# **Quarterly Activities Report**

29 July 2010



#### JUNE 2010 QUARTER

### **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.

#### ASX: CVN

Capital Details			
	30 June	31 March	
Share price (as at)	\$0.345	\$0.485	
Market capitalisation	\$237m	\$333m	
Net cash / (debt)	\$31.2m	\$35.2m(*)	
(*) Refer note in "Cornorate Activities" section			

#### **SUMMARY POINTS**

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

#### ✓ Production

- Sales for the quarter averaged 5,748 bopd gross (2,299 bopd net to CVN)
- Sales were tracking below the trajectory required to achieve the joint venture's 2010 target average of 9,000 bopd gross but the WBExt-1 discovery and follow up appraisal wells has the potential to change this (refer below)
- 5 production wells were drilled during the June 2010 quarter and, notwithstanding positive drilling operations, the wells did not achieve projected production levels
- Further development drilling around Bo Rang may be undertaken after appraisal drilling of the recent L33-1 and WBExt-1 discoveries

#### ✓ Appraisal

- Appraisal drilling in the NSE-F1 and Bo Rang "B" areas extended reserve boundaries beyond 1P envelopes
- Wichian Buri Field sandstone appraisal well (WBEXT-1) intersected a volcanic reservoir and tested up to 2,500 bopd – oil is currently stored pending DMF approval of 90 day test

#### ✓ Exploration

- The L33-1 commitment exploration well resulted in a new discovery in July 2010 with test results of around 1,100 bopd being achieved
- Further appraisal drilling is planned ahead of a production license application in this area

#### THAILAND L20/50

✓ Well planning is advancing and on schedule to drill in the December 2010 quarter

#### **AUSTRALIA**

- ✓ Successful farmout of WA-399P to Apache was achieved in July 2010
- ✓ Acquisition of seismic data is expected to commence in the September 2010 quarter on the Phoenix blocks in Western Australia
- ✓ Carnarvon was awarded a new permit WA-443-P during the June 2010 quarter

#### **NEW ZEALAND**

✓ CVN acquired a 10% interest in PEP 38524 with 80-100mmbbl target spudded 29 July 2010

#### **OIL PRODUCTION AND REVENUE**

Carnarvon's oil sales revenue for the June 2010 quarter was A\$16.15 million, with an average price of A\$77 per barrel.

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

	Jun 10 Quarter	Mar 10 Quarter	Qrtly % Changes	Comments
Net sales revenue - (A\$000)	16,153	17,435	-7%	Higher oil prices offset lower sales volumes
Net sales volumes - (bbls)	209,171	228,934	-9%	Recent development wells did not achieve targeted rates
Average sale price achieved - (A\$/bbl)	77.23	76.16	+1%	
Net average daily volume - (bopd)	2,299	2,544	-9%	

A total of seven new wells have been drilled in the Bo Rang North (BRN) production license over the course of the quarter which have resulted in extending the envelope for potential oil reserves but have not added significantly to oil production rates. Details of the results of these wells can be found later in this quarterly report.

Subsequent to quarter end, successful drilling at the L33-1 (1,100 bopd gross) and WBEXT-1 (2,500 bopd gross) have resulted in increased production capability, however as detailed below the sales of oil from these reservoirs are deferred until approval of appropriate Testing and Production Licenses.

Drilling rates have improved with the rig currently drilling around 3 wells per month. However, the anticipated 400 bopd (gross) increase per well has not eventuated with the result that current sales rates are in the order of 5,000 bopd gross (2,000 bopd net to Carnarvon), not including the L33-1 and WBExt-1 potential. Production additions from drilling over the quarter have totalled only around 500-600 bopd, offset by natural declines from wells drilled before the June 2010 quarter.

The Bo Rang and NSE-F1 license drilling results outlined below were mainly due to the result of higher risk early stage appraisal wells seeking to test the limits of the NSE-F1 and Bo Rang "B" oil accumulations whilst still seeking production outcomes. Well bore complications were also experienced during the quarter, with one well sufferring a well bore collapse and a further well with wellbore cuttings potentially clogging the well. While targetting production, these initial wells were also drilled to determine oil water contacts and the extent of the oil accumulation for better planning of the next phase of development wells.

Planned development wells in the BRN production license are expected to be delayed several months due to the success at L33-1 and WBEXT-1, and the requirement to better deliniate the reservoirs with appraisal drilling around those wells in order to expedite production license applications.

#### **OIL PRODUCTION AND REVENUE**

The intent is to appraise the L33-1 discovery with the L33-2 well (currently drilling) and immediately prepare and submit a production license (PL) application to the Thailand Department of Mineral Fuels (DMF) upon the completion of the testing of the L33-2 well. Until a production license (PL) is approved by the DMF, historically 90 days from the date of the application submission, no production may be sold since this discovery represents the first oil production in Concession L33 and a point of sale PL does not exist within the concession. Additional appraisal wells will be required to determine the extent of the L33-1 accumulation. It is anticipated that L33-1 oil will be able to be sold late in the current calendar year.

Testing of the WBEXT-1 will continue until the surface storage tanks (approximate capacity 20,000 bbls) are full at which time the well will be temporarily shut-in pending approval by the DMF of a 90 day production test. This is anticipated in early June, and at which point the oil may be trucked to the refinery and sold. At the completion of the 90 day test, and prior to the granting of a Production License, the well will be required to be shut-in. While the 90 day production test is underway, additional appraisal wells are planned and will form the basis of a PL application that will likely be submitted to the DMF before the end of the September Quarter. Historically, these PL application approvals have taken approximately 90 days from submission to approval. Additional appraisal wells will be required to determine the extent of the WBEXT-1 accumulation at the volcanic reservoir level.

Following the results from the September 2010 quarter drilling, management will be in a better position to assess the 2010 production and sales guidance.

#### **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	
NSE-H3RD-ST1	L44/43	Tested at 10 bopd plus significant gas / currently 39 bopd	
NSE-B3	L44/43	Unstabilised testing at 100 bopd / currently 27 bopd	
L44W-A15	L44/43	Pilot hole – sidetracked for production	
L44W-A15-ST1	L44/43	Oil production well – tested 200 bopd / currently 34 bopd	
L44W-A15-2	L44/43	Oil production well – tested 200 bopd / currently 330 bopd	
NSE-F2	L44/43	Pilot hole – tested 20 bopd / currently 45 bopd	
L44W-A14	L44/43	Testing ongoing – sub commercial to date	
NSE-F3	L44/43	Tested significant gas and minimal liquids	
NSE-F4	L44/43	Tested with minimal in flow – workover candidate	

#### **DRILLING AND EXPLORATION**

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

Well	Permit	Status
L33-1	L33/43	New discovery in the L33 concession tested at up to 1,100 bopd – currently shut-in waiting on PL.
WBEXT-1	L44/43	New discovery in the volcanic section tested up to 2,500 bopd.
L33-2	L33/43	Appraisal well to the L33-1 new field discovery – drilling ahead.

**NSE-H3RD-ST1**, an infill development well targeting volcanic reservoirs within the NSE Central field, encountered well bore problems during initial drilling and took 18 days longer than initially planned due to the hole continually packing off (collapsing due to the highly fractured overlying shales). The well was completed but subsequently collapsed around the reservoir level. Using a workover rig, the well was deepened to open up an additional 10 metres of potential volcanic reservoir. The well was placed back on production approximately at the end of June and at that time was flowing gas at approximately 0.73 million cubic feet per day with 10 barrels of oil and 45 barrels of completion brine per day. The well will continue to be tested until it stabilizes.

**NSE-B3**, an infill horizontal development well targeting the main volcanic reservoir within the NSE Central field, was brought on-line at unstablised rates of between 90 to 150 bopd (gross). Recently the well started producing higher amounts of formation water and oil rates are constrained to between 20 to 50 bopd (gross).

The **L44W-A15** pilot hole was drilled vertically to determine the thickness of the main Bo Rang "B" volcanic reservoir at this eastern flank location. The well penetrated approximately 60 meters of volcanic reservoir, which is significantly thicker than the 24 meters encountered in the central and western portion of the field. In addition to the main Bo Rang "B" volcanic zone, two volcanic intervals of approximately 25 meters and 10 meters thick were encountered between the depths of 335 to 390 meters. These zones appear to be gas bearing based on elevated mud gas readings observed while drilling and they exhibit good reservoir characteristics on logs. A future well will target these volcanic intervals in a down dip position looking for a possible oil leg.

**L44W-A15-2**, a deviated appraisal well located approximately 1.1 kilometres east of the BR-3 and BR-4D1 surface location, was completed into the Bo Rang "B" volcanic target. The well has been on production for approximately five weeks and is currently flowing at a rate of 330 bopd gross (132 bopd net) after initially producing at approximately 500 bopd gross.

**L44W-A15ST1**, a step out horizontal appraisal well drilled as a sidetrack to the L44W-A15 was targeting a location approximately 500 metres south of the L44W-15-2 well. The well encountered the Bo Rang "B" volcanic target and has been on production for approximately six weeks. It is believed the unexpected low rates relative to the deviated L44W-A15-2 well above, may be due to drill cuttings lodged in the fracture system behind the perforated liner that was used in the completion.

#### DRILLING AND EXPLORATION

**L44W-A14**, a step out appraisal well located approximately 1.1 kilometres east of the L44W-A15 surface location was drilled to test the areal extent of the Bo Rang "B" field assigned as possible reserves in the December 31, 2009 reserve report ("3P"). The main Bo Rang "B" volcanic reservoir was encountered. The well is planned to be tested over three intervals, of which the bottom two have been completed. Test #1 over the base of the volcanic interval resulted in the recovery of approximately 1 barrel of oil and 63 barrels of water (mainly brine) before the well reached pump off due to a lack of permeability. Test #2 over the uppermost 18 metres of the target volcanic produced 1 barrel of oil and 38 barrels of brine before pumping off due to low permeability. Test #3 has recently commenced with perforations over a nine metre thick volcanic that was encountered above the main Bo Rang "B" volcanic.

**NSE-F2** was a vertical well drilled from a surface location approximately 1.2 kilometres north east of the NSE-F1 discovery well surface location. The top of the target volcanic zone was encountered and testing of an open hole interval resulted in the recovery of 18 bopd of oil (gross) with 172 barrels of water. The well confirms a field areal extent much greater than the 1P envelope, but with an oil water contact most likely 79 metres higher than the 2P oil water contact estimate.

**NSE-F3** was a deviated appraisal well approximately 1.6 kilometres south east of NSE-F2 described above. The main volcanic objective was encountered however testing resulted in the recovery of only approximately 0.6 million cubic feet of gas per day with no liquids.

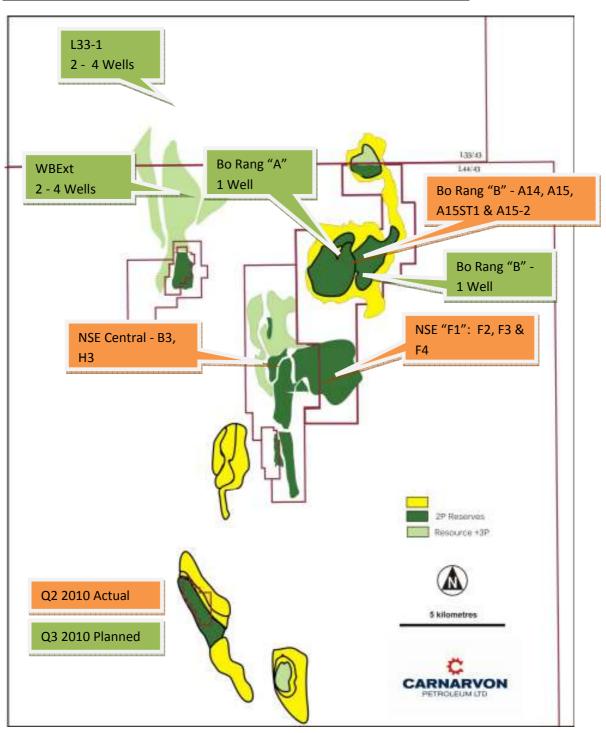
**NSE-F4** is a deviated development well drilled from the NSE-F2 surface pad targeting the main volcanic reservoir objective approximately 120 metres south of the original NSE-F2 well and approximately 35 metres structurally higher. Testing has resulted in minimal well inflow of fluids. This well is a candidate for a workover to increase flow rates.

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. The well was shut-in at the end of the initial 108 hour test period. The L33-1 exploration well was drilled vertically from a surface location in Concession L33 approximately 4.5 kilometres north of the Concession L44 / Concession L33 boundary targeting a structural closure with an estimated maximum areal extent of approximately 9.7 square kilometres at the volcanic objective level. Prior to the drilling of this well, production had yet to be established from Concession L33. Test volumes from the L33 Concession cannot be trucked and sold until a Production License and point of sale have been established, which is not anticipated until the end of 2010.

The **WBEXT-1** exploration well free flowed 35 degree API oil through tubing at a rate of over 2,500 barrels per day gross from a volcanic reservoir. Testing will continue until the surface storage tanks are full at which time the well will be temporarily shut-in pending approval by the DMF of a 90 day production test, which is anticipated in early June. 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. The targets of this exploration well were the proven oil bearing zones of the Wichian Buri F and G sandstone reservoirs, and an underlying volcanic target. The sandstone reservoirs were encountered as anticipated and are interpreted to be oil bearing, but were not tested with this well and likely to be the subject of further appraisal.

The **L33-2** appraisal well is currently drilling from a surface location approximately 1.8 kilometres south of L33-1 and is targeting the same L33-1 volcanic reservoir within the 9.8 square kilometres estimated maximum areal extent structural closure.

June 2010 Quarter Actual Wells and September 2010 Quarter Planned Wells



#### DRILLING AND EXPLORATION

During the September 2010 quarter, the Joint Venture is planning to drill eight to nine 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"

<sup>\*</sup> Final well numbers, locations and order of drilling are subject to ongoing Joint Venture discussion and Thai Department of Mineral Fuels Approvals.

For the June 2010 quarter the Joint Venture drilled and completed nine wells. The current rig operations are working efficiently with the average drilling time per well reduced to approximately ten days from rig on location to rig off. Well costs, including drilling and completing for production are approximately US\$0.8 to \$1.1 million dollars (\$0.32 to \$0.44 million dollars net to Carnarvon).

For the September quarter the Joint Venture is anticipating to drill eight to nine wells in the L44/43 and L33/43 exploration licenses.

Full scale development within the BRN production license may continue in the next quarter in the **Bo** Rang "A" and "B" fields depending upon results of appraisal drilling of the recent discoveries. Further development drilling is anticipated in the fourth quarter of 2010, dependent on well results.

#### **EXPLORATION BLOCKS – THAILAND**

#### (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. The L33-1 well feature is a three way dip closed structure, fault bounded to the west. The main objective of the well was to evaluate the potential of the Wichian Buri Group sands, currently productive further south at the Wichian Buri field. 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 secondary target below the Wichian Buri sands. This is the first commercial oil production test in the L33 Concession.

#### **EXPLORATION BLOCKS – THAILAND**

#### (b) L20/50 Concession – Thailand (Carnarvon Petroleum 50% and Operator, Sun Resources 50%)

Work has been progressing on plans for a drilling campaign onshore Thailand in this Carnarvon operated block to the west of the L44 and L33 blocks. The Environmental Impact Assessment (EIA) for the three most promising targets has been submitted to the government on schedule. Drill sites have been identified and landowners have signed leases to allow drilling. Well design and rig selection are well advanced. Bids have been received and are being reviewed for long lead items. All is on schedule for a drilling campaign to commence late 2010.

## (c) L52/50 & L53/50 Concession Applications - Thailand (Carnarvon Petroleum 50%, Pearl Energy 50% and Operator)

The Joint Venture plans to start work on the blocks shortly, and envisages geological surface mapping and shallow geophysical data acquisition being undertaken in the first year ahead of detailed 2D seismic acquisition in the second year.

#### **EXPLORATION BLOCKS - AUSTRALIA**

## (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 and interpretation ongoing. The acquisition of 2D (well tie lines) and 3D seismic data (1,100 sq km) is scheduled to begin mid-August.

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.

#### (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 has 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.

#### **EXPLORATION BLOCKS – AUSTRALIA**

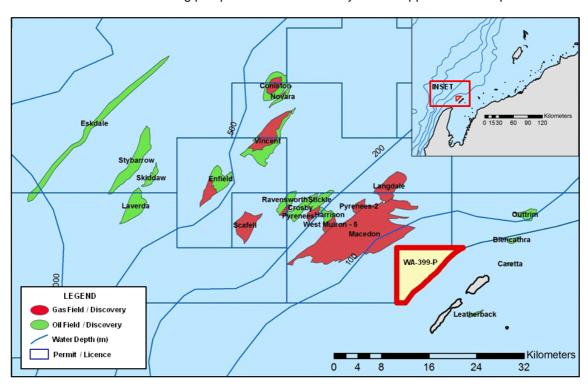
#### (c) WA-399-P - Australia Offshore NW Shelf

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

Carnarvon and the previous joint venture partner in the WA-399-P exploration permit Rialto Energy Limited (ASX:RIA) ("Rialto") announced a farm out to Apache Energy Limited ("Apache") and Jacka Resources Limited (ASX:JKA) ("Jacka") subsequent to quarter end.

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 and in consideration for which Apache will acquire a 60% working interest in the permit and operatorship.

Apache plan to acquire the 3D seismic data over the permit in late 2010. The 3D seismic data acquisition exceeds the existing minimum exploration commitment obligation under the exploration permit's terms. The advanced acquisition and processing of the new 3D seismic data will enable the Joint Venture to further de-risk a number of existing prospects that have already been mapped within the permit.



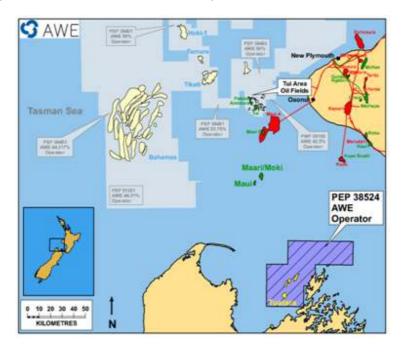
Immediately following the farm out to Apache, Rialto and Jacka completed their previously announced farm out and Carnarvon and Jacka exchanged a 7% working interest in consideration for Jacka making a cash payment to Carnarvon.

The farmout to Apache and Jacka allows the introduction of a strong joint venture partner and operator in Apache, facilitates acquisition of 3D seismic data at no cost to Carnarvon and rationalises Carnarvon's cash commitments.

## **EXPLORATION BLOCKS – NEW ZEALAND**

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

Subsequent to quarter end, Carnarvon announced that Carnarvon (NZ) Pty Limited, a wholly owned subsidiary of Carnarvon Petroleum Ltd, had farmed into PEP38524, offshore Taranaki Basin in New Zealand. Carnarvon will contribute towards the cost of the Tuatara-1 exploration well to earn a 10% participating equity interest from AWE New Zealand Pty Ltd.



The Tuatara-1 well, which spudded on 29 July, will target approximately 80 to 100 MMBBL of potential recoverable oil reserves. The well, which is planned to be drilled to a depth of approximately 2,000 metres, will be located in 50 metres of water, around 15 kilometres offshore to the north of New Zealand's South Island. The Tuatara prospect is interpreted to contain Moki sandstone reservoirs typical of a Taranaki Basin-style structural trap. Seismic expression over the structure is similar to the Maari oil field, the largest crude oil field in New Zealand, which is located 80 kilometres to the northwest of Tuatara-1. In particular encouraging seismic amplitudes over the structure are interpreted to represent possible migration of hydrocarbons into the trap.

Tuatara is interpreted to be a quality prospect that is well defined on seismic. If successful it would add significantly to Carnarvon's current oil reserves.

## **EXPLORATION BLOCKS - INDONESIA**

# (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.

#### **EXPLORATION BLOCKS – INDONESIA**

Recent reviews of the block, including seismic reprocessing, resulted in Carnarvon and its Joint Venture partners concluding that the previous wells were not valid tests of the prospectivity and that there is significant untested potential, including previously unrecognised deep targets analogous to proven production in adjacent blocks. A number of leads have been identified on the existing 2D seismic data and these will be the target of a 474 km seismic survey to be acquired in the second half of 2010.



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. During July the community liaison program continued and line surveying commenced. Seismic acquisition is expected to commence in mid-August and continue until late October.

#### **CORPORATE ACTIVITIES**

#### **Cash Balance**

Carnarvon's consolidated cash balance at quarter end was A\$31.2 million, compared to A\$35.2 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. Cash reported in the March 2010 quarterly report of \$34.4m excluded cash held as security over bank guarantees. As at 30 June 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 June 2010 quarter was primarily due to the payment of annual taxes in Thailand by the POE joint venture.

## **CORPORATE ACTIVITIES**

Cash balances are also affected by fluctuations in working capital, the impact of changes in foreign exchange rates and the timing of tax payments.

## **Top 20 Shareholders**



#### **CARNARVON PETROLEUM LTD**

#### ORDINARY SHARES As of 23 Jul 2010

#### **Top Holders Snapshot**

Rank	Name	Units	% of Units
1.	J P MORGAN NOMINEES AUSTRALIA LIMITED	55,073,971	8.02
2.	NATIONAL NOMINEES LIMITED	34,057,891	4.96
3.	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	33,012,527	4.81
4.	AMP LIFE LIMITED	20,486,432	2.98
5.	ANZ NOMINEES LIMITED <cash a="" c="" income=""></cash>	19,180,307	2.79
6.	MR EDWARD PATRICK JACOBSON	12,917,903	1.88
7.	MACQUARIE BANK LIMITED <metals &="" a="" c="" cap="" div="" energy=""></metals>	11,294,046	1.64
8.	CITICORP NOMINEES PTY LIMITED	11,064,128	1.61
9.	PENDOMER INVESTMENTS PTY LTD <law a="" c="" fund="" settlements=""></law>	8,400,000	1.22
10.	JACOBSON GEOPHYSICAL SERVICES PTY LTD	8,000,000	1.16
11.	MR PETER JAMES LEONHARDT	7,700,000	1.12
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.	MR GREGORY JOHN MUNYARD + MRS MARIA ANN MUNYARD + MISS CARMEN HELENE MUNYARD <riviera a="" c="" fund="" super=""></riviera>	5,750,000	0.84
16.	COGENT NOMINEES PTY LIMITED	5,471,898	0.80
17.	ATHOL STEEL PTY LTD	4,800,000	0.70
18.	ARNE INVESTMENTS PTY LTD	3,991,906	0.58
19.	COGENT NOMINEES PTY LIMITED <smp accounts=""></smp>	3,811,262	0.55
20.	MR NIGEL ROY GOLDTHORPE	3,510,432	0.51
	s: Top 20 holders of ORDINARY SHARES Remaining Holders Balance	267,233,196 419,526,438	38.91 61.09