

**General information**

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| Wellbore name                      | 6407/2-5 S                                |
| Type                               | EXPLORATION                               |
| Purpose                            | WILDCAT                                   |
| Status                             | P&A                                       |
| Press release                      | <a href="#">link to press release</a>     |
| Factmaps in new window             | <a href="#">link to map</a>               |
| Main area                          | NORWEGIAN SEA                             |
| Field                              | <a href="#">HALTEN ØST</a>                |
| Discovery                          | <a href="#">6407/2-5 S (Nona)</a>         |
| Well name                          | 6407/2-5                                  |
| Seismic location                   | 3D Survey:ST04m8.inline 2474 & xline 3163 |
| Production licence                 | <a href="#">074</a>                       |
| Drilling operator                  | StatoilHydro Petroleum AS                 |
| Drill permit                       | 1258-L                                    |
| Drilling facility                  | <a href="#">OCEAN VANGUARD</a>            |
| Drilling days                      | 39                                        |
| Entered date                       | 26.07.2009                                |
| Completed date                     | 02.09.2009                                |
| Release date                       | 02.09.2011                                |
| Publication date                   | 02.09.2011                                |
| Purpose - planned                  | WILDCAT                                   |
| Reentry                            | NO                                        |
| Content                            | OIL/GAS                                   |
| Discovery wellbore                 | YES                                       |
| 1st level with HC, age             | MIDDLE JURASSIC                           |
| 1st level with HC, formation       | GARN FM                                   |
| 2nd level with HC, age             | MIDDLE JURASSIC                           |
| 2nd level with HC, formation       | ILE FM                                    |
| Kelly bushing elevation [m]        | 22.0                                      |
| Water depth [m]                    | 250.0                                     |
| Total depth (MD) [m RKB]           | 3408.0                                    |
| Final vertical depth (TVD) [m RKB] | 3311.0                                    |
| Maximum inclination [°]            | 31.5                                      |
| Bottom hole temperature [°C]       | 116                                       |
| Oldest penetrated age              | EARLY JURASSIC                            |
| Oldest penetrated formation        | ÅRE FM                                    |
| Geodetic datum                     | ED50                                      |



|                |                  |
|----------------|------------------|
| NS degrees     | 64° 50' 55.69" N |
| EW degrees     | 7° 38' 5.7" E    |
| NS UTM [m]     | 7192481.71       |
| EW UTM [m]     | 435264.21        |
| UTM zone       | 32               |
| NPDID wellbore | 6151             |

## Wellbore history

### General

The 6407/2-5 S Nona well was drilled within the Bremstein Monocline on the Halten Terrace, 10 Km to the south of the Midgard gas/condensate field and 15 Km to the north of the Mikkel gas/condensate field. The objective was to prove hydrocarbon bearing sands in the Middle Jurassic Garn and Ile Formations in the Nona prospect. The location was chosen in order to test several plays and seismic amplitude anomalies in the Ile Formation, and to avoid shallow gas anomalies. A secondary objective was to test the hydrocarbon potential in the Ror, Tilje and Åre formations.

### Operations and results

A pilot hole, 6407/2-U-1, was drilled prior to the main well to evaluate shallow gas.

Wildcat well 6407/2-5 S was spudded with the semi-submersible installation Ocean Vanguard on 26 July 2009 and drilled to TD at 3408 m (3311 m TVD) in the Early Jurassic Åre Formation. The well was drilled vertically down to the 12 1/4" hole section and directionally drilled from the 12 1/4" section to hit the geological target at a 27 deg angle, holding this inclination to TD of the well. No shallow gas observed. The well was drilled with sea water and hi-vis sweeps down to 1321 m and with Performadril mud with 3-5% glycol from 1321 m to TD.

The lithology down to top reservoir was dominantly mudstones with no reports of any shows. Top of the primary target reservoir sands, top Garn Formation, was encountered at 2750.5 m, 31 m deep to prognosis. Hydrocarbons were encountered in a 39 m gas column from top reservoir in Garn Formation down to the deepest sand in the Not Formation. The Ile Formation was oil filled with a 34 m oil column from the shallowest sand down to the OWC at 2869 m (2829.8 m TVD), which is clearly identified from wire line logs, pressure gradients, and core oil shows. The reservoir contains residual oil from the OWC and down to 2882.2 m (2840.1 m TVD). Pressure measurements indicated pressure depletion from the Mikkel and/or Midgard fields and possibly non-communication between Garn and Ile. The sandstone intervals in the Ror, Tilje, and Åre Formations were all water bearing without shows.

Two cores were cut in the intervals 2751 - 2778 m in the Garn formation and 2833 - 2887.5 m in the Ile formation. Good quality samples were taken with the MDT Single Probe equipment. Gas samples were collected in the Garn Formation at 2756.5 m, oil in the Ile Formation at 2844.9 m, and water in the Ile Formation at 2897.7 m.

The well was permanently abandoned on 2 September 2009 as an oil and gas discovery.

### Testing

No drill stem test was performed.

**Cuttings at the Norwegian Offshore Directorate**

| Cutting sample, top depth [m] | Cutting samples, bottom depth [m] |
|-------------------------------|-----------------------------------|
| 1330.00                       | 3408.00                           |

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

**Cores at the Norwegian Offshore Directorate**

| Core sample number | Core sample - top depth | Core sample - bottom depth | Core sample depth - uom |
|--------------------|-------------------------|----------------------------|-------------------------|
| 1                  | 2751.0                  | 2778.5                     | [m ]                    |
| 2                  | 2833.0                  | 2887.7                     | [m ]                    |

|                               |      |
|-------------------------------|------|
| Total core sample length [m]  | 82.2 |
| Cores available for sampling? | YES  |

**Lithostratigraphy**

| Top depth [mMD RKB] | Lithostrat. unit                |
|---------------------|---------------------------------|
| 272                 | <a href="#">NORDLAND GP</a>     |
| 515                 | <a href="#">NAUST FM</a>        |
| 1305                | <a href="#">KAI FM</a>          |
| 1379                | <a href="#">HORDALAND GP</a>    |
| 1379                | <a href="#">BRYGGE FM</a>       |
| 2010                | <a href="#">ROGALAND GP</a>     |
| 2010                | <a href="#">TARE FM</a>         |
| 2071                | <a href="#">TANG FM</a>         |
| 2150                | <a href="#">SHETLAND GP</a>     |
| 2150                | <a href="#">SPRINGAR FM</a>     |
| 2198                | <a href="#">NISE FM</a>         |
| 2396                | <a href="#">KVITNOS FM</a>      |
| 2585                | <a href="#">CROMER KNOLL GP</a> |
| 2585                | <a href="#">LANGE FM</a>        |
| 2719                | <a href="#">LYR FM</a>          |
| 2733                | <a href="#">VIKING GP</a>       |
| 2733                | <a href="#">SPEKK FM</a>        |
| 2745                | <a href="#">MELKE FM</a>        |



|      |                           |
|------|---------------------------|
| 2750 | <a href="#">FANGST GP</a> |
| 2750 | <a href="#">GARN FM</a>   |
| 2783 | <a href="#">NOT FM</a>    |
| 2828 | <a href="#">ILE FM</a>    |
| 2926 | <a href="#">BÅT GP</a>    |
| 2926 | <a href="#">ROR FM</a>    |
| 3096 | <a href="#">TILJE FM</a>  |
| 3311 | <a href="#">ÅRE FM</a>    |

**Logs**

| Log type                         | Log top depth [m] | Log bottom depth [m] |
|----------------------------------|-------------------|----------------------|
| MDT PRESS                        | 2650              | 3220                 |
| MDT SAMPLE                       | 2845              | 2845                 |
| MDT SAMPPLE-SCANN                | 2756              | 2897                 |
| MSIP PPC                         | 2300              | 3408                 |
| MWD LWD - ARCVRES6 TELSCOPE GVR6 | 2651              | 3408                 |
| MWD LWD - ARCVRES8 PP825         | 272               | 624                  |
| MWD LWD - ARCVRES8 PP825 SONVIS  | 1318              | 2651                 |
| MWD LWD - ARCVRES9 PP900         | 324               | 1318                 |
| MWD LWD - PP900                  | 272               | 324                  |
| PEX HRLA ECS                     | 2650              | 3408                 |
| VSP                              | 206               | 3408                 |

**Casing and leak-off tests**

| Casing type | Casing diam. [inch] | Casing depth [m] | Hole diam. [inch] | Hole depth [m] | LOT/FIT mud eqv. [g/cm3] | Formation test type |
|-------------|---------------------|------------------|-------------------|----------------|--------------------------|---------------------|
| CONDUCTOR   | 30                  | 319.0            | 36                | 624.0          | 0.00                     | LOT                 |
| SURF.COND.  | 13 3/8              | 1310.0           | 17 1/2            | 1321.0         | 1.64                     | LOT                 |
| INTERM.     | 9 5/8               | 2650.0           | 12 1/4            | 2650.0         | 1.87                     | LOT                 |
| OPEN HOLE   |                     | 3408.0           | 8 1/2             | 3408.0         | 0.00                     | LOT                 |

**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 |
|-----------------|--------------------------|------------------|---------------------|--------------|------------------|
| 1068            | 1.33                     | 29.0             |                     | Performadril |                  |
| 1257            | 1.33                     | 31.0             |                     | Performadril |                  |
| 1470            | 1.54                     | 30.0             |                     | Performadril |                  |
| 1837            | 1.53                     | 32.0             |                     | Performadril |                  |
| 2291            | 1.54                     | 27.0             |                     | Performadril |                  |
| 2325            | 1.54                     | 20.0             |                     | Performadril |                  |
| 2515            | 1.54                     | 37.0             |                     | Performadril |                  |
| 2594            | 1.54                     | 32.0             |                     | Performadril |                  |
| 2651            | 1.54                     | 32.0             |                     | Performadril |                  |
| 3408            | 1.25                     | 33.0             |                     | Performadril |                  |

### 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="#">6151 Formation pressure (Formasjonstrykk)</a> | PDF                | 0.28                  |

