

Roc-2 well update

8 June 2016



Highlights

- **Roc-2 appraisal well on schedule to commence drilling late June or early July 2016**
- **Latest Roc-1 laboratory results materially exceed expectations and bode well for Roc-2**
- **Roc-2 well program includes coring and testing to assess potential production flow rates**

Carnarvon Petroleum Limited (“Carnarvon”) (ASX: CVN) is pleased to confirm the timing and location of the Roc-2 well in WA-437-P. The well has been designed to appraise and test the Roc-1 gas-condensate discovery that Carnarvon announced on 4 January 2016.

Carnarvon Managing Director and CEO, Adrian Cook said:

“Our growth has been very rapid this year with us securing a number of new additions to the portfolio. Encouragingly, we’ve been able to achieve these goals while simultaneously advancing our existing projects. But of particular interest in the near term is drilling the Roc-2 well with Quadrant Energy, particularly so soon after making the Roc-1 discovery in January this year.

In the success case, the Roc-2 appraisal well will confirm our gas and condensate volume estimates and provide us with important information on the flow rates of these hydrocarbons from the reservoir.

We also have plans to explore a secondary deeper objective in the Roc-2 well, targeting a zone that contained encouraging hydrocarbon shows in the bottom hole section of the Roc-1 well, following success in the primary target and accommodating well conditions.

The Roc-1 well laboratory results have an important bearing on this project, and I’m pleased to report that the results have begun to come in and have exceeded our expectations.

We recently received fast track analysis of a number of sidewall cores across the Caley reservoir section of the Roc-1 well that show permeabilities are substantially better than the 10 millidarcy (mD) to 100mD we reported in January 2016. Certain sections of the reservoir recorded 500mD with Carnarvon interpreting a weighted average over sands one to four of around 130mD. This is significantly better than the permeabilities required to achieve commercial flow rates from these reservoir rocks.

In addition to better permeability results we have also have seen and reported a higher Condensate to Gas Ratio (CGR). The CGR currently is estimated to be approximately 60 barrels per million cubic feet of gas, an increase on the initial range of 20 to 40 barrels per million cubic feet of gas. Higher CGRs generally increase the value of a project due to the value of the liquids that can be produced and sold with the gas production.

Demonstrating a commercial flow rate and a commercial volume of gas and condensate in the Roc-2 well would represent an important milestone in the development potential for the Roc structure and surrounding resources, all of which could realise substantial value for our company.”

Roc-2 well timing

The Operator of the WA-437-P exploration permit, Quadrant Energy, has advised that the “Ocean Monarch” rig is expected on location at the Roc-2 site in the last week of June or the first week of July. The Ocean Monarch will have the capability and approvals to undertake well testing if the expected hydrocarbons are confirmed whilst drilling this well.

The Roc-2 appraisal well is required to delineate the extent of the Roc field, calibrate reservoir parameters, understand reservoir deliverability and characterise fluid properties.

Roc-2 will be drilled to a depth of 5,250m with capacity to extend to 5,700m if justified by hydrocarbon shows, reservoir quality and drilling conditions.

Full well-bore coring and flow-testing are planned for this well over the Caley sandstones, taking the total time to drill, core and test to around 98 days.

Roc-2 location and volumes

The Roc-2 well is located in around 100m water depth, approximately 160 km north-east of Port Hedland in the Bedout sub-basin of the greater Roebuck basin (figure 1).

Roc-1 encountered a gross reservoir section of around 120 metres in the Caley, with the top 40 meters being hydrocarbon bearing. The Roc-2 well is designed to appraise this reservoir section in an updip location, around 5km to the east of the Roc-1 well. (figure 2).

The Roc-2 well is designed to appraise the contingent volumes and to explore for the prospective volumes (refer to announcement of 17 March 2016* with results in table 1) in order to aggregate a total contingent volume above the minimum economic field size (“MEFS”) threshold.

For contingent volumes, encountering similar quality sands across the same 40m gross column in the Roc-2 location is expected to prove up (in the mid case) a volume of around 270 Bscf and 13 million barrels of condensate recoverable (gross)*.

Encountering the additional 80 metre sands above the gas-water contact in Roc-2, as has been interpreted on 3D seismic, is expected to prove up (in the mid case) an additional volume of around 193 Bscf and 9 million barrels of condensate (gross)*. These quality sands were discovered in the Roc-1 well below the gas-water contact and accordingly were non-hydrocarbon bearing at that location.

A mid case contingent and prospective resource outcome is expected to comfortably satisfy the MEFS threshold.

Table 1: Gross and Volumetric Estimates for Gas and Condensate WA-437-P*

Contingent Resource	1C	2C	3C
Recoverable gas (Bscf)	42	270	372
Recoverable condensate (MMSTB)	2	13	18
Prospective Resource	Low Estimate	Mid or best Estimate	High Estimate
Recoverable gas (Bscf)	87	193	328
Recoverable condensate (MMSTB)	4	9	16

Note: Totals have been estimated using probabilistic methodology; Carnarvon has a 20% equity interest in these resources – see Table 2 for net resources. Refer to announcement of 17 March 2016

Refer to cautionary statement in the report (page 4) relating to estimates of contingent and prospective resources

Roc-2 well testing

The proposed well test in Roc-2 across the Caley reservoir will aim to prove up potential commerciality by demonstrating flow potential. The well test will primarily demonstrate that the Caley sandstone is capable of production at commercial rates.

Additional information that will be collected by the well test include average reservoir properties such as permeability across the tested zones, connected volumes and indications of reservoir architecture including boundaries and calculation of in-flow performance relationship.

The well test can also be used to collect downhole and surface samples of the producing fluid.

The final well test program will be decided once the Roc-2 well has drilled through the Caley reservoir, but it is envisaged to take a total of around 20 days to complete.

Roc-1 Update

Several sidewall core samples from the Roc-1 well were fast tracked through routine core analysis in order to determine porosity and permeability parameters.

The results have given more confidence in the range of gas and condensate in place with porosities being reported of 14.5% for Sand 2 and 12% for Sand 4.

More importantly, the permeabilities reported of 300 to 500mD in Sand 2 and 40mD in Sand 4 are significantly better than expected and give confidence for positive flow rates being achieved during well flow testing.

The Roc prospective and contingent resources are within the WA-437-P exploration permit in the North West Shelf of Australia.

The equity interest holders are:

Carnarvon Petroleum	20%
Quadrant Energy (<i>Operator</i>)	80%

Yours faithfully



Adrian Cook
Managing Director
Carnarvon Petroleum

Shareholder enquiries:

Mr Thomson Naude
Company Secretary
Phone: (08) 9321 2665
Email: investor.relations@cvn.com.au

Media enquires:

Mr Tony Dawe
Professional Public Relations
(08) 9388 0944 / 0405 989 743
tony.dawe@ppr.com.au

Cautionary Statement

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.

***Resources**

All contingent and prospective resources presented in this report are prepared as at 17 March 2016 (Reference: CVN ASX release of 17 March 2016). The estimates of contingent and prospective resources included in this announcement have been prepared in accordance with the definitions and guidelines set forth in the SPE-PRMS and have been prepared using probabilistic methods.

Carnarvon is not aware of any new information or data that materially affects the information included in this report and that all material assumptions and technical parameters underpinning the estimates in this presentation continue to apply and have not materially changed.

Competent Person Statement Information

The Resource estimates outlined in this report were compiled by the Company's Chief Operating Officer, Mr Philip Huizenga, who is a full-time employee of the Company. Mr Huizenga has over 20 years' experience in petroleum exploration and engineering. Mr Huizenga holds a Bachelor Degree in Engineering and a Masters Degree in Petroleum Engineering. Mr Huizenga is qualified in accordance with ASX Listing Rules and has consented to the form and context in which this statement appears.

Forward Looking Statements

This document may contain forward-looking information. Forward-looking information is generally identifiable by the terminology used, such as "expect", "believe", "estimate", "should", "anticipate" and "potential" or other similar wording. Forward-looking information in this document includes, but is not limited to, references to: well drilling programs and drilling plans, estimates of reserves and potentially recoverable resources, and information on future production and project start-ups. By their very nature, the forward-looking statements contained in this news release require Carnarvon and its management to make assumptions that may not materialize or that may not be accurate. The forward-looking information contained in this news release is subject to known and unknown risks and uncertainties and other factors, which could cause actual results, expectations, achievements or performance to differ materially, including without limitation: imprecision of reserve estimates and estimates of recoverable quantities of oil, changes in project schedules, operating and reservoir performance, the effects of weather and climate change, the results of exploration and development drilling and related activities, demand for oil and gas, commercial negotiations, other technical and economic factors or revisions and other factors, many of which are beyond the control of Carnarvon. Although Carnarvon believes that the expectations reflected in its forward-looking statements are reasonable, it can give no assurances that the expectations of any forward-looking statements will prove to be correct.

Table 2: Volumetric estimates for gas and condensate*

	Gross (100%)			Net (20%)		
	1C	2C	3C	1C	2C	3C
Contingent Resource⁽ⁱ⁾						
Recoverable gas (Bscf)	41.8	269.7	371.9	8.4	53.9	74.4
Recoverable condensate (MMSTB)	2.0	13.0	18.2	0.4	2.6	3.6

(i) The Contingent Resources reflects the assessment of the discovered hydrocarbon column across the entire structure and have been estimated probabilistically.

	Gross (100%)			Net (20%)		
	Low Estimate	Mid or best Estimate	High Estimate	Low Estimate	Mid or best Estimate	High Estimate
Prospective Resource⁽ⁱⁱ⁾						
Recoverable gas (Bscf)	86.6	192.6	327.6	17.3	38.5	65.5
Recoverable condensate (MMSTB)	4.1	9.2	16.2	0.8	1.8	3.2

(ii) The additional Prospective Resources have been estimated probabilistically and reflects the assessment of the good quality reservoir sands intersected in the Roc-1 well below the interpreted gas water contact which are anticipated to be hydrocarbon bearing in the updip location as targeted by the proposed Roc-2 well.

Refer to cautionary statement in the report (page 4) relating to estimates of contingent and prospective resources.

The wide range in volumetric analysis is a reflection of the un-appraised nature of the discovery and the subsurface uncertainties yet to be addressed, particularly as the discovery well intersected the Roc structure in a flank position.

As currently characterised, the most important uncertainties are the lateral extent of the gas bearing sands encountered in the Roc-1 well and the extent of the predicted gas and condensate column in the reservoir quality sands intersected water wet below the interpreted gas water contact. The Roc-2 well proposed to be drilled in 2016 will go a long way to addressing these uncertainties and to firm up the recoverable resource volumes in the discovered gas condensate pool.

Success at the Roc-2 well is expected to move Prospective Resources into Contingent Resources and prove the base for a viable field development.

Figure 1 – Depth map based on 3D seismic interpretation, showing the location of the Roc-1 and proposed Roc-2 wells

This image shows the location of the Roc-1 well and the proposed Roc-2 well together with the interpreted gas water contact in the “Best or mid” case used for volumetric estimation. The best estimate of the areal extent of this structure as mapped is significant at approximately 45km².

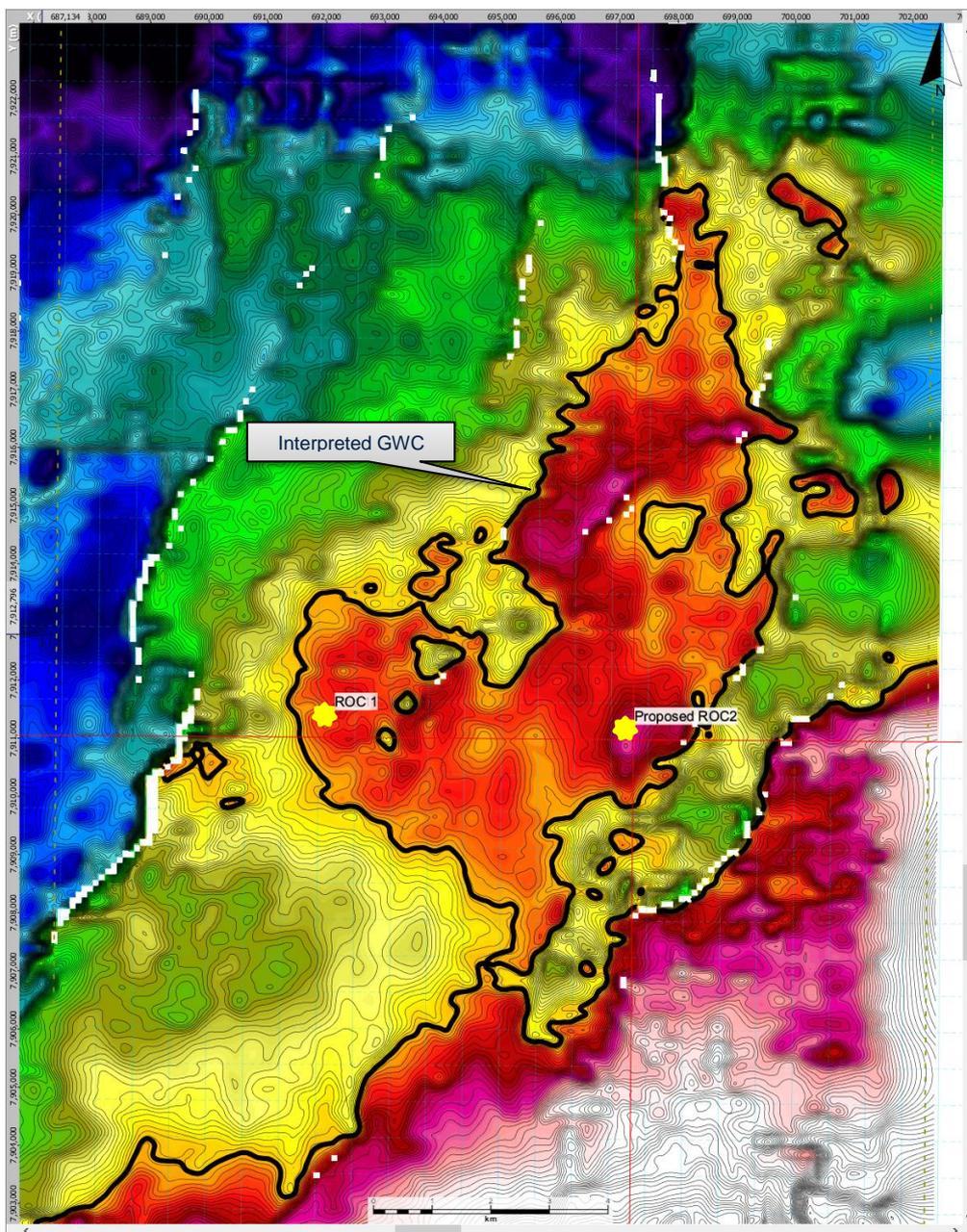


Figure 2: Depiction of Top Caley and gas charged sands and gas water contact

The Roc-1 well encountered sands at the edge of the Roc structure, thereby helping to identify potential gas water contacts in the field. This provides an important data point for the outer edge of the hydrocarbon bearing structure in this area. The composition of the reservoir encountered above and below the interpreted gas water contact in Roc-1 was of conventional reservoir quality. The Roc-2 well will target a more crestal location within the Roc structure. The objective being to determine whether the gas and condensate extends laterally and vertically to this location. The interpretations are that there should be a high chance of this outcome occurring.

