License Relinquishment Report

P.1870: Block 15/21d

January 2013
**UK Seaward Production License P.1870, Block 15/21d**

**License Summary:**
26th Round Promote License awarded 100% to Echo Exploration Limited on March 15th 2011, effective from 10th January 2011. The initial term expires 09th January 2013. Echo Exploration was purchased by North Sea Energy in March 2011 and is a fully owned subsidiary of North Sea Energy Inc. Echo assigned 50% of the license ownership to Encore Petroleum on 12th July 2011. Following the Premier takeover of Encore Petroleum, the partner name was changed to Premier Oil (Encore Petroleum) Limited on April 16th 2012.

**Partner(s):**
Echo Exploration 50%
Premier Oil 50%

**Work Commitment:**
The Licensee shall obtain 100km² of 3D seismic data. The licensee acquired the relevant portions of the Scott 3D and M84 3D surveys for the 2012 interpretation project and has completed the firm work commitment.

**Synopsis:**
This report covers the initial two year period of the Promote license. Mapping and prospective resource assessments were carried out by Senergy UK in the period January-May 2012 using a comprehensive set of well and seismic data. Block 15/21d lies between the Scott/Telford Fields and the Rob Roy Field in the south east corner of block 15/21. Two prospects have been defined: Bluebird is an oil discovery in the Claymore Sandstone that was discovered by 15/21d-50 and Blackbird is a Piper Sandstone structural closure on the fault terrace to the east of the Ivanhoe Field and updip from the 15/21d-54 well. In both prospects the potential resources are small and the crest of the Bluebird structure lies outside of the 15/21d license area. The potential resources net to the partnership were considered too small in either prospect to commit to a firm well and the license was determined on December 6th 2012.

**Exploration Activities:**
Sproule International was retained to produce an audited estimate for the resource potential of the Bluebird and Blackbird prospects in August 2011. Their work was strongly grounded.
on the work used to underpin the license application. North Sea Energy is quoted on the Toronto Venture Stock Exchange (TSX-V) and must therefore publish only audited resource estimates.

A geological and geophysical interpretation project was undertaken by Senergy in early 2012 covering this block. The geological focus was on the Upper Jurassic Claymore and Piper Sandstones and the geophysical work utilised both the Scott and M84 3D seismic surveys to investigate the trapping potential in these formations. A Petrophysical analysis was conducted for the 15/21d-50 well Upper Jurassic section and North Sea Energy analysed the DST results for this well. Although the work resulted in new estimates of the resource potential; these were not sufficiently different from the earlier Sproule estimates to require the preparation of a new audited resource estimate.

**Prospectivity Analysis**

**Bluebird:** The Bluebird Prospect is located at the eastern tip of the Halibut Horst between the South Scott and Rob Roy oilfields. The prospect is an undeveloped oil discovery made by the 15/21-50 well that found an oil column of 114 feet in Upper Jurassic Claymore Sandstone.

**Trap:** The prospect is formed by a Claymore Sand turbidite fan present in the hanging wall on the southeast tip of the Halibut Horst. The crest of the structure is at -8200 feet tvdss, and it has closure down to the OWC at -8,638 feet.

**Reservoir:** The CPI shows a 126 feet thick oil bearing section of Claymore Sand in well 15/21b-50, with 60 feet net pay above the Oil-Water contact. The sands have an average porosity of 22%.

A DST was performed and 90 feet of the gross sandstone was perforated from which the well flowed at a maximum instantaneous production rate of 5571 stb/d which declined to 5353 stb/d within 10 minutes. The oil has an API gravity of 28°API and GOR of 391 scf/stb.

**Chance of Success:** Bluebird is an appraisal/development prospect that is quite modest in size. Mapping within the upper Jurassic sequence is difficult as there is rarely a correlatable event at the top reservoir level and the main risk is the structural mapping and its impact on the reservoir volume. The bulk of the resource lies in the adjacent acreage and because of its small size Echo was unable to commit to drilling a well on the structure.

**Resources:** The discovered in place oil volumes are the gross numbers including the area of the structure extending off block to the west. Contingent resources on block are shown in square brackets.

<table>
<thead>
<tr>
<th>15/21d BLUEBIRD</th>
<th>Gross Hydrocarbon Volumes (MMbbl) [On Block]</th>
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<tbody>
<tr>
<td></td>
<td>Low Case (p90)</td>
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<tr>
<td>Discovered Oil In Place</td>
<td>9 [3.15]</td>
</tr>
<tr>
<td>Contingent Resources</td>
<td>1.8 [0.63]</td>
</tr>
</tbody>
</table>

**Blackbird:** The Blackbird Prospect is located on the fault terrace to the east of the Rob Roy oil field. The prospect is a hanging wall structure mapped at top Piper Sand level. The
15/21d-54 well penetrated this terrace and found the Piper to be well developed but water wet and the prospect is defined by the newly mapped structural closure updip from this well.

**Trap:** The prospect is formed by a northwest trending terrace on the eastern flank of the Rob Roy structure. The prospect requires a hanging wall fault seal along its western side and a conventional fault seal to the east.

**Reservoir:** The Piper section in 15/21d-54 comprises 106 feet of net sand with 20% porosity.

**Source and Charge:** The Piper sand is charged with good quality sweet medium gravity oil up dip in the Rob Roy and Ivanhoe oil fields and this oil source will charge the Blackbird structure en route to these oil fields.

**Chance of Success:** Blackbird is a high risk prospect that requires the development of a fault seal in the sandy lower Upper Jurassic section along the western side of the structure. Echo placed a chance of success of 10% on the prospect and in consideration of the risk versus reward, could not commit to drilling a well to test the prospect.

**Prospective Resources:**

<table>
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<tr>
<th>15/21d BLACKBIRD</th>
<th>Gross Hydrocarbon Volumes (MMbbl) [On Block]</th>
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<tbody>
<tr>
<td></td>
<td>Low Case (p90)</td>
</tr>
<tr>
<td>Oil Initially-In-Place</td>
<td>2.3</td>
</tr>
<tr>
<td>Prospective Resources</td>
<td>0.3 [0]</td>
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**Clearance**
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