

## Hartleys Investor Presentation 10 May 2011





Carnarvon
Petroleum
ASX code: CVN

Presented by Ted Jacobson CEO

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## Carnarvon is a compelling Investment proposition

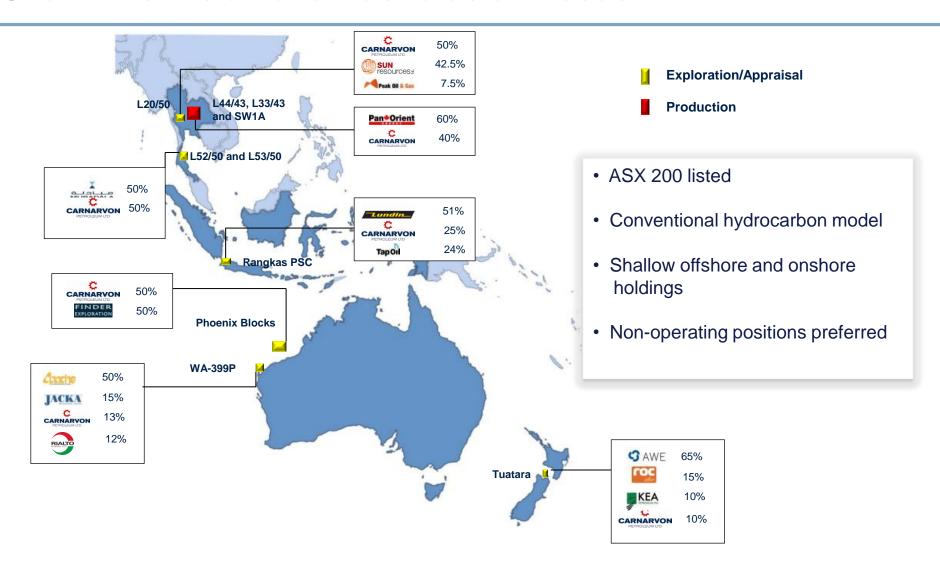


#### **Carnaryon offers investors:**

- Significant, long life oil reserves currently in production in Thailand
- Material gas appraisal project offshore Western Australia
- Continuous exploration, appraisal and development drilling programme in Thailand
- Pipeline of low cost material upside exploration in Thailand, Indonesia, Australia and New Zealand
- Capability to secure quality new venture opportunities

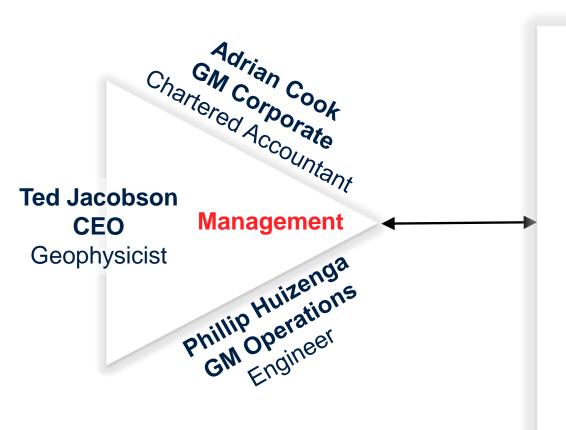
#### **South East Asian and Australasian Focus**





## **Experienced & responsive management team**





Few operatorships to distract

#### The Board

Peter Leonhardt - Chairman Chartered Accountant

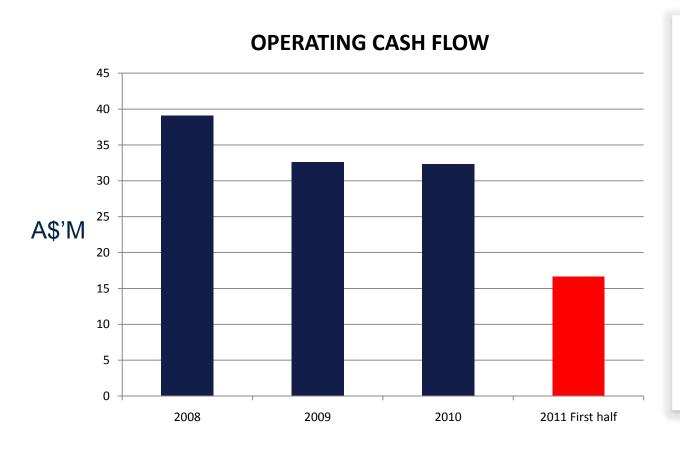
**Ted Jacobson - MD**Geophysicist

Bill Foster – Non Executive Engineer

Neil Fearis – Non Executive
Corporate lawyer

## **Corporate snapshot**



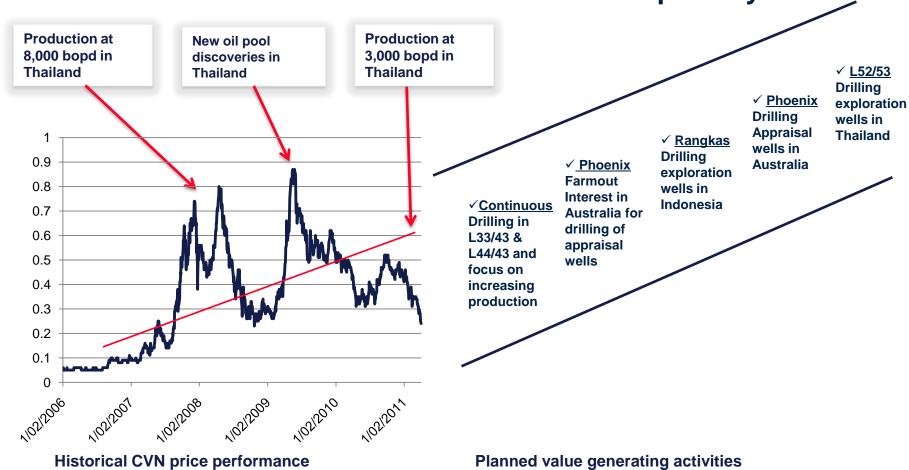


- 688m shares issued
- \$175m Market Capitalisation
- \$24m Cash (March 2011)
- No Debt (March 2011)
- 28% Institutional Shareholding
- 9% Director and Staff shareholding

#### **Share Price**



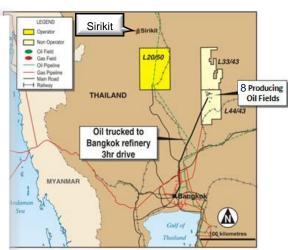


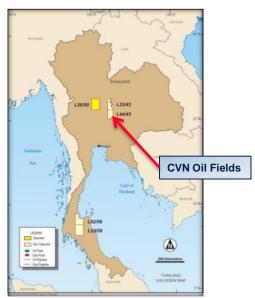


## **Background in Thailand**



- Hydrocarbon Presence: Oil was being produced at ~100 bopd from the Wichian Buri Field sandstone reservoir
- Under Appreciated Asset: Major oil companies such as Shell, BP and Petrocorp had explored onshore Thailand discovering only one significant field at Sirikit
- Change In Perspective: New play concept in fractured volcanic reservoirs
- New Information: 3D seismic data recorded over most of the permit acreage
- New Focus: The joint venture pursued further exploration and appraisal activities.
- **Discovered:** 14 new oil pools generating free cash





## **CVN Oil Fields in Thailand**



- Carnarvon has a 40% interest in L44/43, L33/43 & SW1A
- Operator Pan Orient Energy 60%
- Since 2006 JV has
- ✓ Drilled 14 new oil pools

Wichian Buri G&H sands

**POE-6 fault block sands** 

Na Sanun East Central

**Na Sanun East South** 

**Na Sanun East North** 

**WBEXT** 

**Bo Rang A&B** 

L44-W

NSE-F1

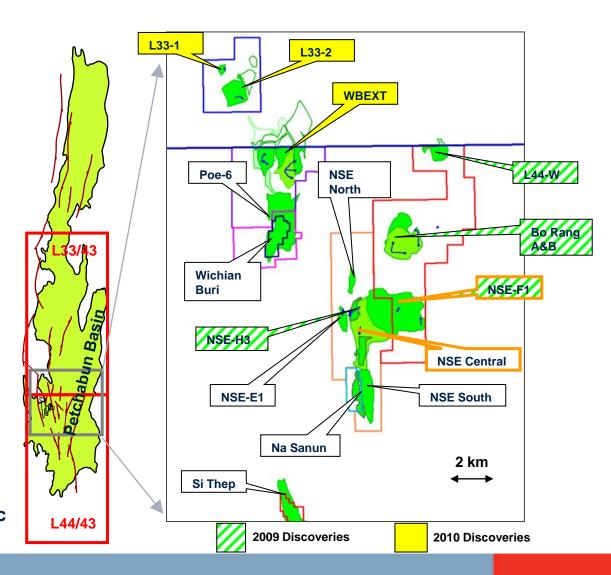
NSE-E1

NSE-H3

L33-1

L33-2

- Acquired 580 km2 of 3D seismic
- Drilled over 140 wells



## **Carnarvon Today**

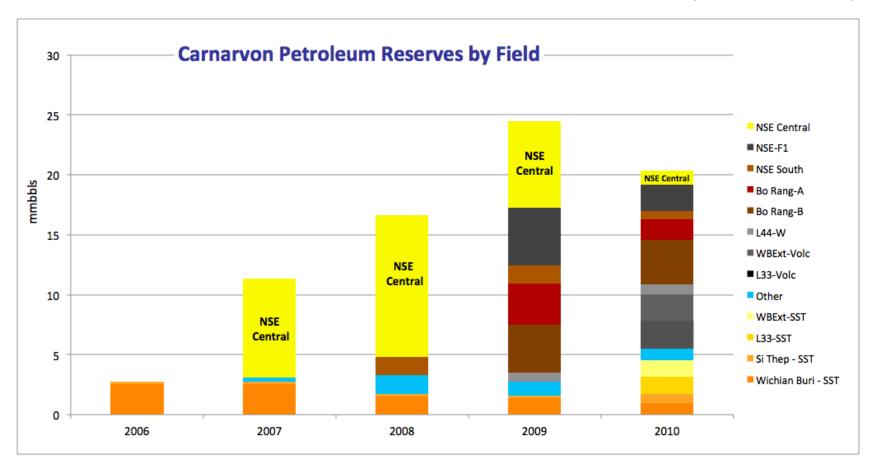


- ✓ CVN currently produces around 700,000 to 900,000 mmbbls annually
- ✓ CVN generates operating cash flow in the order of \$30m annually
- ✓ Active exploration programme in SE Asia / Australasia
- Looking for more opportunities
- Underlying profitability provides capital management flexibility

#### **Reserves Thailand**



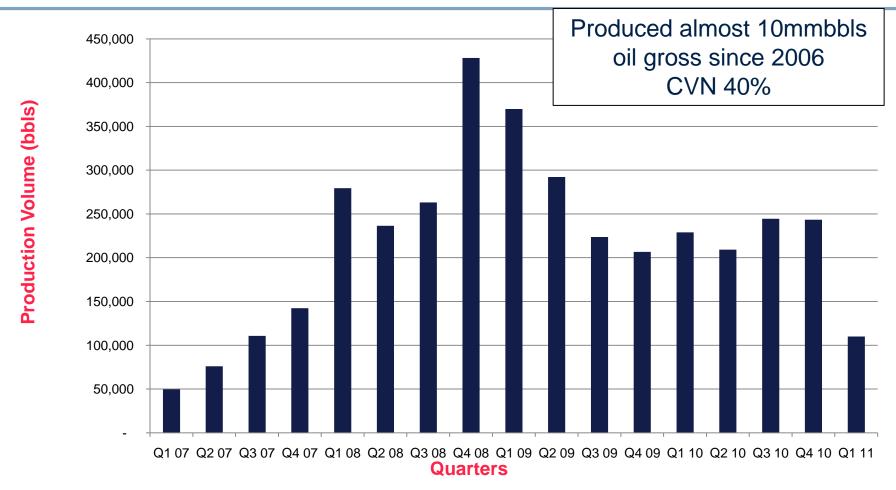
1P Reserves of 4.7 mmbbls / 2P Reserves of 20.4 mmbbls\* (\*as at 31 December 2010)



Reserves diversified across 14 major producing fields

#### **Production Thailand**





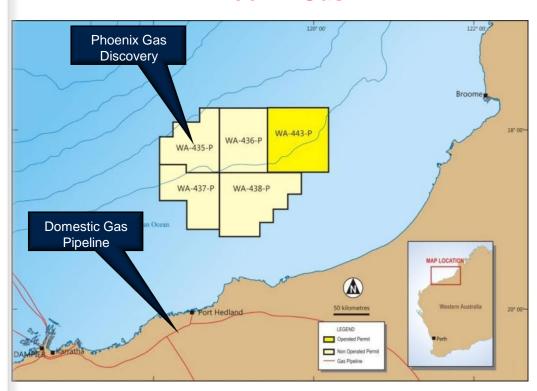
- Oil is present, it is highly profitable, it is produced from long life fields
- Production variability will always exist in fractured volcanic reservoirs
- JV is reviewing ways to improve production

## **Gas Discovery in Australia**



- Gas discovered in 1980 & 1982
- Carnarvon 50% equity
- Shallow water ~100 metres deep
- Close to coast and gas pipelines
   175 kms from Port Headland
- Good gas prices
- Strong domestic demand
- Possible LNG project gas
- Well cost estimated ~\$40mm
- Farm-out late 2011
- Drill 2 appraisal wells 2012

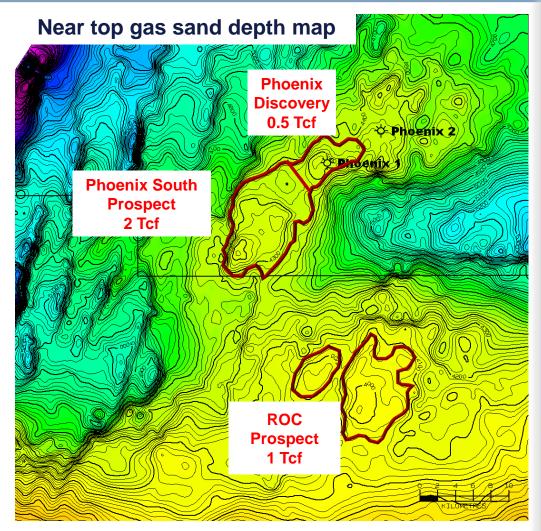
#### **Phoenix Gas**



**Significant Potential** 

### Phoenix gas resource





**Prospective Resource estimates shown** 

#### Phoenix 1 exploration well

- 767 metre gas column
- 110 metres net gas reservoir
- Not tested drilling limitations Influx of gas into well bore Casing set too high
- Middle Triassic sandstone
- 4,300 metres deep
- Porosity 4% 15%
- Permeability ~ 5mD
- Stacked pay
- Oil shows in core

#### Phoenix 2 appraisal well

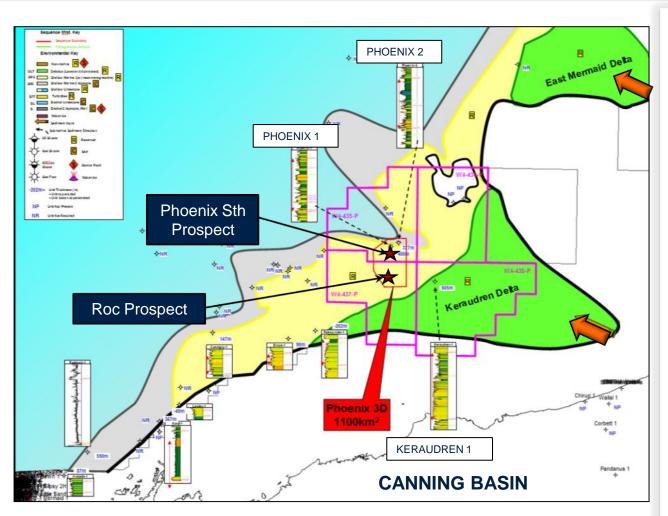
- 678 metre gas column
- Poorly located distal for sands
- Not tested

#### Regional well data interpreted

 reservoir improves in proximal sand direction to south towards Phoenix South and Roc prospects

## **Phoenix Sand Depositional Map**

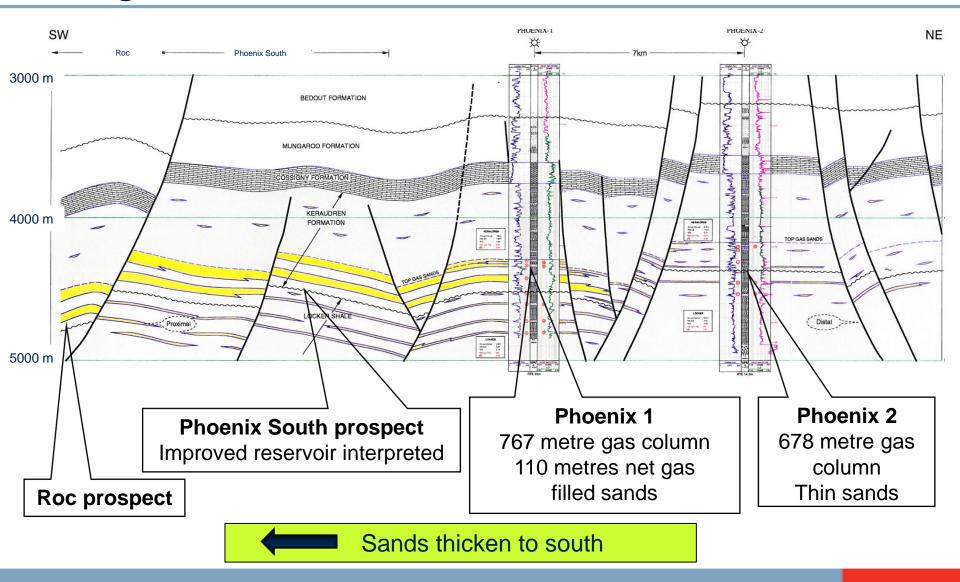




- Phoenix 1 gas discovery in low permeability Middle Triassic sandstones
- Engineering studies indicates Phoenix 1 should flow on testing
- Phoenix 2 appraisal to north intersected distal thin sandstone reservoirs
- Keraudren 1 to SE intersected good sandstone reservoir ~20%porosity

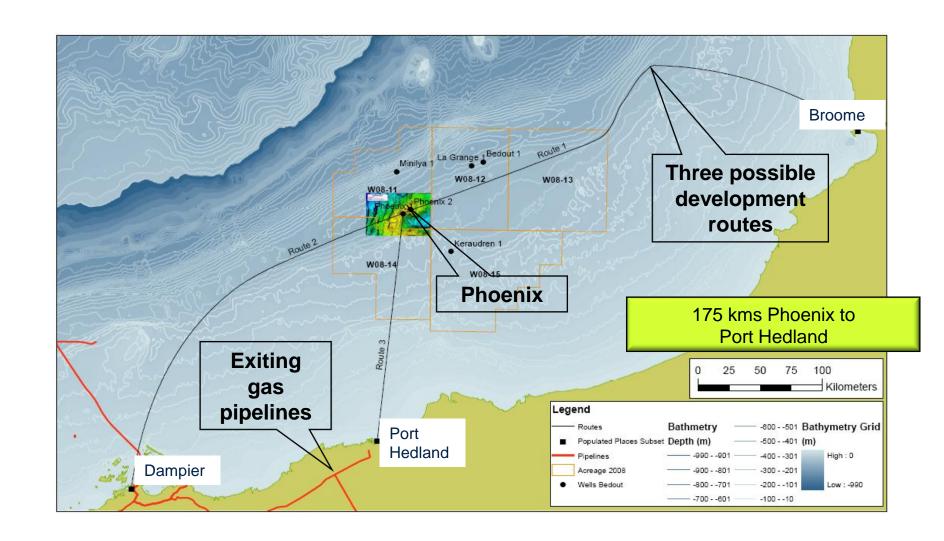
# **Geological Cross Section Through Phoenix 1 & 2**





## Phoenix optimally located





## **Phoenix Programme Summary**

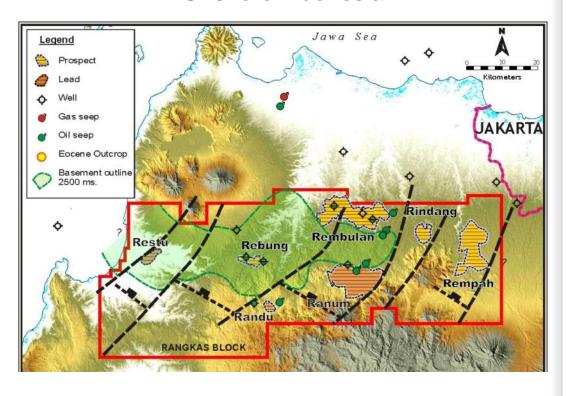


- Phoenix structure defined on existing 2D seismic
- Discovery wells not flow tested
- Need to drill appraisal wells to:
  - Determine if commercial flow rate possible
  - Presence of valuable condensate
- 1,100sq kms 3D seismic was acquired early this year to examine reservoir distribution and determine optimum drill sites
- Processing including seismic inversion techniques underway
- Farm-out late 4<sup>th</sup> Quarter 2011 after processing and interpretation of 3D seismic
- Plan to drill 2 wells 2012 in Phoenix South and Roc prospects where better reservoir predicted
- Many other prospects in these large permits covering 21,700 sq kms

## Rangkas oil



#### Onshore Indonesia



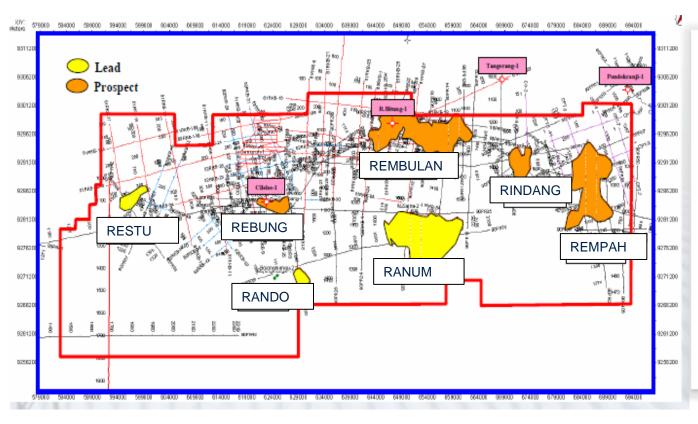
Significant Potential near Jakarta

- Large permit 3,997 sq kms
- Onshore adjacent to Jakarta
- Close to markets
- 7 Prospects & leads highlighted by existing seismic
- Numerous oil seeps and oil shows in wells
- 500kms new seismic has been acquired to delineate drill targets
- 1,000 kms existing seismic reprocessed

## Rangkas prospects



#### **NUMBEROUS PROSPECTS & LEADS**



- Prospective resource at Paleogene level.
- Potential also at deeper Miocene Saraweh carbonate level
- Numerous prospects and leads

## **Rangkas Programme Summary**

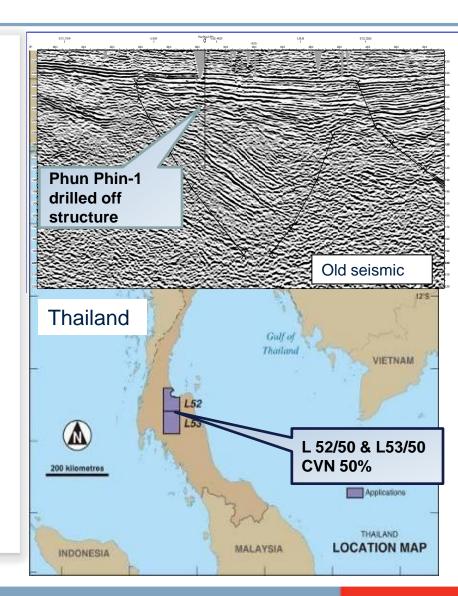


- Previous wells drilled for shallow target
- Numerous oil shows in wells and oil seeps at surface
- 500 kms of 2D seismic acquired earlier this year
- 1,000 kms old seismic reprocessed
- Currently processing new seismic
- · Drilling plans awaiting results of new seismic interpretation

#### **THAILAND – L52/50 & L53/50**



- Hydrocarbon Presence: This permit sits immediately to the southwest of an offshore block that discovered and flowed oil at over 10,000 bopd
- Under Appreciated Asset: The focus in Thailand has traditionally been in offshore exploration blocks
- Change In Perspective: Carnarvon believes similar offshore geology extends onshore into these blocks
- New Information: A Geological field survey is completed. A new seismic survey is about to commence
- New Focus: New joint venture focused on the geological similarities with the offshore Thailand discoveries
- Drilling: 2 well commitment for 2012



## **Active Programme in CY 2011**



#### **THAILAND**

L44/43 & L33/43 34 exploration / appraisal / development wells (2011)

25% Sandstone reservoir appraisal 50% Fractured reservoir appraisal

25% exploration

L52/50 & L53/50 Planning for new seismic data acquisition

2 wells commitment for 2012

#### **AUSTRALIA**

**Phoenix Blocks** New seismic data acquired, Interpretation & Farm-out

to follow in 2011 (drilling likely in 2012)

**WA-399-P** 3D seismic acquired over entire permit in 2011,

interpret in 2011 (possible drilling 2012)

#### **INDONESIA**

Rangkas Block Process & Interpret new 474 kms2D seismic

(exploration drilling possible 2012)

## **Summary**



- Over \$30mm annual cash flow from Thailand oil production
- Currently \$24mm cash reserves (March 2011)
- No debt (March 2011)
- More to come from production licences in Thailand Joint Venture committed to improving production More exploration More appraisal
- Gas appraisal project underway at Phoenix offshore WA
- Active exploration in Thailand, Indonesia, Australia & New Zealand
- Looking for more good exploration & production opportunities

## Carnarvon is a compelling Investment proposition



#### In concluding...... Carnarvon offers investors:

- Significant low cost, long life oil reserves currently in production in Thailand
- Material gas appraisal project offshore Western Australia
- Continuous exploration, appraisal and development drilling programme in Thailand
- Pipeline of low cost material upside exploration in Thailand,
   Indonesia, Australia and New Zealand
- Capability to secure quality new venture opportunities