

**Good Oil Conference**

**September 2008**



**CARNARVON**  
PETROLEUM LTD

Presented by  
Ted Jacobson CEO



# Carnarvon Snapshot

## Capital Structure

Ordinary Shares	673 million
Options (ex @ 10c)	10 million
<b>Market Capitalisation:</b> (fully diluted @ 44c)	\$300 million
<b>Cash on hand</b> (30 June 2008)	\$31.5 million
Top 20	~30%
Directors and Management	~17.5%

## Directors & Management

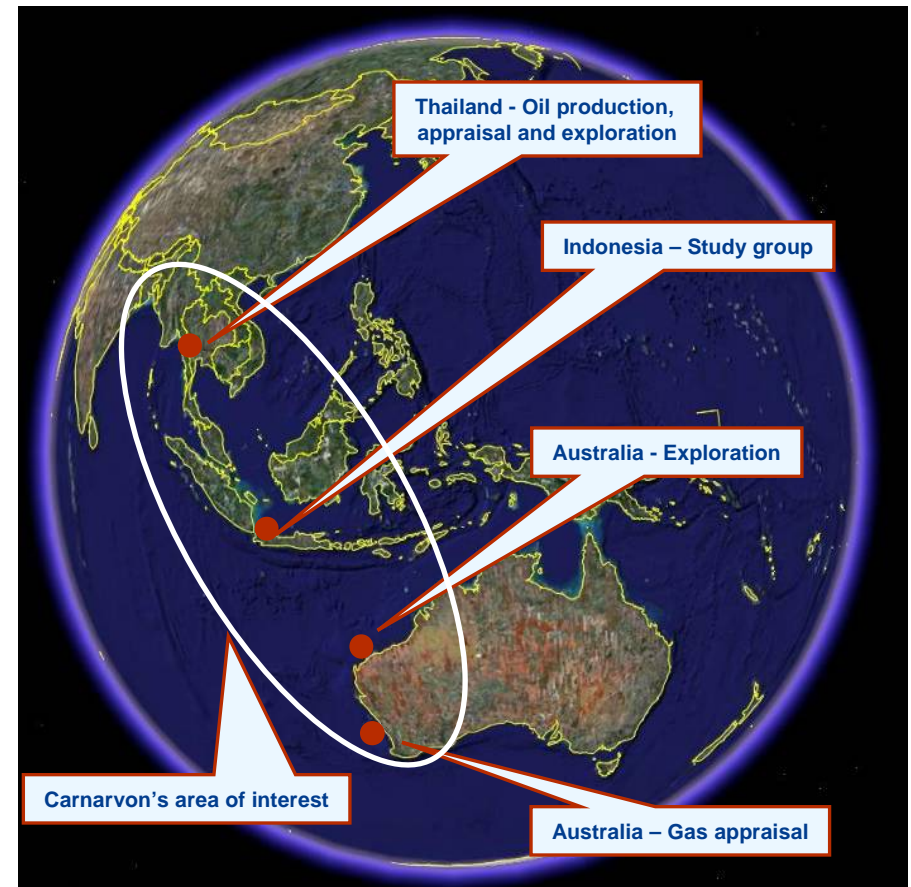
Chairman:	<b>Peter Leonhardt</b>
Managing Director:	<b>Ted Jacobson</b>
Non Exec Directors:	<b>Neil Fearis &amp; Ken Judge</b>
Company Sec & CFO:	<b>Bob Anderson</b>
COO:	<b>Philip Huizenga</b>
New Ventures Manager:	<b>Dr Robert Bird</b>





# Carnarvon Project Areas

- **Production from onshore Thailand L44/43 Licence**
- **NV Focus on Thailand and surrounding countries**
- Evaluating new opportunities in Australia and South East Asia
- Recent award and applications for 2 new permits in Thailand
- Study Group Indonesia
- Australia - 3 offshore Carnarvon Basin and 1 onshore Perth Basin ORRI





# Thailand Reserves/Resources

## Rapidly growing Thailand oil reserves

- 11.4mmbbls 2P net recoverable reserves - increase in excess of 300% over the previous 12 months
- 45.7mmbbls 3P net recoverable reserves - large upside
- Doesn't include recent new shallow oil discovery at Na Sanun East – producing from NSE-A1
- Doesn't include 2008 oil discovery at L44-R
- 13 wells already completed in 2008 – 3 wells currently testing
- 2 drilling; Further 10-12 development, appraisal and exploration wells before end 2008

## Considerable additional contingent resources estimated at

- 31 mmbbls (2C net recoverable resources)





# Thailand Oil Reserves

- Reviewed as at 31 December 2007 by independent consulting firm Gaffney Cline & Associates Ltd
- Over 300% increase in 2P reserves over 2007

OIL FIELD THAILAND	Proved	Proved + Probable	Proved + Probable + Possible	Reservoir type
	1P	2P	3P	
Na Sanun East	2.2	8.3	32.0	Fractured Volcanic
Na Sanun	0.1	0.3	1.0	Fractured Volcanic
Wichian Buri	0.3	2.5	9.8	Sandstone
Si Thep	0.1	0.2	3.0	Sandstone
<b>Total Net Carnarvon</b>	<b>2.6 mmbbls</b>	<b>11.4 mmbbls</b>	<b>45.7 mmbbls</b>	

Does not include recent oil discovery L44-R

Or shallow producing oil reservoir at NSE



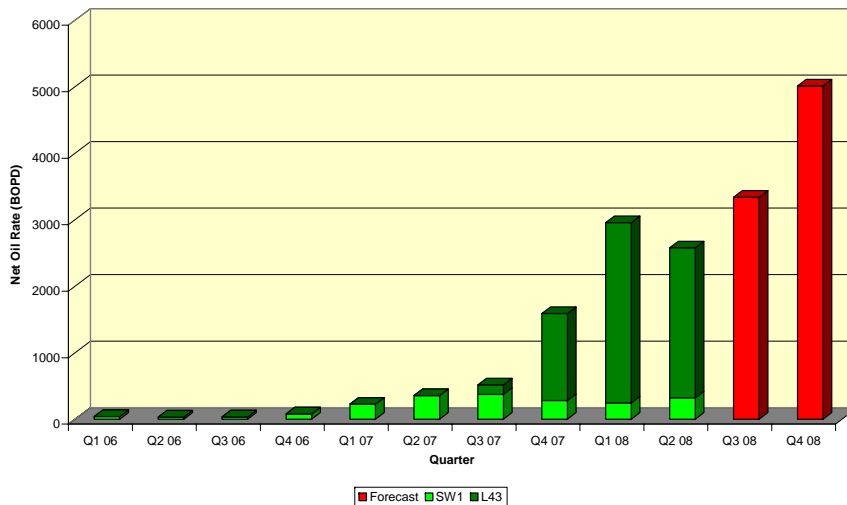
# Thailand Production

## Rapidly growing oil production

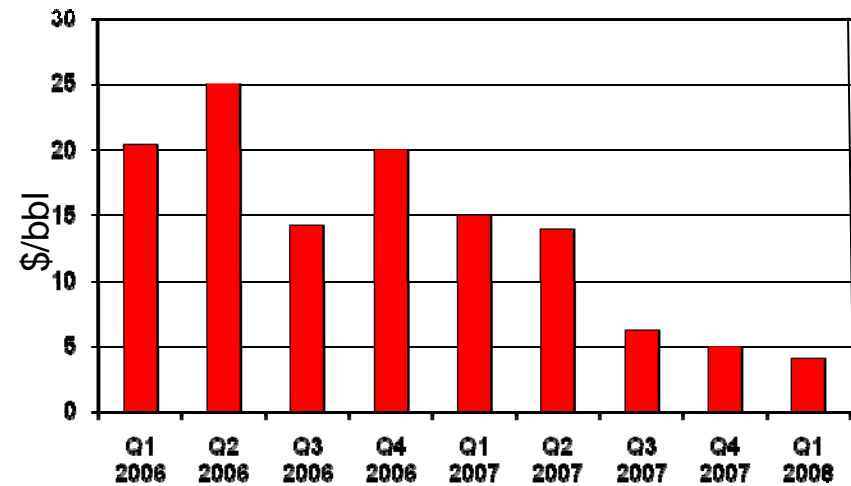
- Currently approaching 4,000 bopd net sales, an increase of over 1,000% over last 12 months
- Targeting 6,000 bopd net sales by end of 2008 calendar year

## NET PRODUCTION

Quarterly Production BOPD (Net)



## OPERATING COSTS





# Thailand Operations

## Minimal Well Cost

- Well costs approx US\$0.8mm ~ 20 days drilling trouble free
- Approx US\$0.2mm per well to bring on production
- Very fast payback (at average flow rates - between 1 week to 1 month)

## Cost Effective Trucking Operation

- Trucking operation – 3hrs to refinery outskirts Bangkok
- Road Tanker fleet capacity of approximately 15,000 – 20,000 bopd
- Second refinery available on expansion of production



# Thailand Cashflow

## Oil Price

- PTT (Thai National Oil Co.) sales contract based on Singapore HSFO crude price
- Approx 85% of WTI - discount for wax content of oil
- Not hedged

## Operating Cost

- Operating costs per barrel decreasing with rising production rates
- ~US\$1.60 per barrel plus US\$ 2.43 trucking costs for 1Q 2008

## Capital Required

- Nil debt
- Self funding - wells put on stream within days of completion

## Fiscal Regime

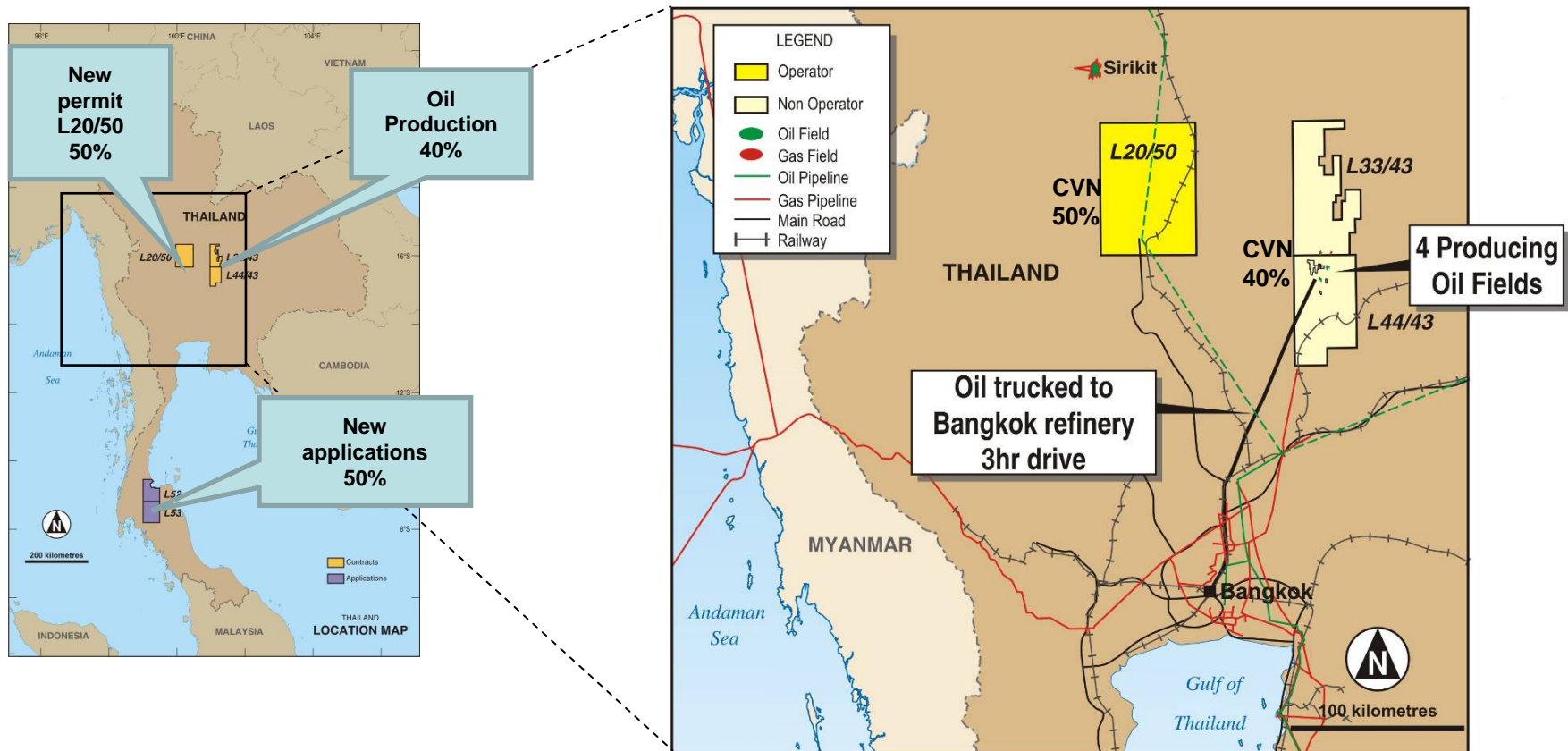
- Royalty tax - 5 – 15% sliding scale on monthly production levels (current ~8%)
- SRB tax - 0 -75% of profits once capital recovered (current ~45%)
- Company tax - 50% on net profit after royalty and SRB
- Gaffney Cline's modelling - company take equates to approx 30% future net revenue after taxes and costs
- Can offset Company tax against exploration elsewhere in Thailand





# Thailand Permits & Infrastructure

## Building a Long Term Business in Thailand

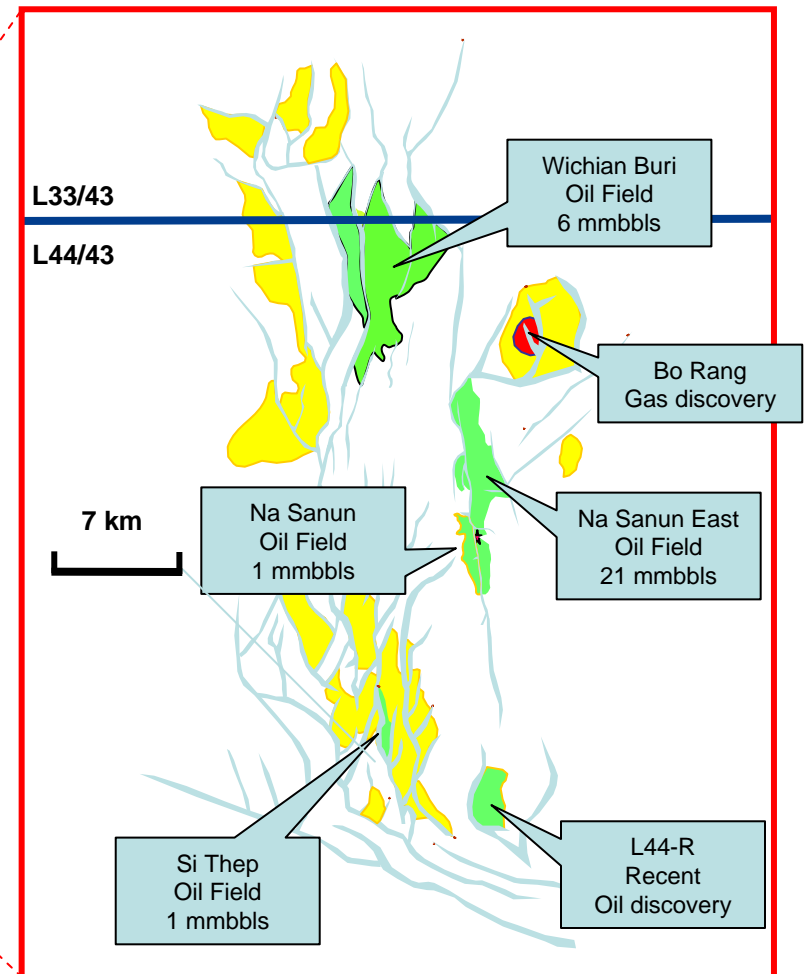
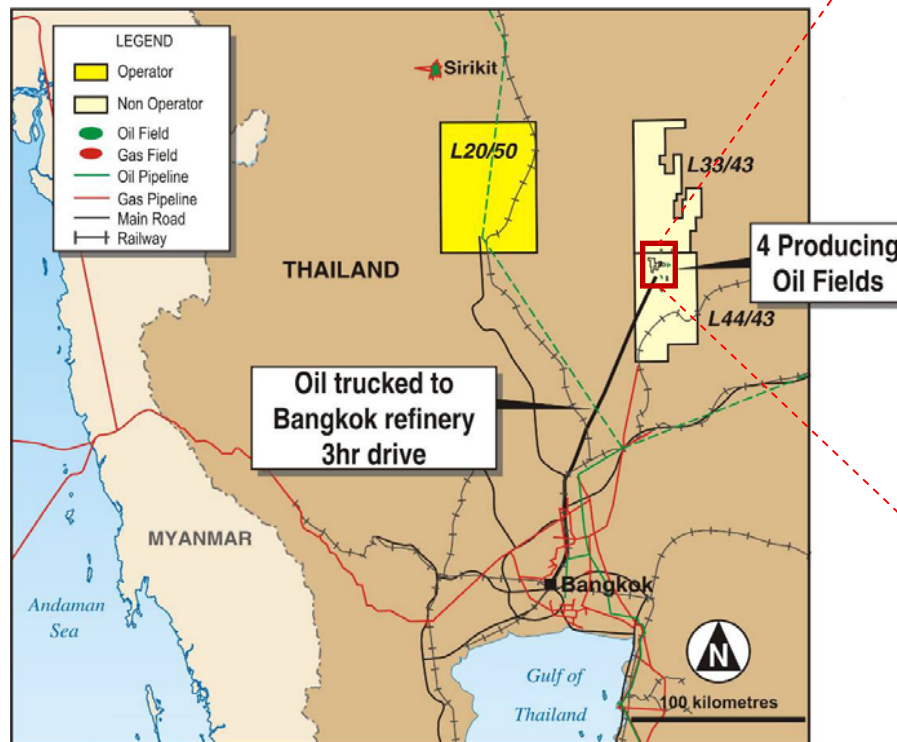


- Simple operation
- Supportive Government



# L33/43 & L44/43 - Overview

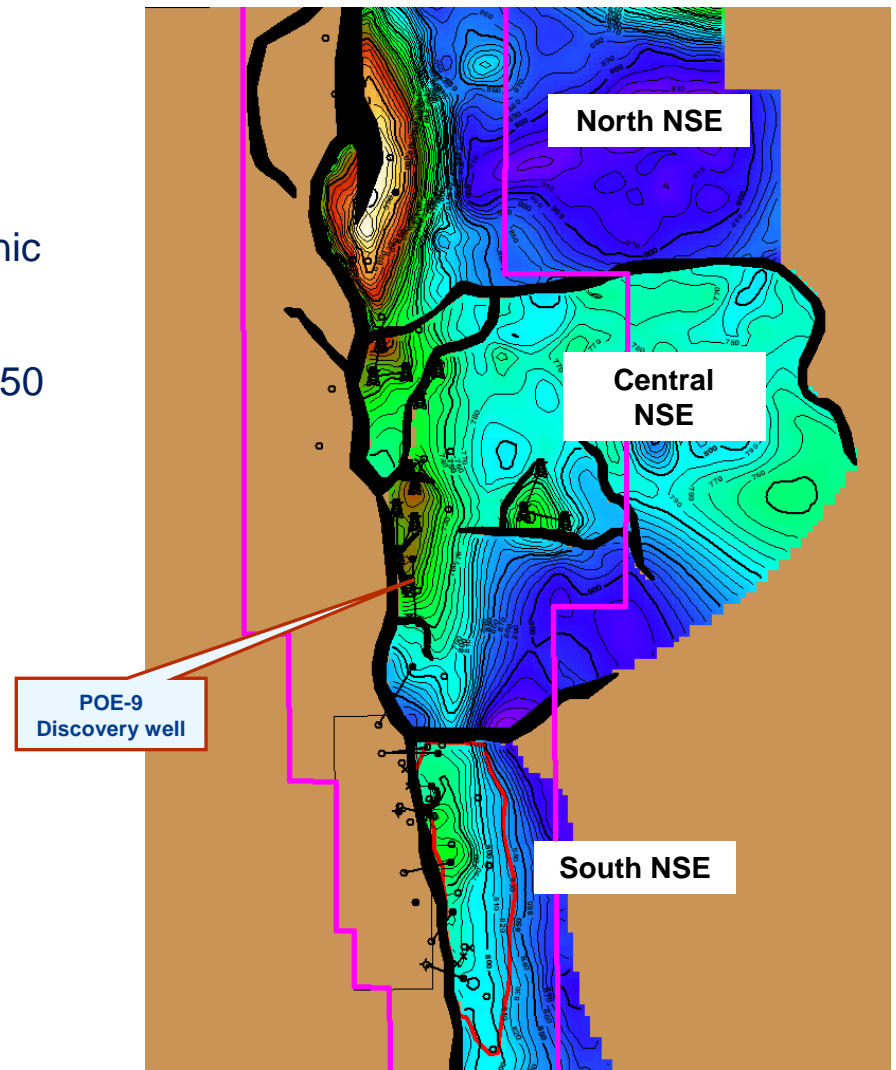
- Carnarvon 40% - Pan Orient (Operator) 60%
- 2 rigs under long term contact
- 1 workover rig
- Significant production and growing rapidly
- Significant reserves and growing rapidly





# Na Sanun East Field

- 2P reserves of 20.69MM bbls (gross)
- 3 separate fault compartments – fractured volcanic reservoir
- 19 wells drilled to date with flow rates between 150 to 4,000 bopd per well
- Full field development underway
  - 3 development wells completed
  - 2 wells drilling
  - 3 wells testing
- Current net production approaching 4,000 bopd





# L33/43 & L44/43 - Upside

## Reserves Upside – 3P

- Na Sanun East development 32 mmbbls 3P
- Wichian Buri development 9.8 mmbbls 3P

## Resource Upside – 2C

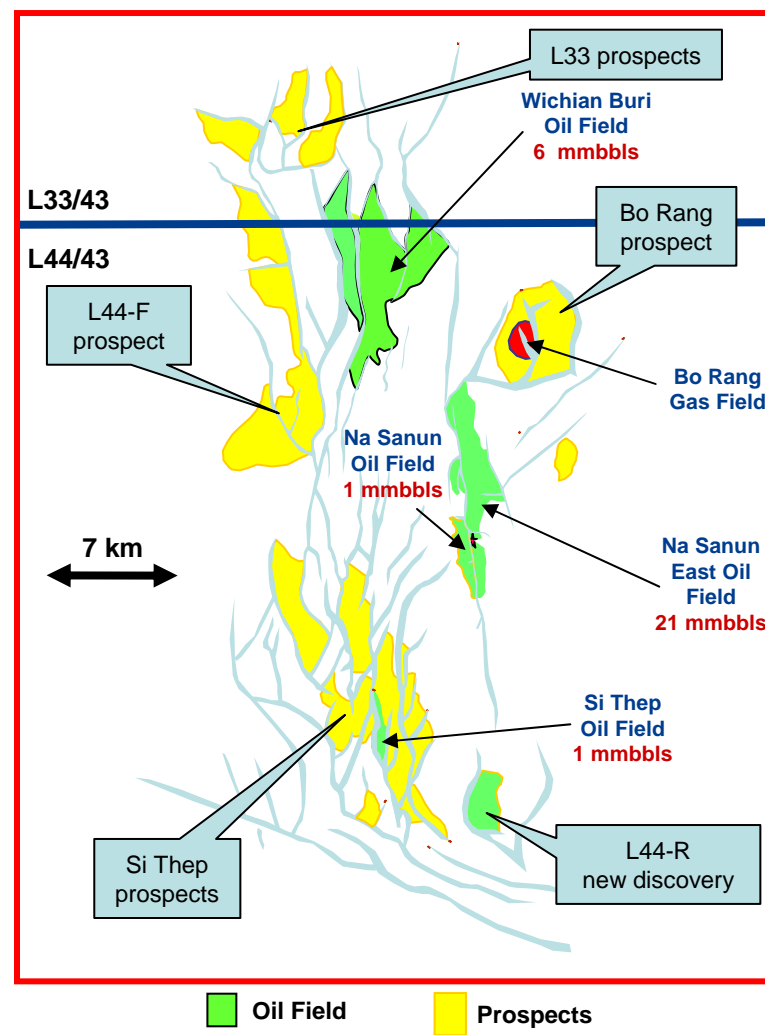
- Na Sanun East resource 14 mmbbls 2C
- Bo Rang 7 mmbbls 2C
- Si Thep 7 mmbbls 2C
- L44-R 3 mmbbls 2C

## Other oil – Yet to be calculated

- Recent NSE-A1 discovered a shallower reservoir above main volcanic at NSE – flowed 1,245 bopd on test. Currently producing above 1,600 bopd.

## Exploration

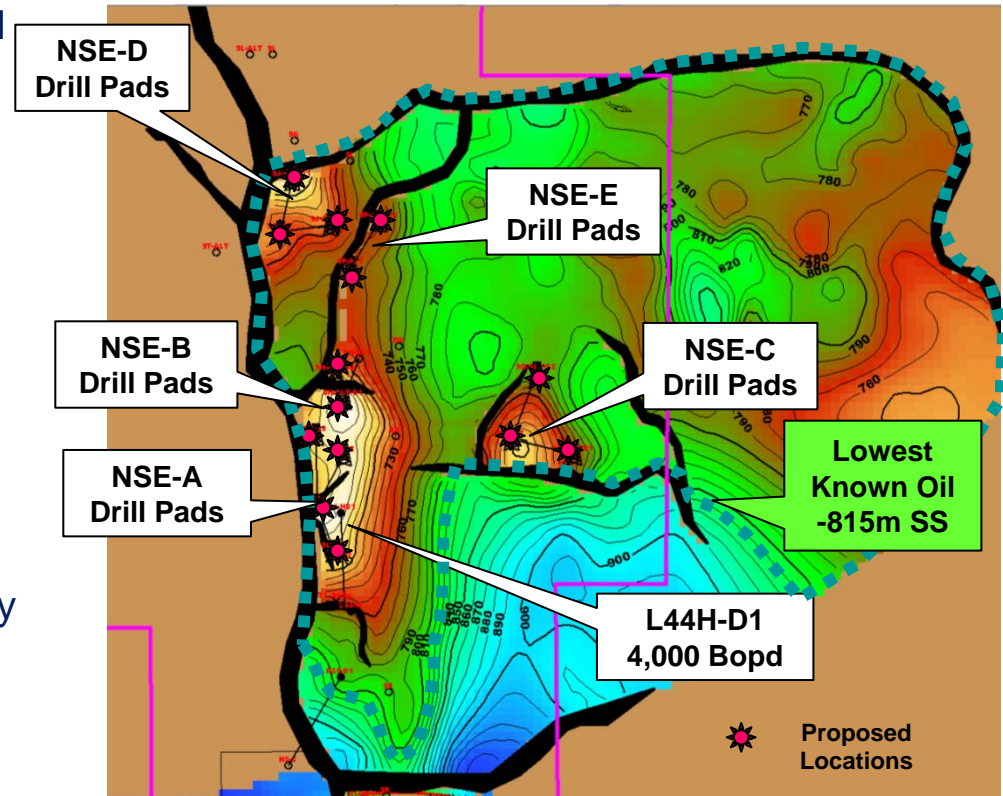
- Wichian Buri Deep - volcanic
- L44-F – sandstone & volcanic
- Si Thep area – sandstone & volcanic
- L33/43 prospects – sandstone & volcanic





# Development Plan Update

- 5 surface locations from which 14 wells will be drilled in the Central fault compartment
- ~ 3 low angle deviated wells to be drilled from each location
- Redundancy of wells will level out production variations from individual wells
- Production is anticipated to ramp up significantly from current levels
- Anticipated rate 6,000 bopd by end 2008 cy
- NSE-A2 and NSE-B2 currently drilling
- NSE-A1 recently completed – flow tested a new shallower volcanic – currently above 1,600 bopd
- L44-C (Wichian Buri), NSE-A4 & NSE-B1 currently testing – awaiting results





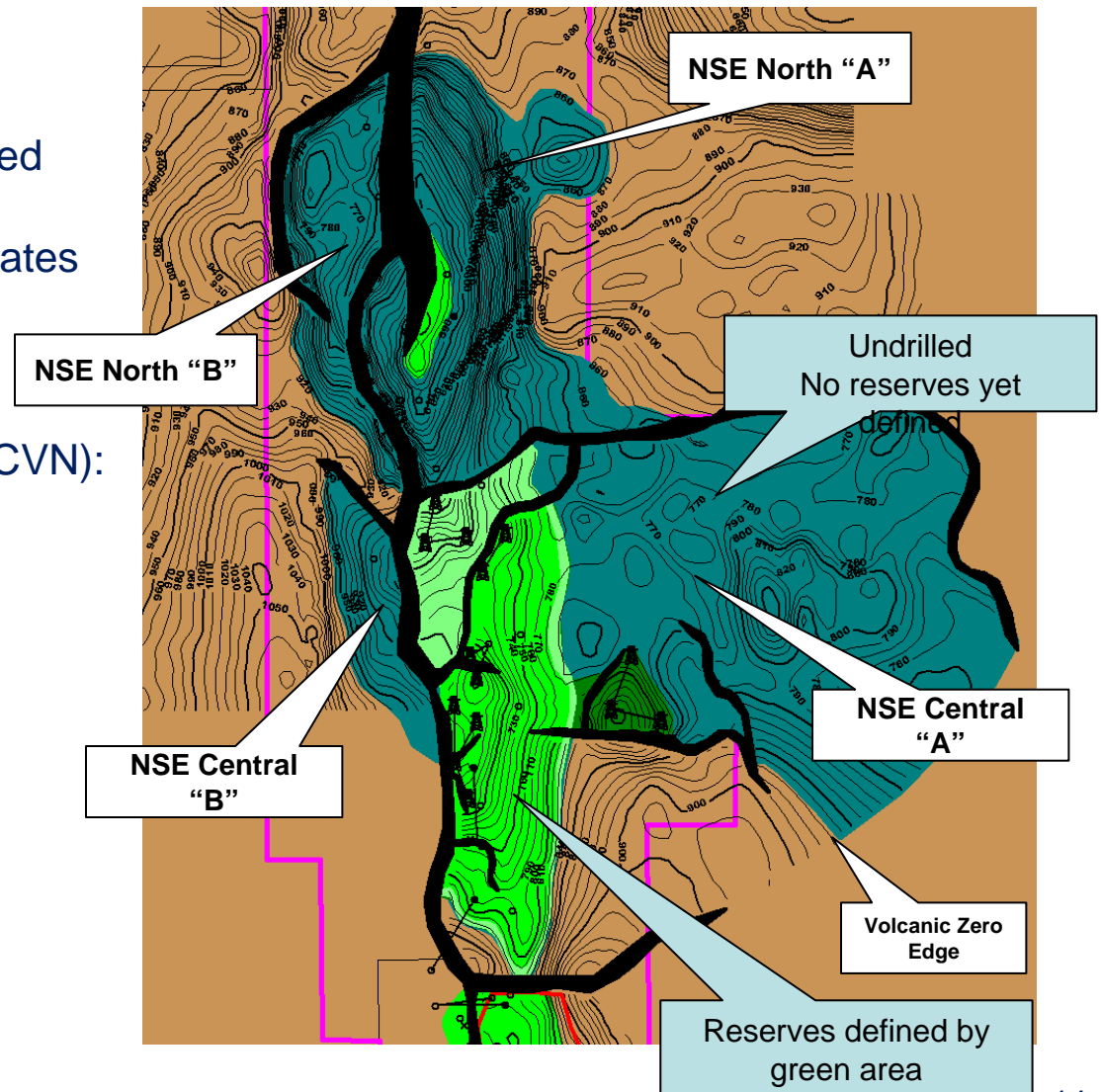


# Na Sanun East Upside

- A large part of NSE structure is undrilled
- Additional to published reserves estimates
- Several wells planned for late 2008
- Resource estimates (recoverable net CVN):

2C

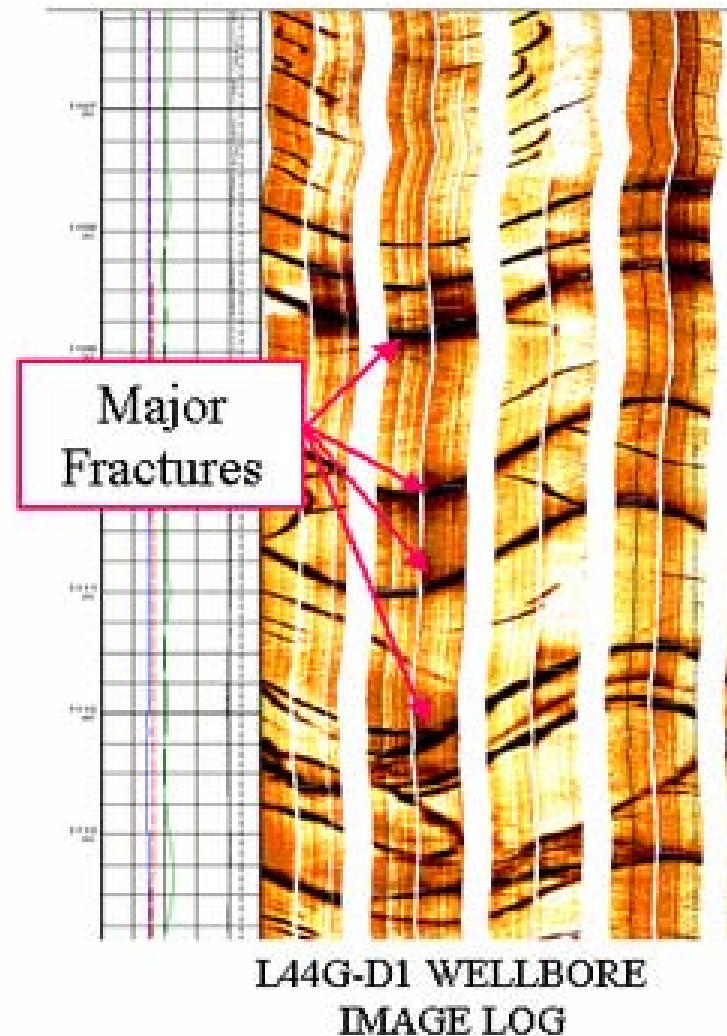
14mmbbls





# Fractured Volcanic Reservoir

- Image logs and drilling indicates major fracture system
- Massive lost circulation whilst drilling fracture reservoirs –  
e.g. up to 23,000 bbls lost drilling fluids in NSE-A4
- Some fractures in excess of 1 metre thick
- Porosity comprises fractures and matrix
- Core cut in several wells –
  - NS-3 (non-reservoir),
  - L44H-D2
  - NSE-A1
- Studies in progress to evaluate reservoir



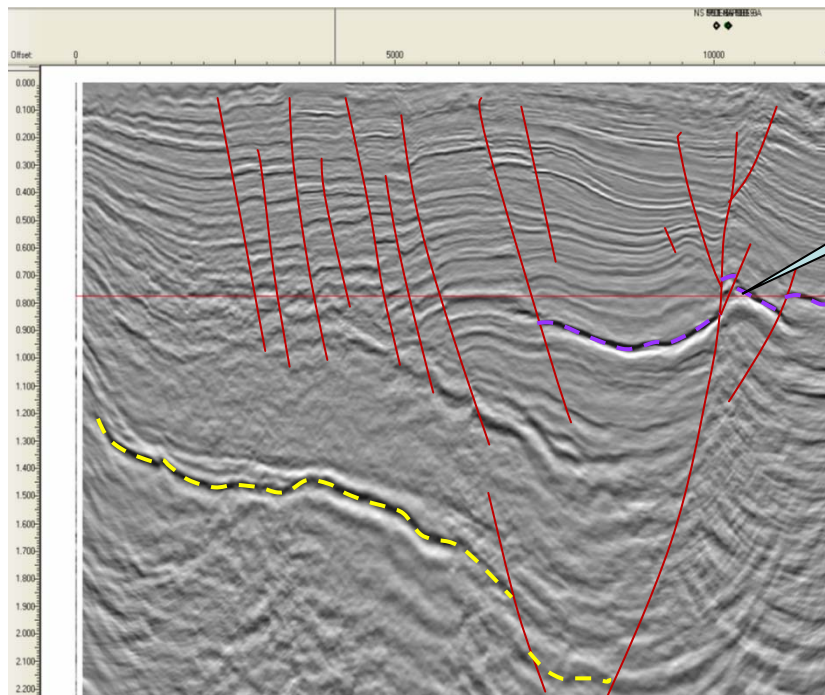
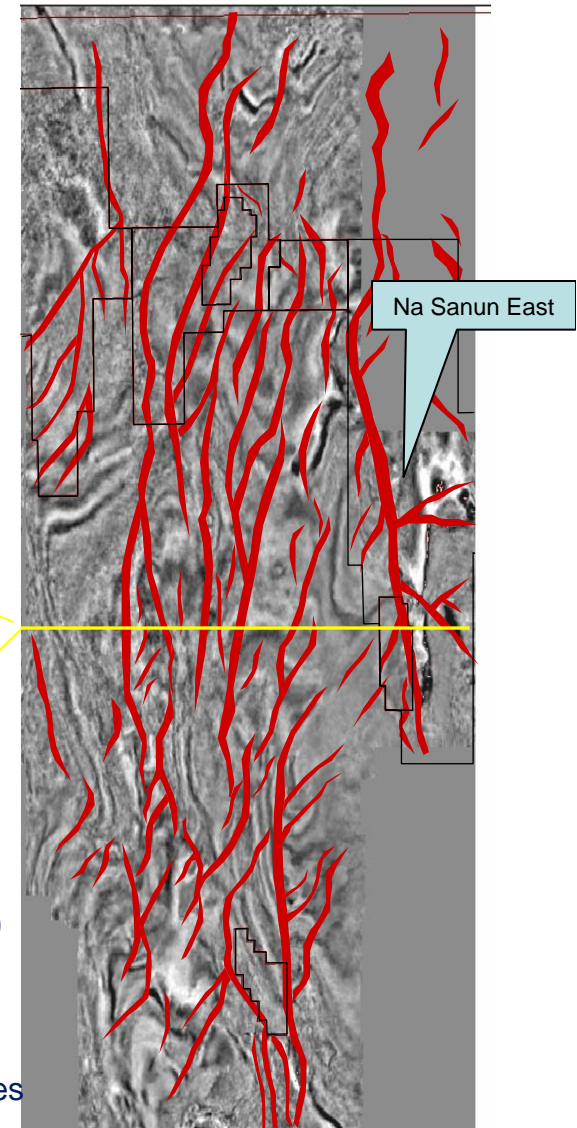


# Structure and Faulting



An extensive fault system  
With associated fracturing

Time Slice from  
3D Seismic  
774 msec level

3D Seismic Line  
through Na Sanun East



## LEGEND

-  Faults
-  Licence Boundaries





# Geology



- Limited data available on the fractured reservoir
- Analogous Permo-Triassic and Tertiary volcanics outcrop throughout Central Thailand
- Some units exhibit extensive fracturing
- An integrated study is currently being undertaken.



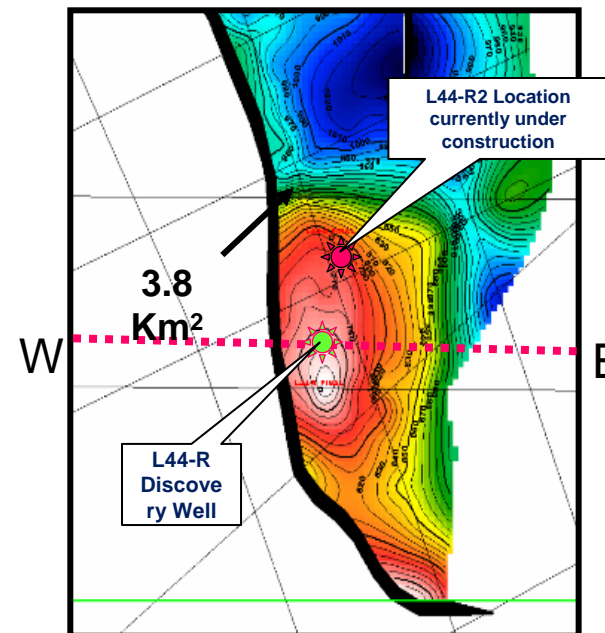
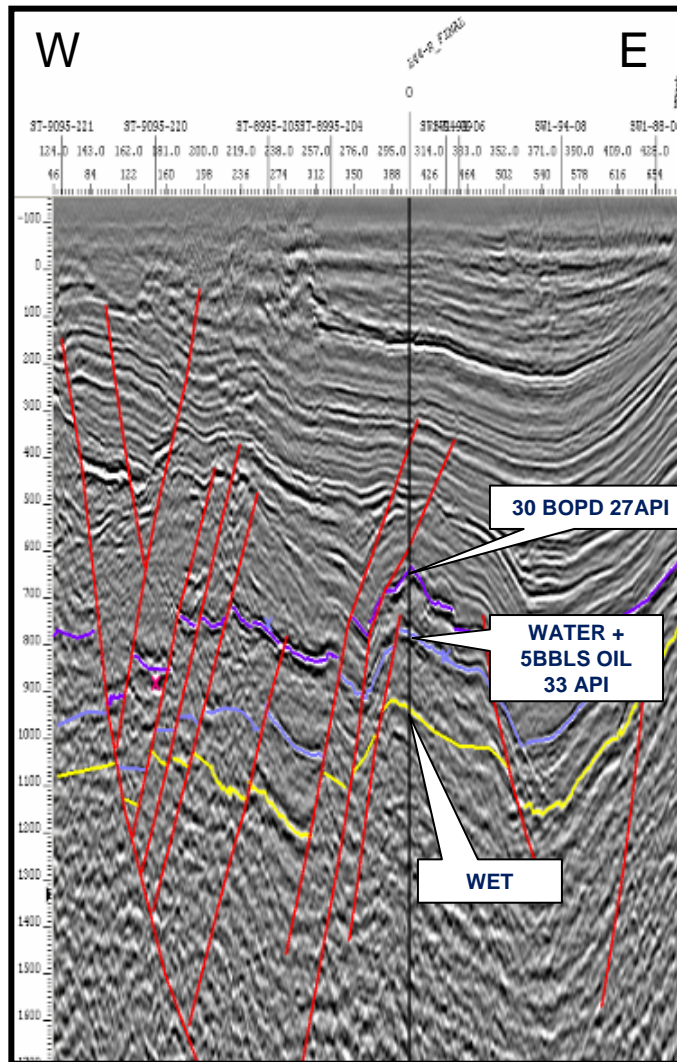
## Other Examples of Volcanic Reservoirs

- Jatibonico Field – Cuba: 1,200 wells into fractured serpentines
- Pina reservoir – Cuba: Production from Cretaceous tuffites
- Hilbigpool – Texas: Cretaceous palagonites
- McArthur River Field – Alaska: Jurassic tuffites & volcanic sands
- Kora Field – New Zealand: Upper Miocene volcanics
- **Jatibarang Field – Java: Eocene & Oligocene lavas**
  - **Similar style oil field**
  - **Discovered 1969**
  - **Fractured volcanic reservoirs**
  - **Reservoir is regionally extensive over basin**
  - **Wells produce 250 – 3,000 bopd**
  - **Depth 2,000 – 2,300 metres**
  - **102 mmbbls produced to date**
  - **58 mmbbls remaining reserves**



# L44-R Oil Discovery

- L44-R flowed ~ 30 bbls/day oil
- No fractured reservoir intersected in well
- Prospective Resource Estimates (CVN 40% - unrisks):
  - 3.2MM bbls: 2C
- Not included in Dec 2007 Reserves Estimate
- Forward Plan – Drill L44-R2 and determine if fracking and / or horizontal well required to achieve planned rates of +/- 300 bopd





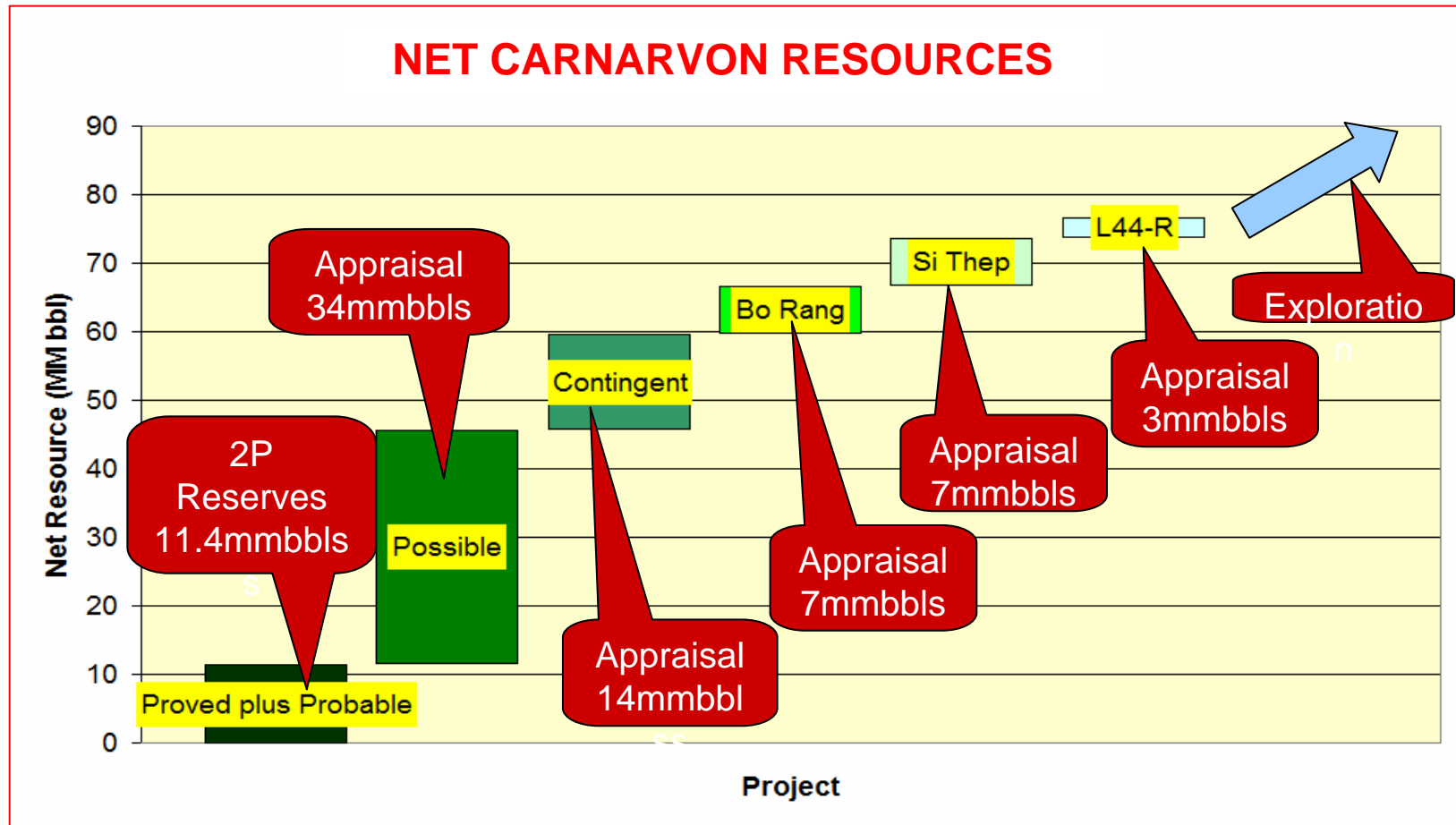




# L44/43 Possible Reserves Growth

## Over Next 12 -24 Months Carnarvon is:

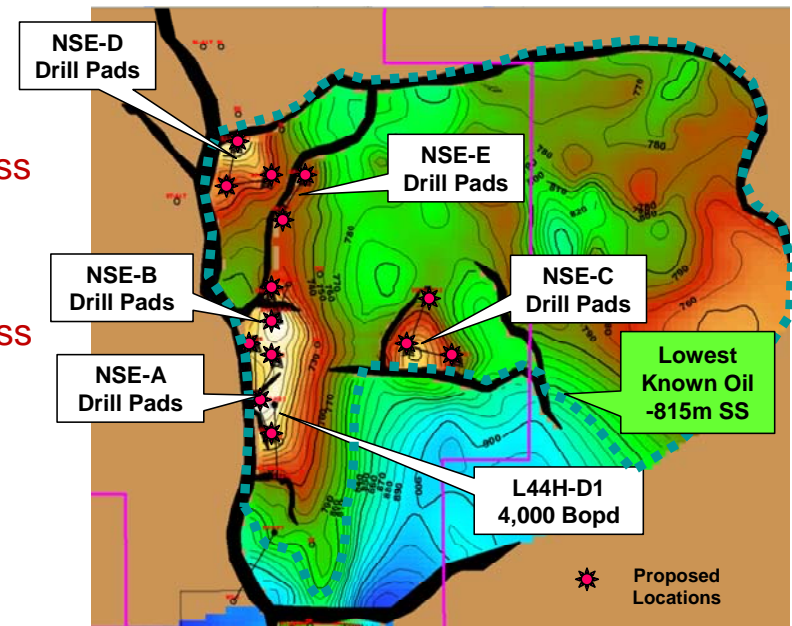
- Appraising 65 mmbbbls 2C net oil resource & further (possible) reserves
- Plus exploration from further drilling
- In addition to 11.4 mmbbbls 2P net reserves already discovered (ie. proved plus probable)





# 2008 Progress

- 10 wells drilled and completed for 2008 to date
  - **Exploration wells**
    - 1 successful (L44-R) and 1 failed (L33-3) - 50% success
  - **Appraisal wells**
    - 4 successful (L44-HD2, NS5-D1STH, POE-9A & NS3-D1STH) & 2 failed (NS1-D1 and NS-9HZ) - 67% success
  - **Development wells**
    - 2 successful (NSE-A1 and NSE-A3) - 100% success
  
- 3 wells currently under test
  - L-44C testing up to 6 levels at Wichian Buri
  - NSE-A4 testing upper volcanics at NSE
  - NSE-B1 testing main volcanics at NSE
  
- **Development drilling of NSE underway**
  - NSE-A2 and NSE-B2 currently drilling
  - Additional 10 development wells planned for 2008





# Drilling Programme

## **CONTINUOUS DRILLING NEXT 6 - 12 MONTHS**

Development wells on Na Sanun East

Appraise resource area Na Sanun East

Si Thep appraisal well

Bo Rang appraisal well

Exploration wells in L33/43

Further wells on Wichian Buri Field

Order of wells depends on site preparations  
and results of ongoing wells



# Summary

- 10 wells drilled, completed and tested for 2008 to date
  - Currently drilling 2 development wells and testing 3 wells
- Targeting further 10-12 wells for remainder 2008
- Development drilling of NSE underway
- Appraisal of further 31 mmbbls recoverable oil resources
- Excellent infrastructure in place
- Many large prospects with significant oil potential
- Some prospects have old wells with fractured volcanics not tested





# Disclaimer

*The information in this document, that relates to oil exploration results and reserves, is based on information compiled by the Company's Chief Operating Officer, Mr Philip Huizenga, who is a full-time employee of the Company. Mr Huizenga consents to the inclusion of the reserves and resource statements in the form and context in which they appear.*

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