



## Generell informasjon

|                                          |                                   |
|------------------------------------------|-----------------------------------|
| Brønnbane navn                           | 2/7-8                             |
| Type                                     | EXPLORATION                       |
| Formål                                   | WILDCAT                           |
| Status                                   | P&A                               |
| Faktakart i nytt vindu                   | <a href="#">lenke til kart</a>    |
| Hovedområde                              | NORTH SEA                         |
| Felt                                     | <a href="#">ELDFISK</a>           |
| Funn                                     | <a href="#">2/7-8</a>             |
| Brønn navn                               | 2/7-8                             |
| Seismisk lokalisering                    | LINE PGE 217 M SP: 375            |
| Utvinningstillatelse                     | <a href="#">018</a>               |
| Boreoperatør                             | Phillips Petroleum Company Norway |
| Boretillatelse                           | 85-L                              |
| Boreinnretning                           | <a href="#">ZAPATA EXPLORER</a>   |
| Boredager                                | 66                                |
| Borestart                                | 08.06.1973                        |
| Boreslutt                                | 12.08.1973                        |
| Frigitt dato                             | 12.08.1975                        |
| Publiseringsdato                         | 26.10.2009                        |
| Opprinnelig formål                       | WILDCAT                           |
| Gjenåpnet                                | NO                                |
| Innhold                                  | OIL                               |
| Funnbrønnbane                            | YES                               |
| 1. nivå med hydrokarboner, alder         | PALEOCENE                         |
| 1. nivå med hydrokarboner, formasjon.    | EKOFISK FM                        |
| 2. nivå med hydrokarboner, alder         | LATE CRETACEOUS                   |
| 2. nivå med hydrokarboner, formasjon     | TOR FM                            |
| Avstand, boredekk - midlere havflate [m] | 34.0                              |
| Vanndybde ved midlere havflate [m]       | 70.0                              |
| Totalt målt dybde (MD) [m RKB]           | 3318.0                            |
| Temperatur ved bunn av brønnbanen [°C]   | 104                               |
| Eldste penetrerte alder                  | LATE CRETACEOUS                   |
| Eldste penetrerte formasjon              | HOD FM                            |
| Geodetisk datum                          | ED50                              |
| NS grader                                | 56° 23' 8.6" N                    |



|                      |               |
|----------------------|---------------|
| ØV grader            | 3° 19' 6.6" E |
| NS UTM [m]           | 6249195.05    |
| ØV UTM [m]           | 519666.78     |
| UTM sone             | 31            |
| NPDID for brønnbanen | 267           |

## Brønnhistorie

### General

Well 2/7-8 is located In the Feda Graben of the southern North Sea, some 3 km west of the Eldfisk Field. It was drilled on the East Eldfisk Structure, and the main objective was to test the Danian Limestone. Secondary objective was to test the Late Cretaceous Chalk, which could be hydrocarbon bearing if porosity is present.

### Operations and results

Wildcat well 2/7-8 was spudded with the jack-up installation Zapata Explorer on 8 June 1973 and drilled to TD at 3318 m in the Late Cretaceous Hod Formation. The well was drilled with seawater and hi-vis slugs down to 1220 m, and with a lignosulphonate mud (UNI-CAL / Caustic) from 1220 m to TD. According to the mud program the section below 1220 m was drilled with 4% diesel in the mud.

The Danian Limestone, which was expected to be 100 m thick with 38 m of net pay, was found to be much thinner than the other wells on Eldfisk, and was only 9 m thick. It was also less fractured than other wells on Eldfisk, but still yielded commercial quantities of oil and gas, after acidization, over the total interval on the third of three drill stem tests. This test included the top 23 m of the Late Cretaceous (Maastrichtian). The remaining tests below this interval, also in the Maastrichtian, did not produce oil or gas in commercial amounts. The truncated Danian, the lack of fracturing and secondarily porosity, and the fact that the produced oil was heavier than the oils on the main Eldfisk structure to the west, suggested that East Eldfisk structure is not in communication with the main Eldfisk structure.

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

The well was permanently abandoned on 12 August 1973 as an oil discovery.

### Testing

Four drill stem tests were performed.

DST 1 and 2 tested the interval 3039 - 3051 m in the Maastrichtian Tor Formation. DST 1 gave no production. DST 2, after acidization, produced 1 litre fluid (95% water and 5% oil) pr hour.

DST 3 tested the interval 3014 - 3033 m in the Tor Formation. It produced 13.5 Sm<sup>3</sup> oil and 2407 Sm<sup>3</sup> gas/day. The corresponding GOR is 178 Sm<sup>3</sup>/Sm<sup>3</sup>, and the measured oil gravity was 14 deg API.

DST 4 tested the interval 2969 - 3001 m in the Danian Ekofisk Formation and the upper Tor Formation. It produced 539 Sm<sup>3</sup> oil and 53802 SM<sup>3</sup> gas/day. The corresponding GOR is 100 Sm<sup>3</sup>/Sm<sup>3</sup>, and the measured oil gravity was 33 deg API.



### Borekaks i Sokkeldirektoratet

| Borekaksprøve, topp dybde [m] | Borekaksprøve, bunn dybde [m] |
|-------------------------------|-------------------------------|
| 1237.49                       | 3318.36                       |

|                                        |    |
|----------------------------------------|----|
| Borekaks tilgjengelig for prøvetaking? | NO |
|----------------------------------------|----|

### Litostratigrafi

| Topp Dyb<br>[mMD RKB] | Litostrat. enhet             |
|-----------------------|------------------------------|
| 104                   | <a href="#">NORDLAND GP</a>  |
| 1850                  | <a href="#">HORDALAND GP</a> |
| 2874                  | <a href="#">ROGALAND GP</a>  |
| 2874                  | <a href="#">BALDER FM</a>    |
| 2886                  | <a href="#">SELE FM</a>      |
| 2920                  | <a href="#">LISTA FM</a>     |
| 2963                  | <a href="#">VÅLE FM</a>      |
| 2969                  | <a href="#">SHETLAND GP</a>  |
| 2969                  | <a href="#">EKOFISK FM</a>   |
| 2978                  | <a href="#">TOR FM</a>       |
| 3028                  | <a href="#">HOD FM</a>       |

### Dokumenter - eldre Sokkeldirektoratets WDSS rapporter og andre relaterte dokumenter

| Dokument navn                                   | Dokument format | Dokument størrelse [KB] |
|-------------------------------------------------|-----------------|-------------------------|
| <a href="#">267_01_WDSS_General_Information</a> | pdf             | 0.25                    |

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

| Dokument navn                                  | Dokument format | Dokument størrelse [KB] |
|------------------------------------------------|-----------------|-------------------------|
| <a href="#">267_01_2_7_8_Completion_Log</a>    | pdf             | 1.35                    |
| <a href="#">267_01_2_7_8_Completion_report</a> | pdf             | 5.04                    |

### Dokumenter - Sokkeldirektoratets publikasjoner





| Dokument navn                                                                                    | Dokument format | Dokument størrelse [KB] |
|--------------------------------------------------------------------------------------------------|-----------------|-------------------------|
| <a href="#">267_01_NPD_Paper_No.30_Geology_of_the_Eldfisk_Area_Well_2_7_8</a>                    | pdf             | 72.88                   |
| <a href="#">267_02_NPD_Paper_No.30_Early_Tertiary-Late_Jurassic_Correlation_chart_Well_2_7_8</a> | pdf             | 0.56                    |

Borestrengtester (DST)

| Test nummer | Fra dybde MD [m] | Til dybde MD [m] | Reduksjonsventil størrelse [mm] |
|-------------|------------------|------------------|---------------------------------|
| 1.0         | 3039             | 3051             | 0.0                             |
| 2.0         | 3039             | 3051             | 0.0                             |
| 3.0         | 3014             | 3033             | 0.0                             |
| 4.0         | 2969             | 3001             | 0.0                             |

| Test nummer | Endelig avstengningstrykk [MPa] | Endelig strømningstrykk [MPa] | Bunnhullstrykk [MPa] | Borehullstemperatur [°C] |
|-------------|---------------------------------|-------------------------------|----------------------|--------------------------|
| 1.0         |                                 |                               |                      |                          |
| 2.0         |                                 |                               |                      |                          |
| 3.0         | 40.000                          | 27.000                        |                      |                          |
| 4.0         | 40.000                          | 37.000                        |                      |                          |

| Test nummer | Olje produksjon [Sm3/dag] | Gass produksjon [Sm3/dag] | Oljetetthet [g/cm3] | Gasstyingde rel. luft | GOR [m3/m3] |
|-------------|---------------------------|---------------------------|---------------------|-----------------------|-------------|
| 1.0         |                           |                           |                     |                       |             |
| 2.0         |                           |                           |                     |                       |             |
| 3.0         | 13                        | 2406                      | 0.970               |                       |             |
| 4.0         | 539                       | 53789                     | 0.860               |                       |             |

Logger

| Type logg   | Topp dyp for logg [m] | Bunn dyp for logg [m] |
|-------------|-----------------------|-----------------------|
| 4ARM DIPLOG | 8700                  | 10886                 |
| BHC AC GR   | 230                   | 3995                  |
| BHC AC GR   | 4004                  | 8044                  |
| BHC AC GR   | 8033                  | 10877                 |
| CBL         | 230                   | 585                   |





|          |      |       |
|----------|------|-------|
| CBL      | 300  | 3940  |
| CBL      | 5400 | 7700  |
| CBL      | 7720 | 10814 |
| CNL      | 9300 | 10886 |
| FDC      | 9300 | 10886 |
| IEL      | 1600 | 10887 |
| ML       | 9300 | 10886 |
| VELOCITY | 230  | 10887 |

Foringsrør og formasjonsstyrketester

| Type utforing | Utforing diam.<br>[tommer] | Utforing dybde<br>[m] | Brønnbane diam.<br>[tommer] | Brønnbane dyp<br>[m] | LOT/FIT slam<br>eqv.<br>[g/cm3] | Type formasjonstest |
|---------------|----------------------------|-----------------------|-----------------------------|----------------------|---------------------------------|---------------------|
| CONDUCTOR     | 30                         | 154.0                 | 36                          | 155.0                | 0.00                            | LOT                 |
| SURF.COND.    | 20                         | 488.0                 | 26                          | 497.0                | 0.00                            | LOT                 |
| INTERM.       | 13 3/8                     | 1220.0                | 17 1/2                      | 1229.0               | 0.00                            | LOT                 |
| INTERM.       | 9 5/8                      | 2449.0                | 12 1/4                      | 2457.0               | 0.00                            | LOT                 |
| LINER         | 7                          | 3311.0                | 8 1/2                       | 3318.0               | 0.00                            | LOT                 |

Boreslam

| Dybde MD [m] | Egenvekt, slam<br>[g/cm3] | Viskositet, slam<br>[mPa.s] | flytegrense [Pa] | Type slam  | Dato, måling |
|--------------|---------------------------|-----------------------------|------------------|------------|--------------|
| 174          | 1.10                      |                             |                  | waterbased |              |
| 487          | 1.07                      | 55.0                        |                  | waterbased |              |
| 548          | 1.37                      | 50.0                        |                  | waterbased |              |
| 762          | 1.43                      | 55.0                        |                  | waterbased |              |
| 1066         | 1.49                      | 55.0                        |                  | waterbased |              |
| 1219         | 1.37                      | 55.0                        |                  | waterbased |              |
| 2900         | 1.72                      | 51.0                        |                  | waterbased |              |
| 3318         | 1.71                      | 51.0                        |                  | waterbased |              |