

**General information**

|                                    |                             |
|------------------------------------|-----------------------------|
| Wellbore name                      | 7/12-3 A                    |
| Type                               | EXPLORATION                 |
| Purpose                            | APPRAISAL                   |
| Status                             | P&A                         |
| Factmaps in new window             | <a href="#">link to map</a> |
| Main area                          | NORTH SEA                   |
| Field                              | <a href="#">ULA</a>         |
| Discovery                          | <a href="#">7/12-2 Ula</a>  |
| Well name                          | 7/12-3                      |
| Seismic location                   |                             |
| Production licence                 | <a href="#">019</a>         |
| Drilling operator                  | BP Norway Limited U.A.      |
| Drill permit                       | 191-L                       |
| Drilling facility                  | <a href="#">NORSKALD</a>    |
| Drilling days                      | 95                          |
| Entered date                       | 04.06.1977                  |
| Completed date                     | 06.09.1977                  |
| Release date                       | 06.09.1979                  |
| Publication date                   | 13.08.2015                  |
| Purpose - planned                  | APPRAISAL                   |
| Reentry                            | NO                          |
| Content                            | OIL SHOWS                   |
| Discovery wellbore                 | NO                          |
| Kelly bushing elevation [m]        | 25.0                        |
| Water depth [m]                    | 71.0                        |
| Total depth (MD) [m RKB]           | 4191.0                      |
| Final vertical depth (TVD) [m RKB] | 4011.0                      |
| Bottom hole temperature [°C]       | 163                         |
| Oldest penetrated age              | LATE PERMIAN                |
| Oldest penetrated formation        | ZECHSTEIN GP                |
| Geodetic datum                     | ED50                        |
| NS degrees                         | 57° 6' 24.54" N             |
| EW degrees                         | 2° 48' 41.56" E             |
| NS UTM [m]                         | 6329434.14                  |
| EW UTM [m]                         | 488583.99                   |
| UTM zone                           | 31                          |
| NPDID wellbore                     | 297                         |



## Wellbore history

### General

Well 7/12-3 A is a geological sidetrack to 7/12-3 on the western flank of the 7/12-2 Ula discovery in the North Sea. The primary objective was to establish the oil-water level in the Ula structure.

The well is type well for the Mandal Formation.

### Operations and results

On 4 June 1977 appraisal well 7/12-3 A was kicked off from below the 13 3/8" casing shoe in well 7/12-3 at a depth of 1720. The semi-submersible installation Norskald drilled the well to TD at 4191 m (4011 m TVD) in the Permian Zechstein Group.

Well 7/12-3A penetrated the reservoir at 3638.5 (3506.8 m TVD). The cores showed oil staining, cut and fluorescence. Wire line logs and testing showed this to be immovable oil, and indicated an oil water transition zone to a depth of 3693.5. (3555.3 m TVD). One hundred and eighty-nine meters of Ula Formation reservoir were encountered representing a true thickness of 168.9 m, and a net to gross ratio of 0.83 assuming a 10% porosity cut off on the computer-processed log.

Seven full hole cores were cut from 3642.0 to 3730.0 m. RFT fluid samples were taken at 3675.5 m (salt water and mud filtrate) and 3688.5 m (salt water with traces of gas and oil/oil-water emulsion).

The well was permanently abandoned on 6 September 1977 as a dry well with shows.

### Testing

DST 1 tested the interval 3771.0 to 3715.5m. The test flowed 192 m3 saline formation water /day through a 32/64 choke. The DST temperature was 146.7 °C.

DST 2 teste the interval 3680.0 to 3669.5 m. The test flowed 509 m3 saline formation water with trace oil /day through a 32/64 choke. The DST temperature was 145.6 °C.

## Cuttings at the Norwegian Offshore Directorate

| Cutting sample, top depth [m] | Cutting samples, bottom depth [m] |
|-------------------------------|-----------------------------------|
| 1730.00                       | 4114.00                           |

|                                  |    |
|----------------------------------|----|
| Cuttings available for sampling? | NO |
|----------------------------------|----|

## Cores at the Norwegian Offshore Directorate

| Core sample number | Core sample - top depth | Core sample - bottom depth | Core sample depth - uom |
|--------------------|-------------------------|----------------------------|-------------------------|
| 1                  | 3642.5                  | 3660.0                     | [m ]                    |



|   |        |        |      |
|---|--------|--------|------|
| 2 | 3660.0 | 3678.3 | [m ] |
| 3 | 3678.3 | 3692.2 | [m ] |
| 4 | 3692.2 | 3697.6 | [m ] |
| 5 | 3697.6 | 3698.0 | [m ] |
| 6 | 3700.0 | 3718.0 | [m ] |
| 7 | 3718.0 | 3730.0 | [m ] |

|                               |      |
|-------------------------------|------|
| Total core sample length [m]  | 85.5 |
| Cores available for sampling? | YES  |

### Core photos



3642-3647m



3647-3652m



3652-3657m



3657-3660m



3660-3665m



3665-3670m



3670-3675m



3675-3678m



3678-3683m



3683-3688m



3688-3692m



3697-3698m



3697-3698m



3700-3705m



3705-3710m



3710-3713m



3710-3715m



3715-3718m



3718-3723m



3723-3728m



3728-3730m

### Palynological slides at the Norwegian Offshore Directorate

| Sample depth | Depth unit | Sample type | Laboratory |
|--------------|------------|-------------|------------|
| 3451.0       | [m]        | DC          | OD         |
| 3460.0       | [m]        | DC          | OD         |
| 3469.0       | [m]        | DC          | OD         |
| 3481.0       | [m]        | DC          | OD         |
| 3490.0       | [m]        | DC          | OD         |
| 3499.0       | [m]        | DC          | OD         |
| 3505.0       | [m]        | DC          | OD         |
| 3511.0       | [m]        | DC          | OD         |
| 3514.0       | [m]        | DC          | OD         |
| 3520.0       | [m]        | DC          | OD         |
| 3526.0       | [m]        | DC          | OD         |
| 3529.0       | [m]        | DC          | OD         |
| 3535.0       | [m]        | DC          | OD         |
| 3541.0       | [m]        | DC          | OD         |
| 3544.0       | [m]        | DC          | OD         |
| 3550.0       | [m]        | DC          | OD         |
| 3556.0       | [m]        | DC          | OD         |
| 3559.0       | [m]        | DC          | OD         |
| 3571.0       | [m]        | DC          | OD         |
| 3580.0       | [m]        | DC          | OD         |
| 3589.0       | [m]        | DC          | OD         |
| 3601.0       | [m]        | DC          | OD         |

### Lithostratigraphy

| Top depth<br>[mMD RKB] | Lithostrat. unit             |
|------------------------|------------------------------|
| 96                     | <a href="#">NORDLAND GP</a>  |
| 1565                   | <a href="#">HORDALAND GP</a> |
| 2655                   | <a href="#">ROGALAND GP</a>  |



|      |                                 |
|------|---------------------------------|
| 2655 | <a href="#">BALDER FM</a>       |
| 2692 | <a href="#">SELE FM</a>         |
| 2731 | <a href="#">LISTA FM</a>        |
| 2762 | <a href="#">MAUREEN FM</a>      |
| 2826 | <a href="#">SHETLAND GP</a>     |
| 2826 | <a href="#">EKOFISK FM</a>      |
| 2947 | <a href="#">TOR FM</a>          |
| 3195 | <a href="#">HOD FM</a>          |
| 3261 | <a href="#">CROMER KNOLL GP</a> |
| 3261 | <a href="#">RØDBY FM</a>        |
| 3514 | <a href="#">TYNE GP</a>         |
| 3514 | <a href="#">MANDAL FM</a>       |
| 3560 | <a href="#">FARSUND FM</a>      |
| 3638 | <a href="#">VESTLAND GP</a>     |
| 3638 | <a href="#">ULA FM</a>          |
| 3827 | <a href="#">BRYNE FM</a>        |
| 3929 | <a href="#">SKAGERRAK FM</a>    |
| 4095 | <a href="#">ZECHSTEIN GP</a>    |

**Geochemical information**

| Document name             | Document format | Document size [MB] |
|---------------------------|-----------------|--------------------|
| <a href="#">297_GCH_1</a> | pdf             | 0.27               |

**Documents - reported by the production licence (period for duty of secrecy expired)**

| Document name                                             | Document format | Document size [MB] |
|-----------------------------------------------------------|-----------------|--------------------|
| <a href="#">297_7_12_3_A_COMPLETION_LOG</a>               | pdf             | 2.32               |
| <a href="#">297_7_12_3_A_COMPLETION_REPORT</a>            | pdf             | 7.06               |
| <a href="#">297_7_12_3_A_COMPLETION_REPORT_GEOLOGICAL</a> | pdf             | 13.26              |

**Drill stem tests (DST)**

| Test number | From depth MD [m] | To depth MD [m] | Choke size [mm] |
|-------------|-------------------|-----------------|-----------------|
| 1.0         | 3771              | 3716            | 0.0             |
| 2.0         | 3673              | 3662            | 0.0             |





| Test number | Final shut-in pressure [MPa] | Final flow pressure [MPa] | Bottom hole pressure [MPa] | Downhole temperature [°C] |
|-------------|------------------------------|---------------------------|----------------------------|---------------------------|
| 1.0         |                              |                           |                            |                           |
| 2.0         |                              |                           |                            |                           |

| Test number | Oil [Sm3/day] | Gas [Sm3/day] | Oil density [g/cm3] | Gas grav. rel.air | GOR [m3/m3] |
|-------------|---------------|---------------|---------------------|-------------------|-------------|
| 1.0         |               |               |                     |                   |             |
| 2.0         |               |               |                     |                   |             |

**Logs**

| Log type          | Log top depth [m] | Log bottom depth [m] |
|-------------------|-------------------|----------------------|
| CBL               | 1600              | 2500                 |
| CBL               | 1600              | 2500                 |
| CBL VDL GR CCL    | 3395              | 4105                 |
| CST               | 3260              | 3585                 |
| CST               | 3605              | 4125                 |
| DLL RXO GR SP CAL | 3599              | 3827                 |
| FDC CNL GR        | 3773              | 4130                 |
| FDC CNL GR CAL    | 3599              | 3827                 |
| ISF BHC GR SP     | 1681              | 3586                 |
| ISF BHC GR SP     | 3599              | 4016                 |
| ISF BHC GR SP     | 3599              | 3825                 |
| ISF BHC GR SP     | 3766              | 4188                 |
| RFT               | 3626              | 4080                 |
| RFT               | 3650              | 3897                 |
| RFT               | 3675              | 0                    |
| RFT               | 3688              | 0                    |
| TEMP              | 1650              | 1979                 |
| WST               | 1720              | 4188                 |

**Casing and leak-off tests**



| Casing type | Casing diam.<br>[inch] | Casing depth<br>[m] | Hole diam.<br>[inch] | Hole depth<br>[m] | LOT/FIT mud<br>eqv.<br>[g/cm3] | Formation test<br>type |
|-------------|------------------------|---------------------|----------------------|-------------------|--------------------------------|------------------------|
| CONDUCTOR   | 30                     | 169.0               | 36                   | 174.0             | 0.00                           |                        |
| SURF.COND.  | 20                     | 466.0               | 26                   | 470.0             | 0.00                           |                        |
| INTERM.     | 13 3/8                 | 1679.0              | 17 1/2               | 1686.0            | 0.00                           |                        |
| INTERM.     | 9 5/8                  | 3601.0              | 12 1/2               | 3612.0            | 0.00                           |                        |
| OPEN HOLE   |                        | 4190.0              | 8 1/2                | 4190.0            | 0.00                           |                        |

**Drilling mud**

| Depth<br>MD [m] | Mud<br>weight<br>[g/cm3] | Visc.<br>[mPa.s] | Yield point<br>[Pa] | Mud type   | Date<br>measured |
|-----------------|--------------------------|------------------|---------------------|------------|------------------|
| 1720            | 1.45                     |                  |                     | waterbased |                  |
| 2048            | 1.46                     |                  |                     | waterbased |                  |
| 2838            | 1.45                     |                  |                     | waterbased |                  |
| 3346            | 1.45                     |                  |                     | waterbased |                  |
| 3612            | 1.46                     |                  |                     | waterbased |                  |

**Pressure plots**

The pore pressure data is sourced from well logs if no other source is specified. In some wells where pore pressure logs do not exist, information from Drill stem tests and kicks have been used. The data has been reported to the NPD, and further processed and quality controlled by IHS Markit.

| Document name                                            | Document<br>format | Document size<br>[MB] |
|----------------------------------------------------------|--------------------|-----------------------|
| <a href="#">297 Formation pressure (Formasjonstrykk)</a> | pdf                | 0.22                  |



