WELL: Chanin 1  
CRAE No. RD93MB25

Operator: Pacific Oil & Gas Pty. Limited
Participants: Pacific Oil & Gas Pty. Limited 90%  
Omega Oil N.L. 10%

Tenement: EP18
Seismic Location: Line MD92-255; SP860
Location: Lat: 16°14'11.6" South  
Long: 133°44'47.8" East
AMG: Zone 53, 366048E, 8204483N

Basin: Beetaloo Sub-Basin, McArthur Basin
Elevation: 244.9m AHD (KB), 240m AHD (GL)
Spudded: 0030hrs 26 June 1993
Rig Released: 0900hrs 20 July 1993
Rig: Rig 22
Drilling Contractor: Rockdrill Contractors

Status: Plugged and abandoned
Hole Size: 12¾" to 60.8m  
8½" to 309.0m  
6" to 1411m (TD)

Casing & Tubing Details:
13 ¾" Surface Conductor to 8.8m  
9 ½" Deep Conductor to 59.0m  
7" Casing to 294.45m

Perforations: Nil
Plugs: Plug No. 1 1358-1298m (Class "A" cement)  
Plug No. 2 252-324m (Class "A" cement)  
Surface Plug 45m to cellar floor

STRATIGRAPHY:
*(NB: Non-Contributory Interest)*

<table>
<thead>
<tr>
<th>AGE</th>
<th>UNIT AND SUB-UNIT</th>
<th>MBDF (Logger)</th>
<th>Metres AHD (Logger)</th>
<th>Thickness (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cretaceous</td>
<td>Mullaman beds</td>
<td>Surface (4.9)</td>
<td>240.0</td>
<td>71.6</td>
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<tr>
<td>Cambrian</td>
<td>Tindall Limestone</td>
<td>76.5</td>
<td>168.4</td>
<td>105.8</td>
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<tr>
<td></td>
<td>Antrim Plateau Volcanics</td>
<td>182.3</td>
<td>62.6</td>
<td>440.1</td>
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<tr>
<td>Proterozoic</td>
<td>&quot;Hayfield Mudstone&quot;</td>
<td>622.4</td>
<td>-377.5</td>
<td>252.6</td>
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<tr>
<td></td>
<td>&quot;Jamison Sandstone&quot;</td>
<td>875.0</td>
<td>-630.1</td>
<td>73.4</td>
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<td></td>
<td>McMinn Formation</td>
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<td></td>
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<tr>
<td></td>
<td>- Kyalla Member</td>
<td>948.4</td>
<td>-703.5</td>
<td>379.6</td>
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<tr>
<td></td>
<td>- Moroak Sandstone Member</td>
<td>1328.0</td>
<td>-1083.1</td>
<td>83.0</td>
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</tbody>
</table>

Total Depth (Driller) (m) 1411.0  
Total Depth (Logger) (m) 1411.0

FORMATION TESTS: Nil

CHOOSE:

<table>
<thead>
<tr>
<th>TEST</th>
<th>TIMES (min)</th>
<th>PRESSURES (psi)</th>
<th>RESULT</th>
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<td>PF</td>
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<td>SSI</td>
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</tbody>
</table>

PF: Preflow Period  
FSI: First Sheet In  
F: Flow Period  
SSI: Second Sheet In  
IHH: Initial Hydrostatic Head  
IPF: Initial Flow Pressure  
IPP: Initial Preflow Pressure  
FPP: Final Preflow Pressure  
BP: Build Up Pressure  
FBP: Final Build Up Pressure  
FHH: Hydrostatic Head
Chemical Analysis (water, oil, gas)

A sample of formation water 2956459 lifted by Air from the top of the Moroak Sandstone Member was submitted for standard water analysis (DPO No. 77758).

A sample of cuttings 2956449, recovered from the basal "Jamison Sandstone" which possessed weak fluorescence, was submitted for liquid chromatographic separation of extracted organic matter and gas chromatography of the saturate fraction (DPO 77768)

Summary & Conclusions:

Chanin 1 was designed to test a seismically-inferred structural closure approximately 60km north of Jamison 1. The very poor hydrocarbon shows encountered in the well suggests that the structure may have developed after hydrocarbon generation and migration.

The Mullaman beds, from surface to 76.5m proved difficult to drill. The intention was to have the weathered claystones of this formation behind a surface conductor before drilling ahead into the underlying Tindall Limestone. The depth of the Tindall Limestone (and thus the depth at which to set the conductor) was determined from lost circulation zones encountered in the water bore drilling. This depth proved inadequate, as 17.5m of weathered claystone was open to the borehole whilst drilling the Tindall Limestone and top of the Antrim Plateau Volcanics, severely contaminating the samples of these formations and causing drilling difficulties.

Erroneous seismic interpretation (which was revised soon after spud) placed the prognosed top and base of the Antrim Plateau Volcanics lower than intersected in the well. The revised seismic depth prognosis was accurate.

Air and mist/foam drilling proved very successful with regard to ROP, bit life, and reducing well costs in general, but as a trade off sample quantity was at times low, and quality was generally poor. Detailed show description was impossible with the samples generated by air drilling. Lithological identification was however, quite good once the logger became accustomed to the samples. Lithological identification and show evaluation during air mist/foam drilling was significantly improved from purely air drilling.

The depth prognosis from seismic to the top of both the "Jamison Sandstone" and the Moroak Sandstone Member came in within several metres. This accuracy gives a great deal of confidence in the validity of the structure. It does not, however confirm the integrity of the interpreted four way dip closure, or suggest a structural reason for the lack of hydrocarbons.

Chanin 1 successfully tested all of the proposed targets; the "Jamison Sandstone", Moroak Sandstone Member, the sands within the lower "Hayfield Mudstone" and the Kyailla Member, in what is believed to be the first test of a four-way dip closure in the Beetaloo Sub-basin. The lack of hydrocarbons is a serious concern and at the time of writing this report, it was considered that the timing of structure development may have been too late at Chanin for the feature to have received and trapped migrating hydrocarbons.