

Dorado-1 Oil Discovery

18 July 2018



Highlights

- Significant oil discovery in primary target, the Caley Sandstone
- Excellent reservoir and fluid characteristics
- Caley Sandstone contains a net oil pay thickness of 79.6m
- Hydrocarbon bearing sands also identified in Baxter Member
- Additional potential in Crespin and Milne Sandstone still to come

Carnarvon Petroleum Limited ("Carnarvon" or "the Company"; ASX:CVN) confirms that the Quadrant-Carnarvon Joint Venture has made a significant oil discovery in the Caley Member as part of the current Dorado-1 well drilling campaign.

Light oil has been recovered from excellent reservoir containing a gross hydrocarbon package of 96.1 metres and a net pay thickness of 79.6 metres in highly porous and permeable sands.

The results were confirmed after wireline testing was undertaken at the Dorado-1 well, after it drilled down to around 4,044 metres Measured Depth ("MD") MD in 8-1/2" hole. Currently the well is still in a hydrocarbon bearing column.

Carnarvon Managing Director Adrian Cook said the result is transformational for the company.

"This is a significant discovery given the quantum of the net pay thickness, the quality of the oil and the extremely good reservoir characteristics," Mr Cook said.

"Currently, we estimate the net oil pay is around 80 metres, with more drilling still to come this is very exciting for Carnarvon Petroleum.

"With multiple targets still left, the focus now is to complete the drilling program through the Baxter, Crespin and Milne Members.

In April we highlighted the possibility that the Dorado structure could contain a substantial oil accumulation. Given this outcome has now occurred, Carnarvon will make an assessment of and issue a revised volume estimate as soon as we possibly can once drilling operations have finished."

Annexure to Dorado Oil Discovery – Carnarvon Technical Summary

Wireline and formation evaluation tools have confirmed the presence of a hydrocarbon column in the Caley Member in the Dorado-1 well, with light oil recovered to surface.

An additional hydrocarbon accumulation has been observed in the Baxter Member, with drilling and evaluation still to be completed in that section of the well.

Drilling through the Caley Member, logging while drilling tools indicated a sandstone reservoir section with elevated gas readings and increased resistivity, indicating the presence of hydrocarbons. Given the significance of these results, it was decided to bring the proposed wireline program forward.

While drilling sufficient hole to accommodate the wireline logging tools, further reservoir sands were encountered in the Baxter Member with accompanying indications of hydrocarbons. At the completion of drilling, at around 4,050 metres Measured Depth, the well had yet to encounter water saturated sands and all sands were hydrocarbon charged.

The wireline logging tools have confirmed the well encountered a total gross Caley hydrocarbon package of 96.1 metres True Vertical Thickness (“TVT”) with a net oil pay of 79.6 metres TVT.

Excellent reservoir characteristics were interpreted from the logging with average porosity of around 20% with hydrocarbon saturation of 82.5%.

Permeabilities ranged between 100 to 1,000 millidarcy in the Caley hydrocarbon zone.

The high quality of the reservoir was further reinforced by the rapid time taken to extract the oil samples and the high mobility recorded while undertaking formation testing.

A number of oil samples were extracted in the Caley sandstone interval with a very light oil being recovered to surface. Estimates of the oil characteristics from the rig indicate a 49.6° API oil.

The pressure measurements undertaken with the wireline formation tester indicate a hydrocarbon column across the whole gross hydrocarbon bearing thickness of 96.1 metres TVT in the Caley. No water contact was encountered in the well indicating the total oil column could extend past the currently drilled extent of the well.

The combination of light oil and excellent reservoir characteristics support potential for high flow rates on production.

A further hydrocarbon accumulation in a sandstone in the Baxter Member was intersected towards the very bottom of the well. The wireline logging tools were not able to assess at this time whether this is part of the same accumulation or a new accumulation of oil. This sand is yet to be fully evaluated.

Following the completion of the wireline formation evaluation, the well will be deepened to approximately 4,550 metres MD to evaluate the newly discovered Baxter sand and the secondary targets in the Crespin and Milne. It is likely that a 7" liner will be set prior to drilling into the Crespin and Milne Members.

Notwithstanding that the prospective volumes for this well were indicated to be gas-condensate, the very light nature of the oil means that the two fluids show similar characteristics while drilling and hence the formation testing tool was required to differentiate between fluids.

Carnarvon had previously disclosed prospective resources for Dorado of 545 Bscf of gas and 30 million barrels of associated condensate (being 125 million barrels of oil equivalent ("boe"), gross, Pmean) on 23 April 2018.

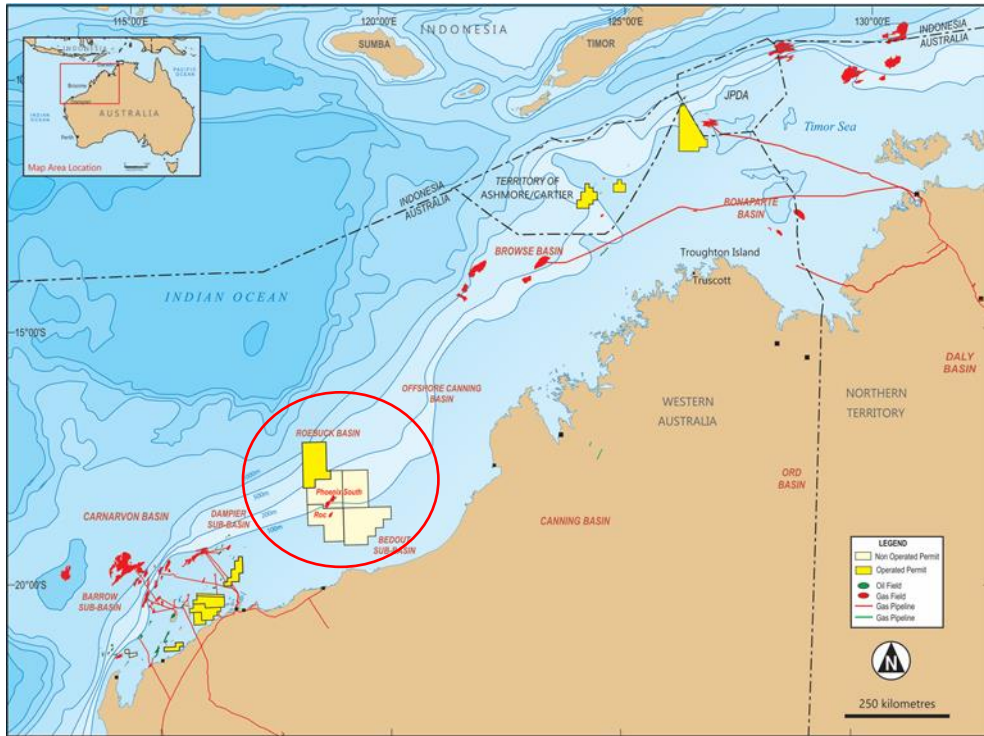
On 30 April Carnarvon noted that there is a possibility for the structure to contain a substantial oil accumulation. Given the oil discovery outcome in this well, Carnarvon will issue a revised volume estimate as soon as it can following the completion of drilling, which will be a contingent resource of oil.

The prospective resources referred to above are prepared as at 23 April 2018 (Reference: CVN ASX release 23 April 2018). These prospective resources have been prepared in accordance with the definitions and guidelines set forth in the SPE-PRMS and have been prepared using probabilistic methods.

There are numerous uncertainties inherent in estimating reserves and resources, and in projecting future production, development expenditures, operating expenses and cash flows. Oil and gas reserve engineering and resource assessment must be recognised as a subjective process of estimating subsurface accumulations of oil and gas that cannot be measured in an exact way.

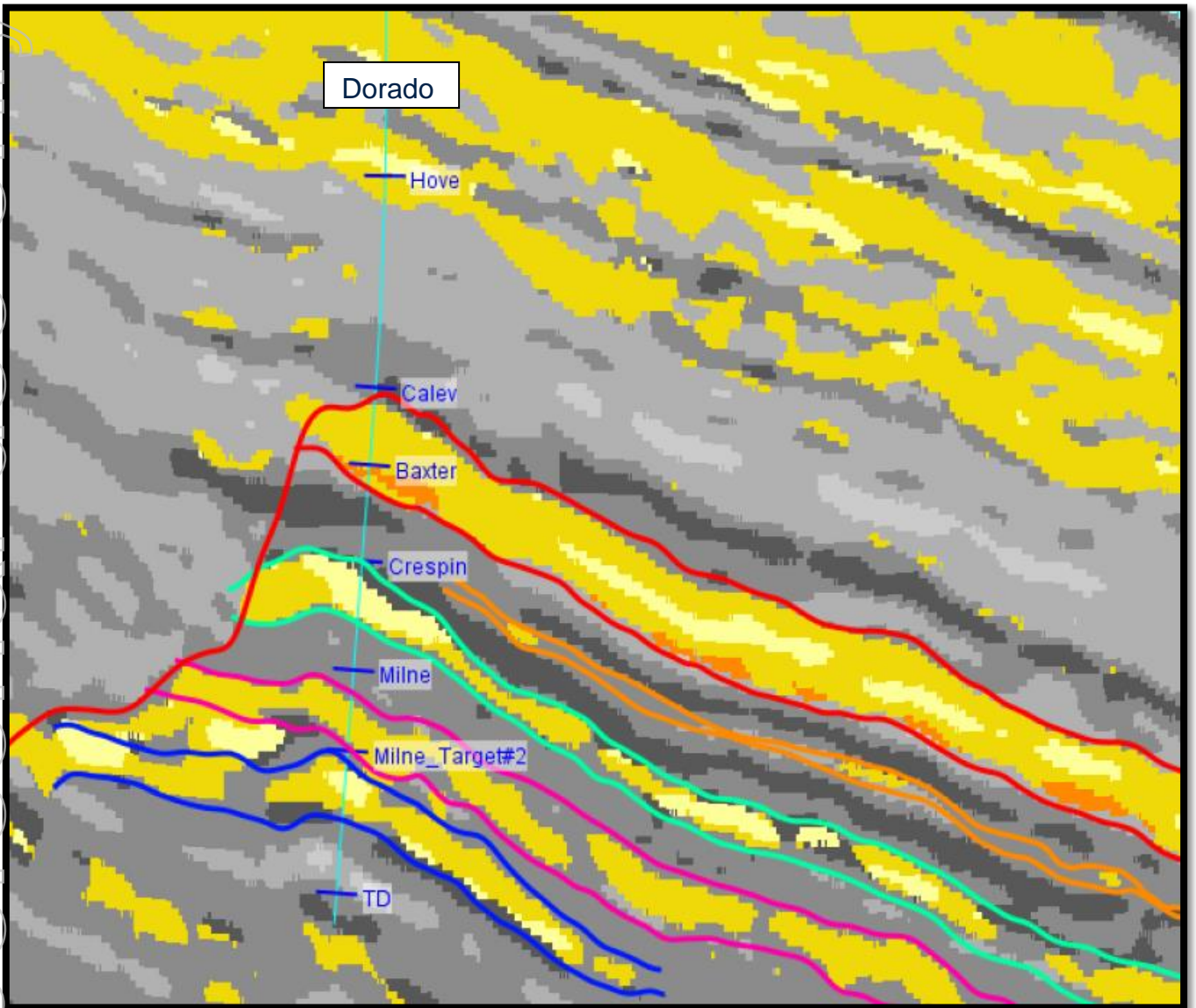
Prospective Resources are the estimated quantities of petroleum that may potentially be recovered by the application of a future development project and may relate to undiscovered accumulations. These prospective resource estimates have an associated risk of discovery and risk of development. Further exploration and appraisal is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

Figure 1: Location of the Phoenix Project



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Figure 2: Predicted Lithology at Dorado from 2017 Seismic Inversion Project



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Carnarvon Petroleum
Quadrant Energy (*Operator*)

20%
80%

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