Well Severance (Rig Chase)
Oceaneering continues wellhead severance track record with completion of its first integrated ‘lead contractor’ well severance campaign of 2018 season.

Project Overview
Oceaneering was contracted by a major North Sea operator for a turnkey, fast-track well severance campaign comprising four subsea wells. The expedited nature of the project was due to time constraints on the removal of one of the wells, and the project was completed on schedule and on budget, without any quality, health, safety, or environmental (QHSE) incidents.

The campaign was successfully completed using the Oceaneering® Magnum® work class remotely operated vehicle (ROV) and active-heave compensated construction cranes – without requiring the use of divers, guide wires, or explosives. With the completion of this project, Oceaneering continues its 100% wellhead severance track record.
Oceaneering used its proprietary H4 wellhead connector and abrasive water jet cutting (AWJC) system, which are non-injurious for well integrity and the environment. The campaign used a cost-effective dynamically positioned Class 2 (DP2) offshore construction vessel (in lieu of more expensive alternatives) and, online, live streaming video throughout the execution phase so that areas of interest could be viewed onshore in real time.

Beyond the normal scope of wellhead severance and recovery, Oceaneering also completed additional work, including the removal and recovery of subsea monitoring equipment (CaTS logging system), rig-deployed net guards, a drilling spud base, and various debris.

**The scope of supply included:**
- Integrated project team and services (single point of contact)
- Well data review [all wells were coded SS 0-0-1 (Category 1)] and well-specific work programs
- Vessel charter (Olympic Zeus)
- Management interfaces (operators, vessel, QHSE, emergency response)
- Hazard identification and risk assessment
- Offshore project management
- Wellhead severance (Oceaneering abrasive water jet cutting technology)
- Seabed clearance and survey
- Wellhead disposal
- End-of-well reporting

### Key performance indicators

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No harm to people (zero incidents)</td>
<td>0</td>
</tr>
<tr>
<td>No high-potential incidents (zero accidents)</td>
<td>0</td>
</tr>
<tr>
<td>No harm to the environment (zero spills)</td>
<td>0</td>
</tr>
</tbody>
</table>

### Operational metrics

<table>
<thead>
<tr>
<th>Area</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quayside (mobilization, port calls, demobilization)</td>
<td></td>
</tr>
<tr>
<td>Transit</td>
<td></td>
</tr>
<tr>
<td>On location</td>
<td></td>
</tr>
<tr>
<td>Waiting on weather</td>
<td></td>
</tr>
</tbody>
</table>

Building on internal lean initiatives, Oceaneering increased its mobilization and demobilization efficiencies, thus reducing timings by the percentages noted above.

### Well summary list, including operational time on location

<table>
<thead>
<tr>
<th>Well location</th>
<th>Water depth (ft/m)</th>
<th>Cut depth (BML)</th>
<th>Wellhead</th>
<th>Casing program at cut depth</th>
<th>Time on location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>381 ft / 116 m</td>
<td>12.1 ft / 3.7 m</td>
<td>SS-15, H4 (NG, CaTS)</td>
<td>30 x 20 in / 76 x 51 cm</td>
<td>27 hr 25 min</td>
</tr>
<tr>
<td>Norway</td>
<td>384 ft / 117 m</td>
<td>14.8 ft / 4.5 m</td>
<td>SS-15, H4 (NG, CaTS)</td>
<td>30 x 20 in / 76 x 51 cm</td>
<td>19 hr 20 min</td>
</tr>
<tr>
<td>Norway</td>
<td>354 ft / 108 m</td>
<td>14.4 ft / 4.4 m</td>
<td>SS-15, H4 (NG, CaTS)</td>
<td>30 x 20 in / 76 x 51 cm</td>
<td>14 hr 30 min</td>
</tr>
<tr>
<td>Norway</td>
<td>302 ft / 92 m</td>
<td>9.8 ft / 3.0 m</td>
<td>MS-700, H4 (PGB, Spud Base)</td>
<td>36 x 20 in / 91 x 51 cm</td>
<td>26 hr</td>
</tr>
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