

Q2

Quarterly Report
31 December 2016





Quarter Highlights:

- **Phoenix South-2 gas and condensate discovery**
- **Successful Roc-2 flow test exceeded pre-drill expectations**
- **Dorado prospect identified in the greater Phoenix area**
- **A\$60 million held in cash**

Managing Director's Comments

The end of 2016 marked an exciting quarter for Carnarvon and completed what has been a very active year for the Company. The quarter began with a successful flow test in the Roc-2 well where the well flowed at levels which exceeded pre-drill expectations and was limited only by equipment constraints. There was also the fifth consecutive discovery for Carnarvon in the Phoenix South-2 well which discovered gas and condensate in the Caley Sandstone. I am thrilled with the string of successes in the greater Phoenix and Roc area as Carnarvon continues to advance this area of significant potential.

The Phoenix South-2 well intersected a definitive hydrocarbon-bearing zone as it approached the primary Caley target. The well experienced significant gas influx and elevated reservoir pore pressures which indicates a hydrocarbon body larger than we have previously experienced in the basin. Due to the significant amount of hydrocarbon bearing pressure encountered, it was not possible to continue drilling. A new well with a different well bore design is required to manage the elevated pressure and assess the Caley reservoir.

We look forward to releasing revised volume estimates and outlining the next steps for the Phoenix South-2 discovery once the joint venture has had an opportunity to completely assess the results.

In addition to the Phoenix South-2 result, we had a game changing flow test in the Roc-2 well. The well flowed gas and condensate to surface at rates which were significantly greater than anticipated. The completion of the flow test clearly shows that the Caley Sandstone is capable of producing at commercial rates.

The joint venture is currently assessing the Roc and Phoenix South results achieved to date and will decide on the forward strategy to unlock the potential of the 22,000 km² greater area. In the shorter term this is expected to include testing the Dorado prospect which was identified using the modern Capreolus 3D seismic data the joint venture has recently acquired. The Dorado prospect is located South of Roc and Phoenix South and has the potential to be the largest structure discovered in the area to date. The joint venture is currently preparing to drill the Dorado prospect in late 2017, however more news will be released on this in due course.

Concurrently, Carnarvon continues to develop prospects in its exciting exploration permits which have been targeted as a result of building one of the leading regional databases over the North-West Shelf of Australia. These permits have been acquired with minimal work program commitments and I look forward to providing more information on these prospects as we advance these projects further.

From a financial perspective, Carnarvon has maintained a strong cash balance of A\$60 million. We continue to be prudent in managing our resources whilst being one of the most active oil and gas companies in Australia.

Adrian Cook
Managing Director

Phoenix South-2

(Carnarvon 20%, Quadrant Energy is the Operator)

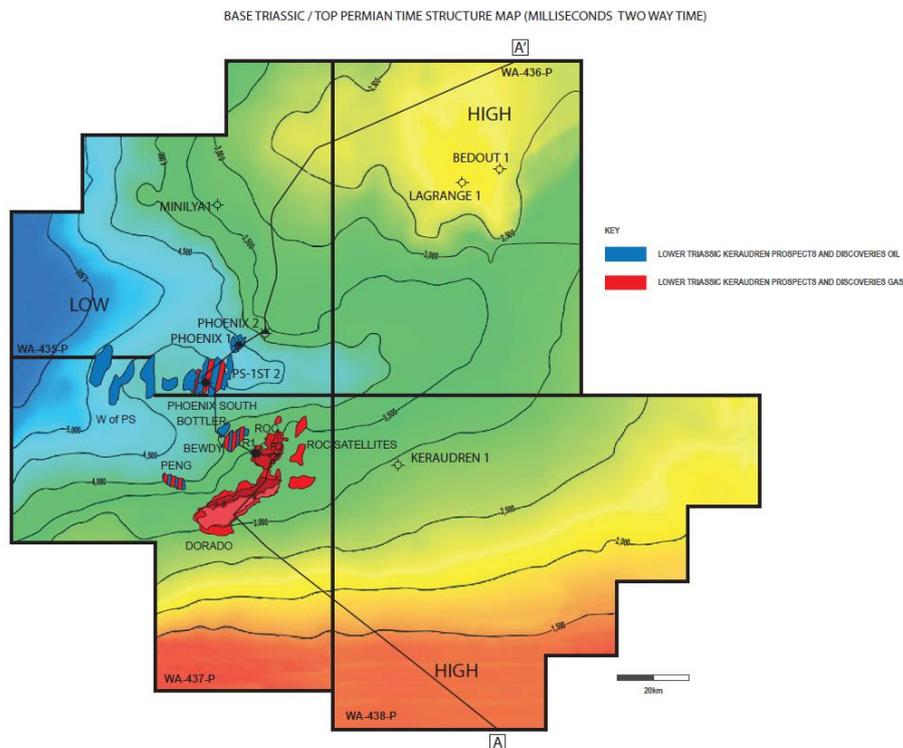
The Phoenix South-2 well provided another positive step forward for Carnarvon and its partner as more gas and condensate was discovered in an interval at the top of the Caley Sandstone.

As the well approached the primary Caley target, an estimated 39 metre hydrocarbon-bearing zone between approximately 5,176 and 5,215 metres was intersected. At this point, a significant gas influx and elevated reservoir pore pressure was experienced leading to the decision to cease drilling. A further 185 metres of potential hydrocarbon bearing reservoir in the Phoenix South Caley remains to be assessed.

The reservoir pore pressure that the well intersected was much higher than expected which is very encouraging as higher formation pressures typically support both larger volumes and higher gas and condensate flow rates over a given reservoir. Further drilling into this reservoir will require a different well bore design from that used in this well. Accordingly, for safety reasons, no further drilling could occur in the current well bore. As such, the well was successfully and safely completed following the end of the quarter.

The Phoenix South-2 discovery of gas and condensate is a welcomed addition to the light oil discovery in the Phoenix South-1 well and is expected to provide the additional gas and condensate resources to those already discovered at Roc. Carnarvon is currently evaluating the Phoenix South-2 results and will provide an updated volumetric assessment once they are available.

With a string of hydrocarbon discoveries in the greater Phoenix area, the joint venture will now assess the encouraging results so far before deciding on the appropriate plan going forward.



Phoenix area discoveries and prospect map.

Roc Gas and Condensate

(Carnarvon 20%, Quadrant Energy is the Operator)



Image of the Ocean Monarch flow testing at the Roc-2 well

In October 2016, a successful controlled flow test was completed in the Roc-2 well. This was a welcomed accompaniment to the gas and condensate discoveries in the Roc-1, Roc-2 and Phoenix South-2 wells.

The flow test achieved a peak flow rate of 51 million scf/day and 2,943 barrels of condensate per day, which is equivalent to approximately 11,500 barrels of oil equivalent* per day. These rates were achieved through an approximate 1 ½" choke and were equipment constrained flow rates; meaning the well flowed at the maximum rate possible with the equipment being used.

The flow test followed the discovery of a high-quality reservoir within the Caley section of the Roc-2 well, which is almost fully saturated with gas and condensate. Porosities of up to 15% were observed with an average of around 9%, which is an excellent result for a reservoir at this depth.

These results exceeded the pre-drill expectations by quite some margin and has resulted in a reassessment of the quality of the reservoir at different depths in the basin. These are positive implications on the capability of hydrocarbons to flow from quality reservoirs in the basin including not only the Roc gas and condensate discoveries but also for the Phoenix South-2 discovery and the chain of prospects in the greater exploration area.

The joint venture is currently interpreting the results and designing the forward strategy to maximise the potential of these discoveries. Forward planning being undertaken in 2017 is expected to include engineering studies to analyse the options to commercialise the Roc gas and condensate.

*Barrels of oil equivalent converted at 6,000 scf gas to 1 bbl oil.

Exploration – Greater Phoenix Area

The success at Phoenix South and Roc has established the existence of an excellent petroleum system in the region and has also confirmed that the Barret and Caley formations can produce at commercial rates. The joint venture has been focussing on the follow up potential and a number of prospects and leads have already been identified with the most exciting of these being the Dorado prospect.

The Dorado prospect is positioned South of the Roc-1 and Roc-2 wells. Dorado contains a significant structure in the Caley Sandstone, which contained gas and condensate in the Roc-1, Roc-2 and Phoenix South-2 wells. In addition, Dorado contains deeper targets in the Baxter Sandstone and Milne Sandstone, which could potentially unlock a new structural play type for the basin. The joint venture is currently considering drilling the Dorado-1 well towards the end of 2017.

The first 3D in the area was the Phoenix MC3D covered an area of approximately 1,100 km² or approximately 5% of the total permit holding of over 21,000 km². Following the initial success in these permits, the joint venture partners licenced the Zeester MC3D seismic survey that covers the Northern parts of WA-436-P and WA-435-P. The Zeester survey covers an area of 3,854 km² and incorporates the very large Bandy lead amongst others.

The joint venture partners also acquired and licenced the Capreolus MC3D. This survey contains an additional 6,500 km² of 3D seismic coverage in the basin. The joint venture partners have commenced interpretation of the data and have identified a number of leads and prospects including the Bewdy and Bottler which are in between the Roc and Phoenix South discoveries and the Dorado prospect.

In addition to the Capreolus 3D seismic acquisition, the joint venture partners are acquiring and licensing approximately 10,000 km of 2D seismic data to further understand the prospectivity in the south eastern portion of the acreage. This acquisition is approximately 85% complete (Bilby MC2D).

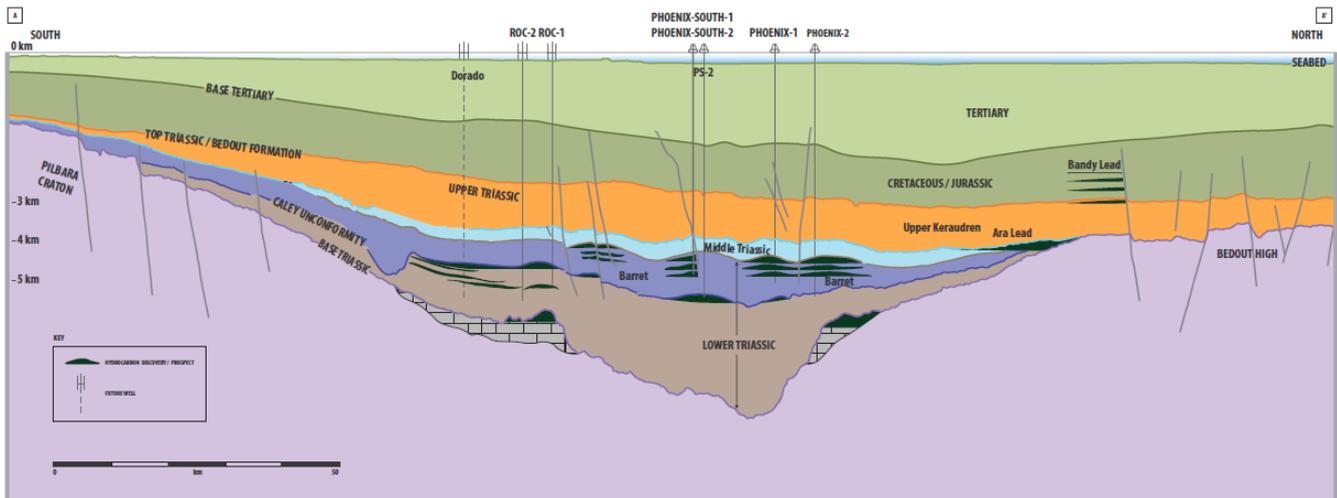


Illustration of the prospects and wells in the greater Phoenix area.

WA-521-P

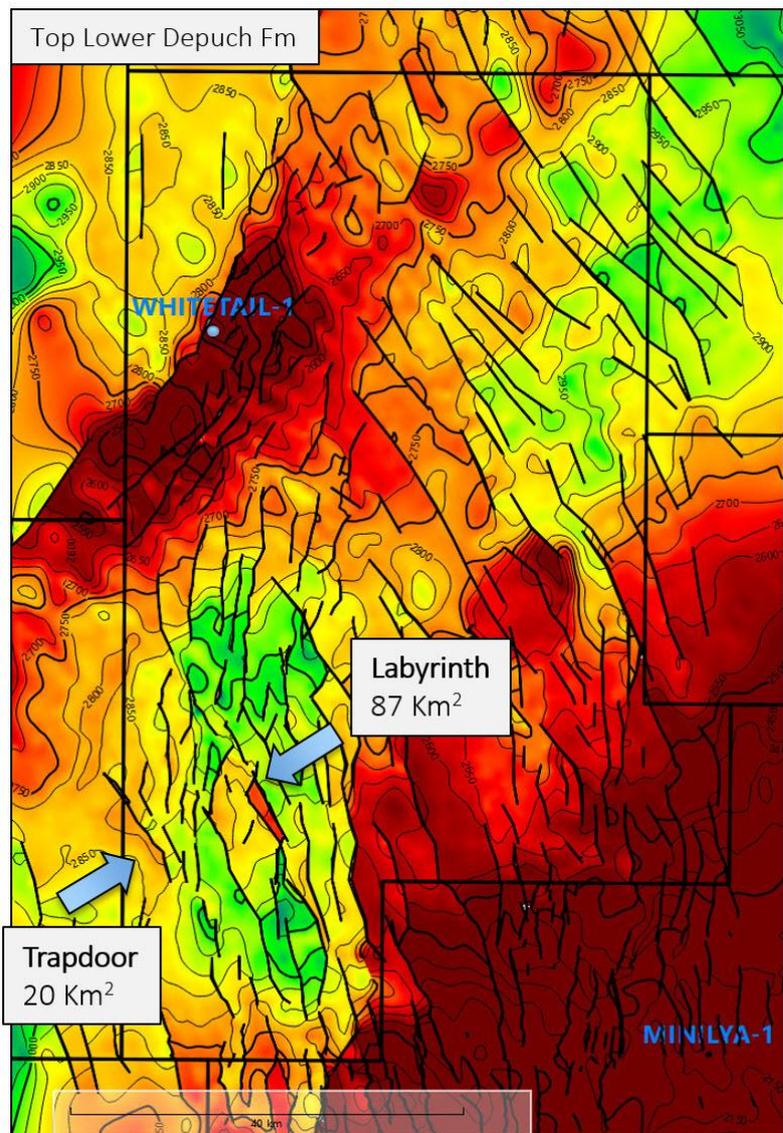
(Carnarvon 100% and operator)

WA-521-P is located in the Roebuck Basin and positioned immediately adjacent to the Phoenix/Roc acreage on the North West Shelf.

For the past five years Carnarvon has been technically evaluating the potential of the Lower Triassic petroleum system that Carnarvon believes lies along the entire length of the North West Shelf. The discovery of hydrocarbons (oil, condensate and gas) at the Phoenix South-1, Roc-1, Roc-2 and Phoenix South-2 wells in this Lower Triassic stratigraphy validates this theory.

Preliminary technical work indicates that the Lower Triassic source rocks have potentially generated and trapped migrated oil and gas into the shallower overlying Jurassic sands, and our technical team has identified several target structures that are larger than those in the Phoenix South and Roc discovery areas. The structures identified include the Black House and Labyrinth prospects, which are attractive based on the information observed in the Phoenix and Roc wells. The team is also currently working on further prospects and will provide an update once this information is available.

Like the Phoenix area, prior to the Phoenix South and Roc discoveries, WA-521-P has seen very little exploration activity in the last decade and Carnarvon believes the area would benefit from modern exploration processes and technologies together with the new geological information that has arisen from the Phoenix South and Roc discoveries.



Map of the Labyrinth and Trapdoor prospects and the previously drilled Whitetail-1 well in WA-521-P.



Outtrim East - WA-155-P(1)

(Carnarvon 28.5%, Quadrant Energy is the Operator)

Following on from the Outtrim East-1 oil discovery, the joint venture continued to test and evaluate the core recovered from the well during the quarter. The objective of the Outtrim East-1 well is to target oil to form the hub of an oil aggregation play using the same principles as the Harriet Joint Venture.

The core comprised a total of 91 metres cut through the reservoir section of the well. The core evaluation is critical to determine the size and quality of the net reservoir and estimate the in place and recoverable volumes of oil in the Outtrim and Outtrim East structures.

A number of months of laboratory work are necessary before the Company will be in a position to report on these final results. Following this the Company and the Operator will discuss the next steps forward for the joint venture.

Cerberus Blocks

EP-490, EP-491, EP-475 and TP/27

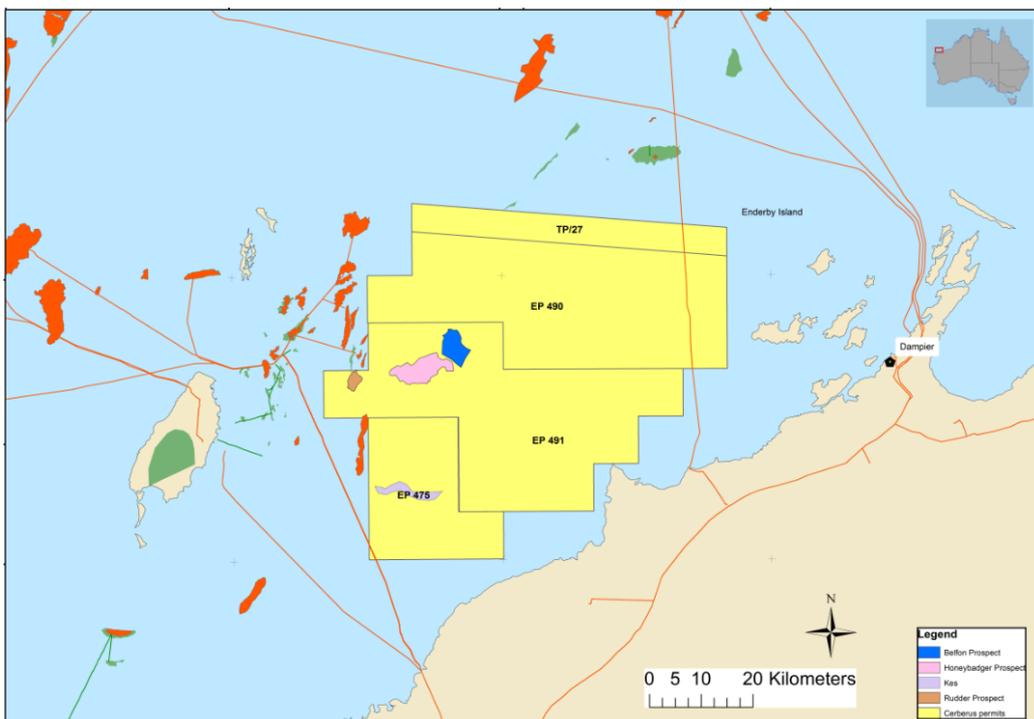
(Carnarvon 100% and operator)

Carnarvon has identified a number material oil prospects in these permits. These prospects are associated with Lower Triassic source rocks that have been identified in nearby wells through extensive geochemistry, petrophysics and biostratigraphic studies. The Triassic source rocks are analogous to proven oil-prone source rocks at Phoenix, Roc and the Perth Basin. These Triassic sourced targets are in addition to the more traditional oil plays across the area, which are primarily sourced from the Jurassic and Cretaceous aged sediments, for example the nearby Stag, Wandoo and Harriet oil fields.

In particular, the Belfon (Upper Permian) and Honeybadger (Early Triassic) prospects are estimated to contain significant volumes of recoverable oil. Detailed analysis is ongoing to refine these prospect volume estimates and further updates are planned to provide shareholders with this information in due course. These prospects (Honeybadger and Belfon) have been de-risked following the results of Roc-1. Five conventional Jurassic prospects also exist (1,000-1,500 metre target depths) with a further set of Cretaceous, shallow (circa 500 metres target depth) oil prospects, which could be volumetrically large, in the context of North West Shelf oil prospects and are the focus of the current stage of geological studies.

The investment case in this area is particularly attractive because of the combination of very sizeable targets and low exploration costs. The shallow water depths (approximately 50m) and shallow oil target depths (500m - 3,000m) means drilling and development costs are expected to be low relative to normal expectations in the North West Shelf. Multiple development options are available due to the shallow depths, proximity to shore and existing production infrastructure.

The Company is looking to progress its exploration plans with a partner with the intention of drilling one or more prospects while retaining a significant equity interest in this project.



Location map of the Cerberus blocks with Belfon, Honeybadger, Kes and Rudder prospects

Buffalo Project – WA-523-P

(Carnarvon 100% and operator)

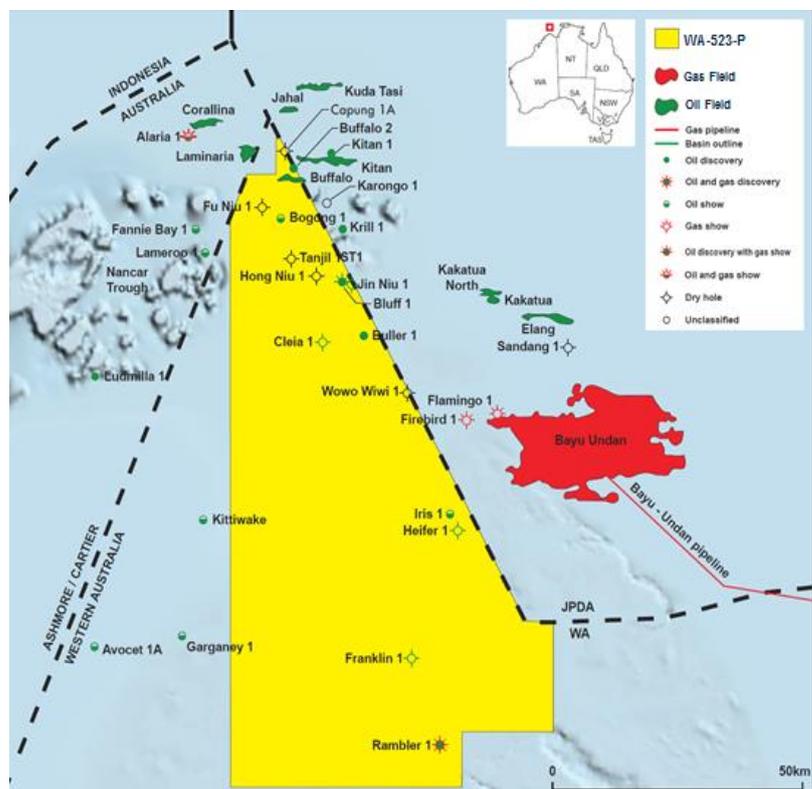
WA-523-P is surrounded by nearby oil and gas fields and pipelines. WA-523-P includes the Buffalo Oil Field and the undeveloped oil discoveries in the Bluff-1 and Buller-1 wells. The permit is also close to proven oilfields at Laminaria, Corallina, Kitan, Jahal, and Kuda Tasi that collectively contain approximately 280 mmbbl initially recoverable, all lying within 15 kilometres of WA-523-P. Further south, the giant Bayu-Undan gas/condensate field, and the Kakatua and Elang oil fields lie just 25-40km to the east of WA-523-P. In total, within a 40km radius of WA-523-P, these discovered fields are estimated to collectively contain about 730 million barrels of oil and 3.4 Tcf of gas.

WA-523-P includes the Buffalo Oil Field that produced around 20 million barrels of high quality oil and was flowing around 4,000 barrels of oil a day when operations ceased in 2004. Depending on oil price and remapping of the field, Buffalo may be a commercially attractive re-development opportunity in the future, perhaps for tie-back to nearby facilities.

In looking at historical drilling across the area, Carnarvon Petroleum observes that the absence of accurate seismic depth imaging of the target reservoirs has resulted in a very poor track record for well depths ‘coming in on prognosis’, even when they are drilled close to existing well control. This problem in getting the depth mapping right has resulted in major difficulty defining field development locations and prospects, describing volumes, reducing risk and justifying drilling. Carnarvon’s proposed new seismic imaging processes are intended to address these historical depth imaging challenges by using modern processes that the company has been testing on other permits in its portfolio.

In the past three years, advances in computing technology now enable very significant geophysical capabilities that were previously only theoretically possible. Of particular relevance to the seismic data in WA-523-P is the recent emergence of Full Waveform Inversion (FWI) as a working tool to provide the required higher resolution velocity field measurement for input to Pre-Stack Depth Migration (“PSDM”) and to provide the required improved depth imaging.

A key component of Carnarvon’s work program for WA-523-P is therefore application of FWI, and other modern processing technologies to the reprocessing of the existing 3D data to deliver greatly improved depth imaging. The improved data will enable detailed remapping, and facilitate work towards a drilling program.



Location map of the Buffalo project and nearby oil & gas fields

Maracas Project – WA-524-P

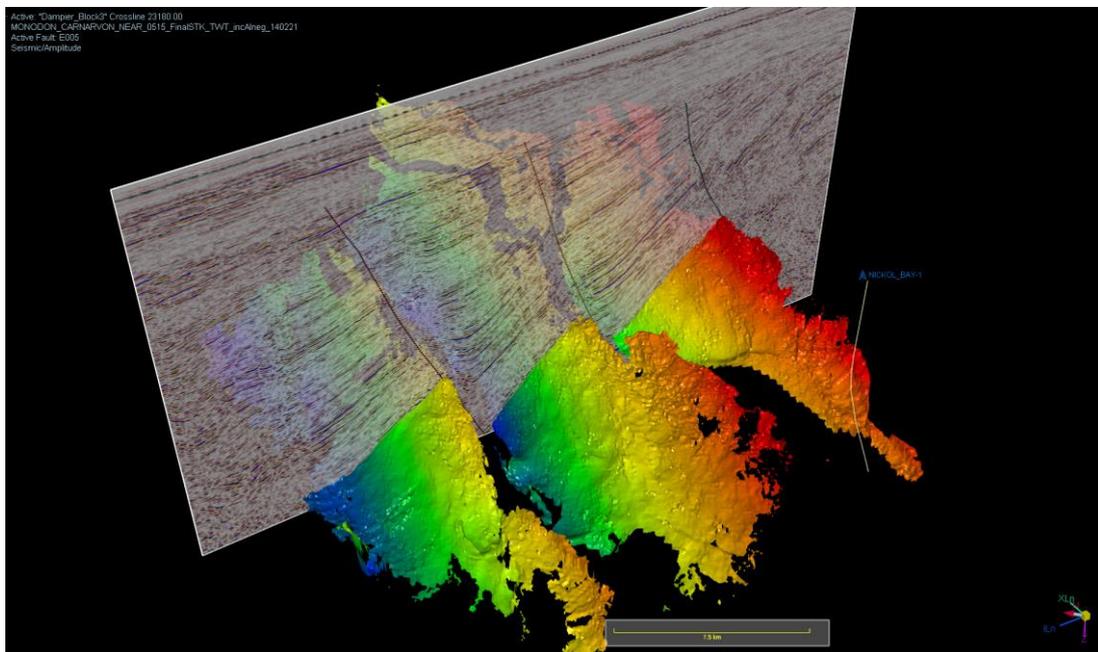
(Carnarvon 100% and operator)

WA-524-P is situated on the flanks of the Dampier Sub-Basin, an important part of the highly prospective Greater Carnarvon Basin, on Western Australia's North West Shelf. This large 1,210km² permit is located on the Enderby Terrace, which contains a number of untested yet attractive play types in a proven basin which includes the Stag, Wandoo and Legendre oil fields, plus the Reindeer gas field.

Carnarvon was attracted to the Permo-Triassic stratigraphy within the permit. The success of drilling the Early Triassic play types in the Roebuck Basin is well documented, and Carnarvon has identified through its regional technical work, the potential for a similar pre-Jurassic play on the flanks of the Dampier Barrow Sub-Basin.

Carnarvon has identified three potential leads within the block and aims to de-risk the elements of the play, with a number of geoscience work flows. This will include a regional source rock study and 3D seismic reprocessing with modern Full Wave Form Inversion (FWI) aimed at greatly improving the quality of the 3D seismic interpretation, which also act as a precursor to rock physics studies aimed at improving our confidence around the reservoir properties. These work flows allow Carnarvon to add significant value to the asset by undertaking a forward work program that has a modest financial obligation.

Carnarvon's technical team will also further investigate the potential of a secondary play system in the shallower Cretaceous stratigraphy, which has seen great success in the nearby Stag and Wandoo oil accumulations.



3D interpretation of the top reservoir section, highlighting the large throw of the fault blocks in WA-524-P which host each of the three leads



Corporate / Financial

The Company's cash holdings at the end of the quarter were \$59.9 million, compared to \$65.1 million at the end of the previous quarter.

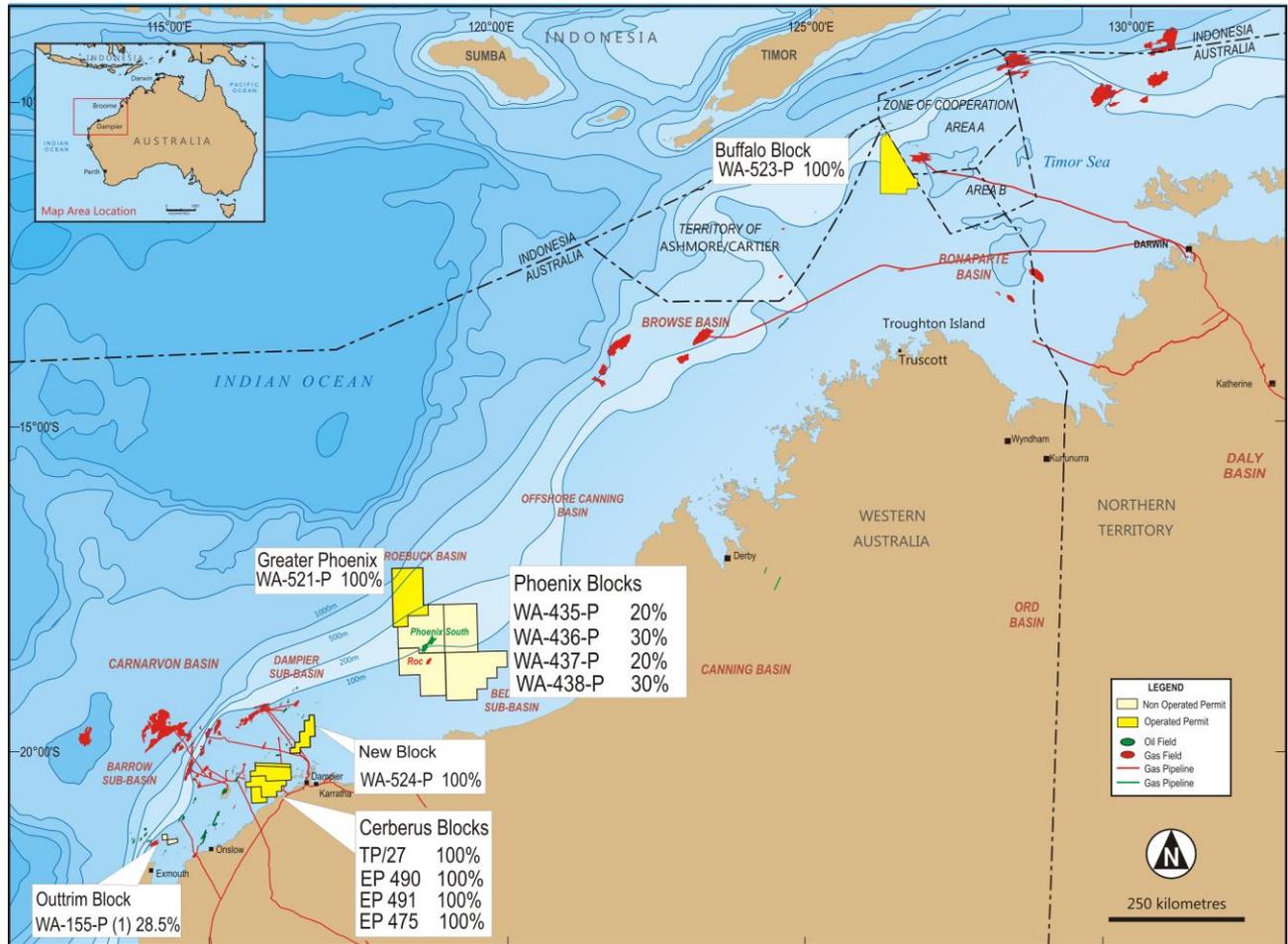
The Company's United States Dollar holdings were US\$42.7 million with the balance being Australian Dollars. The retention of predominantly US dollars demonstrates the sensitivity of Carnarvon's reported cash holdings to the AUD / USD exchange rate. Carnarvon retains the majority of its cash in USD as a natural hedge to likely future expenditures expected to be denominated in USD.

A strengthening of the Australian Dollar relative to the United States Dollar during the quarter resulted in a foreign exchange translation gain to the Company's reportable cash holdings of A\$3.3 million.

During the quarter A\$7.8 million was spent on exploration activities in the North West Shelf which includes Phoenix South-2, Roc-2 and Outtrim East-1 drilling costs. In addition to this \$0.7 million was spent on business development and corporate costs.

Project Table

Project	Permit(s)	Operator	Interest held	Interest Acquired during quarter
Greater Phoenix	WA-435-P	Quadrant Energy	20%	-
Greater Phoenix	WA-436-P	Quadrant Energy	30%	-
Greater Phoenix	WA-437-P	Quadrant Energy	20%	-
Greater Phoenix	WA-438-P	Quadrant Energy	30%	-
Greater Phoenix	WA-521-P	Carnarvon Petroleum	100%	-
Buffalo	WA-523-P	Carnarvon Petroleum	100%	-
Maracas	WA-524-P	Carnarvon Petroleum	100%	-
Outtrim East	WA-155-P(1)	Quadrant Energy	28.5%	-
Cerberus	EP-490	Carnarvon Petroleum	100%	-
Cerberus	EP-491	Carnarvon Petroleum	100%	-
Cerberus	EP-475	Carnarvon Petroleum	100%	-
Cerberus	TP/27	Carnarvon Petroleum	100%	-



Carnarvon Petroleum permit map

Abbreviations

Bopd	Barrels of oil per day
Bwpd	Barrels of water per day
Bbls	Barrels of oil
OWC	Oil water contact
CVN	Carnarvon Petroleum Limited
JV	Joint Venture
Km	Kilometres
Km2	Square kilometres
m	Millions
Qtr	Quarter
Q/Q	Quarter on Quarter
Tcf	Trillion cubic feet (gas)
2D	Two dimension seismic data
MC2D	Multi-client 2D – seismic data acquired for multiple parties that require licensing
3D	Three dimensional seismic data
MC3D	Multi-client 3D – seismic data acquired for multiple parties that require licensing
US\$	United States of America dollar

About Carnarvon Petroleum

Carnarvon Petroleum Limited (Carnarvon) is a Perth based company listed on the Australian Securities Exchange (ASX: CVN). The Company's principal activity is oil and gas exploration.

Carnarvon's objective is to create material returns on its shareholder's investments, through delivering profitable and sustainable growth from the development, exploitation and commercialisation of oil and gas assets.

Carnarvon is focused on oil & gas exploration in the world-class province of the North West Shelf area off the coast of Western Australia.

For Further Information please contact:

Shareholder Enquiries:

Mr Thomson Naude
 Company Secretary
 Phone: (+618) 9321 2665
 Email: investor.relations@cvn.com.au

Media Enquiries:

Mr Tony Dawe
 Professional Public Relations
 Phone: (+618) 9388 0944
 Email: 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 14 November 2016 (Reference: CVN ASX releases of 14 November 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.