Technical Presentation
L52/50 & L53/50 Thailand
6 March 2013

ASX ANNOUNCEMENT

Carnarvon Petroleum Limited ("Carnarvon") (ASX:CVN) is pleased to provide shareholders with the attached Technical Presentation given by Dr. Stephen Molyneux, Carnarvon's Exploration Manager at the 2013 APPEX Conference in London, on Wednesday 6 March 2013.

For this presentation and further information on the Company please visit the CVN website at: www.carnarvon.com.au

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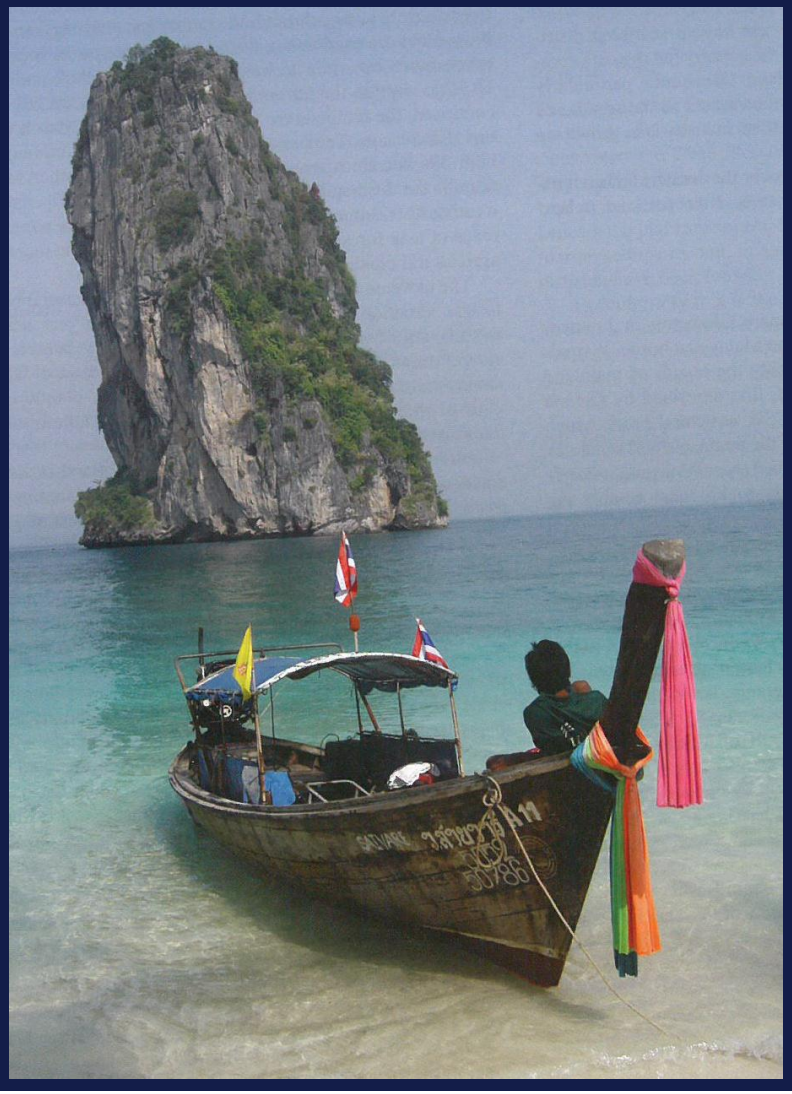
Yours faithfully

Thomson Naude
Company Secretary
Carnarvon Petroleum Limited

Offshore Thailand potential onshore – Khian Sa Basin



Low cost onshore work program to access up to 100 mmbbls recoverable prospects

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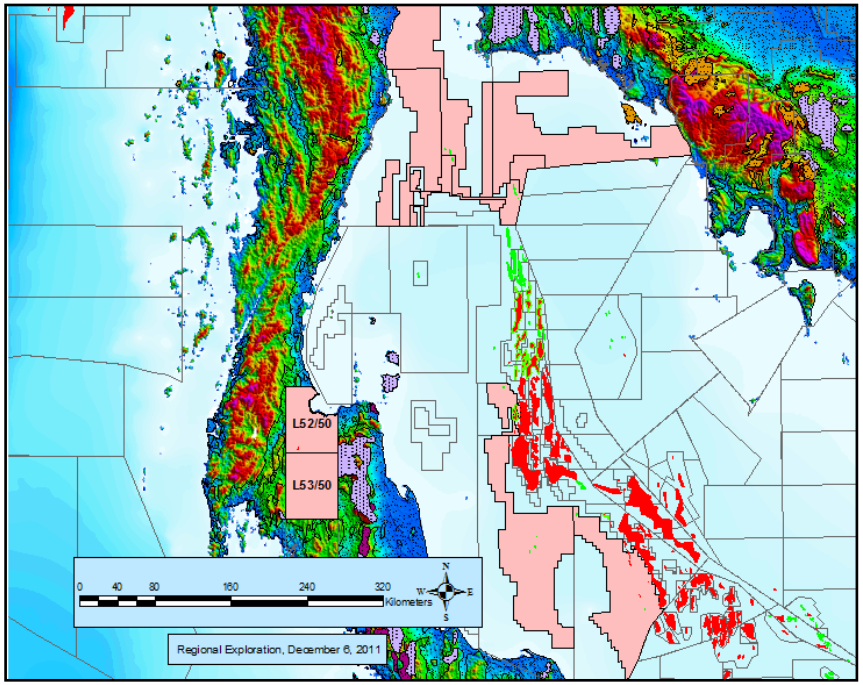
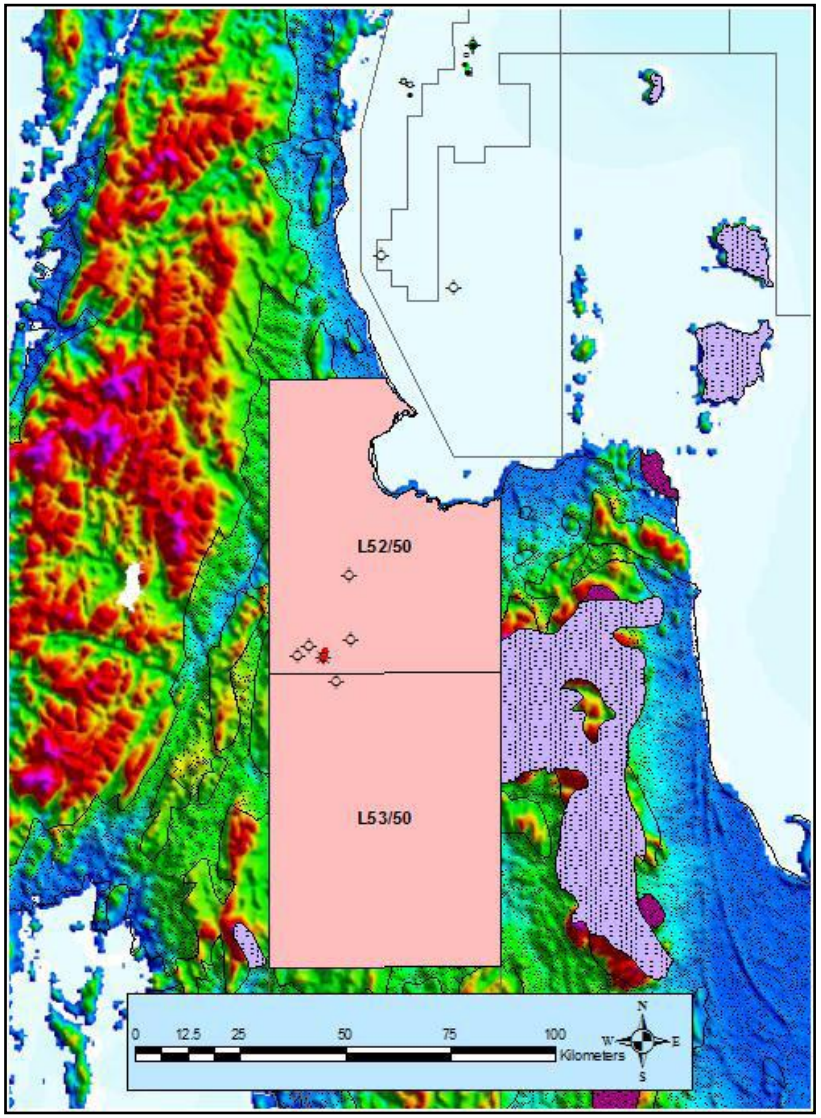
L52/50 & 53/50: The Opportunity

- Only two wells drilled in an under-explored onshore basin
- Multi-target leads already identified, analogous to producing Permian carbonate fields in the Chumphon Basin and surrounded by producing Western Gulf of Thailand Blocks
- Rapid commercialisation possible, very high value $/bbl in the event of success
- Low cost work onshore program planned to access up to 100 mmbbls recoverable prospects
- Once a carbonate discovery is made shooting a 3D may highlight clastic closures analogous to the offshore discoveries

Location, Summary





- Awarded 25th February, 2010 with Mubadala(op)/Carnarvon 50:50
- Total 6,922km^2
  - L52/50 = 3,067km^2
  - L53/50 = 3,855km^2
- Carnarvon 100% equity since December 2012

Tectonic setting

C. K. Morley and R. Westaway 2006

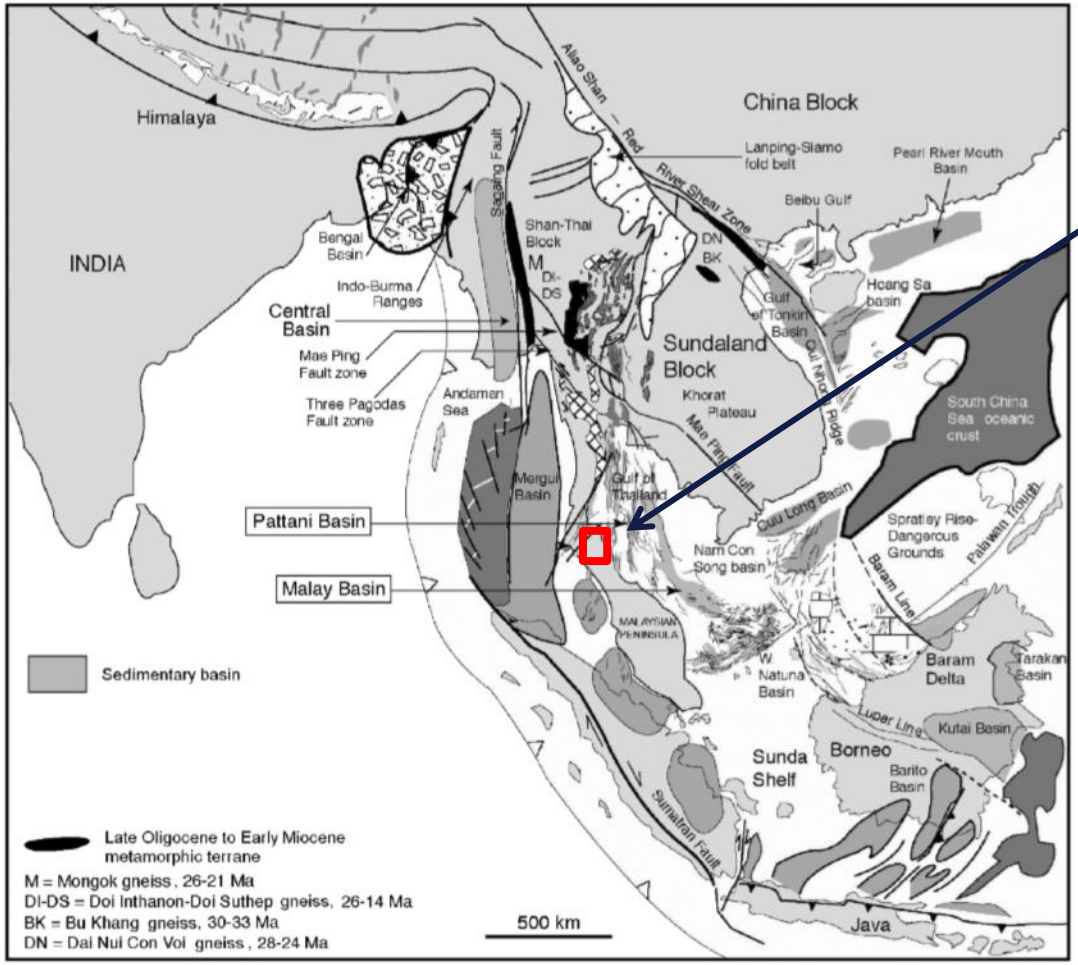


Fig. 1. Location map of super-deep basins in Southeast Asia, modified from Morley (2002).

Oligocene = syn rift

Mid Miocene onwards
- Less subsidence
- Mergui rift phase

Surrounded by productive basins

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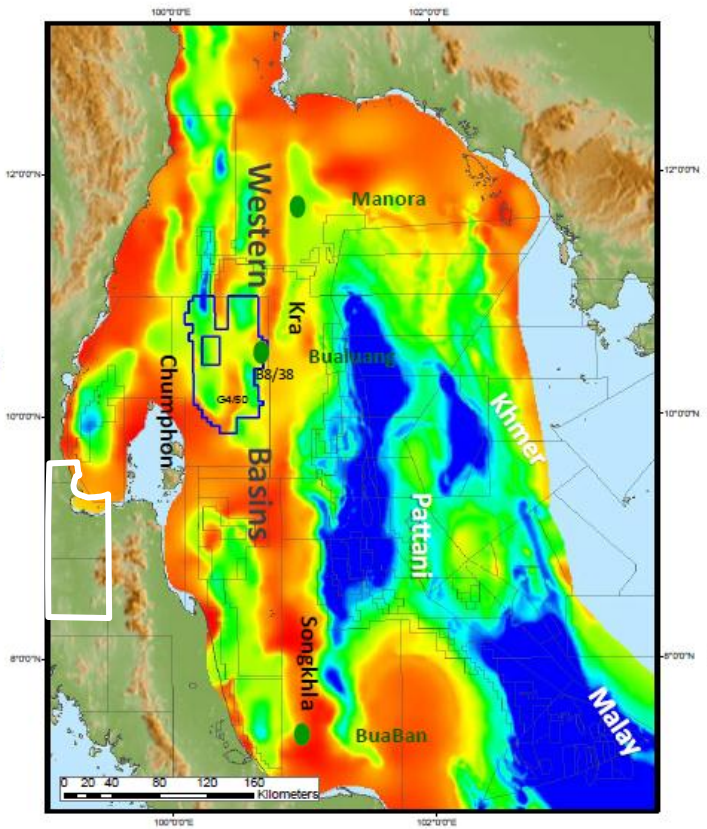
Salamander 7th January 2013
Macquarie Oil Explorers Conference

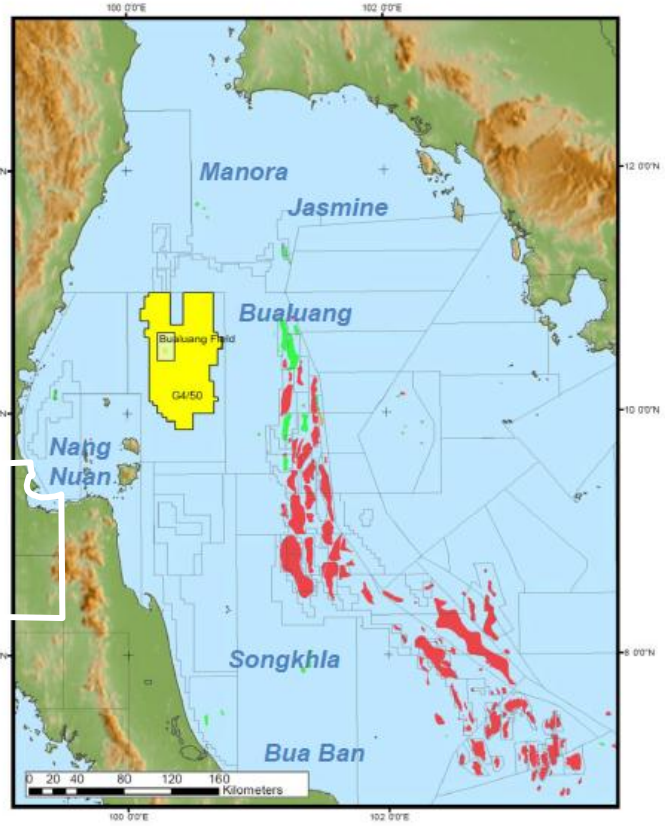
- Mature Pattani Basin
- Western GOT an under-explored province
- Larger block sizes in the Western Gulf
- Bualuang field in B8/38 production licence

Tertiary basins



Base Tertiary Structure map with basin names

Fields



Salamander 2012

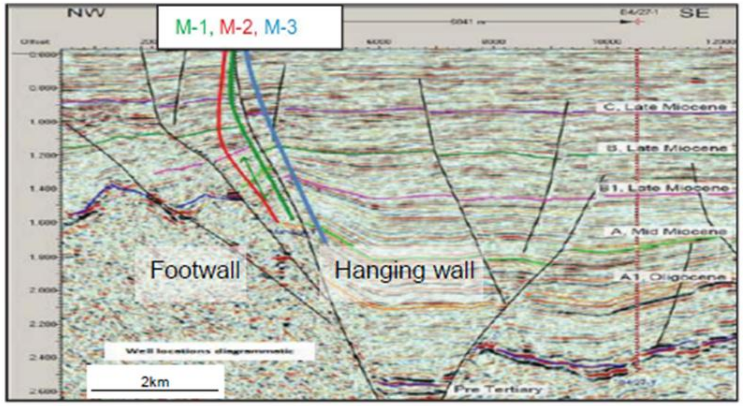
FIELDS
Bualuang: 45 mmbo 2P ; Bua Ban: 60 mmbo 2P; Songkhla: 12 mmbo 2P;
Manora: 24 mmbo 2P; Jasmine 35 mmbo+ 2P; Nang Nuan: 100 mmbo STOIIP/produced 5 mmbo one well

Offshore Oligo-Miocene clastic play – fault bounded

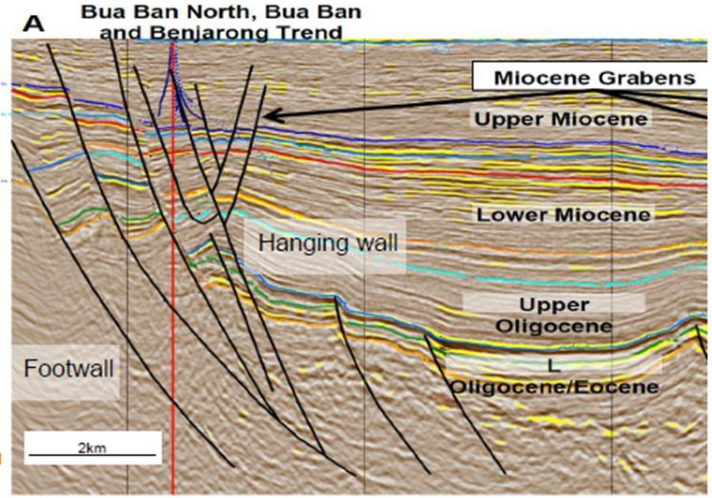
GULF OF THAILAND WESTERN BASINS: HANGING WALL TRAPS

- Recent discoveries located on down thrown side of basin bounding fault:
  - Manora
    - Pearl operated
    - 7 sq. km area
    - 35 MMBO
  - Bua Ban North
    - Coastal operated
    - 68 MMBO
    - 16 sq. km
- Straightforward migration path from underlying kitchen, up faults into Miocene reservoirs
- Pay has been encountered in stacked reservoirs of Late Oligocene to Mid Miocene age

Manora Oilfield



Downthrown fault play



Salamander 2013

Is L52/50 and 53/50 an overlooked Western Thailand basin?

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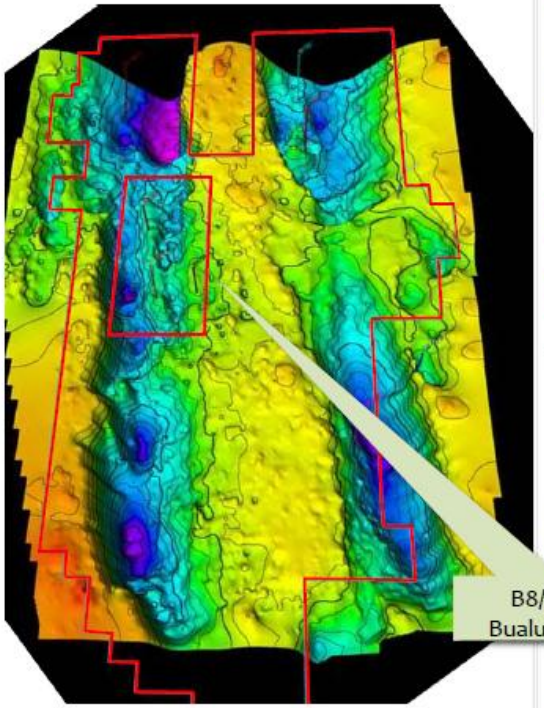
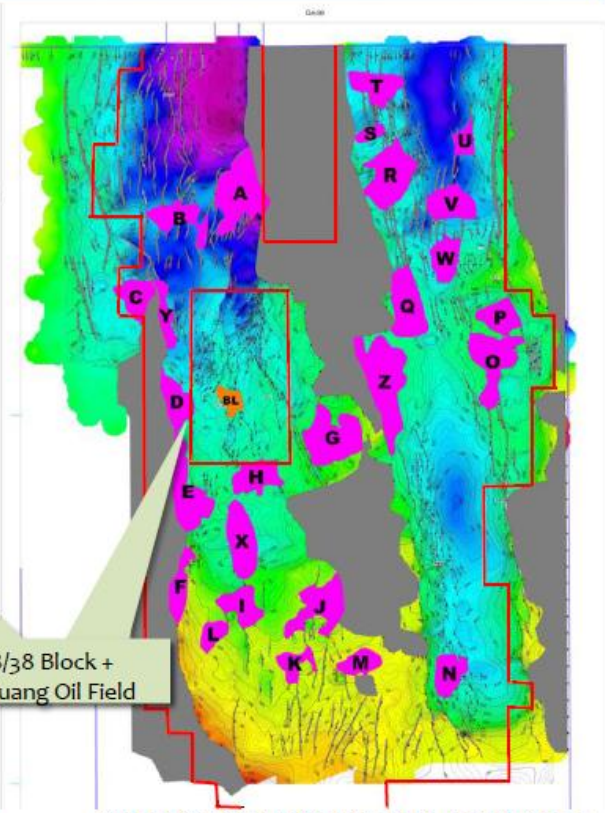
GREATER BUALUANG G4/50: MATURING PROSPECT INVENTORY

- Offshore there are 3D's
- Onshore L52/53 has 2-3 km spacing 2D

- 5,000 sq. km of 3D high quality seismic now in-house and interpreted
- Prospect sizes 20-90 MMbo
- CoS 25-35%
- EIA permits in place for northern prospects, still required for southern locations
- Discussions ongoing for second rig on long term contract



Pre-Tertiary Structure B8/38 and Block G4/50

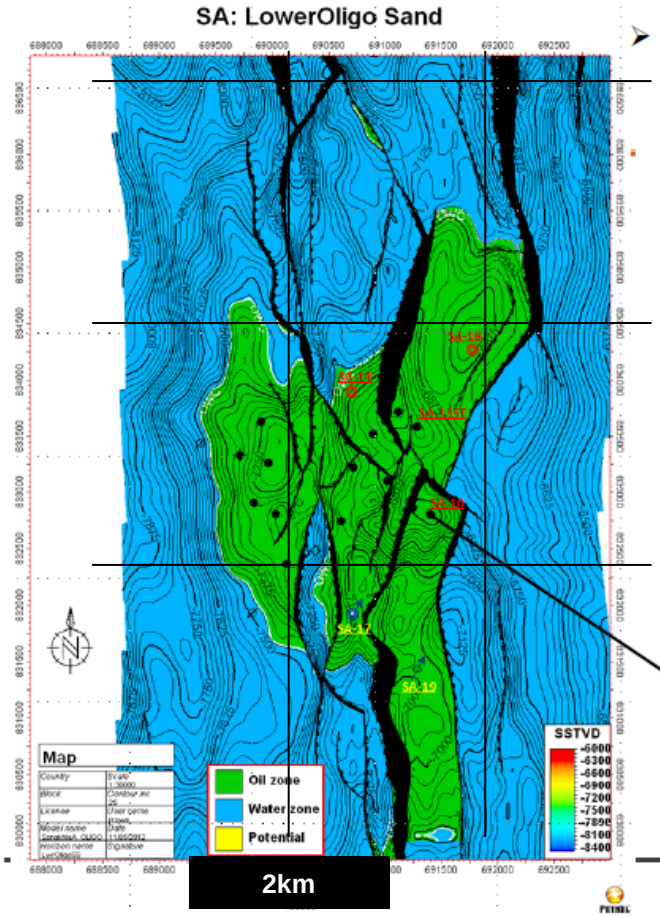


Block G4/50 Tertiary Level, Lead Areas

Salamander 2012

Overlay L52/50 and 53/50 seismic grid of 2 x 2km

Songkhla Field

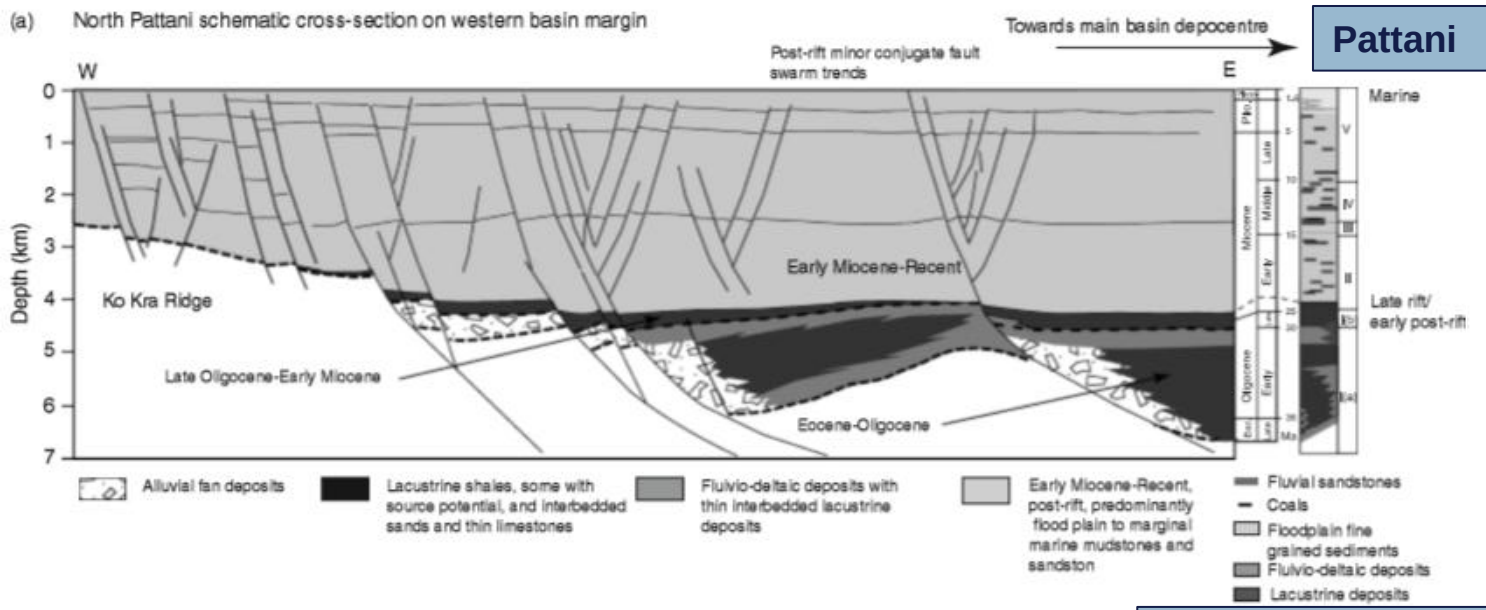


- **2012 Drilling Campaign**
- SA-10
  - Encountered 550' Lower Oligocene sand oil column
  - 212' net pay
  - A record for the Songkhla Basin
- SA-13
  - 67 feet of Lower Oligocene net pay with 18% porosity
  - Evaluating updip location for confirmation well
- Water injection wells required for eastern fault blocks due to lack of aquifer support
- 89 Mmbbls prospective resources (recoverable)
- A-19 water injector found 100 feet Miocene M100 with 20-35% oil saturation, providing evidence of oil migration throughout Miocene in Songkhla area; evaluation of new 3-D to detect structural closures

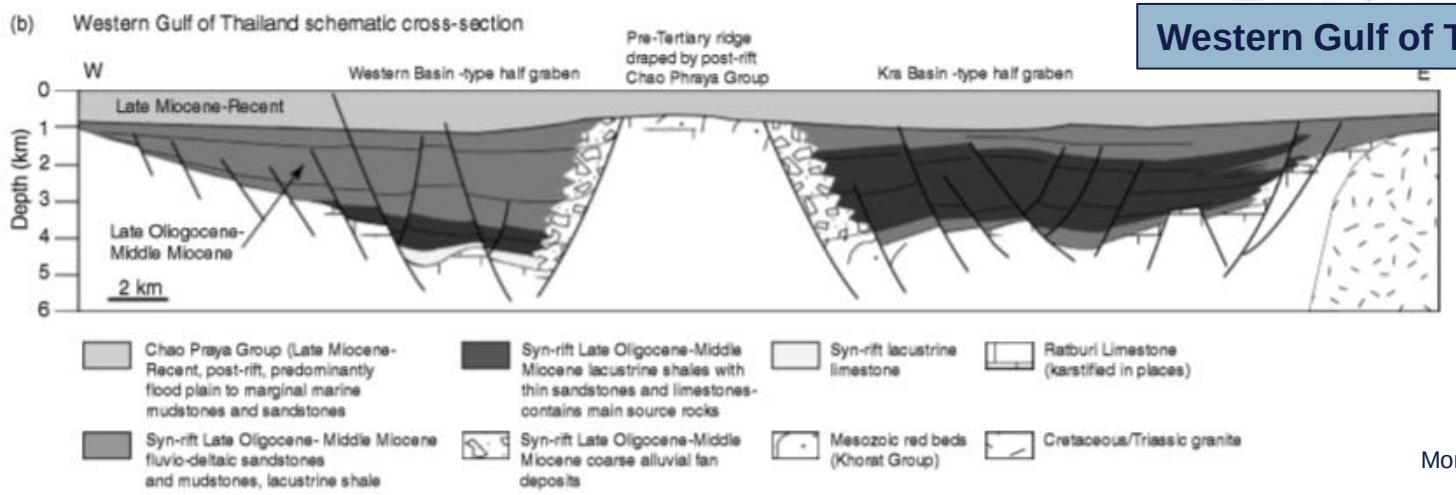
SA10 550' Oil Column 212' Net Pay
2012 Drilling Campaign
Planned Development Well
Planned Water Injection Well

Coastal 2012

Pattani vs Western Gulf of Thailand basin stratigraphy



Thick post rift



Thin post rift

Morley 2006

Chumphon Basin Analogy

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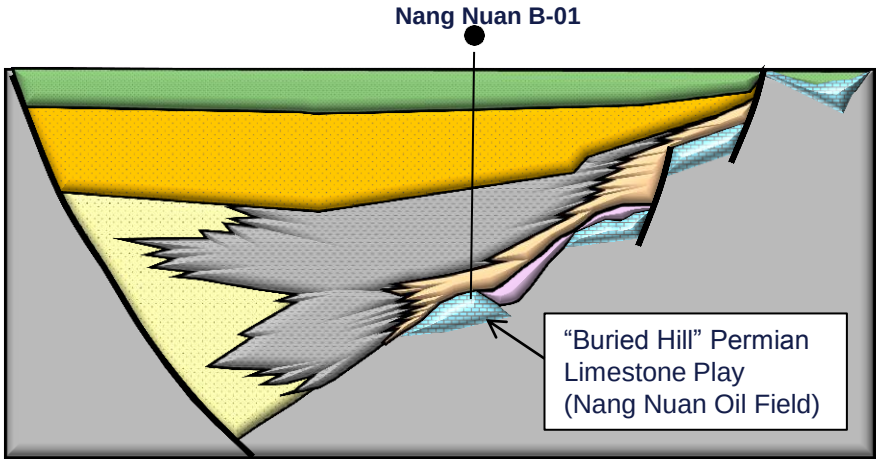
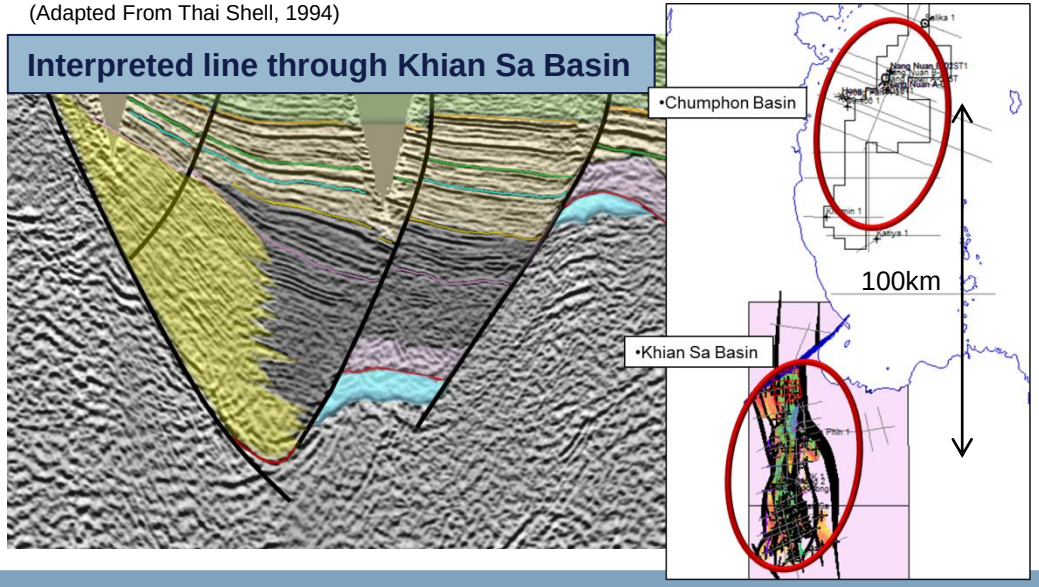
Northern Chumphon Basin Schematic



(Adapted From Thai Shell, 1994)

Interpreted line through Khian Sa Basin



Chumphon Basin: Nang Nuan Oil field

- Offshore and immediately north of L52/50, L52/53
- "buried hill" karstic/hydrothermal reservoir
- produces from karst Permian limestone reservoir (?Pre-Rift)
- Single well Nang Nuan B produced 5 mmbo
- Nang Nuan Well Test rates (BOPD)

Nang Nuan A-02	10000
Nang Nuan A-04ST	9050
Nang Nuan A-01	3400
Nang Nuan B-01	5510
Nang Nuan B-01	4711
Nang Nuan B-01ST1	7500

The Khian Sa Basin : L52/50 and L53/50

- similar basin architecture to the Chumphon Basin.
- leads identified : analogous to Nang Nuan Field

Mergui Basin Analogy

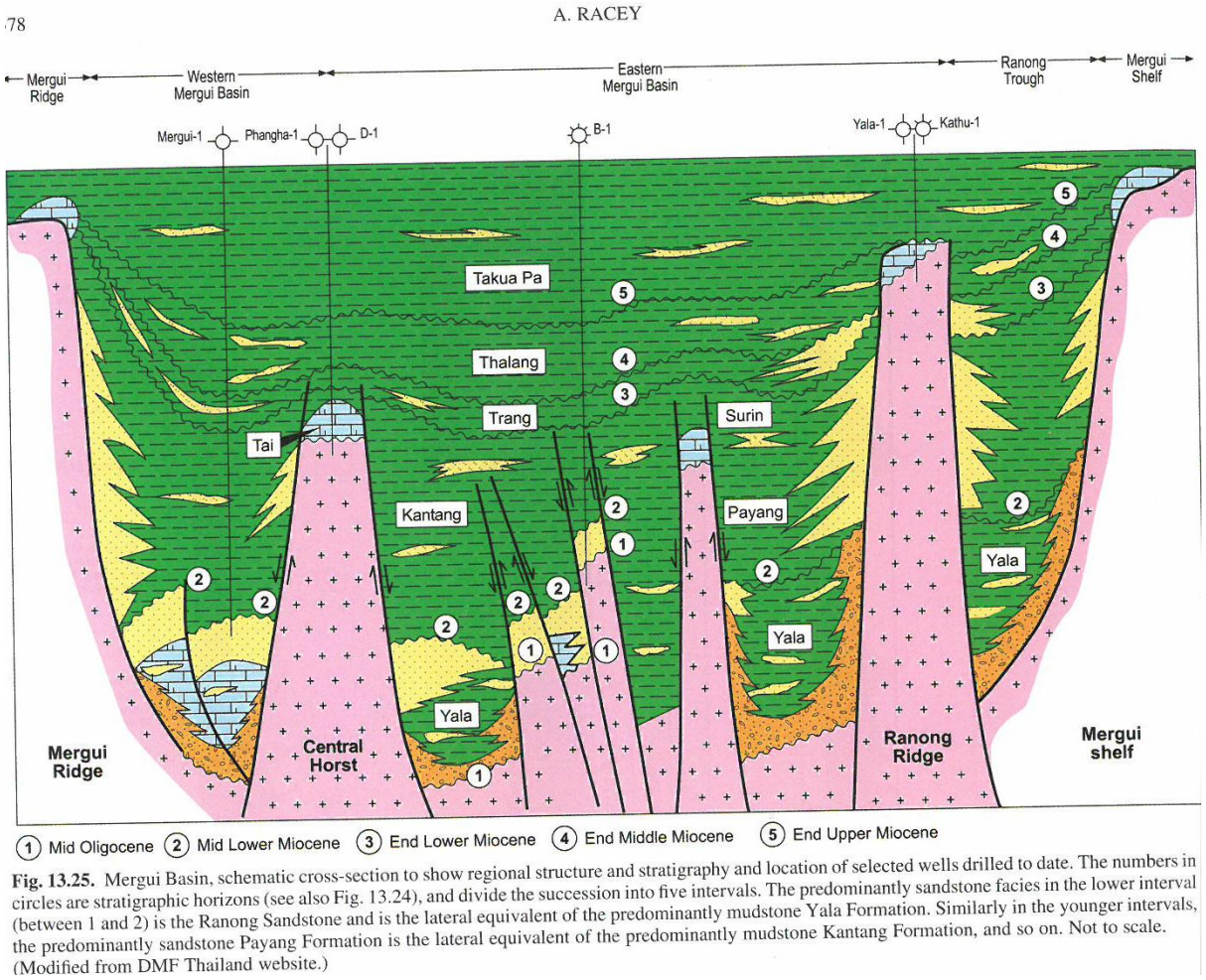
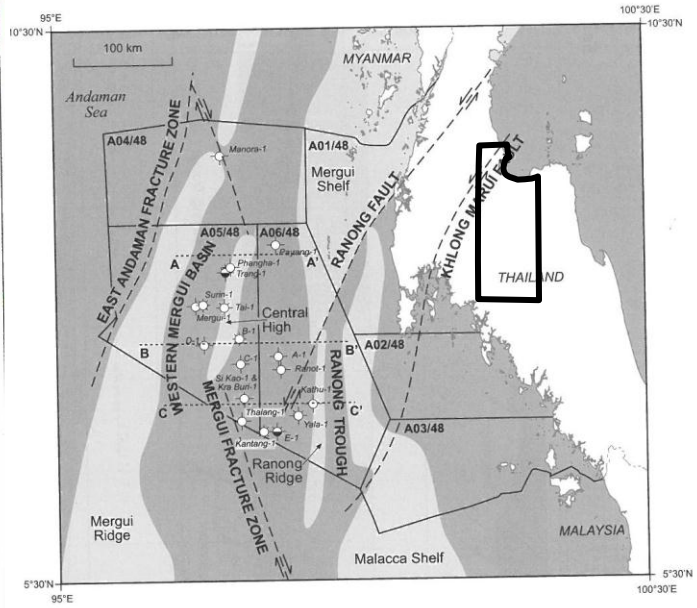


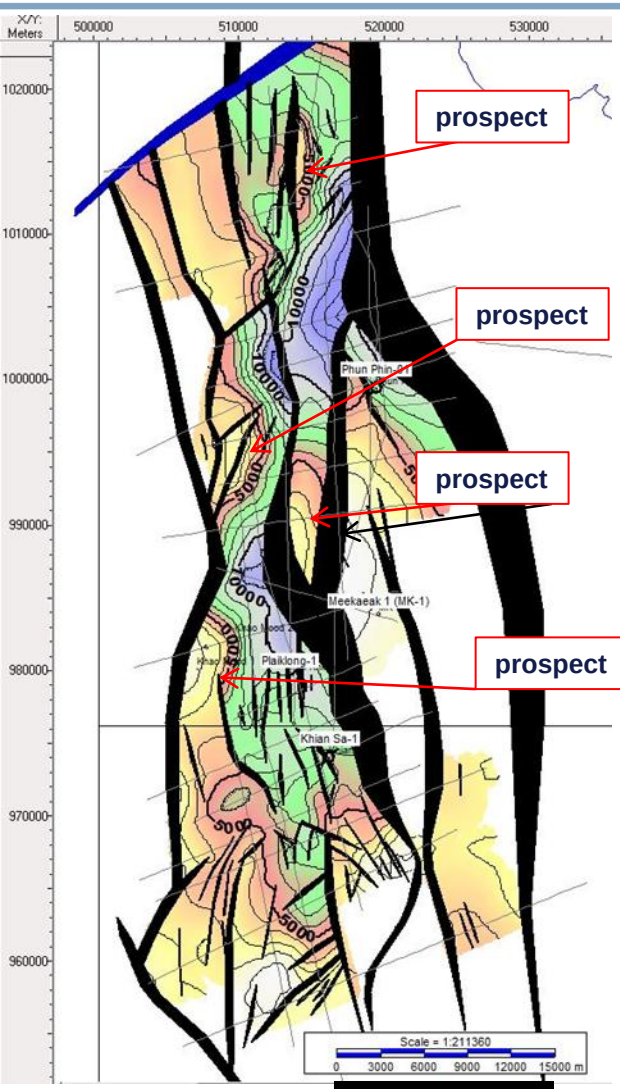
Fig. 13.25. Mergui Basin, schematic cross-section to show regional structure and stratigraphy and location of selected wells drilled to date. The numbers in circles are stratigraphic horizons (see also Fig. 13.24), and divide the succession into five intervals. The predominantly sandstone facies in the lower interval (between 1 and 2) is the Ranong Sandstone and is the lateral equivalent of the predominantly mudstone Yala Formation. Similarly in the younger intervals, the predominantly sandstone Payang Formation is the lateral equivalent of the predominantly mudstone Kantang Formation, and so on. Not to scale. (Modified from DMF Thailand website.)

Miocene Limestone capped Horsts



Racey 2011

Exploration



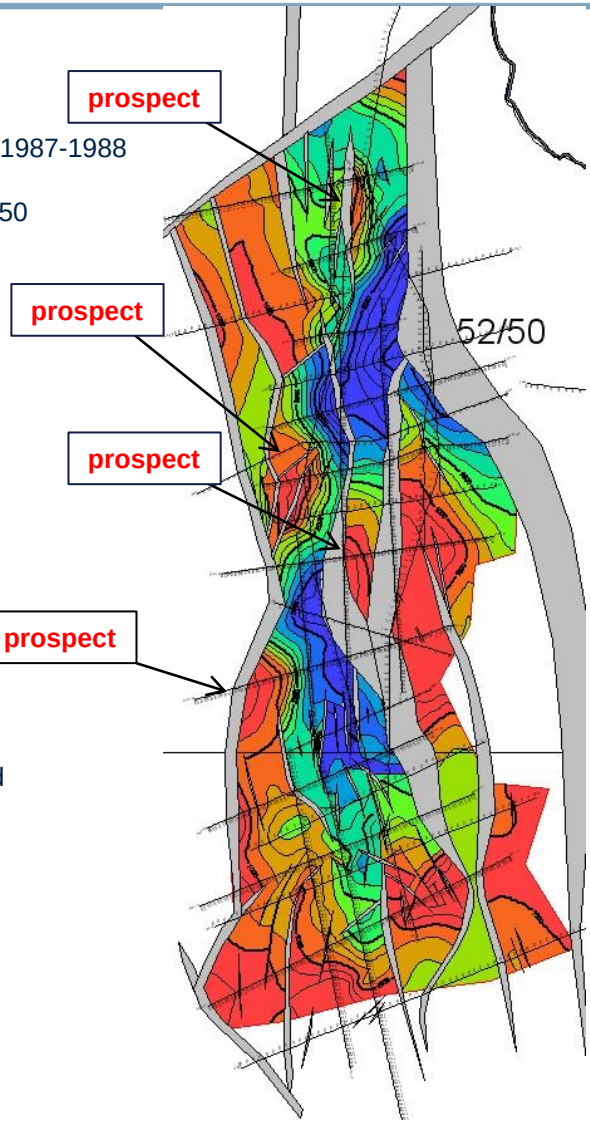
15km

Previous operators:

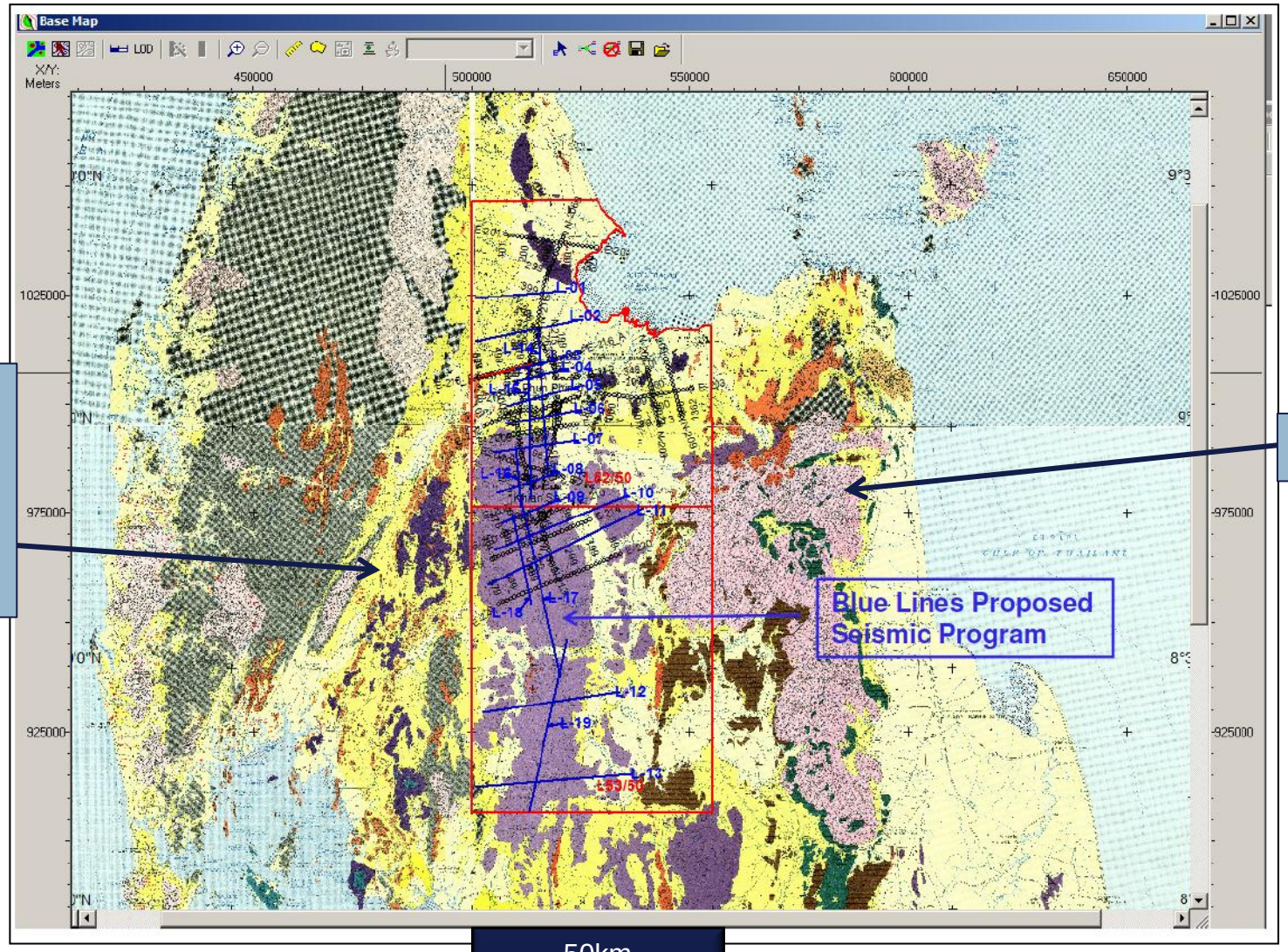
- 393km vintage seismic data acquired Gopher Oil in 1987-1988
- Two exploration wells drilled within L52/50 and L53/50 Gopher Oil in 1988
  - Phun Phin 1 (TD @ 6800')
  - Khian Sa 1 (TD @ 8000')
- Four CBM wells drilled 2003-2006

Current Joint Venture:

- Surface geological mapping
- gravity & magnetic survey in 2011
- Acquired 314km 2D seismic data;
- acquisition, processing and interpretation completed



Proposed and previous seismic lines



Permian Carbonates, Triassic, Jurassic, Cretaceous
- Reservoirs
- >2% TOC

Granite

Mesozoic Source Rocks

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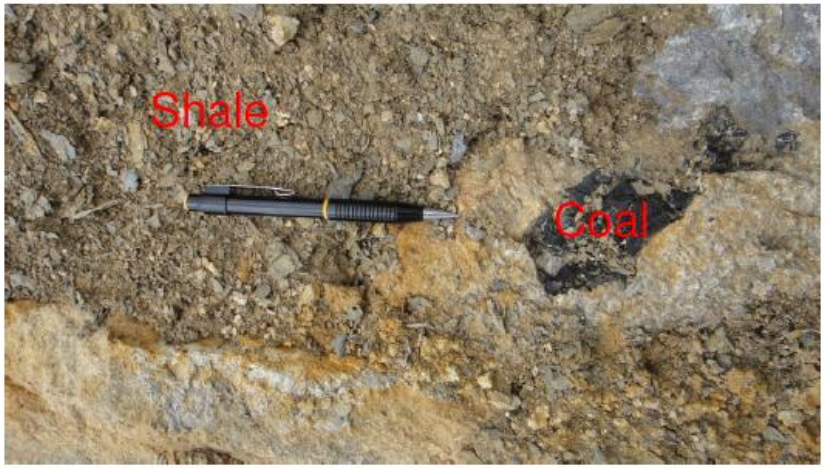
Lacustrine Shales and Allochthonous Coals
Cretaceous Khlong Min Formation



Marine Shales and Paralic Coals
Triassic Sai Bon Formation

Oil seep in south of permit discovered by DMF? / Racey et.al. 1997

Analyses from Outcrop samples

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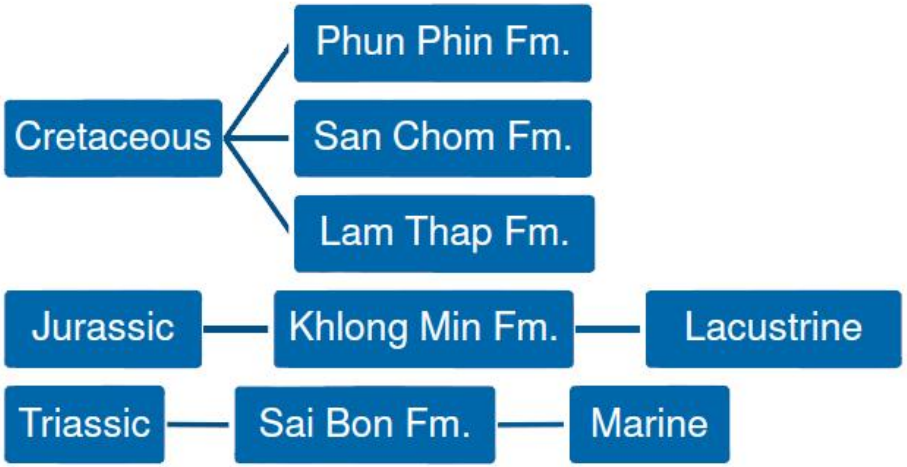
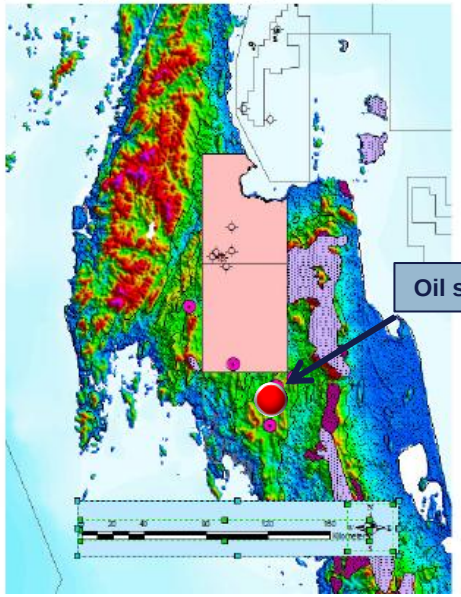
oil & gas

TABLE
ROCK-EVAL PYROLYSIS AND TOC CONTENT *

Sample ID	Lithology	TOC (wt.%)	mg/gm rock			Tmax (°C)	Oil Production Index (OPI)	Potential Yield (S_1+S_2)	Hydrogen Index	Oxygen Index	Formation (Age)
			S_1	S_2	S_3						
L52/53-030	med gy Sltst	3.50	0.03	1.54	0.21	443	0.02	1.57	44	6	Lam Thap (K)
L52/53-01 (STOP 2)	dk gy Ls	0.27	0.02	0.04	0.18	538	0.33	0.06	15	67	
L52/53-02 (STOP 5)	med gy Sh	0.19	0.01	0.08	0.09	431	0.11	0.09	41	46	Lam Thap (K)
L52/53-03A (STOP 6)	gysh blk Coal	54.51	5.09	174.57	21.70	419	0.03	179.66	320	40	Khlong Min (J)
L52/53-3B (STOP 6)	olv gy Mudstone	1.34	0.03	4.39	1.38	436	0.01	4.42	328	103	Khlong Min (J)
L52/53-4A (STOP 9)	gysh blk Coal	48.36	0.06	5.30	9.44	518	0.01	5.36	11	20	Khlong Min (J)
L52/53-4B (STOP 9)	brnsh blk Mudstone	5.42	0.10	5.58	0.39	455	0.02	5.68	103	7	Sai Bon (T)
L52/53-4C (STOP 9)	dk gy Sh	4.70	0.09	4.67	0.18	458	0.02	4.76	99	4	Sai Bon (T)

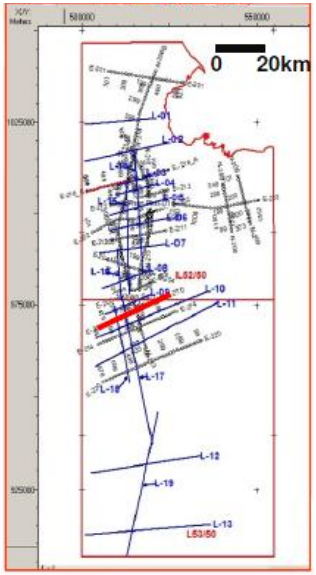




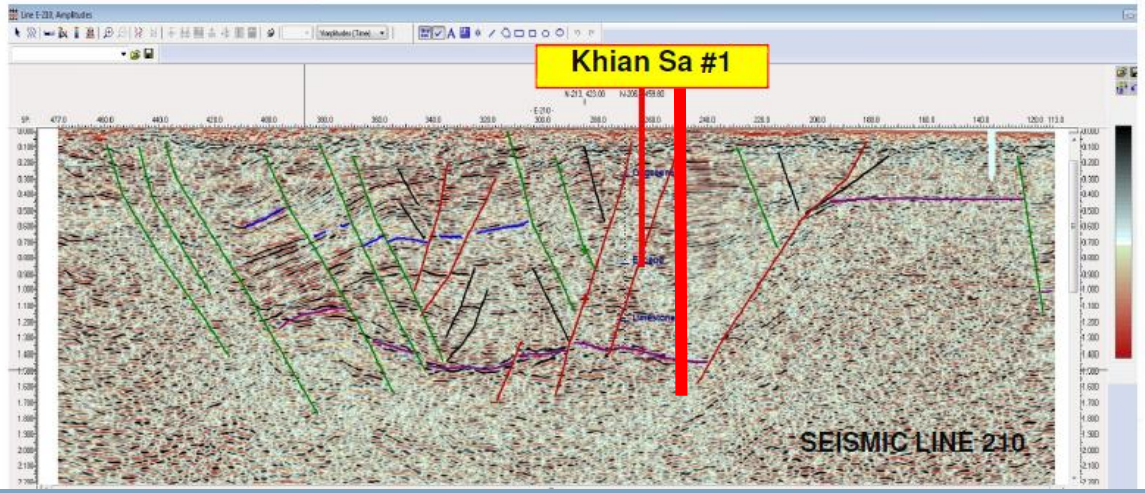
- Mesozoic has Vr of 0.7-1 at outcrop
- buried in subsurface could easily be a generating source rock
- Racey et.al., 1997; oil/bitumen in Cretaceous

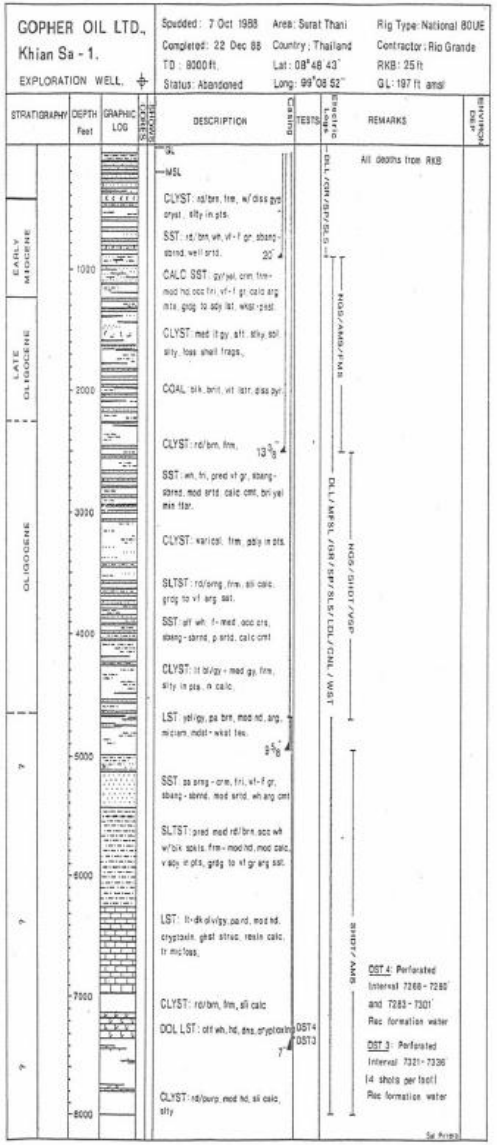
Khian Sa 1 Well

No gas logs run



Well Khian Sa-1 is located on a faulted anticline that appears to have formed by the inversion of a half-graben basin. The dipping strata that define the fold pass close to the surface, suggesting that it is relatively young, and that strata have been removed by erosion. The N-S tie line shows that Khian Sa-1 is drilled off structure.



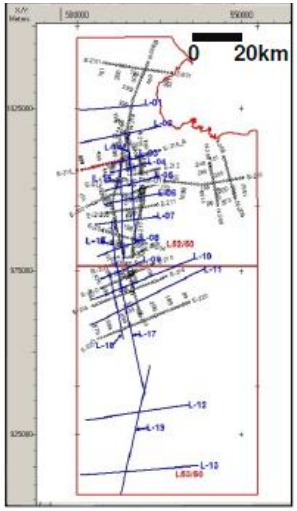


Early Miocene - Oligocene

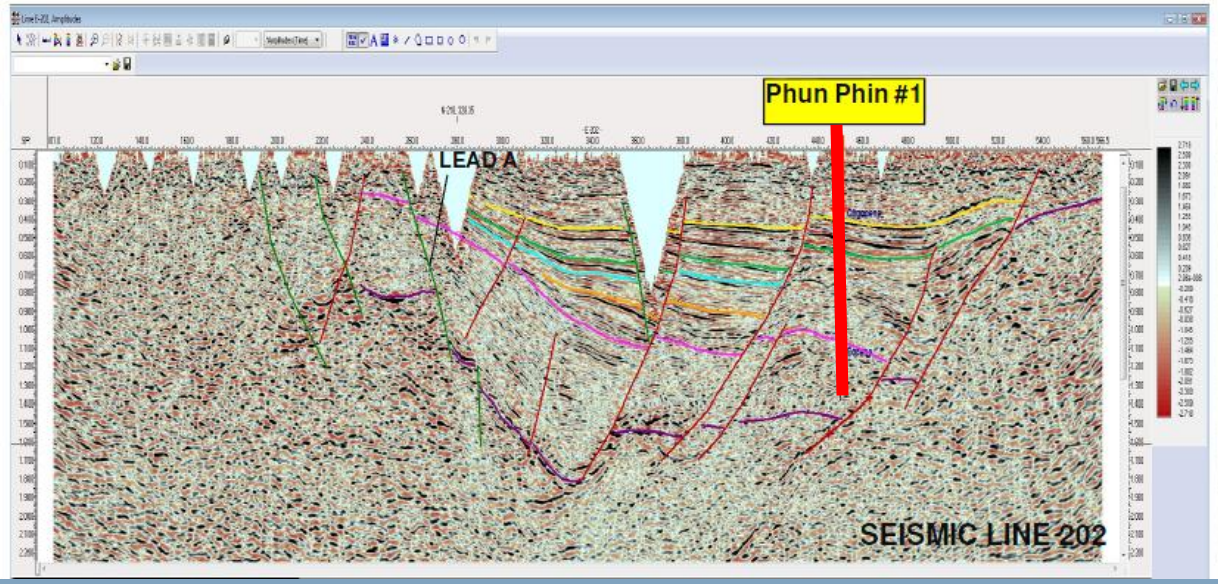
Permian Carbonates?

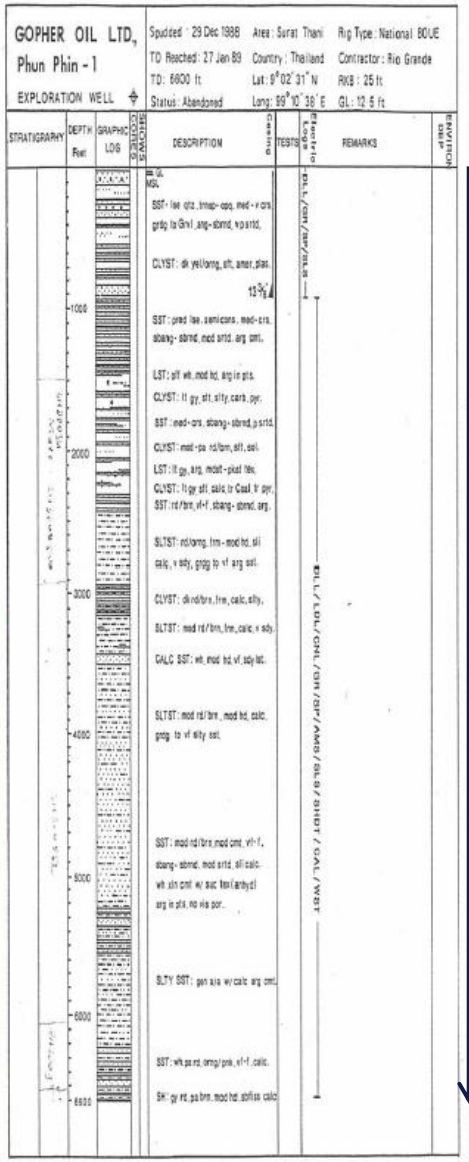
Phun Phin 1 Well

No gas logs run

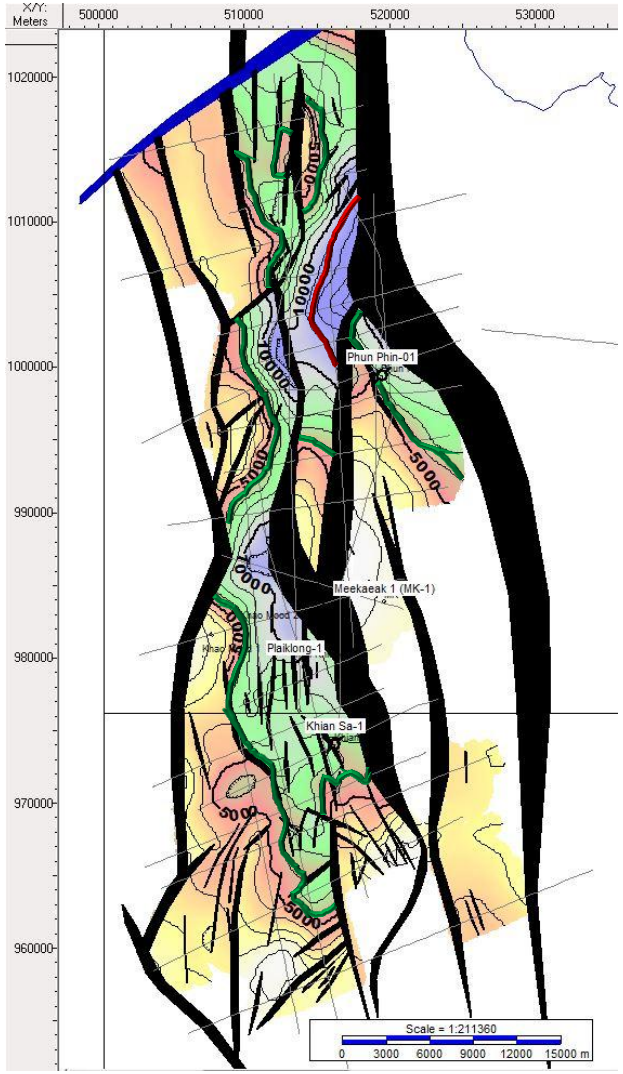


Well Phun Phin-1 is located in a footwall fault block east of the deep basin. This well may be located in a migration shadow. Potential source rocks in the footwall fault block are located at 1.0s TWT, which probably represents insufficient depth for hydrocarbon generation. On the N-S tie line E-215, the structure appears flat at shallow levels and on monoclinal dip at deeper levels. The well is therefore probably off structure.



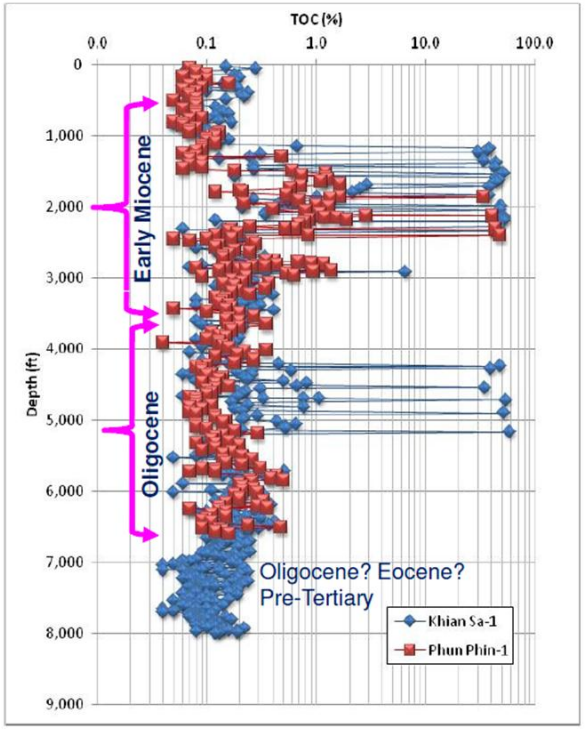


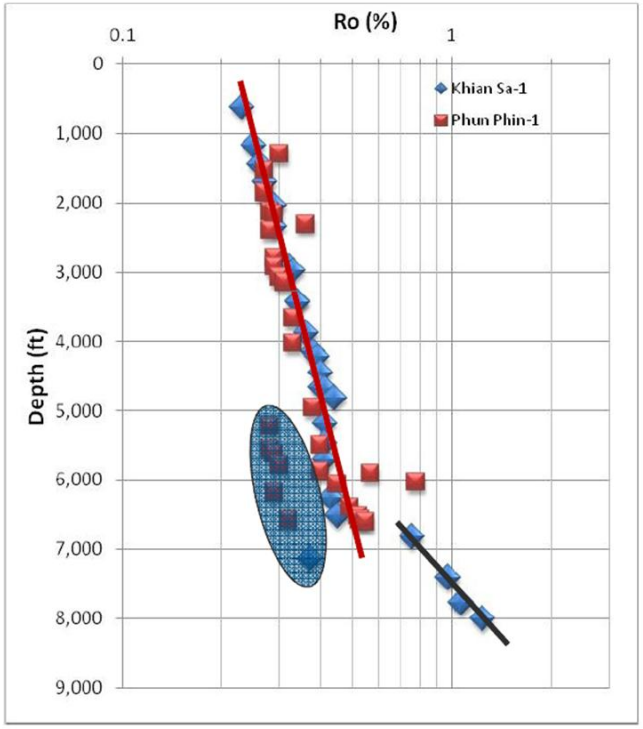
Maturity + Source



Maximum depth 14,500’

- 180 sqkm within oil window
- 6500’ top of oil window
- 11500’ base of oil window



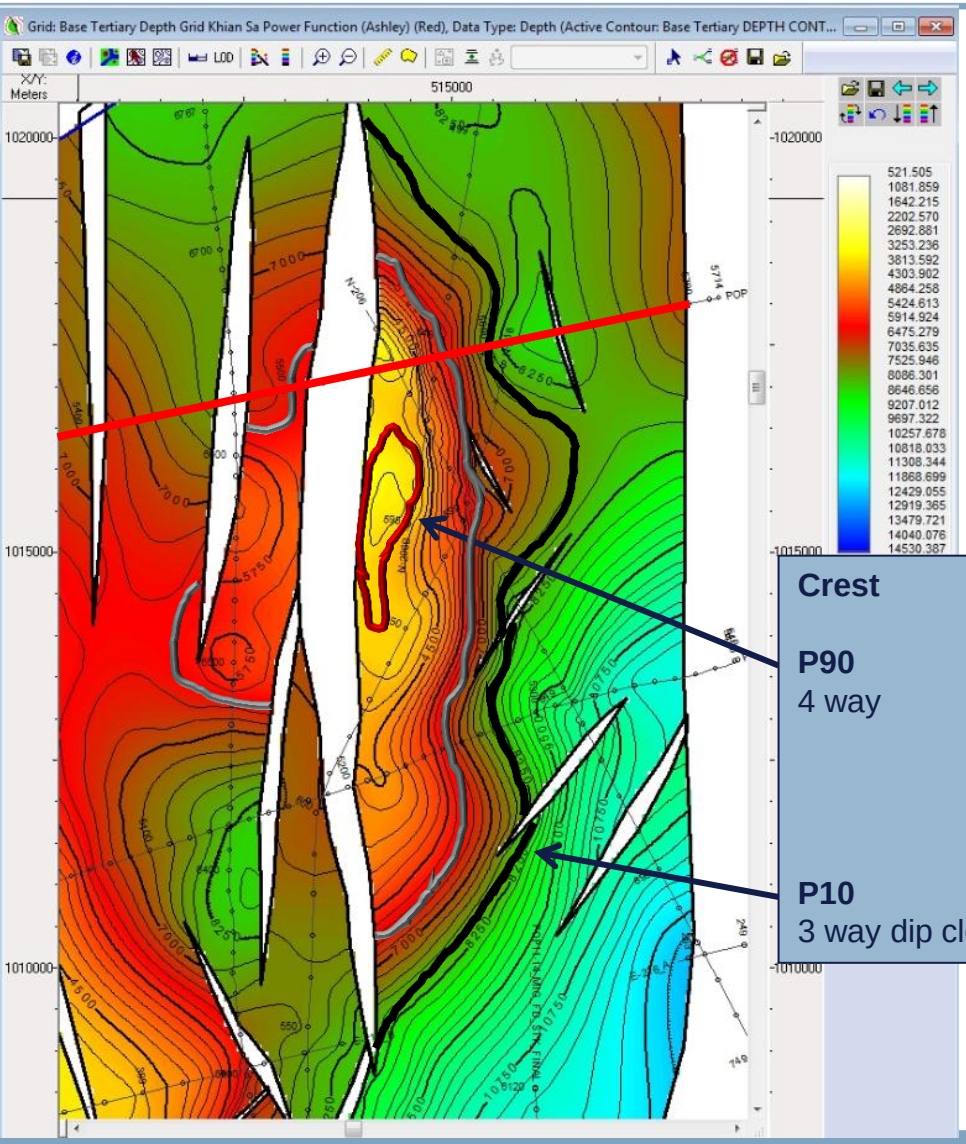


Corelabs

6500’ top of oil window – 0.5 Ro%

11500’ base of oil window – 1.1 Ro%

Tha Chana – Carnarvon (Permian)



Crest **3250ft (990m)**

P90 **3750'(1143m)**
4 way

P10 **8000'(2438m)**
3 way dip close fault block

STOIIP(Recoverable)mmbls

P90	P50	P10
0.4 (0.1)	7.5 (1.4)	118 (26)

Prospect	Ta Chana	
	P90	P10
Area (sqkm)	0.75	15.25
Res thick(m)	150	1000
Net:Gross	1	25
porosity	1	30
So	50	80
Bo	1.05	1.2
RF	10	40
POS	?	?

Tha Chana – Carnarvon (Tertiary)

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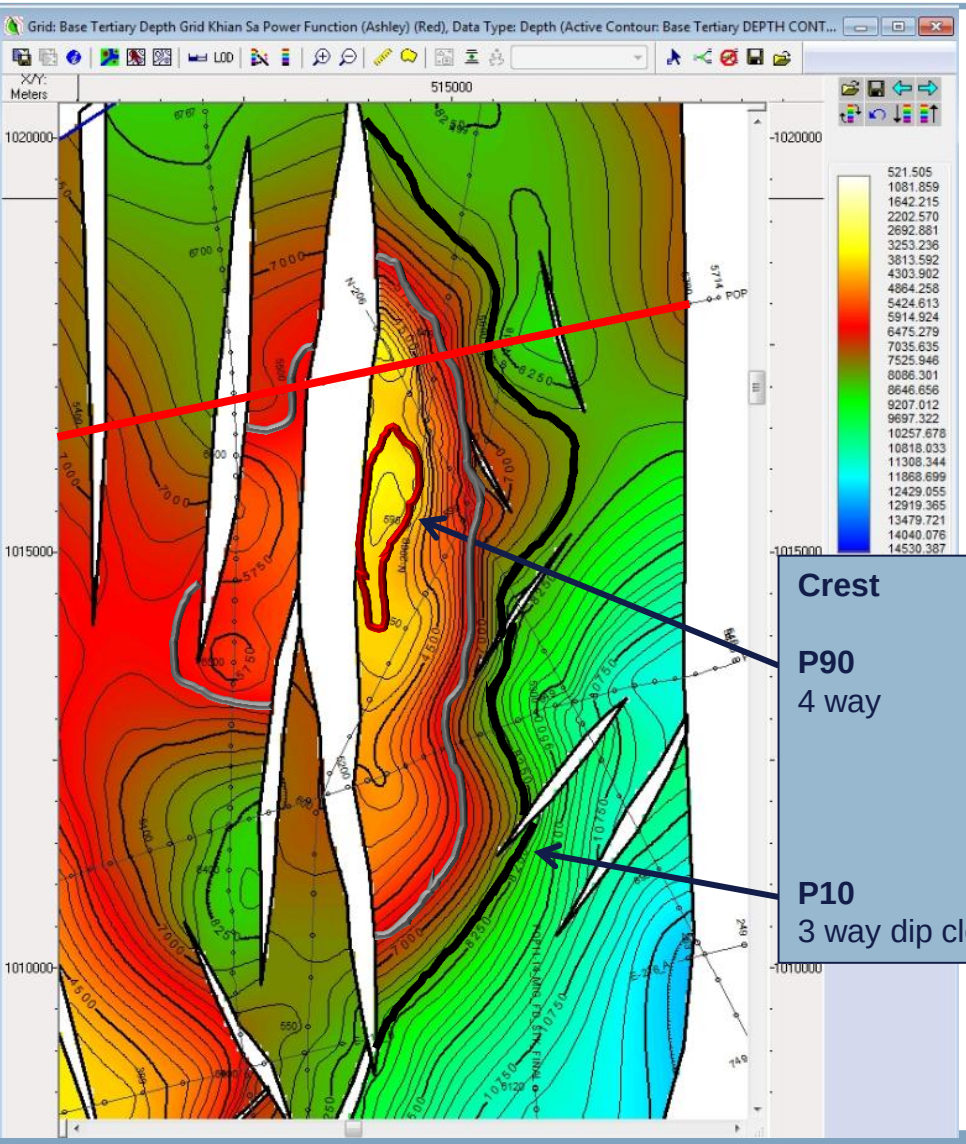


Crest **3250ft (990m)**

P90 **3750'(1143m)**
4 way

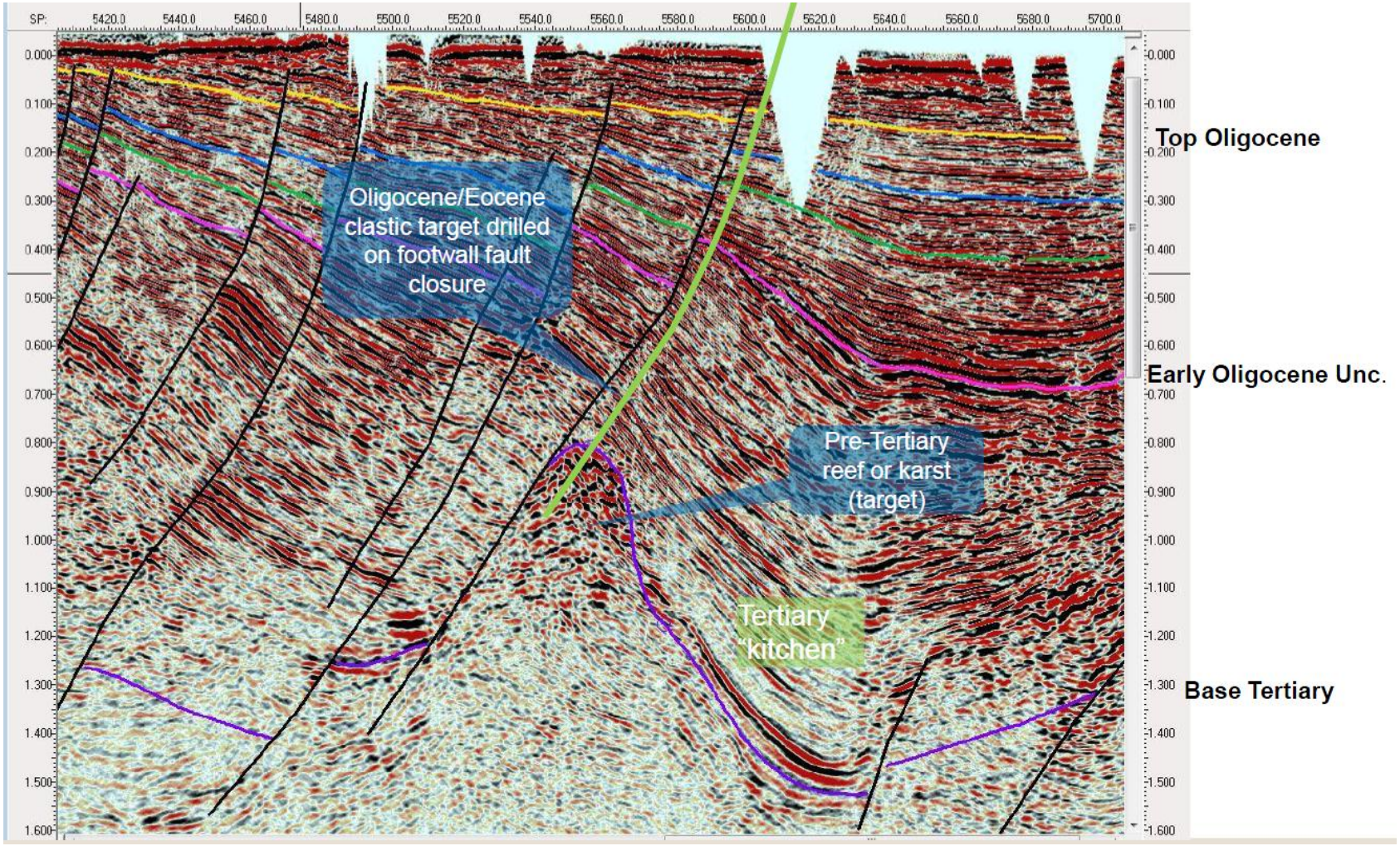
P10 **8000'(2438m)**
3 way dip close fault block

STOIIP(Recoverable)mmbls

P90	P50	Pmean	P10
14(3)	111(27)	258(68)	624(167)

Prospect	Ta Chana	
	P90	P10
Area (sqkm)	0.75	15.25
Res thick(m)	5	25
Stacked sands	2	15
Net:Gross	25	75
porosity	15	28
So	50	80
Bo	1.05	1.2
RF	15	40
POS	?	?

Tha Chana prospect line POPL11-02



Fiscal Regime Summary – Thai III

Government's Take:

- Royalty
  - Sliding scale rates from 5-15% on gross revenue, based on production
- Petroleum Income Tax 50%
- Special Remuneration Benefit (SRB)
  - Progressive rate from 0-75% on "Windfall Profit" (at about 5000 bopd)

Expense before tax

- Royalty
- SRB
- Opex
- Depreciation
  - 5-yr straight line for tangible assets
  - 10-yr straight line for intangible pre-production assets
- Loss carry forward 10 yr max.

Project Economics

Permian/Miocene Carbonates

Based on nearby Chumphon Basin

- 65-200 m reservoir packages
- 17% porosity
- 500-2000 mD perm
- Normally pressured

Wells capable of rates between 1,000 and 10,000 bopd with cumulative production up to 5 MM bbls

Tertiary Clastics

Based on CVN experience from onshore producing fields

- 5-25 m sand packages
- 15-28% porosity
- 5-30 mD permeability
- Normally pressured

Each well produces around 100k bbl at initial rate of 120 bopd declining over 7 years

Case	Recoverable Oil MM bbls	CAPEX US$ MM	Oil Price US$/bbl	Revenue US$ MM	NPV (0%) US$ MM	NPV (10%) US$ MM
Carbonate Low	0.1	3	100	10		
Carbonate Med	1.7	4.5	100	168	51	38
Carbonate High	28	10.5	100	2862	550	363
Clastic Low	3.1	48	100	312	78	58
Clastic Med	27	408	100	2798	696	380
Clastic High	61	1015	100	6161	1572	654

Economic model available on request

2013 – Prove a Petroleum System

1) Improve trap definition

- Optional Aero grav/mag survey May 2013
- Optional mini vibe prospect area survey
- Optional GORE survey May 2013

2) Wells planned for December 2013

4000 feet – est USD 2.8 mm each

6000 feet – est USD 3.25 mm each

Could drill two wells from same surface location

- the above estimate 0.93 mm for well site and well planning, EIA etc
- No contingency times or costs are included

L52/50 & 53/50: The Opportunity

- Only two wells drilled in an under-explored onshore basin
- Multi-target leads already identified, analogous to producing Permian carbonate fields in the Chumphon Basin and Tertiary producing oilfields in the Western Gulf of Thailand Blocks
- Rapid commercialisation possible, very high value $/bbl in the event of success
- Low cost onshore work program to access up to 100 mmbbls recoverable prospects
- Once a carbonate discovery is made shooting a 3D may highlight clastic closures analogous to the offshore discoveries