## **Investor Update**

September 2010





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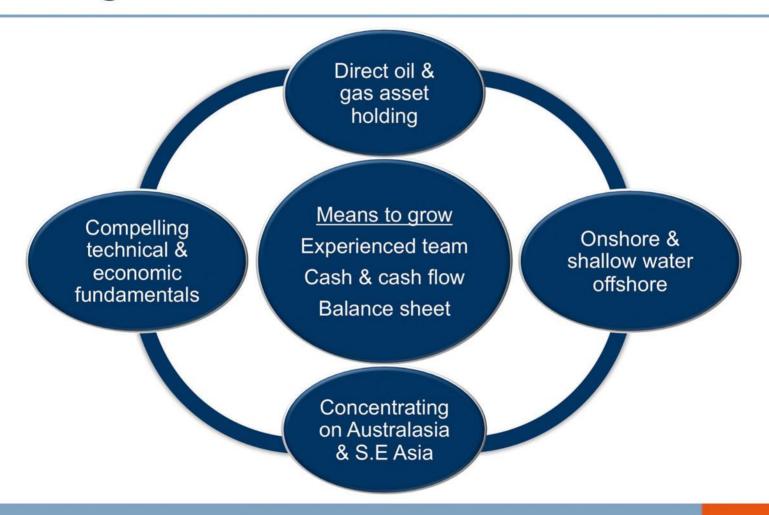
### **Introduction / Latest News**



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### **Strategic Position**





### **Current Asset Position**



Carnarvon's growth plans are focused on adding assets that create a quality portfolio

	Thailand	Australia	Indonesia	New Zealand
Exploration	6 onshore permits	5 offshore permits	1 onshore permit	1 offshore permit
Appraisal	3 onshore permits			
Production	6 onshore licences			

### **People**









**Edward (Ted) Jacobson** – Chief Executive Officer B.Sc (Hons) Geology Executive director Company founder, geologist, corporate strategy



Neil Fearis – Chairman of the Audit & Remuneration Committees LL.B (Hons), MAICD, F.Fin Independent non-executive director Commercial, legal, governance



William Foster
BE Chemical
Independent non-executive director
Technical, operations, commercial

### **Key Metrics** (as at August 2010)



Production (net) 3,000 bopd

Market capitalisation A\$275m

2P reserves (net) 24.5 mmbbls

3P reserves (net) 57.0 mmbbls

Reserve life 25 years

EV / 2P reserves A\$11.25 / bbl

EBIT / bbl produced A\$43.25 / bbl

NPAT / bbl produced A\$16.60 / bbl



### 1H, 2010 CY Highlights



- 48% reserves upgrade in L44/43 permit (Thailand)
- New discovery in volcanics at Wichian Buri produces >2,500 bopd from first well (Thailand)
- New discovery in L33/43 Concession to be appraised & developed under new production licence (Thailand)
- New venture Tuatara-1 well tested 80 – 100 mmbbl potential (New Zealand) with oil & gas shows but not commercial



### **Upcoming Activities**



- L33/43 (Thailand) drilling appraisal and development wells in Q4, 2010 & Q1, 2011
- Phoenix (Australia) seismic acquisition program Q3/Q4, 2010 with farmout program commencing Q2, 2011
- Rangkas PSC (Indonesia) seismic acquisition Q3/Q4, 2010
- L20/50 (Thailand) drilling one firm and two contingent exploration wells in Q4, 2010



## **Operations - Thailand**

## **Operations - Thailand**



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### L44 & SW1A Overview







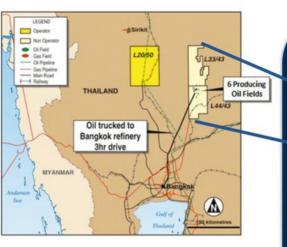




### L44 & SW1A Overview



High margin production with exploration upside



- Onshore close to quality infrastructure
- Opex & trucking ~US\$10.80/bbl
- Depreciation / amortisation ~US\$7.20/bbl (\*)

  (\*) Based on current accounting policy and estimates
- Production ~1.0 mmbbls p.a. net
- 2P reserves of 24.5 mmbbls net

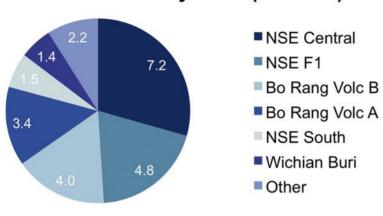


Carnarvon 40% POE Operator

### L44 & SW1A Field Overview



### 2P Reserves by Field (mmbbls)





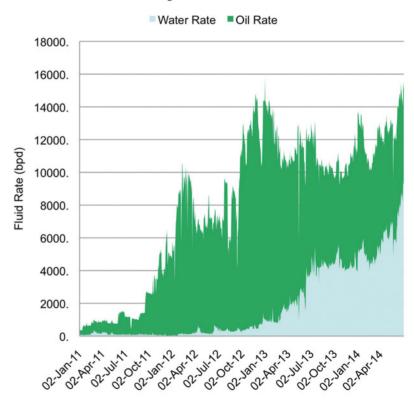
- Reserves spread across several oil fields - notably Bo Rang A & B, NSF-F1 & NSF Central
- Six production licences
  - 20 year life
  - optional 10 year extension period
- 38 producing wells currently in operation
- Gaffney Cline & Associates audit the reserves at December each year
- At 31 December 2009 Gaffney Cline & Associates estimated 2P reserves of 24.5 mmbbls net to CVN.

### L44 & SW1A Production Overview



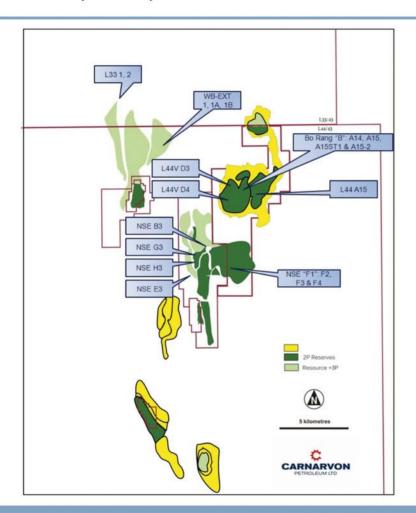
- Production predominantly from fractured reservoirs (differs from sandstone reservoirs, refer slides 17 & 18)
- · Production levels driven by:
  - number of wells on flush production in a given period;
  - number of production wells in a given period;
  - decline rates, which vary from well to well.
- Water cut is currently at a manageable 63%, within field capability

### **Daily Production**



### L44, 1H, 2010 CY Drilling Results







- 1H, 2010 CY wells tested 2P perimeters
- Drilling efficiently with ~3 wells per month being drilled
- New discoveries in L33/43 & WBEXT1 flowed strongly on test

### L44, 1H, 2010 CY Drilling Results



Well	Permit	Status
NSE-G3	L44/43	Suspended exploration well
L44V-D3	L44/43	On production at 650 bopd / currently 348 bopd
L44V-D4	L44/43	On production at 800 bopd / currently 834 bopd
NSE-E3-ST1	L44/43	Testing commenced at around 700 bopd / currently 318 bopd
NSE-H3RD-ST1	L44/43	Tested at 10 bopd plus significant gas / currently shut-in
NSE-B3	L44/43	Unstabilised testing at 100 bopd / currently 105 bopd
L44W-A15	L44/43	Pilot hole – sidetracked for production
L44W-A15-ST1	L44/43	Oil production well – tested 200 bopd / currently 37 bopd
L44W-A15-2	L44/43	Oil production well – tested 200 bopd / currently 257 bopd
NSE-F2	L44/43	Pilot hole – tested 20 bopd / currently 42 bopd
L44W-A14	L44/43	Sub commercial well
NSE-F3	L44/43	Tested significant gas and minimal liquids
NSE-F4	L44/43	Tested with minimal in flow – workover candidate
L33-1 *	L33/43	New discovery in the L33 concession tested at up to 1,100 bopd – currently shut-in waiting on production licence
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 – tested at an average rate of 2,370 bopd

<sup>\*</sup> L33-1, WBEXT1, and L33-2 wells were drilled after 30 June 2010

### **L33 Drilling Results**









### **L33 Drilling Results**



- L33-1 exploration well flow tested at 1,100 bopd gross
- L33-2 appraisal well flow tested at 2,370 bopd gross
- Application for Production Licence being prepared with production expected to commence ~ Feb 2011
- Further infield appraisal wells being planned and considering 3D seismic to better assess geology

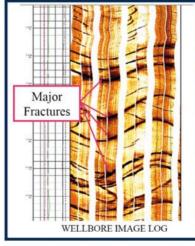


### Fractured Reservoirs in L33, L44 & SW1A



- L33, L44 & SW1A contain multi-layered fractured reservoirs
- Heterogenous nature of fracturing means individual well performance varies:
  - 100,000 bbls to 1.5 million bbls per well
  - Potential for infill locations
- Fracturing also results in varying water cut





Bo Rang ~ 250 - 450m

L44-W ~ 550 - 650 m

NSE main ~ 700 - 950 m

NSE Deep ~ 1000m +

### **Fractured Reservoirs in Other Regions**



Example from fractured reservoir of Austin Chalk:-

- Well production rate is dependent on number of fractures intersected
- Wells that penetrate heavily fractured areas adjacent to fault outperform wells that miss fracture network by as little as 30m
- To increase success rate 3D seismic data used to identify fractured areas

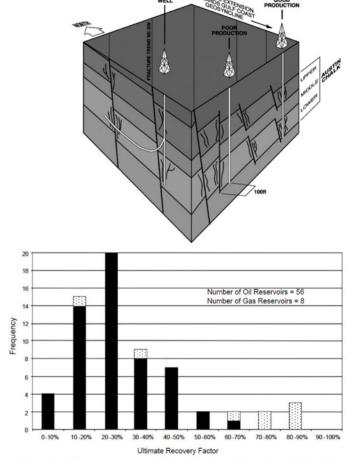


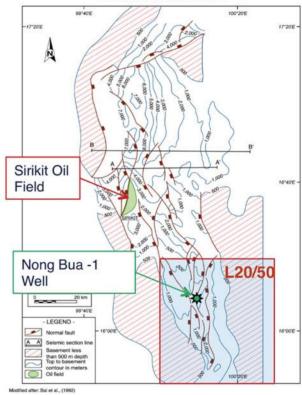
Figure 1. Distribution of ultimate recovery factor for fractured reservoirs of all types (Types I, II, III and IV).

### L20/50



- On trend with 200 million barrel Sirikit Oil Field located ~50 km to NW (now producing ~20,000 bopd; over 150 mmbbls produced)
- Basin modelling and oil shows in Nong Bua -1 well indicate significant oil potential in concession L20/50
- Interpretation of ~1,000 km of 1980s vintage 2D seismic and 550 km of new 2D data (acquired in 2009) is complete
- Government, environmental and local permitting work is complete
- In final stages of securing drilling rig, contractors and personnel

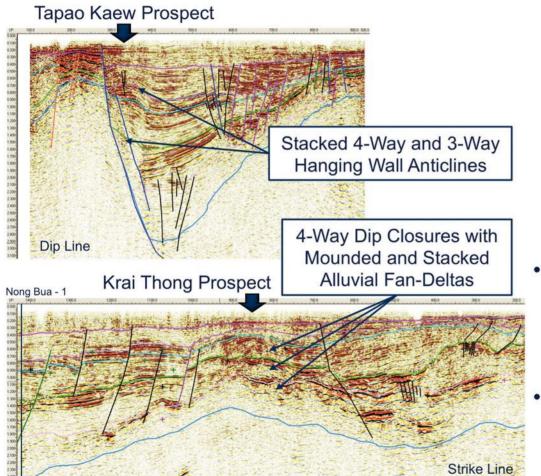
### PHITSANULOK BASIN, THAILAND STRUCTURAL CONTOUR DEPTH MAP TO TOP BASEMENT AND MAJOR FAULTS

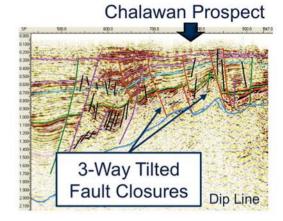


Carnarvon 50% & Operator

### L20/50







- Interpretation reveals a deep basin and multiple plays, prospects & leads
- Three (3) independent prospects ready to drill

### L52/50 & L53/50



- Exploration concession formally granted February 2010
- The combined area of the two blocks is large, comprising approximately 6,950 km<sup>2</sup>
- Both permits are lightly explored, with only two deep wells and limited seismic data available
- On trend, and in a similar basin, to an offshore development that flowed up to 10,000 bopd from one well



Photo of signing ceremony on 25 Feb 2010

Carnarvon 50%
Pearl Oil Operator

### L52/50 & L53/50



### **Commitments – 1st Three Year Obligation**

- geological studies;
- geophysical data acquisition; and
- two wells

Total expenditure of around US\$2.6 million gross (US\$ 1.3 million net to Carnarvon).

### Work Program - 2010 & 2011

- geological surface mapping; and
- shallow geophysical data acquisition

Before detailed 2D seismic acquisition in the second year.



**Operations – Other Regions** 





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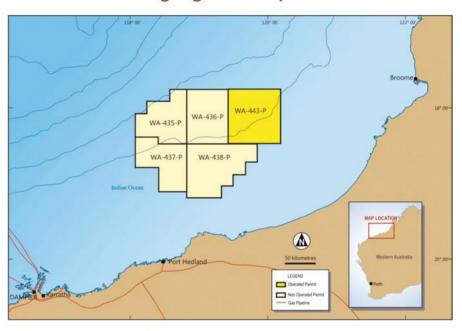
### Phoenix Blocks (\*)



(\*) Blocks comprise WA-435-P, WA-436-P, WA-437-P, WA-438P & WA-443-P

- Permits acquired when most of the industry was distracted with GFC issues
- 28,300 km<sup>2</sup> area in relatively shallow water close to WA shoreline
- Partnership with Finder Exploration, which has a history of successful farmout negotiations
- Acquired for minimal commitments in first three year obligation period

## Permits secured through gazettal process

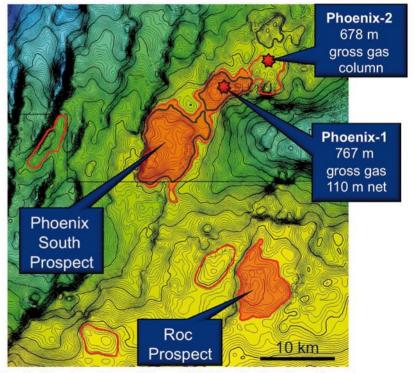


**Carnarvon 50%** (except WA-443-P which Carnarvon operates 100%) Finder Exploration Operator

### **Phoenix Blocks**



- WA-435-P contains the Phoenix gas discoveries
  - Phoenix-1: ~110 metre net gas-bearing section
- Key targets in ~100 m water depth with multi-Tcf recoverable resource potential
- New 2D and 3D data will mature prospects to drillable status



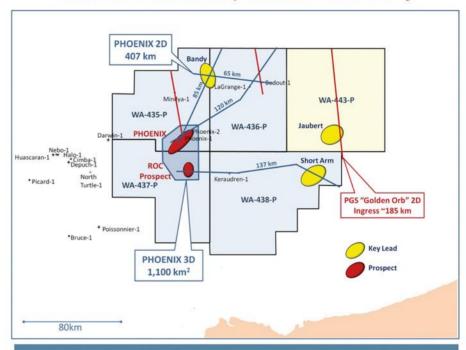
Depth Structure Map of Near Mid Triassic Gas Sand Level

### **Phoenix Blocks**



- Acquisition of 1,100 km<sup>2</sup> of 3D data scheduled for September 2010
- Acquisition of 407 km of 2D data scheduled for September 2010
- Acquisition of 15,847 km<sup>2</sup> of aeromagnetic data completed May 2010
- 2010 budget of A\$3 million net to Carnarvon

### Year one data acquisition underway

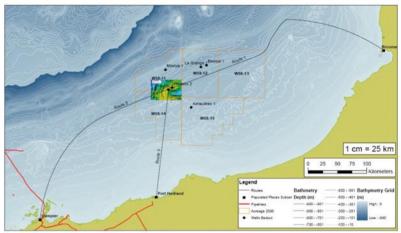


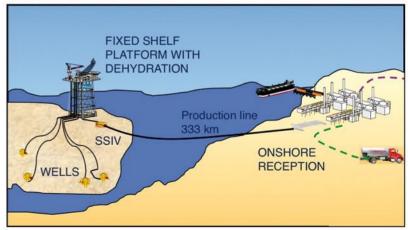
Accelerated year one work program will fulfil the first three years of the permit's work commitments

### **Phoenix Blocks**



- Gas discoveries in shallow water (~100 m)
- Field is within ~250 km of current and proposed onshore LNG plants
- The Joint Venture has a window of several years in which to realise value from the asset
- The Joint Venture intends to seek a farm-in partner prior to drilling a well or wells



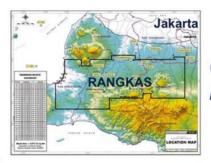


Granherne Concept Study

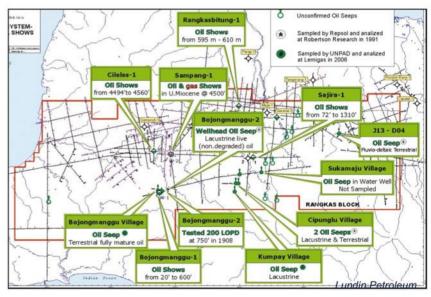
### Rangkas PSC



- Carnarvon farmed into the permit in September 2009
- Large permit located onshore West Java, close to Jakarta
  - Previous wells (last in 1991) targeted shallow Neogene carbonates; deeper Paleogene clastic play is untested
  - Direct evidence of live oil from seeps and previous exploration in block
  - Pertamina discoveries (2007-2010) in nearby West Java block tested from 80-3000 bopd and 3.5-15 MMscfg/d from fractured basement play
  - Gas discoveries can be commercialised
- Drilling expected 2011 / 2012



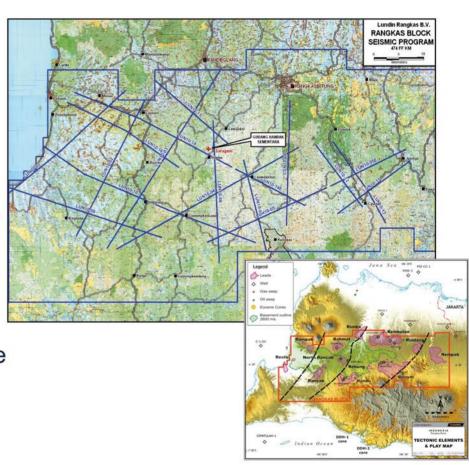
Carnarvon 25% Lundin Petroleum Operator



### Rangkas PSC



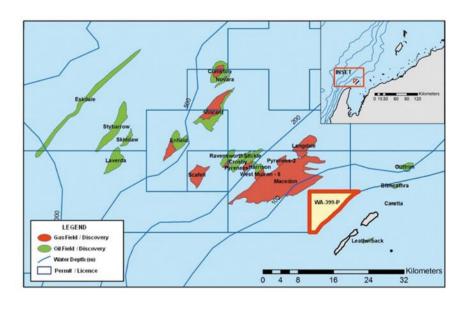
- Acquisition of 474 km of 2D seismic data scheduled for September 2010
- Data will refine geophysical mapping which reveals over 12 significant leads
- Environmental baseline study complete
- Reprocessing of 1000 km of existing 2D data complete
- Core/reservoir study complete
- Petrophysics and basin modelling studies underway



### WA-399-P



- Apache farmed into the permit in July 2010
- 3D acquisition in planning stage, will be funded by Apache
- Multiple play types expected to be better assessed with the 3D seismic data
- Nearby and on trend with large oil and gas fields
- Acreage located in the Exmouth Sub-basin, ~30km NNE of Exmouth



Carnarvon 13% Apache Operator

### **Tuatara (New Zealand)**



- Well drilled August 2010
- Exploration well commitment was ~US \$3.2m (net to CVN)
- Target prospect 80-100 mmbbl
- Result: Intermittent gas and oil shows
- Next Phase: Joint venture to undertake technical assessment of well results before assessing additional prospects



AWE (operator)	60%
Roc Oil	20%
Kea	10%
CVN	10%

# **Corporate / Finance**

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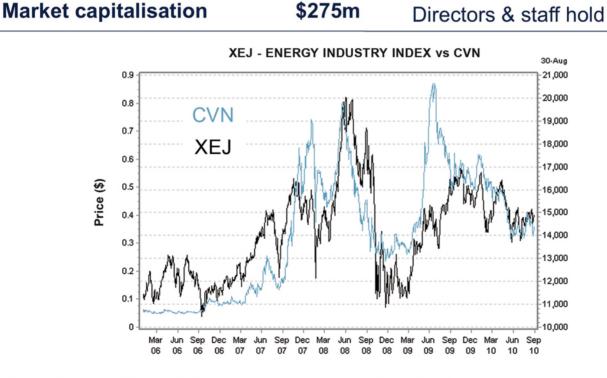
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# **Capital Structure**



9.0%

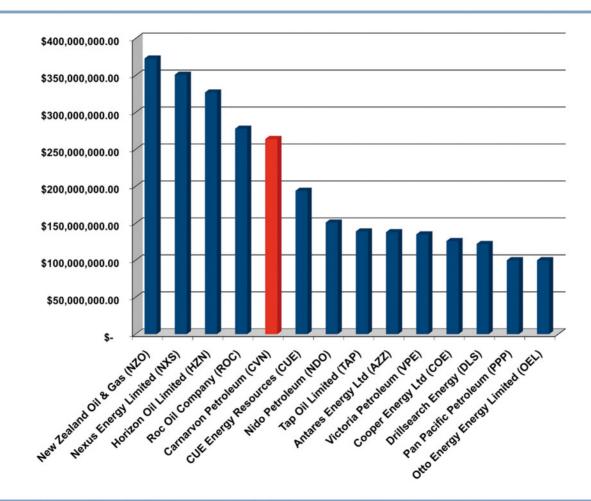
•	Issued shares	687m	Significant Shareholdings (12 Aug 2010)
•	Options	nil	Currently there are no significant shareholders
•	Share price (as at 4 Aug 2010)	<u>\$0.40</u>	Silaterioliders



### **Peer Comparison**

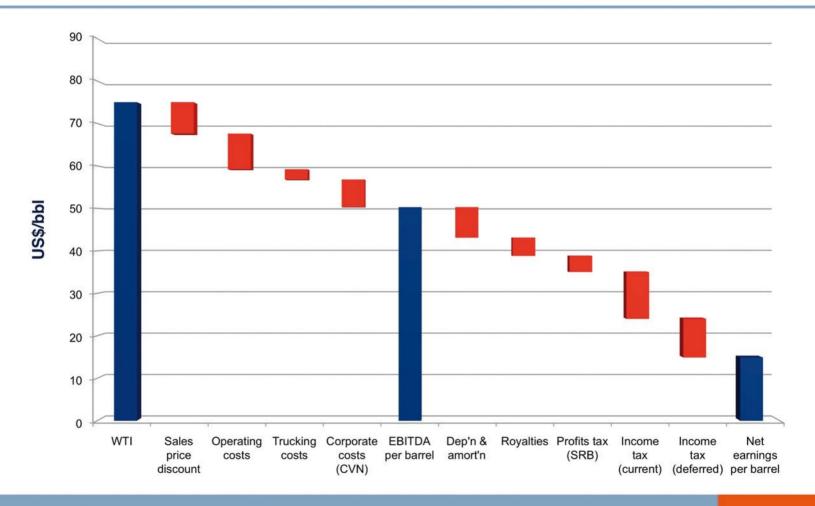


Mareket Capitalisation (A\$)



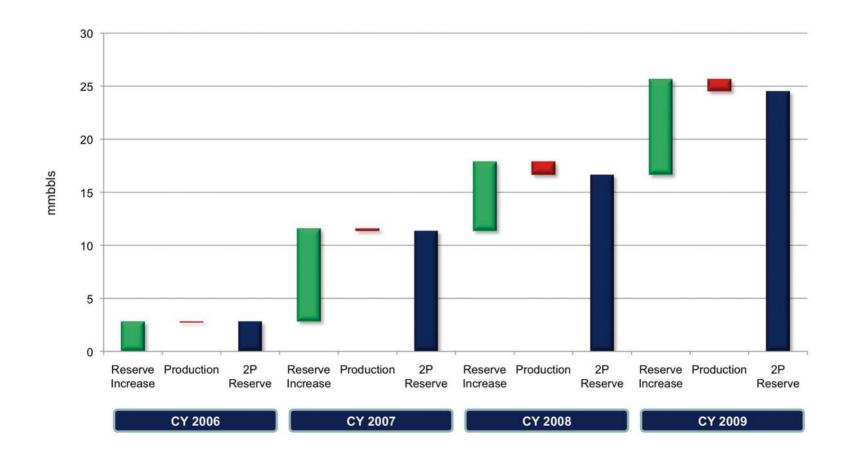
# **Earnings Analysis**





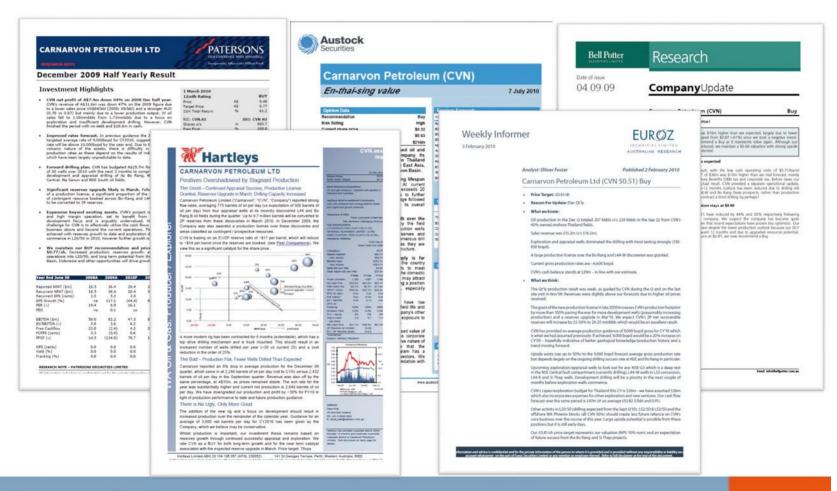
### Reserves (net to CVN)





### **Broker Reports**





### **Broker Valuations**



CVN share price currently in the range of \$0.35 to \$0.40

Company value range \$0.46 to \$0.80

Consensus \$0.63

Exploration and appraisal assets value range \$0.11 to \$0.23

Consensus \$0.15

Production assets (reserves) value range \$0.31 to \$0.54

Consensus \$0.45

Gaffney, Cline &
Associates valued CVN's
2P reserves at 31 Dec
2009 at \$0.48

## Thai SRB Explained

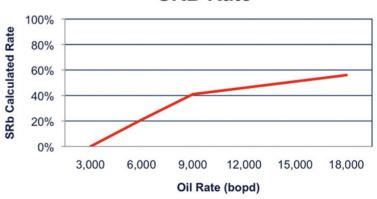


- Thailand III regime
- Designed to tax 'excessive profits'
- Applied to each concession area
- Paid annually
- Sliding scale from 0% to 75%
- Higher profit = higher SRB rate

Baht per metre (From)	Baht per metre (To)	Rate per baht metre	Effective S	RB (to)
0	4,800	0	0	0
4,801	14,400	240	0	40%
14,401	33,600	960	40%	60%
>33,601		3840	60%	75%

Source: Hartley's, Department of Mineral Fuels, Thailand

### **SRB Rate**



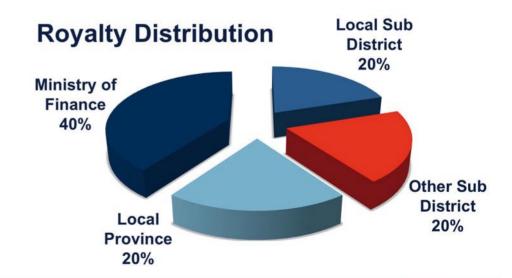
# Thai Royalty Explained



- Thailand III regime
- Royalty is applied over each concession area
- Sliding scale from 5% to 15% based on production levels
- Paid on a monthly basis
- Deductible for SRB and corporate tax purposes

Barrels per Day (From)	Barrels per Day (To)	Tiered Royalty Rate	Effective Royalty Rate
0	2,000	0.0500	5
2,001	5,000	0.0625	5.0-5.8
5,001	10,000	0.1000	5.8-7.9
10,001	20,000	0.1250	7.9-10.2
>20,000		0.1500	10.2-15.0

Source: Hartleys, Department of Mineral Fuels, Thailand



# **Upcoming Activities**

# **Upcoming Activities**



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# **2010 CY Work Programme**



	Q1	Q2	Q3	Q4	Indicative 2011
Thailand L44 & L33 production		25 – 35 wells			
Thailand L44 & L33 exploration		(possible 3D seismic)			
Thailand L20/50 exploration				1 to 3 wells	Studies (possible 3D seismic follow up to wells)
Thailand L52/53 exploration					Geophysical data acq'n
Australia Phoenix exploration			~1,100km² of 3D & ~410km of 2D seismic acq'n		Farmout (possible well)
Indonesia Rangkas exploration			~500km of 2D seismic acq'n		Seismic Interpretation
New Zealand Tuatara exploration			Tuatara-1 well		Studies

### **Growth Plan**



	Thailand	Australia	Indonesia	New Zealand	New Regions	
Exploration	Significant short term and medium term upside within the existing exploration asset portfolio					
Appraisal	Significant short term upside	<ul> <li>Direct oil &amp; gas asset holding</li> <li>Onshore / shallow offshore</li> <li>Concentrating on Australasia/SE Asia</li> <li>Compelling technical &amp; economic fundamentals</li> <li>Experienced team, cash, cash flow and balance sheet</li> </ul>				
Production	Strong long life cash flows to support growth					



### PHILIP HUIZENGA

General Manager (Operations)



1322 Hay Street, West Perth Western Australia 6005

Telephone: +61 (8) 9321 2665 Fax: +61 (8) 9321 8867 Mobile: +61(0) 407 778 745 Email: phuizenga@cvn.com.au

www.carnarvon.com.au

### ADRIAN COOK

General Manager (Corporate)



1322 Hay Street, West Perth Western Australia 6005

Telephone: +61 (8) 9321 2665 Fax: +61 (8) 9321 8867 Mobile: +61(0) 438 912 476 Email: acook@cvn.com.au

www.carnarvon.com.au

### **TED JACOBSON**

Chief Executive Officer



1322 Hay Street, West Perth Western Australia 6005

Telephone: +61 (8) 9321 2665 Fax: +61 (8) 9321 8867 Email: tjacobson@cvn.com.au

www.carnarvon.com.au



Ground Floor 1322 Hay Street West Perth WA 6005 Telephone: +61 (8) 9321 2665 Fax: +61 (8) 9321 8867

www.carnarvon.com.au