

# Quarterly Activities Report

29 October 2010



September 2010 QUARTER

ASX: CVN

## Company Overview

Carnarvon is an oil and gas exploration and production company with onshore and offshore interests in the South East Asian and Australasian regions.

## Capital Details

	<u>30 September</u>	<u>30 June</u>
Share price (as at)	\$0.435	\$0.345
Market capitalisation	\$299m	\$237m
Net cash / (debt)	\$22.1m	\$31.2m

## SUMMARY POINTS

### THAILAND L33/43, L44/43 and SW1A

- ✓ Production
  - Sales volume for the Quarter averaged 6,645 bopd gross (2,658 bopd net to CVN). This is a 17% increase over the previous Quarter.
  - Three wells drilled during the Quarter were put on production under 90 day production test while a further two were shut-in waiting on grant of production licence.
  - Production licenses anticipated to be awarded for an area around the L33-1 and L33-2 wells during the December 2010 Quarter and WBExt wells for the March 2011 Quarter.
- Exploration and Appraisal
  - New oil pools discovered during the Quarter at L33-1, L33-2 and WBExt-1 (WBV1 volcanic).
  - New oil pool discovered with the WBExt-1A well in the WBV-2 volcanic.
  - Upside appraisal of the producing F-sand to follow record production rates achieved at WBExt-1B in the sandstone of 550 bopd gross.

### THAILAND L20/50

- ✓ Well planning is well advanced, however site construction delayed due to heavy monsoonal rains.
- ✓ Drilling is anticipated to commence early 2011.

### AUSTRALIA

- ✓ Successful farmout of WA-399-P, within the Carnarvon Basin offshore WA, to Apache completed during the Quarter.
- ✓ Planning for acquisition of 3D seismic on WA-399-P has commenced.
- ✓ Acquisition of 3D seismic data on the Phoenix blocks in Western Australia is expected to commence in the December 2010 Quarter.

### NEW ZEALAND

- ✓ Tuatara-1 well drilled during the Quarter with good oil and gas shows.

## OIL PRODUCTION AND REVENUE

Carnarvon's oil sales revenue for the September 2010 Quarter was A\$17.69 million, with an average price of A\$72 per barrel.

Oil sales and revenues net to Carnarvon for the past two Quarters are as follows:

	Sept 10 Quarter	Jun 10 Quarter	Qrtly % Changes	Comments
Net sales revenue - (A\$000)	17, 697	16,153	10%	Increased revenue from increased sales volume
Net sales volumes - (bbls)	244, 577	209,171	17%	Increased sales volume from recent success at WBExt
Average sale price achieved - (A\$/bbl)	72.36	77.23	-6%	
Net average daily volume - (bopd)	2,658	2,299	16%	

Of six wells drilled and completed during the Quarter, three wells were put on long term production test at rates between 500 and 5,000 bopd gross. A further two wells in the L33/43 concession tested successfully at combined rates 3,500 bopd gross, however these wells are currently shut-in awaiting the granting of a production licence.

Details of the results of these wells can be found later in this Quarterly report.

A production license application has been submitted to the Department of Mineral Fuels ("DMF") for the area around the L33-1 and L33-2 wells. Until a production license is approved by the DMF, historically 90 days from the date of the application submission, no production may currently be sold from wells in Concession L33/43 since a point of sale as established by a production license does not exist within the concession. The wells will remain shut-in until the production licence is granted, which is expected early in 2011 based on previous applications.

Planned development wells in the BRN production license will be delayed several months due to the success at the L33-1 and WBEXT-1 wells, and the requirement to better delineate the reservoirs around WBExt in order to optimise production license ("PL") area applications in future.

## DRILLING AND EXPLORATION

### L33/43, L44/43 and SW1A Onshore Thailand (Carnarvon 40% and non-operator)

#### Wells drilled and/or completed during Quarter:

Well	Permit	Status
L33-1	L33/43	Tested at 1,100 BOPD - shut-in pending PL approval
WBEXT-1	L44/43	Tested at 3,500 BOPD - on 90 day test
L33-2	L33/43	Tested at 2,370 BOPD - shut-in pending PL approval
WBEXT-1A	L44/43	Tested at 5,300 BOPD - on 90 day test
WBEXT-1B	L44/43	Tested at 550 BOPD in F sandstone
WBEXT-2	L44/43	Flowing gas on test – to be deepened to target oil leg

#### Wells drilled and/or completed subsequent to Quarter:

Well	Permit	Status
WBEXT-2A & ST	L44/43	Sidetracking well
WBEXT-2 ST	L44/43	Deepening of well to test for oil leg to gas discovery

During the Quarter six wells were drilled and completed. One of these wells (WBEXT-2) has been re-entered to ascertain if an oil leg is associated with the gas flowing on test. Subsequent to Quarter end, an additional well is drilling in a sidetrack (WBEXT-2A) to determine the optimal test zone.

The **L33-1** exploration well was drilled vertically from a surface location in Concession L33/43 approximately 4.5 kilometres north of the Concession L44/43 - Concession L33/43 boundary. The well free flowed 35 degree API oil at an average gross rate of approximately 1,100 barrels of oil per day. The well was shut-in at the end of the clean up period. The L33-1 exploration well was targeting a structural closure at the WBV1 volcanic objective level. Prior to the drilling of this well, production had yet to be established from Concession L33/43. Test volumes from the L33/43 Concession cannot be trucked and sold until a Production License and point of sale have been established, which is not anticipated until early 2011.

The **WBEXT-1** exploration well free flowed 35 degree API oil through tubing at an initial gross rate of over 2,500 barrels per day from what is interpreted to be the same WBV1 volcanic reservoir. The WBEXT-1 well was drilled from a surface pad located 2.5 kilometres northeast of the nearest Wichian Buri field producing well at POE-1, and 6.7 kilometres south of the L33-1 oil discovery well. A 90 day test was approved by the DMF on 9 August 2010, and the well flowed at average rates of around 3,500 BOPD gross with no water. Note that under the terms of the production test this well is expected to be shut-in on 9 November 2010 until such time as a PL has been approved covering the area including this well. At this stage a PL is anticipated sometime late first Quarter 2011.

## DRILLING AND EXPLORATION

The **L33-2** appraisal well was drilled from a surface location approximately 1.8 kilometres south of L33-1 and targeted the same WBV1 volcanic reservoir. The L33-2 well has tested on free flow, 38 degree API crude oil at an average rate of approximately 2,370 BOPD gross. Similar to L33-1 well above, test volumes from the L33/43 Concession cannot be trucked and sold until a Production License and point of sale have been established, which is not anticipated until early 2011.

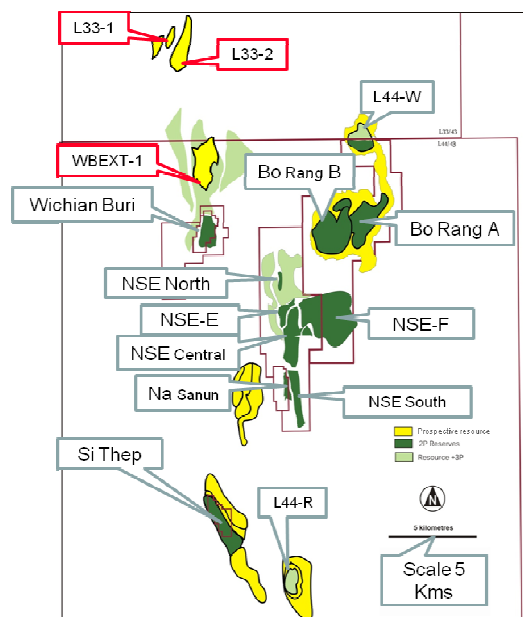
The **WBEXT-1A** well, during a clean-up flow, achieved rates averaging 5,300 BOPD from a lower volcanic designated the WBV2 volcanic. The well was flowed during clean-up operations over a 62 hour period and achieved new record rates for an onshore well in Thailand. Approval from the DMF of a 90 day production test was granted on 22 August and the well was placed on test at various rates.

The **WBEXT-1B** well has been completed in the "F" sandstone at a depth of around 570 metres TVD and tested initially at a rate of 550 BOPD, with associated water cut of less than 2%. This is a significant result from a relatively shallow well that is several kilometres from the nearest other sandstone production wells at the Wichian Buri Field. WBEXT-1B also confirmed oil within the WBV1 volcanic at a distance of over half a kilometre from the producing WBEXT-1 well, albeit close to the oil water contact. This confirms an interpreted 73 metre oil column over an aerially extensive area.

The **WBEXT-2** appraisal well initially tested gas at rates of approximately 1.5 to 3.0 million cubic feet per day from the WBV2 volcanic flowing oil at WBEXT-1A. The well entered the top of the WBV2 target volcanic at a true vertical depth ("TVD") of 971 metres approximately 52 metres high to the top of the WBV2 zone encountered at WBEXT-1A well. Oil was observed in the drilling mud suggesting the base of the open hole volcanic reservoir section of this well may be in close proximity the gas/oil contact. The well was flowed at high gas rates but influx of oil into the wellbore was not observed. Currently the well is being deepened and the upper section of open hole volcanic reservoir, from which gas has been flowed, will be isolated.

The **WBEXT-2A** exploration well, drilled from the same surface pad as the WBEXT-2 well, was targeting the WBV3 volcanic target which had not been drilled previously. The WBV3 volcanic target is interpreted on 3D seismic to be present approximately 180 metres below the WBV2 volcanic zone. Results from drilling have been inconclusive and the well will be sidetracked to find better potential reservoir.

Current operations are centred on the WBEXT-2 well pad, where the drilling rig is undergoing simultaneous operations on both the WBEXT-2 and WBEXT-2A wells.



## DRILLING AND EXPLORATION

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During the December 2010 Quarter, the Joint Venture plans to drill six to eight wells across the following locations:

Locations	Permit	Well Type
L33-1	L33/43	2 - 4 wells – Exploration and appraisal wells around L33-1 discovery
Wichian Buri (WBExt)	L44/43	2 - 4 wells – Appraisal of WBEXT-1 volcanic
Bo Rang “A”	L44/43	1 well - development of Bo Rang “A”
Bo Rang “B”	L44/43	1 well - development of Bo Rang “B”

\* Final well numbers, locations and order of drilling are subject to ongoing Joint Venture discussion and Thai Department of Mineral Fuels approvals.

For the September 2010 Quarter the Joint Venture drilled and completed six wells. The current rig operations are working efficiently, however the average drilling time per well has increased to approximately fifteen days from rig on location to rig off due to dealing with high flow rate wells and recompletions. Well costs, including drilling and completing for production are in the order of US\$1.2 million dollars for each well (\$0.48 million dollars net to Carnarvon).

For the December 2010 Quarter, the Joint Venture is anticipating to drill six to eight wells in the L44/43 and L33/43 exploration licenses.

Better than anticipated well test results of up to 5,300 BOPD has resulted in a new focus area centred on the L33-1,2 and WBExt discoveries. This success has resulted in a delay to further development within the BRN production license. Further appraisal drilling in the **Bo Rang “A” and “B”** fields is anticipated to be scheduled for 2011, as is further exploration drilling elsewhere in the L44/43 and L33/43 concessions.

## EXPLORATION BLOCKS – THAILAND

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### (a) L33/43 Concession – Thailand

(Carnarvon Petroleum 40%, Pan Orient 60% and Operator)

The **L33-1** exploration well was the third well to be drilled on Block L33/43 by Operator Pan Orient. The well is located about 5 km north of the Wichian Buri oilfield. As detailed above, the L33-1 exploration well free flowed 35 degree API oil at an average rate of approximately 1,100 barrels of oil per day gross from a volcanic target WBV1 below the Wichian Buri sandstone reservoirs. This is the first commercial production test in the L33/43 Concession. A production license is anticipated to be granted in early 2011 at which time the two shut-in wells L33-1 and L33-2 will be flowed and oil sold at prices comparable to L44/43 crude.

## EXPLORATION BLOCKS – THAILAND

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### (b) L20/50 Concession – Thailand

(Carnarvon Petroleum 50% and Operator, Sun Resources 50%)

The Joint Venture is planning to drill one to three wells across the following locations commencing early 2011.

Locations	Permit	Well Type
Tapao Kaew-1	L20/50	Buttress play exploration well – targeting mean recoverable of 21 MMbbls.
Krai Thong-1	L20/50	Fan play exploration well – targeting mean recoverable of 37MMbbls.
Chalawan-1	L20/50	Flank play exploration well – targeting mean recoverable of 32 MMbbls.

Work has been progressing on plans for a drilling campaign onshore Thailand in this block to the west of the L44/43 and L33/43 concessions. Carnarvon, as Operator, has advanced plans for preparing three drilling sites. Recent heavy rains in Thailand have unfortunately restricted access to well sites and as a result work on preparing roads and well pad construction has been delayed. It is anticipated that rains will ease shortly, and allowing for draining of surface water, site pad construction should re-commence around the middle of November 2010. As a result, it is anticipated that spudding of the first well may be delayed until January 2011, although planning is still targeting a December 2010 spud date with drilling extending into early 2011. At this stage the Joint Venture has agreed to one commitment well but work is continuing on preparing for a further two contingent wells to be drilled. The Environmental Impact Assessment (EIA) for the three most promising targets was approved by the government during the Quarter.

### (c) L52/50 & L53/50 Concession Applications - Thailand

(Carnarvon Petroleum 50%, Pearl Energy 50% and Operator)

Work has commenced on these blocks that were officially granted in February of this year. The work program for this year is limited to surface geological surface mapping and gravitational data acquisition. A detailed review of existing data has revealed several promising sub-basins and has resulted in the Joint Venture examining options for an extensive 2D seismic acquisition program for 2011.

## EXPLORATION BLOCKS – AUSTRALIA

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### (a) WA-435-P, WA-436-P, WA-437-P and WA-438-P – Australia Offshore NW Shelf

(Carnarvon Petroleum 50%, FINDER Exploration 50% and Operator)

The Operator has compiled all available data and completed a technical review of the regional geology, petroleum systems and plays, time and depth mapping and lead identification. Aeromagnetic data acquisition is complete (total area flown was 15,856 sq km) with processing finalised and first pass interpretation complete. The acquisition of 2D seismic data (well tie lines) and 3D seismic data (1,100 sq km) was scheduled to begin mid-August, however operational issues with the vessel (associated with another Operator's work program) has delayed the commencement of this program until later this year. Once the interpretation of the seismic surveys is complete, Carnarvon intends to farm out a portion of its interests for a financial carry through an exploration drilling programme yet to be defined. Drilling will commence as soon as possible after this farm-out.

## EXPLORATION BLOCKS – AUSTRALIA

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### **(b) WA-443-P– Australia Offshore NW Shelf (Carnarvon Petroleum 100% and Operator)**

No previous drilling has taken place in the WA-443-P block. One large Middle Triassic prospect has been interpreted which is a faulted anticlinal closure. The structural form and size of the prospect are comparable to the adjacent Phoenix group of potentially large gas accumulations. Carnarvon secured this new permit with a firm programme over three years to reprocess and interpret 1,400 km of 2D seismic. Geological and geophysical studies will also be carried out in conjunction with similar work in the Phoenix permits.

### **(c) WA-399-P – Australia Offshore NW Shelf**

**(Carnarvon Petroleum 13%, Apache Energy Limited 60% and Operator, Jacka Resources 15% and Rialto Energy 12%)**

As previously announced, Carnarvon and the previous Joint Venture partner in the WA-399-P exploration permit, Rialto Energy Limited (ASX:RIA) (“Rialto”) completed a farm-out to Apache Energy Limited (“Apache”) and Jacka Resources Limited (ASX:JKA) (“Jacka”) during the quarter.

The farm-out to Apache comprises Apache undertaking, at its sole cost, a 3D seismic survey, which will fulfil the Year 2 and 3 work program obligations for the permit, in consideration for which Apache will acquire a 60% working interest in the permit and Operatorship.

Apache have commenced planning for the acquisition of the 3D seismic data however seismic vessel availability delays are being experienced. The 3D seismic data acquisition will exceed the existing minimum exploration commitment obligation under the exploration permit’s terms and will enable the Joint Venture to further de-risk a number of existing prospects that have already been mapped within the permit.

## EXPLORATION BLOCKS – NEW ZEALAND

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**(Carnarvon Petroleum 10%, AWE 60% and Operator, ROC 20% and Kea Petroleum 10%)**

### **Wells drilled and/or completed during quarter:**

<b>Locations</b>	<b>Permit</b>	<b>Well Type</b>
Tuatara-1	PEP38524	Exploration well – P & A.

The Tuatara-1 well drilled during the Quarter was targeting approximately 80 to 100 MMBBL of gross potential recoverable oil reserves. The well was located in 50 metres of water, around 15 kilometres offshore to the north of New Zealand’s South Island.

The well was drilled to a total measured depth of 1,911 metres, during which gas shows were observed throughout a significant part of the well and minor oil shows were intermittently reported over the interval 1,790 – 1,850 metres. Wireline logs were run, but no zones of economic potential were identified.

## EXPLORATION BLOCKS – INDONESIA

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### (a) Rangkas PSC – Onshore Indonesia

(Carnarvon Petroleum 25%, Tap Oil 24%, Lundin Petroleum 51% and Operator)

The Rangkas Block covers an area of 3,977 km<sup>2</sup> and is located onshore west Java, southwest of Jakarta. Previous exploration seismic and drilling in the block, along with the presence of surface oil seeps, indicates the presence of an active petroleum system.

During the Quarter the seismic acquisition contractor commenced field operations with the construction of field, staging and base camps, explosives bunkers, water storage pits and road works. Seismic acquisition commenced in October 2010 and is anticipated to be complete by year end.

## CORPORATE ACTIVITIES

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### Cash Balance

Carnarvon's consolidated cash balance at Quarter end was A\$22.1 million, compared to A\$31.2 million at the end of the previous Quarter. These balances include cash held as security in relation to bank guarantees and minimum cash holding requirements by Thailand authorities. As at 30 September 2010 cash held as security in relation to bank guarantees and minimum cash holding requirements by Thailand authorities was \$1.4m.

The reduction in the cash balance during the Quarter was primarily due to the payment of half year income tax instalments in Thailand by the POE Joint Venture, payment of the Tuatara-1 well costs in New Zealand, payments for seismic activities in Australia and Indonesia and an unrealised foreign exchange translation loss arising on Carnarvon's US dollar cash holdings.

### Social Activities

Thailand experienced heavy rains during the Quarter resulting in extensive flooding and regrettably loss of life, threatening the health of a substantial number of Thai people. Carnarvon Petroleum, along with other oil and gas Operators in Thailand, joined forces with the Ministry of Energy to organise food parcels to be sent to stranded homeowners in several districts.





## CORPORATE ACTIVITIES

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### Top 20 Shareholders

As of 27 Oct 2010

Rank	Name	Units	% of Units
1.	J P MORGAN NOMINEES AUSTRALIA LIMITED	57,018,218	8.30
2.	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	43,971,391	6.40
3.	NATIONAL NOMINEES LIMITED	38,633,776	5.63
4.	JP MORGAN NOMINEES AUSTRALIA LIMITED <CASH INCOME A/C>	13,894,999	2.02
5.	MR EDWARD PATRICK JACOBSON	12,917,903	1.88
6.	CITICORP NOMINEES PTY LIMITED	12,185,435	1.77
7.	MACQUARIE BANK LIMITED <METALS & ENERGY CAP DIV A/C>	11,294,046	1.64
8.	PENDOMER INVESTMENTS PTY LTD <LAW SETTLEMENTS FUND A/C>	8,400,000	1.22
9.	JACOBSON GEOPHYSICAL SERVICES PTY LTD	8,000,000	1.16
10.	MR PETER JAMES LEONHARDT	7,700,000	1.12
11.	AMP LIFE LIMITED	7,275,948	1.06
12.	ARNE INVESTMENTS PTY LTD	6,710,493	0.98
13.	GEOLYN PTY LTD	6,000,000	0.87
14.	MR EDWARD PATRICK JACOBSON	6,000,000	0.87
15.	ATHOL STEEL PTY LTD	5,600,000	0.82
16.	MR GREGORY JOHN MUNYARD + MRS MARIA ANN MUNYARD + MISS CARMEN HELENE MUNYARD <RIVIERA SUPER FUND A/C>	5,590,000	0.81
17.	COGENT NOMINEES PTY LIMITED	4,274,092	0.62
18.	SEAWELL SUPER PTY LTD <SEAWELL S/F A/C>	4,120,000	0.60
19.	NEFCO NOMINEES PTY LTD	4,056,260	0.59
20.	ARNE INVESTMENTS PTY LTD	3,991,906	0.58
<b>Totals: Top 20 holders of ORDINARY SHARES (GROUPED)</b>		<b>267,634,467</b>	<b>38.97</b>
<b>Total Remaining Holders Balance</b>		<b>419,125,167</b>	<b>61.03</b>