |
| 3008                  | <a href="#">MIME FM</a>         |
| 3012                  | <a href="#">VIKING GP</a>       |
| 3012                  | <a href="#">DRAUPNE FM</a>      |
| 3045                  | <a href="#">HEATHER FM</a>      |
| 3215                  | <a href="#">BRENT GP</a>        |
| 3215                  | <a href="#">TARBERT FM</a>      |
| 3345                  | <a href="#">NESS FM</a>         |
| 3601                  | <a href="#">ETIVE FM</a>        |
| 3617                  | <a href="#">RANNOCH FM</a>      |
| 3722                  | <a href="#">DUNLIN GP</a>       |
| 3722                  | <a href="#">DRAKE FM</a>        |

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

| Dokument navn                                      | Dokument format | Dokument størrelse [KB] |
|----------------------------------------------------|-----------------|-------------------------|
| <a href="#">1530 34 10 33 CR Completion report</a> | pdf             | 20.62                   |

**Borestrengtester (DST)**





| Test nummer | Fra dybde MD [m] | Til dybde MD [m] | Reduksjonsven til størrelse [mm] |
|-------------|------------------|------------------|----------------------------------|
| 1.0         | 3448             | 3517             | 20.6                             |
| 1.2         | 3448             | 3517             | 0.0                              |

| Test nummer | Endelig avstengningstrykk [MPa] | Endelig strømningstrykk [MPa] | Bunnhullstrykk [MPa] | Borehullstemperatur [°C] |
|-------------|---------------------------------|-------------------------------|----------------------|--------------------------|
| 1.0         | 23.000                          | 16.000                        | 42.000               | 124                      |
| 1.2         |                                 |                               |                      | 125                      |

| Test nummer | Olje produksjon [Sm3/dag] | Gass produksjon [Sm3/dag] | Oljetetthet [g/cm3] | Gasstyngde rel. luft | GOR [m3/m3] |
|-------------|---------------------------|---------------------------|---------------------|----------------------|-------------|
| 1.0         | 1635                      | 313300                    | 0.859               | 0.680                | 193         |
| 1.2         |                           |                           |                     |                      |             |

## Logger

| Type logg  | Topp dyp for logg [m] | Bunn dyp for logg [m] |
|------------|-----------------------|-----------------------|
| BO CCL     | 91                    | 180                   |
| BP CCL     | 340                   | 2425                  |
| BP CCL     | 3365                  | 3385                  |
| GR CCL     | 3157                  | 3393                  |
| GR CCL     | 3160                  | 3351                  |
| GR CCL PLT | 3428                  | 3537                  |
| PERF CCL   | 3100                  | 3180                  |
| PLT GR CCL | 3428                  | 3537                  |