



## Generell informasjon

|                                          |                                          |
|------------------------------------------|------------------------------------------|
| Brønnbane navn                           | 8/10-4 S                                 |
| 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                              | NORTH SEA                                |
| Felt                                     | <a href="#">ODA</a>                      |
| Funn                                     | <a href="#">8/10-4 S Oda</a>             |
| Brønn navn                               | 8/10-4                                   |
| Seismisk lokalisering                    | Survey lines CE1001-D- 22A & CE1001-D-19 |
| Utvinningstillatelse                     | <a href="#">405</a>                      |
| Boreoperatør                             | Centrica Resources (Norge) AS            |
| Boretillatelse                           | 1366-L                                   |
| Boreinnretning                           | <a href="#">MÆRSK GUARDIAN</a>           |
| Boredager                                | 74                                       |
| Borestart                                | 15.08.2011                               |
| Boreslutt                                | 27.10.2011                               |
| Frigitt dato                             | 27.10.2013                               |
| Publiseringsdato                         | 27.10.2013                               |
| Opprinnelig formål                       | WILDCAT                                  |
| Gjenåpnet                                | NO                                       |
| Innhold                                  | OIL                                      |
| Funnbrønnbane                            | YES                                      |
| 1. nivå med hydrokarboner, alder         | LATE JURASSIC                            |
| 1. nivå med hydrokarboner, formasjon.    | ULA FM                                   |
| Avstand, boredekk - midlere havflate [m] | 44.0                                     |
| Vanndybde ved midlere havflate [m]       | 66.0                                     |
| Totalt målt dybde (MD) [m RKB]           | 3071.0                                   |
| Totalt vertikalt dybde (TVD) [m RKB]     | 3058.0                                   |
| Maks inklinasjon [°]                     | 11.4                                     |
| Temperatur ved bunn av brønnbanen [°C]   | 128                                      |
| Eldste penetrerte alder                  | LATE PERMIAN                             |
| Eldste penetrerte formasjon              | ZECHSTEIN GP                             |



|                      |                 |
|----------------------|-----------------|
| Geodetisk datum      | ED50            |
| NS grader            | 57° 3' 53.79" N |
| ØV grader            | 3° 2' 43.41" E  |
| NS UTM [m]           | 6324757.70      |
| ØV UTM [m]           | 502752.78       |
| UTM sone             | 31              |
| NPDID for brønnbanen | 6630            |

## Brønnhistorie

### General

Well 8/10-4 S was drilled on the Butch prospect, a salt-induced structure on the Sørvestlandet high, approximately 13 km SE of the Ula Field in the North Sea. The objective of the well was to test the hydrocarbon potential of the Late Jurassic Ula Formation, the main prospective formation in the area.

### Operations and results

Well 8/10-4 S was spudded with the jack-up installation Mærsk Guardian on 15 August 2011 and drilled to TD at 3071 m (3058 m TVD) in the Late Permian Zechstein Group. The well was drilled as an 'S' shaped profile to avoid a potential faulted zone in the shallow sediments, identified during the site survey. A 9 7/8" pilot hole was drilled from 227 m to 1011 m to check for shallow gas. No shallow gas was seen. No significant problem was encountered in the operations. The well was drilled with seawater and hi-vis sweeps down to 1011 m and with oil based mud from 1011 m to TD.

The Ula Formation came in at 2947 m and was filled with oil all through down to its base at 3003 m. No OWC was found, instead the Ula reservoir was penetrated in an oil-down-to setting. Drilling continued through the Skagerrak Formation and was terminated after anhydrite was identified in cuttings returns, indicating that the Zechstein Group had been penetrated. Indications of hydrocarbons were observed only in the Ula Formation, which represents the only reservoir interval in the well.

A total of three cores were taken in the 6" hole from 2928 m to 3028 m with 100% recovery. The third core confirmed the presence of the Skagerrak Formation. RDT wire line samples were taken at 2950 m and at 2973.5 m with oil at both levels.

The well was plugged back and prepared for sidetrack to well 8/10-4 A on 27 October 2011. It is classified as an oil Discovery.

### Testing

No drill stem test was performed.

## Borekaks i Sokkeldirektoratet



|                               |                               |
|-------------------------------|-------------------------------|
| Borekaksprøve, topp dybde [m] | Borekaksprøve, bunn dybde [m] |
| 230.00                        | 3072.00                       |

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

### Borekjerter i Sokkeldirektoratet

| Kjerneprøve nummer | Kjerneprøve - topp dybde | Kjerneprøve - bunn dybde | Kjerneprøve dybde - enhet |
|--------------------|--------------------------|--------------------------|---------------------------|
| 1                  | 2958.0                   | 2985.0                   | [m ]                      |
| 2                  | 2985.0                   | 3003.8                   | [m ]                      |
| 3                  | 3004.0                   | 3027.6                   | [m ]                      |

|                                       |      |
|---------------------------------------|------|
| Total kjerneprøve lengde [m]          | 69.4 |
| Kjerter tilgjengelig for prøvetaking? | YES  |

### Palynologiske preparater i Sokkeldirektoratet

| Prøve dybde | Dybde enhet | Prøve type | Laboratorie |
|-------------|-------------|------------|-------------|
| 2884.0      | [m]         | DC         | PETROSTR    |
| 2890.0      | [m]         | DC         | PETROS      |
| 2896.0      | [m]         | DC         | PETROS      |
| 2904.0      | [m]         | DC         | PETROS      |
| 2910.0      | [m]         | DC         | PETROS      |
| 2916.0      | [m]         | DC         | PETROS      |
| 2925.0      | [m]         | DC         | PETROS      |
| 2931.0      | [m]         | DC         | PETROS      |
| 2937.0      | [m]         | DC         | PETROS      |
| 2943.0      | [m]         | DC         | PETROS      |
| 2949.0      | [m]         | DC         | PETROS      |
| 2955.0      | [m]         | DC         | PETROS      |
| 2958.2      | [m]         | C          | PETROS      |
| 2961.0      | [m]         | DC         | PETROS      |
| 2965.8      | [m]         | C          | PETROS      |
| 2967.0      | [m]         | DC         | PETROS      |
| 2988.8      | [m]         | C          | PETROS      |
| 2990.1      | [m]         | C          | PETROS      |
| 2991.0      | [m]         | DC         | PETROS      |
| 2999.2      | [m]         | C          | PETROS      |



|        |     |    |        |
|--------|-----|----|--------|
| 3000.6 | [m] | C  | PETROS |
| 3002.3 | [m] | C  | PETROS |
| 3004.0 | [m] | DC | PETROS |
| 3004.8 | [m] | C  | PETROS |
| 3005.2 | [m] | C  | PETROS |
| 3008.7 | [m] | C  | PETROS |
| 3009.0 | [m] | DC | PETROS |
| 3009.8 | [m] | C  | PETROS |
| 3012.6 | [m] | C  | PETROS |
| 3015.4 | [m] | C  | PETROS |
| 3017.1 | [m] | C  | PETROS |
| 3017.1 | [m] | C  | PETROS |
| 3018.2 | [m] | C  | PETROS |
| 3019.4 | [m] | C  | PETROS |
| 3023.0 | [m] | C  | PETROS |
| 3027.3 | [m] | C  | PETROS |

**Oljeprøver i Sokkeldirektoratet**

| Test type | Flaske nummer | Topp dyp MD [m] | Bunn dyp MD [m] | Væske type | Test tidspunkt     | Prøver tilgjengelig |
|-----------|---------------|-----------------|-----------------|------------|--------------------|---------------------|
| RFT       |               | 0.00            | 0.00            |            |                    | YES                 |
| RFT       |               | 2973.50         | 2950.00         | OIL        | 21.10.2011 - 15:00 | YES                 |

**Litostratigrafi**

| Topp Dyb [mMD RKB] | Litostrat. enhet             |
|--------------------|------------------------------|
| 110                | <a href="#">NORDLAND GP</a>  |
| 1380               | <a href="#">HORDALAND GP</a> |
| 2258               | <a href="#">ROGALAND GP</a>  |
| 2258               | <a href="#">BALDER FM</a>    |
| 2286               | <a href="#">SELE FM</a>      |
| 2304               | <a href="#">LISTA FM</a>     |
| 2469               | <a href="#">VIDAR FM</a>     |
| 2486               | <a href="#">VÅLE FM</a>      |
| 2493               | <a href="#">SHETLAND GP</a>  |
| 2493               | <a href="#">EKOFISK FM</a>   |



|      |                                 |
|------|---------------------------------|
| 2541 | <a href="#">TOR FM</a>          |
| 2655 | <a href="#">HOD FM</a>          |
| 2732 | <a href="#">CROMER KNOLL GP</a> |
| 2732 | <a href="#">RØDBY FM</a>        |
| 2746 | <a href="#">SOLA FM</a>         |
| 2757 | <a href="#">TUXEN FM</a>        |
| 2763 | <a href="#">ÅSGARD FM</a>       |
| 2887 | <a href="#">TYNE GP</a>         |
| 2887 | <a href="#">MANDAL FM</a>       |
| 2905 | <a href="#">FARSUND FM</a>      |
| 2948 | <a href="#">VESTLAND GP</a>     |
| 2948 | <a href="#">ULA FM</a>          |
| 3004 | <a href="#">SKAGERRAK FM</a>    |
| 3058 | <a href="#">ZECHSTEIN GP</a>    |

## Logger

| Type logg                         | Topp dyp<br>for logg [m] | Bunn dyp for<br>logg [m] |
|-----------------------------------|--------------------------|--------------------------|
| CBL CAST                          | 1750                     | 2450                     |
| GTET DSN SDL ICT IDT WSTT<br>ARCT | 25                       | 3065                     |
| MWD - GR RES DEN SON DIR<br>PWD   | 3028                     | 3071                     |
| MWD - GR RES SON DIR PWD          | 2531                     | 2958                     |
| RDT GR                            | 2919                     | 3002                     |
| VSP                               | 600                      | 3050                     |

## 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                            | 218.6                    | 36                             | 222.0                   | 0.00                            | LOT                    |
| SURF.COND.    | 13 3/8                        | 1001.0                   | 17 1/2                         | 1008.0                  | 0.00                            | LOT                    |
| PILOT HOLE    |                               | 1011.0                   | 9 7/8                          | 1011.0                  | 0.00                            | LOT                    |
| INTERM.       | 9 5/8                         | 2523.0                   | 12 1/4                         | 2531.0                  | 0.00                            | LOT                    |
| LINER         | 7                             | 2896.0                   | 8 1/2                          | 2898.0                  | 0.00                            | LOT                    |
| OPEN HOLE     |                               | 3071.0                   | 6                              | 3071.0                  | 0.00                            | LOT                    |

## Boreslam



| Dybde<br>MD [m] | Egenvekt,<br>slam<br>[g/cm <sup>3</sup> ] | Viskositet,<br>slam<br>[mPa.s] | flytegrense<br>[Pa] | Type slam                  | Dato, måling |
|-----------------|-------------------------------------------|--------------------------------|---------------------|----------------------------|--------------|
| 226             | 1.24                                      | 10.0                           |                     | Kill / displacement<br>mud |              |
| 989             | 1.59                                      | 39.0                           |                     | ENVIROMUL                  |              |
| 1011            | 1.59                                      | 39.0                           |                     | Enviromul                  |              |
| 2022            | 1.44                                      | 29.0                           |                     | ENVIROMUL                  |              |
| 2549            | 1.49                                      | 13.4                           |                     | ENVIROMUL                  |              |
| 2549            | 1.51                                      | 50.0                           |                     | ENVIROMUL                  |              |
| 2549            | 1.44                                      | 45.0                           |                     | ENVIROMUL                  |              |

### Trykkplott

Porertrykksdataene kommer fra logging i brønnen hvis ingen annen kilde er oppgitt. I noen brønner der trykk ikke er logget, er det brukt informasjon fra formasjonstester eller brønnspark. Trykkdataene er rapportert inn til Oljedirektoratet og videre prosessert og kvalitetssikret av IHS Markit.

| Dokument navn                                             | Dokument<br>format | Dokument<br>størrelse [KB] |
|-----------------------------------------------------------|--------------------|----------------------------|
| <a href="#">6630 Formation pressure (Formasjonstrykk)</a> | PDF                | 0.22                       |

