

**General information**

|                                    |                                       |
|------------------------------------|---------------------------------------|
| Wellbore name                      | 16/3-U-1 A                            |
| Type                               | OTHER                                 |
| Purpose                            | APPRAISAL                             |
| Status                             | P&A                                   |
| Multilateral                       | NO                                    |
| Main area                          | NORTH SEA                             |
| Field                              | <a href="#">JOHAN SVERDRUP</a>        |
| Discovery                          | <a href="#">16/2-6 Johan Sverdrup</a> |
| Well name                          | 16/3-U-1                              |
| Production licence                 | <a href="#">501</a>                   |
| Drilling operator                  | Statoil Petroleum AS                  |
| Drill permit                       | 779-G                                 |
| Drilling facility                  | DEEPSEA ATLANTIC                      |
| Drilling days                      | 16                                    |
| Entered date                       | 24.12.2016                            |
| Completed date                     | 10.01.2017                            |
| Release date                       | 10.01.2019                            |
| Plugged and abandon date           | 16.01.2017                            |
| Plugged date                       | 09.01.2017                            |
| Publication date                   | 10.01.2019                            |
| Purpose - planned                  | PILOT                                 |
| Content                            | DRY                                   |
| Discovery wellbore                 | NO                                    |
| Kelly bushing elevation [m]        | 30.0                                  |
| Water depth [m]                    | 118.0                                 |
| Total depth (MD) [m RKB]           | 2882.0                                |
| Final vertical depth (TVD) [m RKB] | 1965.0                                |
| Maximum inclination [°]            | 85.5                                  |
| Oldest penetrated age              | PRE-DEVONIAN                          |
| Oldest penetrated formation        | BASEMENT                              |
| Geodetic datum                     | ED50                                  |
| NS degrees                         | 58° 46' 6.69" N                       |
| EW degrees                         | 2° 47' 1.87" E                        |
| NS UTM [m]                         | 6514447.47                            |
| EW UTM [m]                         | 487497.99                             |
| UTM zone                           | 31                                    |
| NPDID wellbore                     | 8077                                  |



## Wellbore history

### General

Well 16/3-U-1 A is a geological and geo-mechanical side-track to 16/3-U-1 on the south-eastern end of the Johan Sverdrup Field on the Utsira High in the North Sea. The reservoir in this part of the field is below seismic resolution. The primary objective of the primary well and side-track was to investigate sand presence, thickness and quality. Secondary, to investigate horizontal well drilling and high angle hole time-stability in the Draupne shales.

### Operations and results

Wildcat well 16/3-U-1 A was kicked off below the 13 3/8" casing at 1135 m in the primary well on 24 December 2016. It was drilled with the semi-submersible installation Deepsea Atlantic, down-dip towards the south-east to TD at 2882 m (1965 m TVD) in Basement rock. Operations proceeded without significant problems. The well was drilled with Carbosea oil-based mud from kick-off to TD.

Top Draupne Formation was penetrated at 2578 m (1939 m TVD), while the Intra Draupne Formation sandstone was encountered at 2763 m (1955 m TVD), and Basement at 2861 m (1963 m TVD). The Draupne sandstone had abundant cementations and was water-filled. The hole was re-entered as planned after 48 hours from encountered TD, with liner running parameters, in order to simulate a liner running job combined with time exposure of the Draupne shale. The BHA was not able to pass restrictions at the top of the Draupne shale. It was decided to re-enter with a less stiff BHA. However, a fire broke out in a hose and led to about a week delay in operations, the well had to be abandoned, and a side-track, 16/3-U-1 B, was prepared.

There are no oil show recordings from this well bore.

No cores were cut. No fluid sample was taken.

The well was plugged back for side-tracking on 10 January 2017.

### Testing

No drill stem test was performed.

## Cuttings at the Norwegian Offshore Directorate

| Cutting sample, top depth [m] | Cutting samples, bottom depth [m] |
|-------------------------------|-----------------------------------|
| 1140.00                       | 1960.00                           |

|                                  |     |
|----------------------------------|-----|
| Cuttings available for sampling? | YES |
|----------------------------------|-----|



**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   | 36                     | 197.6               | 42                   | 205.0             | 0.00                           |                        |
| INTERM.     | 13 3/8                 | 1119.4              | 17 1/2               | 1127.0            | 1.42                           | FIT                    |
| LINER       | 9 5/8                  | 1989.0              | 12 1/4               | 1992.0            | 1.50                           | FIT                    |
| OPEN HOLE   |                        | 2882.0              | 8 1/2                | 2882.0            | 0.00                           |                        |

**Logs**

| Log type                          | Log top<br>depth [m] | Log bottom<br>depth [m] |
|-----------------------------------|----------------------|-------------------------|
| MWD - ASS ONTRAK                  | 1135                 | 1992                    |
| MWD - ASS ZONETRAK                | 1992                 | 2882                    |
| MWD - G-COPILOT AZT VISITR<br>ORD | 1992                 | 2882                    |

**Lithostratigraphy**

| Top depth<br>[mMD RKB] | Lithostrat. unit                |
|------------------------|---------------------------------|
| 148                    | <a href="#">NORDLAND GP</a>     |
| 773                    | <a href="#">UTSIRA FM</a>       |
| 858                    | <a href="#">HORDALAND GP</a>    |
| 858                    | <a href="#">SKADE FM</a>        |
| 1307                   | <a href="#">ROGALAND GP</a>     |
| 1307                   | <a href="#">BALDER FM</a>       |
| 1345                   | <a href="#">SELE FM</a>         |
| 1361                   | <a href="#">LISTA FM</a>        |
| 1394                   | <a href="#">VÅLE FM</a>         |
| 1433                   | <a href="#">SHETLAND GP</a>     |
| 1433                   | <a href="#">EKOFISK FM</a>      |
| 1454                   | <a href="#">TOR FM</a>          |
| 1557                   | <a href="#">HOD FM</a>          |
| 1786                   | <a href="#">BLODØKS FM</a>      |
| 1901                   | <a href="#">SVARTE FM</a>       |
| 1971                   | <a href="#">CROMER KNOLL GP</a> |
| 1971                   | <a href="#">RØDBY FM</a>        |
| 2259                   | <a href="#">SOLA FM</a>         |
| 2338                   | <a href="#">ÅSGARD FM</a>       |



|      |                                     |
|------|-------------------------------------|
| 2578 | <a href="#">VIKING GP</a>           |
| 2578 | <a href="#">DRAUPNE FM</a>          |
| 2763 | <a href="#">INTRA DRAUPNE FM SS</a> |
| 2861 | <a href="#">BASEMENT</a>            |

**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 |
|-----------------|--------------------------|------------------|---------------------|----------|------------------|
| 1130            | 1.33                     | 25.0             |                     | CARBOSEA |                  |
| 1350            | 1.34                     | 25.0             |                     | CARBOSEA |                  |
| 1729            | 1.33                     | 24.0             |                     | CARBOSEA |                  |
| 1959            | 1.34                     | 26.0             |                     | CARBOSEA |                  |
| 1986            | 1.33                     | 26.0             |                     | CARBOSEA |                  |
| 1992            | 1.34                     | 24.0             |                     | CARBOSEA |                  |
| 2065            | 1.33                     | 30.0             |                     | CARBOSEA |                  |
| 2152            | 1.34                     | 26.0             |                     | CARBOSEA |                  |
| 2196            | 1.33                     | 26.0             |                     | CARBOSEA |                  |