



## Generell informasjon

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| Brønnbane navn                           | 6604/6-1                                |
| Type                                     | EXPLORATION                             |
| Formål                                   | WILDCAT                                 |
| Status                                   | P&A                                     |
| Pressemelding                            | <a href="#">lenke til pressemelding</a> |
| Faktakart i nytt vindu                   | <a href="#">lenke til kart</a>          |
| Hovedområde                              | NORWEGIAN SEA                           |
| Brønn navn                               | 6604/6-1                                |
| Seismisk lokalisering                    | Win18M01 Inline 16968; Crossline 27527  |
| Utvinningstillatelse                     | <a href="#">894</a>                     |
| Boreoperatør                             | Wintershall Dea Norge AS                |
| Boretillatelse                           | 1800-L                                  |
| Boreinnretning                           | <a href="#">SCARABEO 8</a>              |
| Boredager                                | 42                                      |
| Borestart                                | 01.12.2019                              |
| Boreslutt                                | 11.01.2020                              |
| Plugget og forlatt dato                  | 11.01.2020                              |
| Frigitt dato                             | 11.01.2022                              |
| Publiseringsdato                         | 08.08.2022                              |
| Opprinnelig formål                       | WILDCAT                                 |
| Gjenåpnet                                | NO                                      |
| Innhold                                  | DRY                                     |
| Funnbrønnbane                            | NO                                      |
| Avstand, boredekk - midlere havflate [m] | 34.0                                    |
| Vanndybde ved midlere havflate [m]       | 1127.0                                  |
| Totalt målt dybde (MD) [m RKB]           | 3640.0                                  |
| Totalt vertikalt dybde (TVD) [m RKB]     | 3640.0                                  |
| Eldste penetrerte alder                  | LATE CRETACEOUS                         |
| Eldste penetrerte formasjon              | SPRINGAR FM                             |
| Geodetisk datum                          | ED50                                    |
| NS grader                                | 66° 36' 15.35" N                        |
| ØV grader                                | 4° 53' 56.34" E                         |
| NS UTM [m]                               | 7388734.05                              |
| ØV UTM [m]                               | 584137.96                               |
| UTM sone                                 | 31                                      |
| NPDID for brønnbanen                     | 8952                                    |

**Brønnhistorie****General**

Well 6604/6-1 was drilled to test the Gullstjerne prospect ca 14 km east of the 6604/5-1 Balderbrå discovery on the Vigrid Syncline in deep waters in the Norwegian Sea. The primary objective was to confirm live hydrocarbons in the Late Cretaceous Springar Formation submarine fan systems.

**Operations and results**

Wildcat well 6604/6-1 was spudded with the semi-submersible installation Scarabeo 8 on 1 December 2019 and drilled to TD at 3640 m in the Late Cretaceous Springar Formation. Operations proceeded without significant problems, although adverse weather led to as much as 22.3 days (45.5%) of the rig time. The well was drilled with seawater and hi-vis pills down to 2200 m, with Innovert NS oil-based mud from 2200 m to 2318 m and with water-based DW/HT mud from 2318 m to TD.

The Springar Formation came in at 3084 m. It is composed of mudstones with two sandstone units Sandstone 2 with top at 3306 m and Sandstone 3 with top at 3452 m. The sands are separated by a ca 65 m thick claystone unit. The Sandstone 2 unit was finely laminated and had poor permeability and only residual gas saturation, but good porosity - up to 30 %. The Sandstone 3 unit consisted of two separate sandstone packages with poor permeability. The upper one was more laminated with porosities up to 22 % and the lower one was less laminated with porosities up to 24 %. A common water gradient was observed from pressure measurements in sandstone units 2 and 3. The well was dry with no shows.

No cores were cut. MDT fluid samples were taken at 3322 m, 3463.5 m, and 3529.4 m. All samplings recovered formation water, mud filtrate and a little gas. The only temperatures available from the well are those from MDT sampling. The temperature from the sampling station at 3529.41 m was 114.55 °C. This was considered to be in equilibrium after having pumped 29 l of fluids and it is the basis for the extrapolated temperature of 119 °C at final TD.

The well was permanently abandoned on 16 January 2020 as a dry well.

**Testing**

No drill stem test was performed.

**Borekaks i Sokkeldirektoratet**

| Borekaksprøve, topp dybde [m] | Borekaksprøve, bunn dybde [m] |
|-------------------------------|-------------------------------|
| 2322.00                       | 3640.00                       |

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

**Litostratigrafi**



| Topp Dyb<br>[mMD RKB] | Litostrat. enhet                 |
|-----------------------|----------------------------------|
| 1161                  | <a href="#">NORDLAND GP</a>      |
| 1161                  | <a href="#">NAUST FM</a>         |
| 1450                  | <a href="#">KAI FM</a>           |
| 1727                  | <a href="#">HORDALAND GP</a>     |
| 1727                  | <a href="#">BRYGGE FM</a>        |
| 1849                  | <a href="#">NO FORMAL NAME</a>   |
| 2350                  | <a href="#">ROGALAND GP</a>      |
| 2350                  | <a href="#">TARE FM</a>          |
| 2485                  | <a href="#">TANG FM</a>          |
| 3084                  | <a href="#">SHETLAND GP</a>      |
| 3084                  | <a href="#">SPRINGAR FM</a>      |
| 3306                  | <a href="#">UNDIFFERENTIATED</a> |
| 3375                  | <a href="#">UNDIFFERENTIATED</a> |
| 3452                  | <a href="#">UNDIFFERENTIATED</a> |
| 3577                  | <a href="#">UNDIFFERENTIATED</a> |

**Logger**

| Type logg                    | Topp dyp<br>for logg [m] | Bunn dyp for<br>logg [m] |
|------------------------------|--------------------------|--------------------------|
| LWD - DIR                    | 1161                     | 1244                     |
| LWD - DIR BG RES DEN NEU     | 3110                     | 3640                     |
| LWD - DIR GR RES             | 1244                     | 2318                     |
| LWD - DIR GR RES SON DEN NEU | 2318                     | 3110                     |
| MDT                          | 3109                     | 3640                     |
| SEISMIC                      | 3109                     | 3640                     |
| XPT RES LITH DEN NEU SGR     | 3109                     | 3640                     |

**Foringsrør og formasjonsstyrketester**

| Type utforing | Utforing<br>diam.<br>[tommer] | Utforing<br>dybde<br>[m] | Brønnbane<br>diam.<br>[tommer] | Brønnbane<br>dyp<br>[m] | LOT/FIT slam<br>eqv.<br>[g/cm3] | Type<br>formasjonstest |
|---------------|-------------------------------|--------------------------|--------------------------------|-------------------------|---------------------------------|------------------------|
| CONDUCTOR     | 30                            | 1243.0                   | 36                             | 1243.0                  | 0.00                            |                        |
| SURF.COND.    | 13 3/8                        | 2312.0                   | 17 1/2                         | 2312.0                  | 1.35                            | LOT                    |
| LINER         | 9 5/8                         | 3109.0                   | 12 1/4                         | 3109.0                  | 1.53                            | LOT                    |
| OPEN HOLE     |                               | 3640.0                   | 8 1/2                          | 3640.0                  | 0.00                            |                        |