



CARNARVON
PETROLEUM LTD

Q4

Quarterly Report
30 June 2016



Quarter Highlights:

- Commenced drilling the Outtrim East-1 exploration well in June 2016
- Outtrim East-1 oil discovery announced in July 2016
- Roc-2 drilling preparation was completed and drilling commenced in July 2016
- Awarded WA-523-P with multiple oil and gas fields in and around the permit
- A\$87.7 million held in cash plus future receivable up to US\$31.3 million and A\$8m well carry

Managing Director's Comments

During the quarter, we announced our third consecutive hydrocarbon discovery on the North West Shelf at the Outtrim East-1 well and the Company continued to take advantage of current industry conditions by acquiring new acreage positions at low investment costs and participating in multiple drilling campaigns.

The addition of quality acreage, such as WA-523-P and WA-521-P, into our portfolio is positive for the future of the company. Nearer term, we see significant upside potential in the active drilling campaign underway at Roc -2 and in reporting the Outtrim East-1 well core results later in the year.

The Outtrim East-1 well was exploring for oil in an area of known hydrocarbons, with the greatest unknown prior to drilling being the amount of reservoir in place. The primary objective of the well was to acquire core across the reservoir section within the oil column. This objective was successfully achieved with some 91 metres of core recovered. Over the next few months the core will be analysed to determine the amount of net reservoir, the thickness of the interpreted oil column and the nature of the rock in terms of its porosity and permeability. From the above, we will assess the estimated recoverable oil from this structure. In addition to securing the core section, the well confirmed the presence of oil in this area which bodes well for future activity.

The Roc-2 well commenced drilling in July 2016, with its objective being to appraise a volume of gas and condensate above the minimum economic field size. If successful the result will be an important step towards commercialization in the area. Coring, logging and testing the expected gas and condensate column will take approximately 100 days.

During the quarter we announced the acquisition of exploration permit, WA-523-P. What is exciting about this permit, apart from the exploration qualities that will be unearthed through the technical program, are the known discoveries that already exist in the permit and the significant oil fields that exist or existed in and around the permit. These clearly demonstrate the presence of a working petroleum system in the permit. Carnarvon has initiated seismic reprocessing work for this project that entails applying the latest in seismic reprocessing methodologies made possible through significant advances in computing power in recent times. This first stage of technical work is expected to take around twelve months to complete and if successful will uncover significant new oil plays in this permit.

In terms of resources, the Company has a very strong management and board of capable North West Shelf experts, a technical database that is building toward being one of the best in class and a strong financial position. Carnarvon's large number of exciting exploration permits, active drilling campaign and sufficient funds to finance our forward work programs places it in an enviable position of being one of the most active oil and gas exploration companies in Australia.

Adrian Cook
Managing Director

Roc Gas and Condensate

(Carnarvon 20%, Quadrant Energy is the Operator)

In January 2016, gas and condensate were discovered while drilling the Roc-1 well. This was the second well drilled by the current joint venture, both of which have been successful in discovering hydrocarbons. These discoveries complement the Phoenix-1 and Phoenix-2 hydrocarbon discoveries made some 30 years previously. Post-well analysis indicated the Roc-1 well intersected the edge of the large Roc structure.

The first tranche of sidewall core analysis from Roc-1 shows permeability of the reservoir is up to 500mD, with Carnarvon's interpreted average being approximately 130mD. This is significantly better than the permeability required to achieve commercial flow rates.

Preliminary technical work indicates that the gas and condensate can be brought to surface and will be confirmed by a flow test in the Roc-2 well. The forthcoming Roc-2 well will target the interpreted crest of the Roc structure, thereby testing the extent of the contingent and prospective resources. A successful result would not only clarify the current contingent resource but also enable the re-categorisation of the prospective resource into contingent resource. These prospective resources are classified as low risk with a geological chance of success of 80%.

The Roc structure contains the following resource estimates *:

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

Note: Totals have been estimated using probabilistic methodology and Carnarvon has a 20% equity interest in these resources

If Roc-2 encounters the 2C and mid / best case estimates of gas and condensate, it is likely that the Roc resource will be commercial and well advanced in terms of being re-categorised as reserves.

At the base of the Roc-1 well, promising hydrocarbon shows were encountered in an additional sandstone section, named the Milne sandstone. The Roc-2 well is being planned to test the extent of these deeper hydrocarbons encountered at the TD of Roc-1.

The Roc-2 well commenced drilling in July 2016.

For more information on the Roc discovery and resource estimates, refer to the ASX announcement made on 17 March 2016.

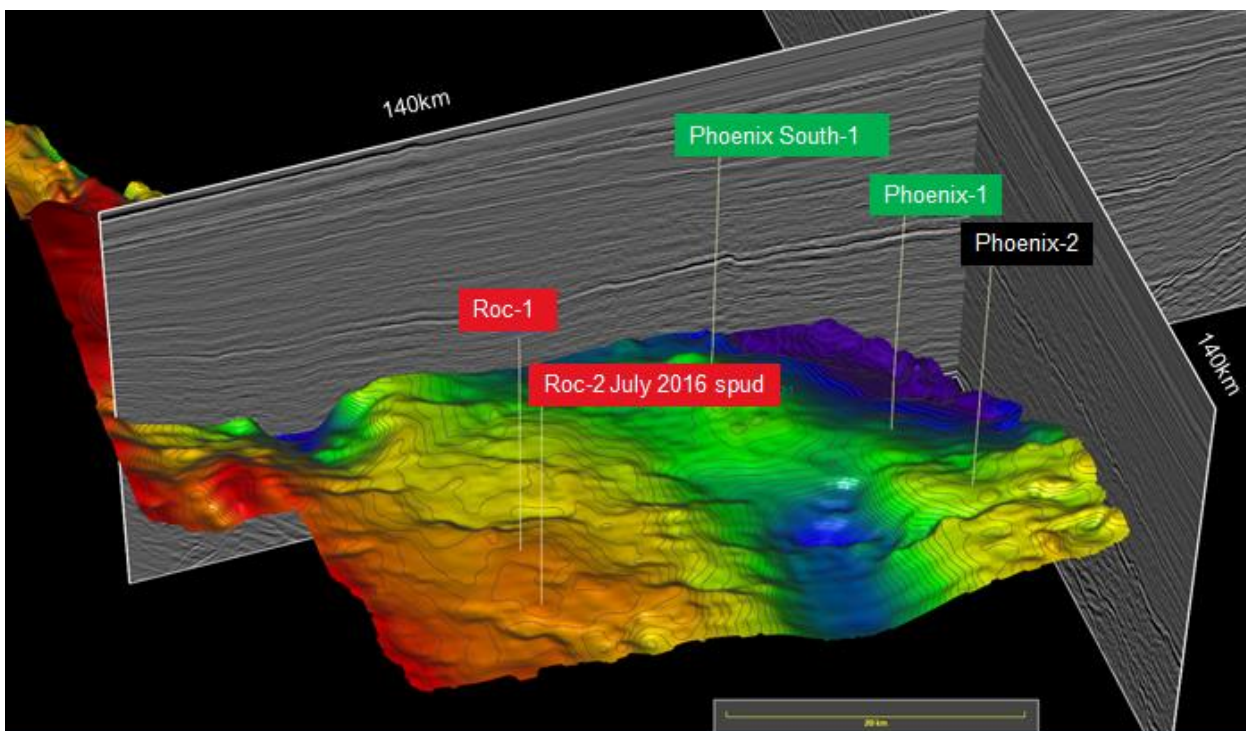
Phoenix South Light Oil

(Carnarvon 20%, Quadrant Energy is the Operator)

Light oil was discovered in the Phoenix South-1 well in the second half of 2014. The discovery excited the industry and importantly changed its perception of the Bedout sub-basin.

The discovery opened up the prospectivity of this largely underexplored basin, demonstrating the first new play concept in the North West Shelf since the prolific Exmouth sub-basin some 20 years previously. This is the first time an oil discovery has been made in Lower Triassic aged sediments on the North West Shelf.

DeGolyer and MacNaughton were engaged by Carnarvon to provide an independent assessment of volumes in the area. They assessed the mid case estimate of recoverable oil at Phoenix South to be 19 million barrels, with upside potential of up to 55 million barrels of recoverable oil*. This Phoenix South oil is of a similar quality to the Roc condensate and could be tied in and produced within a common development infrastructure. For more information on the Phoenix South discovery and resource estimates, refer to the ASX announcement made on 7 April 2014.



Well location image within the Greater Phoenix Area. New seismic is being licensed and interpreted south of Roc-1 and Roc-2 where new leads have been identified

Exploration – Greater Phoenix Area

Given the success at Phoenix South and Roc has established the existence of an excellent petroleum system in the region, the joint venture has been focussing on the follow up potential in the region. A number of exciting leads have already been identified and these will be made public shortly following the completion of final technical evaluation.

The first 3D in the area was the Phoenix MC3D covered an area of approximately 1,100 km² or approximately 5% of Carnarvon's total permit holding of 22,000 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 two new leads to the south of the Roc discovery.

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).

WA-521-P

(Carnarvon 100% and operator)

Carnarvon was awarded offshore exploration permit, WA-521-P, 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 NWS. The discovery of hydrocarbons (oil, condensate and gas) at the Phoenix South-1 and Roc-1 wells in this Lower Triassic stratigraphy validates this theory and provided the justification for securing WA-521-P.

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 significantly larger than the Phoenix South and Roc discovery areas.

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.

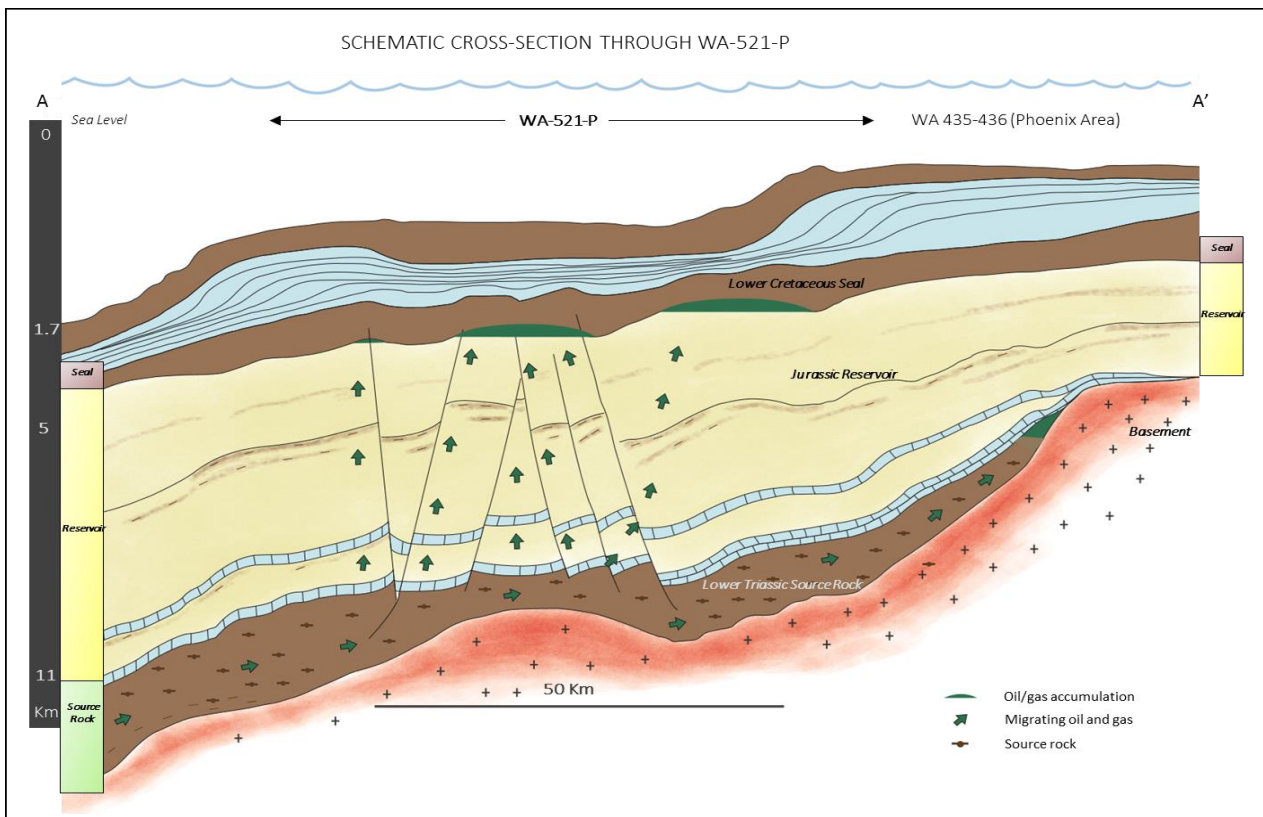


Illustration of oil & gas migrating from the the Lower Triassic source rock which was discovered in the Phoenix South-1 and Roc-1 wells

Outtrim East - WA-155-P(1)

(Carnarvon 28.5%, Quadrant Energy is the Operator)

During the quarter the joint venture commencing drilling the Outtrim East-1 well. The objective of the well was to target oil to form the hub of an oil aggregation play using the same principles as the Harriet Joint Venture.

Outtrim East-1 was completed in July 2016 and was declared an oil discovery.

The well was drilled down to final depth of 1,441 metres and a total of 91 metres of core was cut through the reservoir section with virtually 100% of the core being recovered to surface. The core is currently being evaluated in laboratories in Perth.

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.

Cerberus Blocks

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

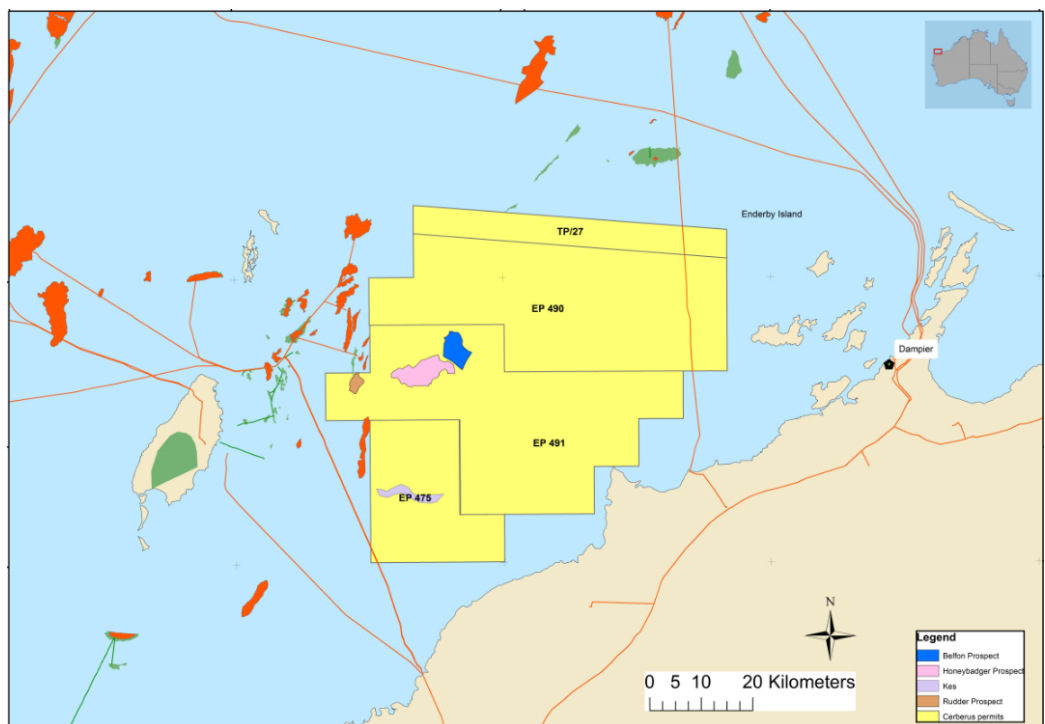
(Carnarvon 100% and operator)

Carnarvon has identified a number of new material oil prospects in these permits. These prospects are associated with Lower Triassic source rocks that have been identified in nearby wells through recently completed 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 meter 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)

During the quarter Carnarvon acquired WA-523-P through the Government gazettal process.

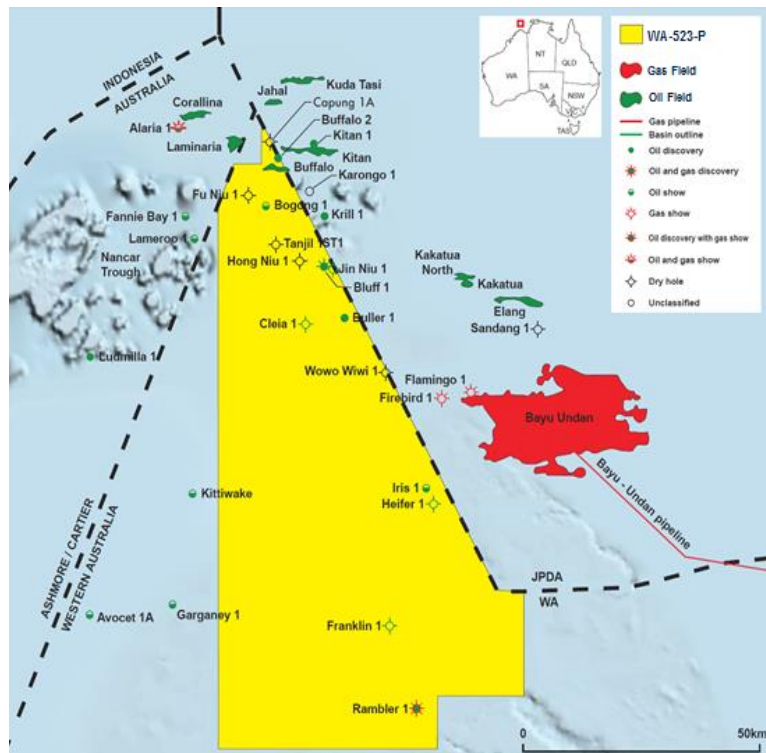
WA-523-P is surrounded by nearby oil and gas fields and pipelines. WA-523-P includes the Buffalo Oil Field and the undeveloped oil discoveries in the Bluff-1 and Buller-1 wells. The permit is also close to proven oilfields at Laminaria, Corallina, Kitan, Jahal, and Kuda Tasi that collectively contain 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

Corporate / Financial

The Company's cash holdings at the end of the quarter were \$87.7 million, compared to \$95.5 million at the end of the previous quarter.

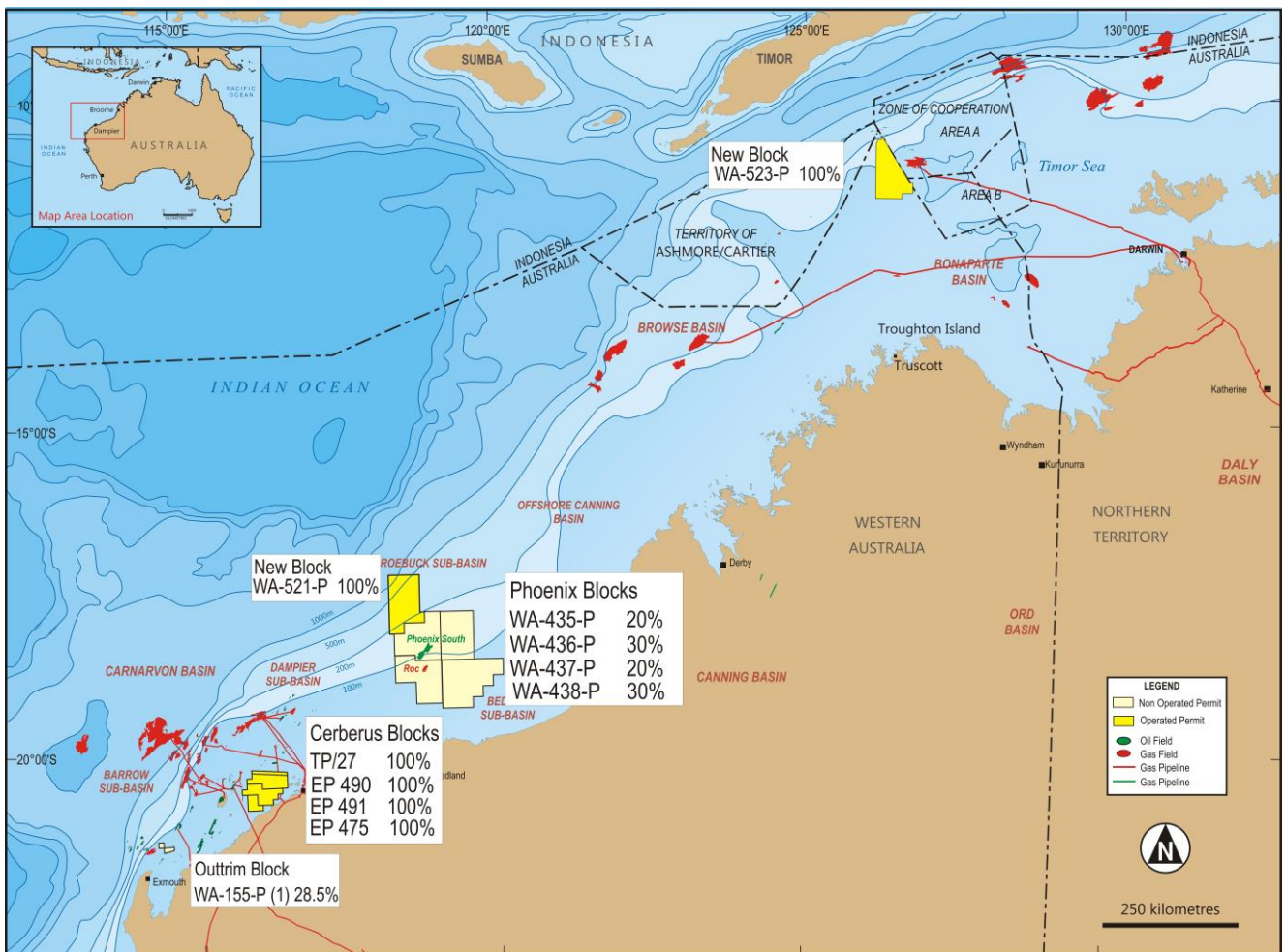
At the end of the quarter, the Company's United States Dollar holdings were US\$61.5 million with the balance being Australian Dollars. The retention of predominantly US dollars demonstrates the sensitivity of Carnarvon's reported cash holdings to the AUD / USD exchange rate. Carnarvon retains the majority of its cash in USD as a natural hedge to likely future expenditures expected to be denominated in USD.

A weakening of the Australian Dollar relative to the United States Dollar during the quarter results in a benefit to the Company's reportable cash holdings by A\$2.4 million.

During the quarter \$9.6 million was spent on exploration activities in the North West Shelf which includes Outtrim East-1 and Roc-2 drilling costs. In addition to this \$0.6 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%	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.

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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 7 April 2015 and 17 March 2016 (Reference: CVN ASX releases of 7 April 2015 and 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.