Licence P1670, block 43/29, Relinquishment Report - Centrica Energy
Upstream

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1 General

Introduction
This report documents the full relinquishment of Licence P1670, blocks 43/29, Fig. 1.1.

![Fig. 1.1 Licence P1670, block 43/29 location](image)

Licence Summary

<table>
<thead>
<tr>
<th>Licence Number</th>
<th>P1670</th>
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<tbody>
<tr>
<td>Licence Round</td>
<td>25</td>
</tr>
<tr>
<td>Licence Type</td>
<td>Traditional</td>
</tr>
<tr>
<td>Block Number(s)</td>
<td>43/29</td>
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<tr>
<td>Operator/Partner %</td>
<td>Centrica 60% / Ithaca 30% / Volantis 10%</td>
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</tbody>
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Commitments / Restrictions
This is a traditional licence with a start date of 12th Feb. 2009. The agreed work programme at Schedule 1 provides that by 11th Feb. 2011 the licensee must make a firm commitment to complete Part 2 of the work programme, or the licence will automatically expire. The work programme was a 2 year drill or drop. Either drill to a depth of 3500m or to the Murdoch horizon whichever is shallower, or elect to allow the licence to automatically cease.

At this time Centrica and its partners see no viable prospectivity entirely within the licence, and elect to let the licence cease.
2 Synopsis

Licence P1670 containing block 43/29 was awarded in the 25th round with a start date of 12th Feb. 2009. Block 43/29 lies in the Silver Pit Sub-Basin, at the feather edge of the Leman Sandstone Play Fairway. The Rotliegendes section is underlain by Carboniferous section varying in age between Namurian C and B age in the north west passing to Westphalian B in the east. The licence was originally acquired for potential prospectivity within the Permian and Carboniferous.

Unfortunately only minor prospectivity was recognised within the licence, and at this time Centrica and its partners wish to relinquish this licence in its entirety.

3 Exploration Activities

Wells Drilled
There are no wells drilled within the licence. However, local wells discoveries and fields were used in the evaluation.

Seismic Database
A selection of 2D and 3D seismic data was used in the evaluation. No reprocessing was performed on any of the data over the licence.

4 Prospectivity Analysis

Reservoir
The main reservoir recognised within the licence is Carboniferous fluvio-deltaic sandstones. Westphalian C/D sandstones subcrop to the NE of the licence with predominantly Namurian sandstones present over most of the licence. These Namurian sandstones are shown to be very tight when encountered by the drill bit. There may be potential for Leman sandstones in the area, but these may not act as a reservoir. It is important to understand the distribution of this ratty Leman sandstone interval because it is neither a reservoir or an effective seal. As such this interval constitutes a waste zone and, where thickly developed, can severely degrade the volume of effective reservoir within any closures.

Source
Carboniferous coal measures are present and mature providing gas for any closure in the area.
Seal
Silverpit shales and halites provide the top seal to any closures within this licence. The Leman sandstone in this area is normally ratty and interbedded with Silverpit shale. Even when developed, the aeolian facies, which forms the main productive units in the fields to the south, is thin to absent. Overall this interval is normally treated as a waste zone that is neither an effective seal or reservoir.

Trap style
Fig. 4.1 is a Top Rotliegendes depth map, whilst Fig. 4.2 is a strike seismic line across lead 43/29.

Fig. 4.1 Depth to Top Rotliegend
Fig. 4.2 Seismic line across 43/29 lead

Lead 43/29 is interpreted as a closure at Top Rotliegendes and Top Carboniferous levels. However, it still requires a substantial amount of technical work to fully understand and define the resource potential and risks. Both the Leman Sandstone and Westphalian B Murdoch Sandstone are possible reservoir targets in this prospect. The lowermost Westphalian B section subcrops the base Permian unconformity in this area and as such there is a reasonable chance that the Murdoch sandstone will be at or near the unconformity and within the closure of lead 43/29.

The key issues associated with prospectivity at this level are therefore:

- How much of the Murdoch Sandstone lies within closure.
- Reservoir thickness.
- Reservoir effectiveness.
- How much of the overlying Leman Fm acts as a waste zone.

Remaining Prospectivity

Although some prospectivity was recognised it was too small and high risk to be pursued.
5 Reserves Summary

GIIP Calculations
After assessment of the data, Centrica interpret the volumes within the licence to be too small and high risk to pursue at this time.

6 Clearance

Publication Clearance
All 3rd party ownership rights (on any contained data and/or interpretations) have been considered and appropriately cleared for publication purposes.