

North Sumatran Basin South Block A PSC Opportunity



Kim Morrison
CEO, Lion Energy Limited

Seapex
8 April 2016

A **New** Approach to Asian Energy

Important notice and disclaimer



Forward-looking statements

Certain statements contained in this presentation, including information as to the future financial or operating performance of Lion and its projects are forward-looking statements. Such forward-looking statements:

- should or can generally be identified by the use of forward looking words such as “anticipate”, “believe”, “expect”, “forecast”, “estimate”, “will”, “could”, “may”, “target”, “plan” and other similar expressions within the meaning of securities laws of applicable jurisdictions, and include earnings guidance and statements of intention about future matters and the outcome and effects of the equity raising. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance are also forward looking statements;
- are based upon a number of assumptions and estimates that, while considered reasonable by Lion, are beyond the control of the Company as they are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies;
- involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements; and
- may include, among other things, statements regarding targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources and anticipated flow rates and are or may be based on assumptions and estimates related to future technical economic, market, political, social and other conditions.

This Document is provided to the recipient on the basis that the recipient understands and acknowledges that it may not rely in any way whatsoever on the Document or other information. Unless legally required, the Company undertakes no obligation to update publicly any forward looking statements, whether as a result of new information, future events or otherwise.

General Disclaimer

The Company has taken all reasonable care in producing the information contained in this document, however it does not guarantee the accuracy of information or analysis provided. The Company will not be responsible for loss or damage arising from the use of this information. The contents of this document should not be used as a substitute for detailed investigations or analysis and we strongly recommend you obtain independent professional advice before making any investment decisions about the Company.

You may use the information for your own personal use or to inform others about our materials, but you may not reproduce or modify it without our express permission.

Competent Persons Statement: Qualified Petroleum Reserves and Resources Evaluator

Pursuant to the requirements of the ASX Listing Rules Chapter 5, the technical information, reserve and resource reporting provided in this document are based on and fairly represent information and supporting documentation that has been prepared and/or compiled by Mr Kim Morrison, Chief Executive Officer of Lion Energy Limited. Mr Morrison holds a B.Sc. (Hons) in Geology and Geophysics from the University of Sydney and has over 28 years' experience in exploration, appraisal and development of oil and gas resources - including evaluating petroleum reserves and resources. Mr Morrison has reviewed the results, procedures and data contained in this presentation. Mr Morrison consents to the release of this report and to the inclusion of the matters based on the information in the form and context in which it appears. Mr Morrison is a member of AAPG.

Lion Energy overview



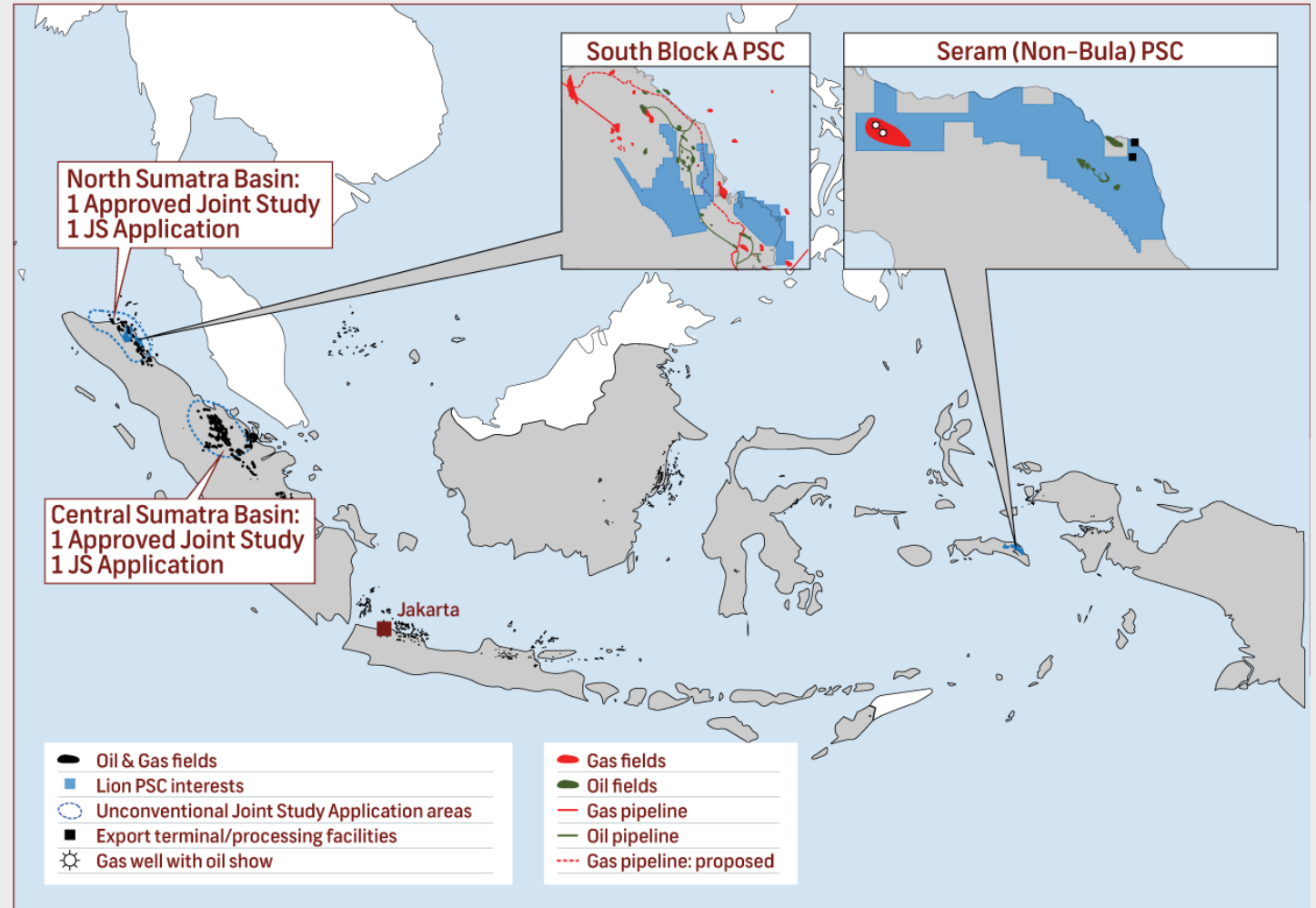
ASX listed with pure Indonesia focus and highly experienced management team

Assets:

- Seram PSC (2.5%) - 4200 bopd production (105 bopd net) and appraisal upside (Lofin 2tcf discovery/50 bcf net)
- South Block A (35%) - exploration
- Two unconventional joint studies complete
- Two unconventional JS applications

Major shareholders:

- Risco Energy Investments (54.7%)
- Tower Energy (6.6%)
- Management (13.5%)

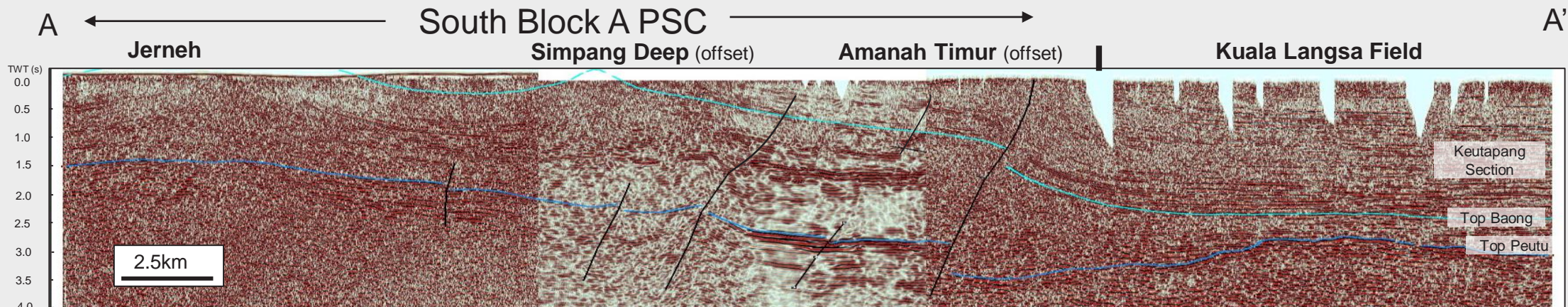
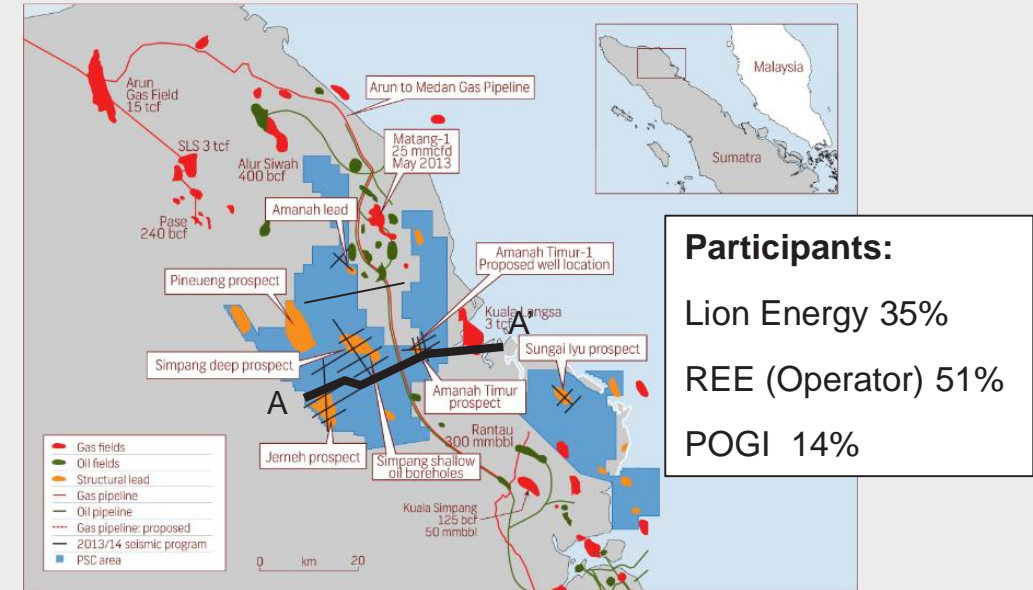


SOUTH BLOCK A PSC

Exciting, underexplored block



- 1579km², multiple plays
- PSC signed 2009, current term expires Dec 2016, commitment well to be drilled will allow 4 year extension
- On trend with major fields, 2013 Matang-1 discovery,
- New 400 mmscfd pipeline through SBA (Arun LNG regas to Medan)
- 183 km 2014 seismic program high-graded two prospects:
 - **Jerneh:** large upside gas/condensate
 - **Amanah Timur:** low risk, shallow oil

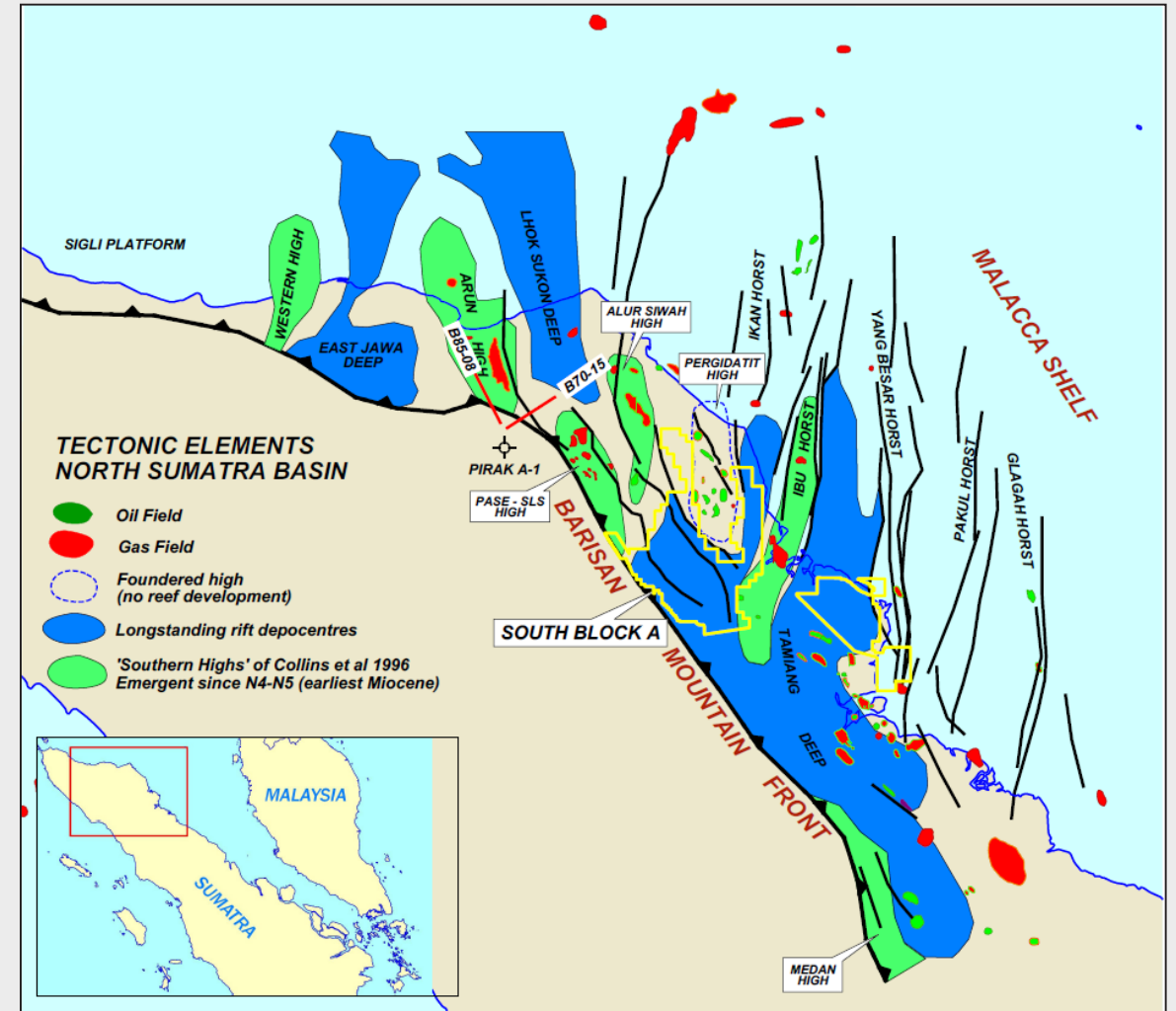
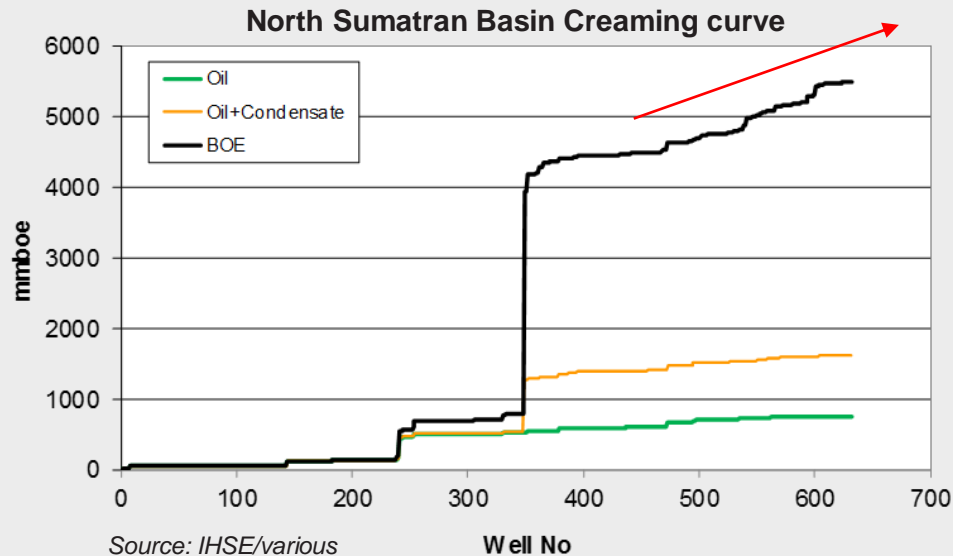


Regional composite seismic line shows large inversion features in west of SBA PSC.

North Sumatra Basin / SBA exploration

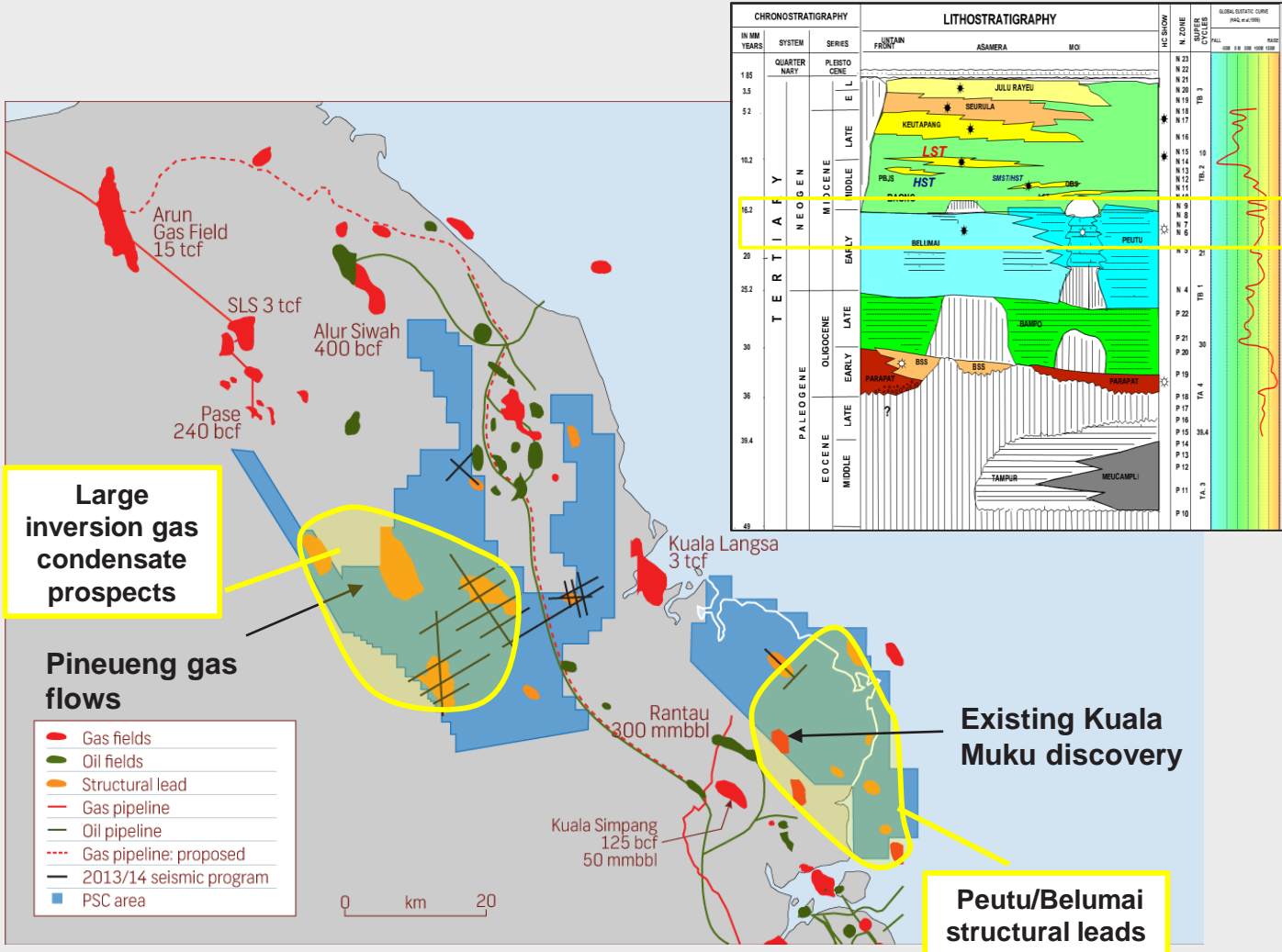
SBA contains extension of highs, basinal areas and large inversion features

- North Sumatra ~25 tcf and 1.6 bill bbl oil/condensate
- Onshore: 34,000 sq km, ~85% of discovered reserves
- Significant yet-to-find, limited onshore 3D
- Previous SBA wells mainly targeted oil
- No drilling since 1992
- 6 wells with gas and/or oil flows (Kuala Muku, Pineueng, Paya Bili, Sungai Iyu)

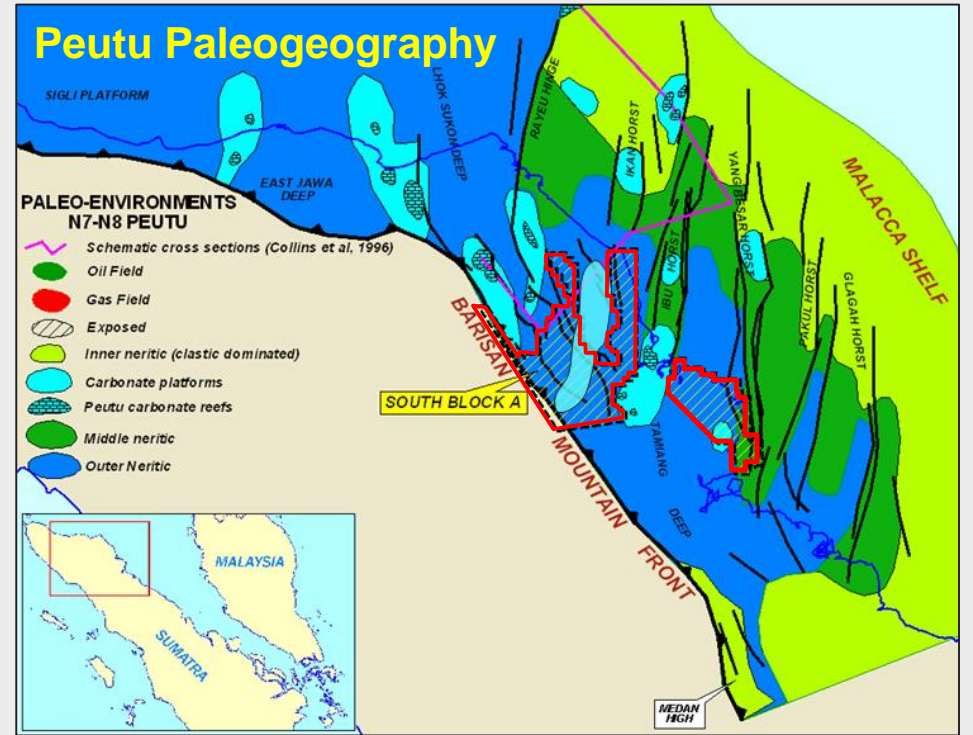


Early Miocene Peutu carbonate play

Discovered play volumes: Oil 40 mmbbl, Gas 20 tcf, Cond 750 mmbbl



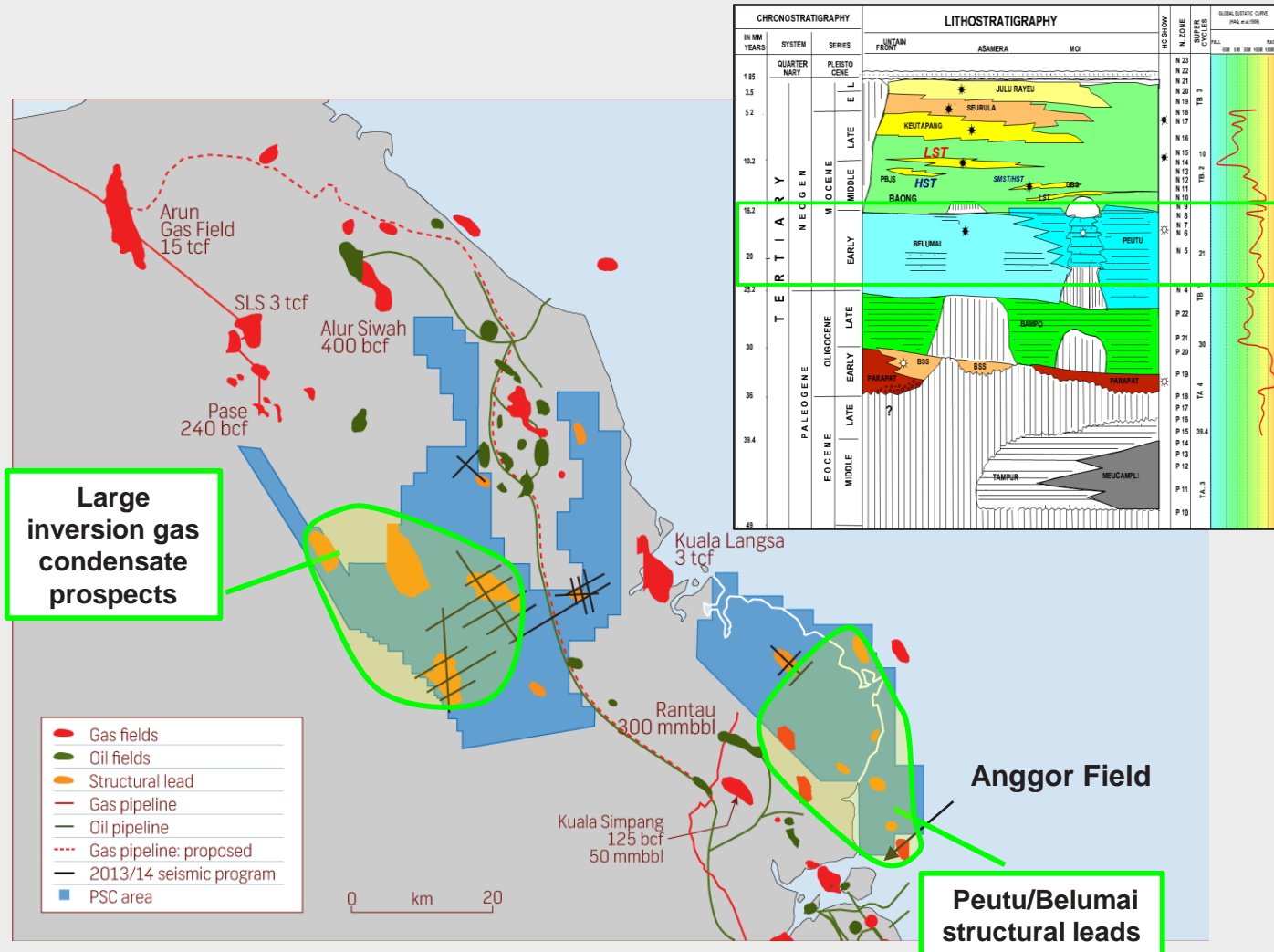
Potential carbonate build ups in SBA on extension of high trends



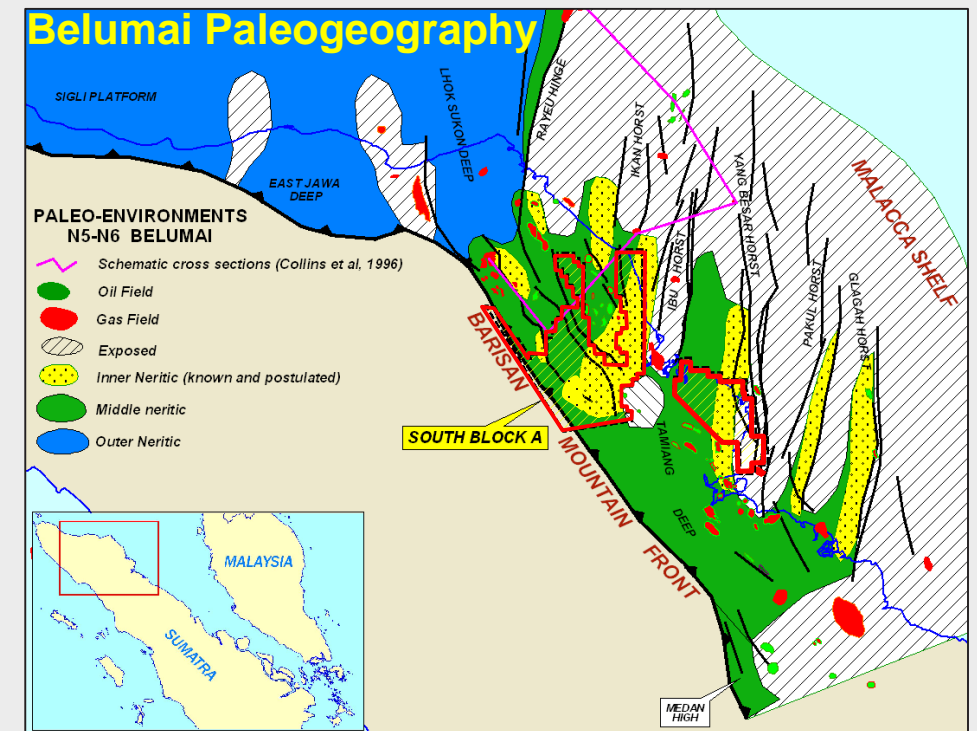
Source: IHSE/various

Early Miocene Belumai sandstone play

Play volumes: Oil 30 mmbbl, Gas 0.5 tcf, Cond 40 mmbbl



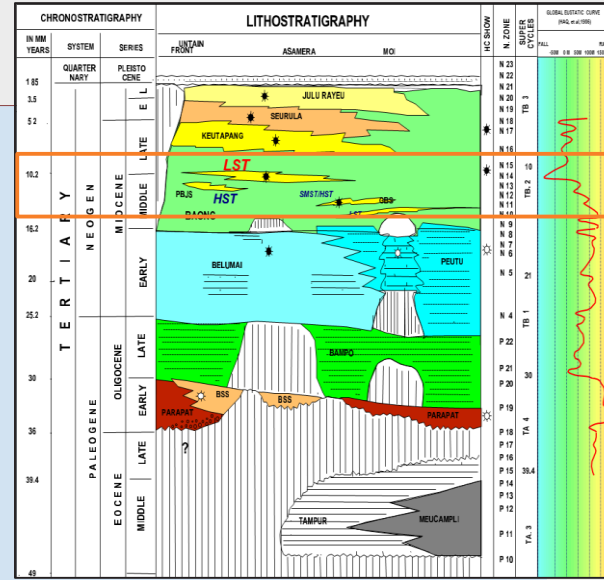
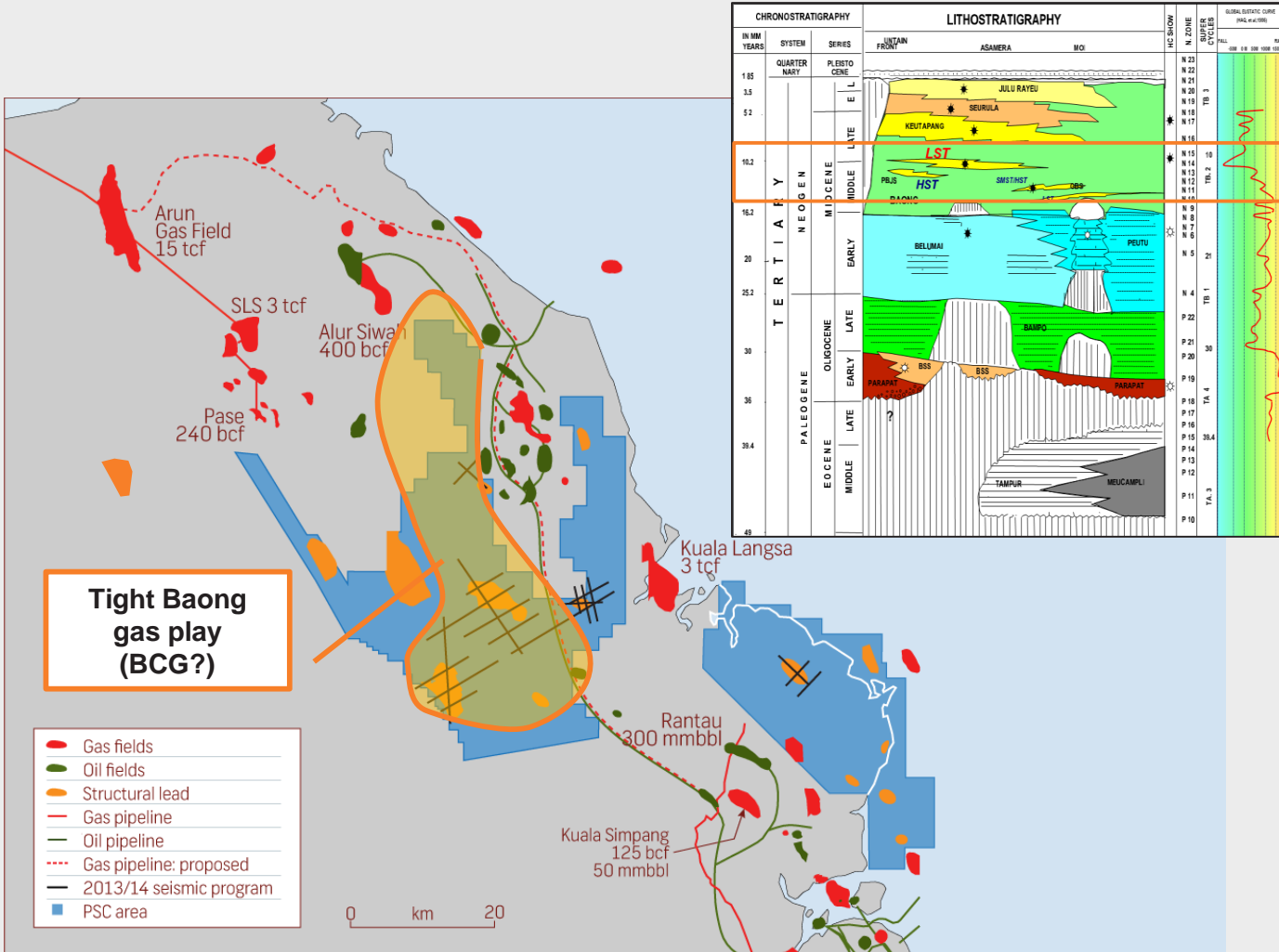
Sandstone sourced from basement highs. Interbedded carbonate and shales with good source potential.



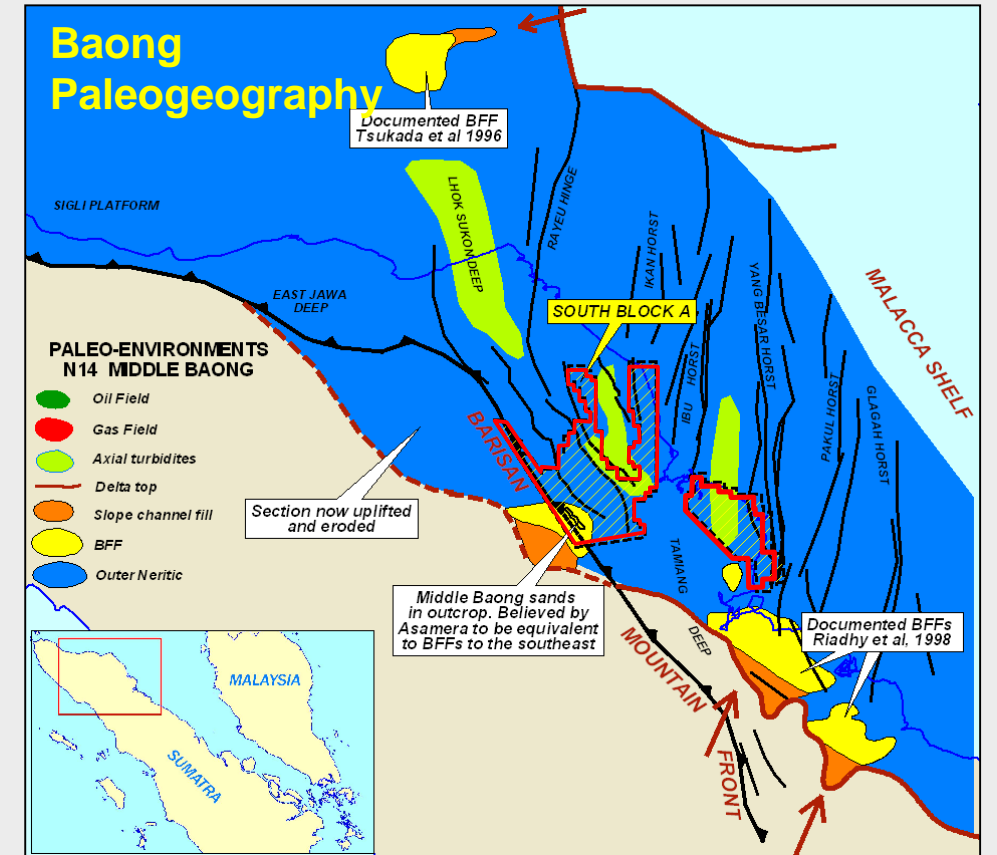
Source: IHSE/various

Middle Miocene Baong Fm sandstone play

Play volumes: Oil 90 mmbbl, Gas 1.6 tcf, Cond 30 mmbbl



SBA PSC Outer shelf to turbidite sandstone and siltstones in axial deposition in lows

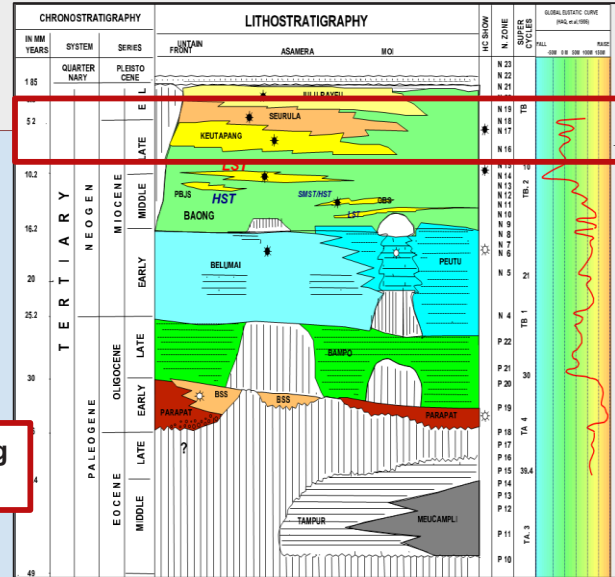
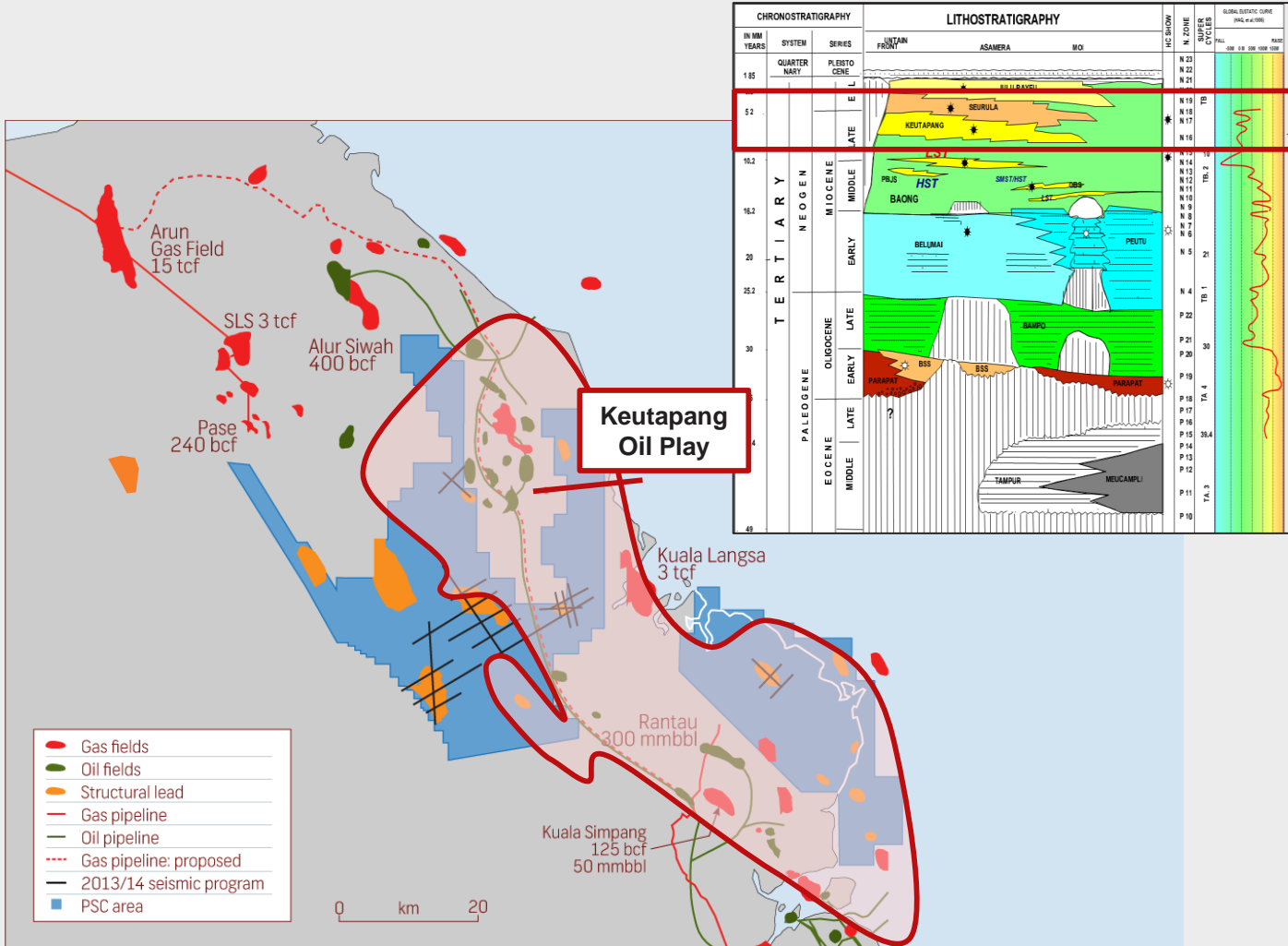


Source: IHSE/various

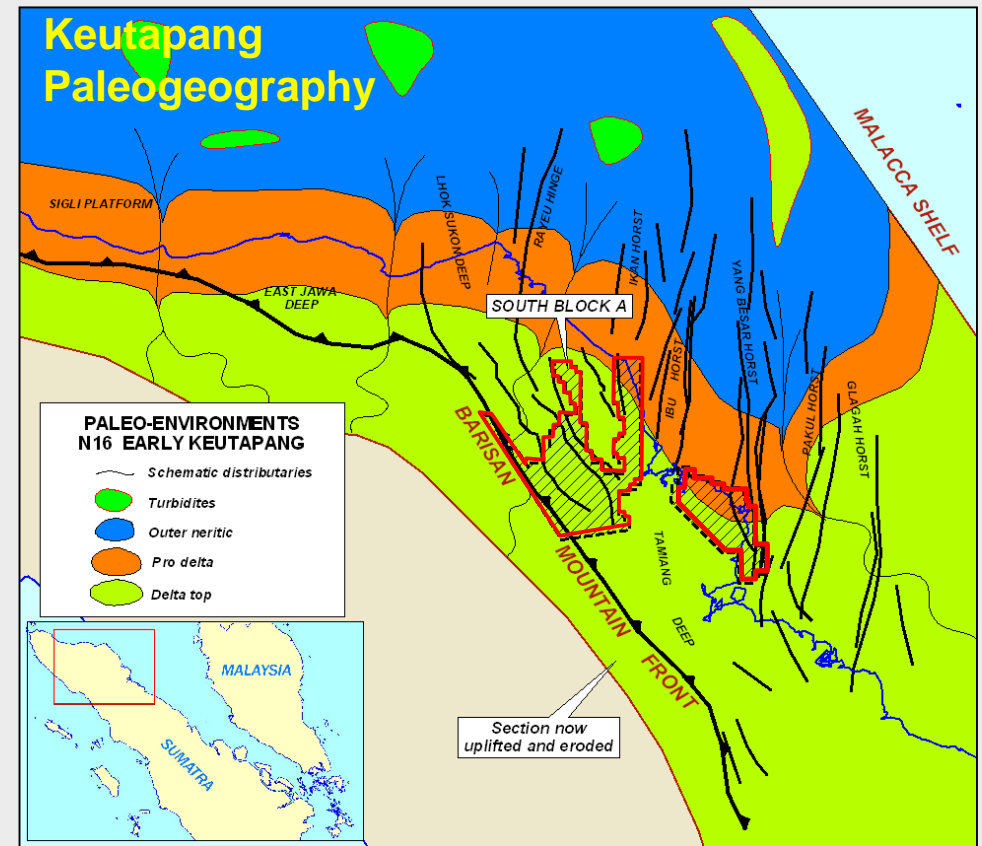
Late Miocene-Plio. Keutapang/Seurula sandstone play



Play volumes: Oil 600 mmbbl, Gas 2.2 tcf, Cond 50 mmbbl



Stacked pay with fluvio-deltaic sandstone sourced from emerging Barisan mountains to south

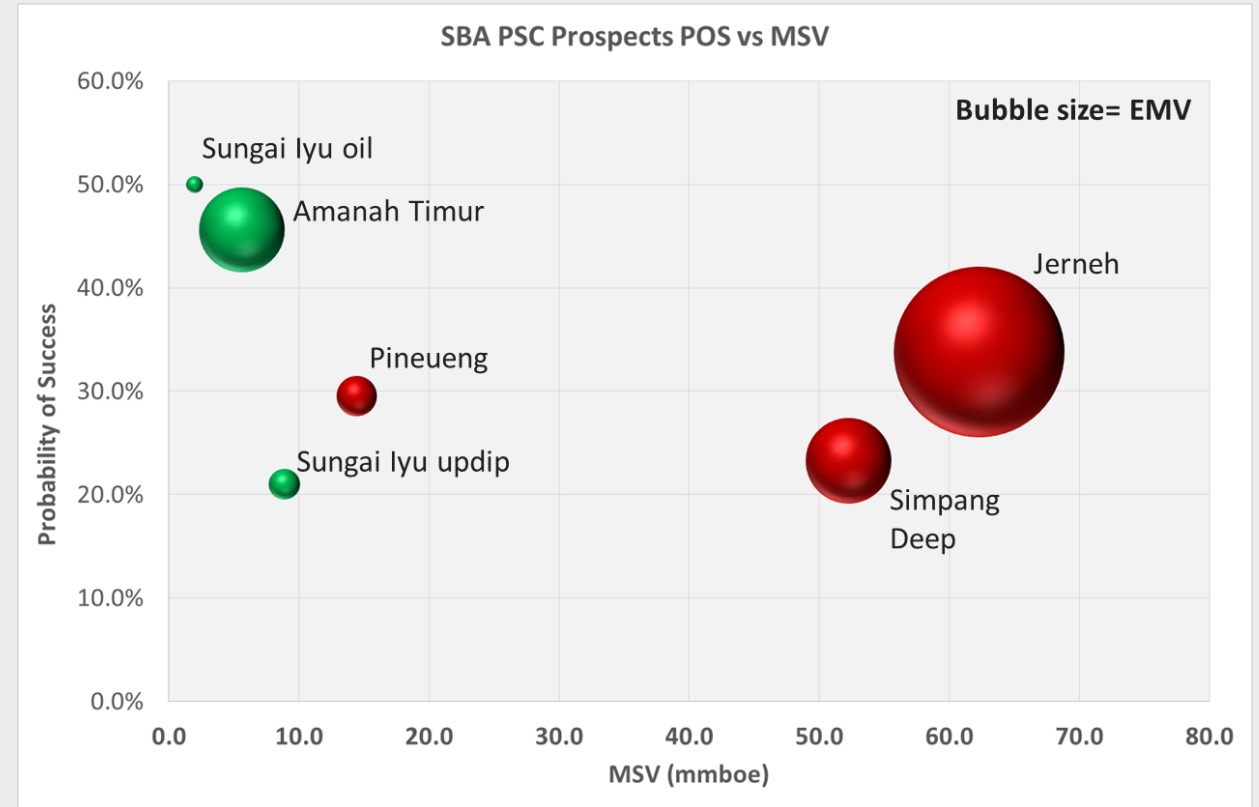


Source: IHSE/various

South Block A PSC Portfolio

100% Prospective resource (unrisked): 191-1428 bcf gas, 9-69 mmbbl oil/cond (top 6 prospects)

- 2014 seismic high graded portfolio
- **Gas condensate**
 - Jerneh: company maker gas/ condensate prospect
 - Follow up Simpang Deep, Pineueng
- **Oil**
 - Amanah Timur Prospect: low risk, low cost oil near term production potential
 - Follow up Sungai Iyu oil trend
- Offshore Belunai leads (adjacent to EMP Angkor Field)
- Under-evaluated tight gas potential



Prospect/ Lead	HC Gas Recoverable (bcf)				OilCond Recoverable (mmbbl)				POS
	P90	P50	Mean	P10	P90	P50	Mean	P10	%
Jerneh	63.7	222.8	328.9	760.2	1.5	5.3	7.5	17.6	34%
Simpang Deep	97.1	219.6	266.4	507.8	2.9	7.0	7.9	14.6	23%
Pineueng	28.2	67.6	78.5	146.2	0.5	1.2	1.4	2.7	27%
Amanah Timur	2.0	4.5	5.3	10.0	1.7	4.0	4.7	9.0	46%
Sungai Iyu Oil					0.5	1.4	1.8	3.9	50%
Sungai Iyu updip					1.61	5.92	8.87	21.05	21%
Total	191.0	514.5	679.1	1424.2	8.6	24.9	32.1	68.9	

Prospective resources: the estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

Arithmetic addition means low side (P90) number is overly conservative and high side (P10) number is overly optimistic

Amanah Timur Prospect

Well developed anticline on proven trend, prospective resource 2-9 mmbo

- Faulted wrench related anticline
- Pre-war field produced ~200,000 bbls from shallow Keutapang,
- Unswept and recharged oil likely
- Deeper Keutapang with good sands not drilled on crest due to pressure transition
- Near term production potential, nearby Rantau field & gas pipeline right next to prospect

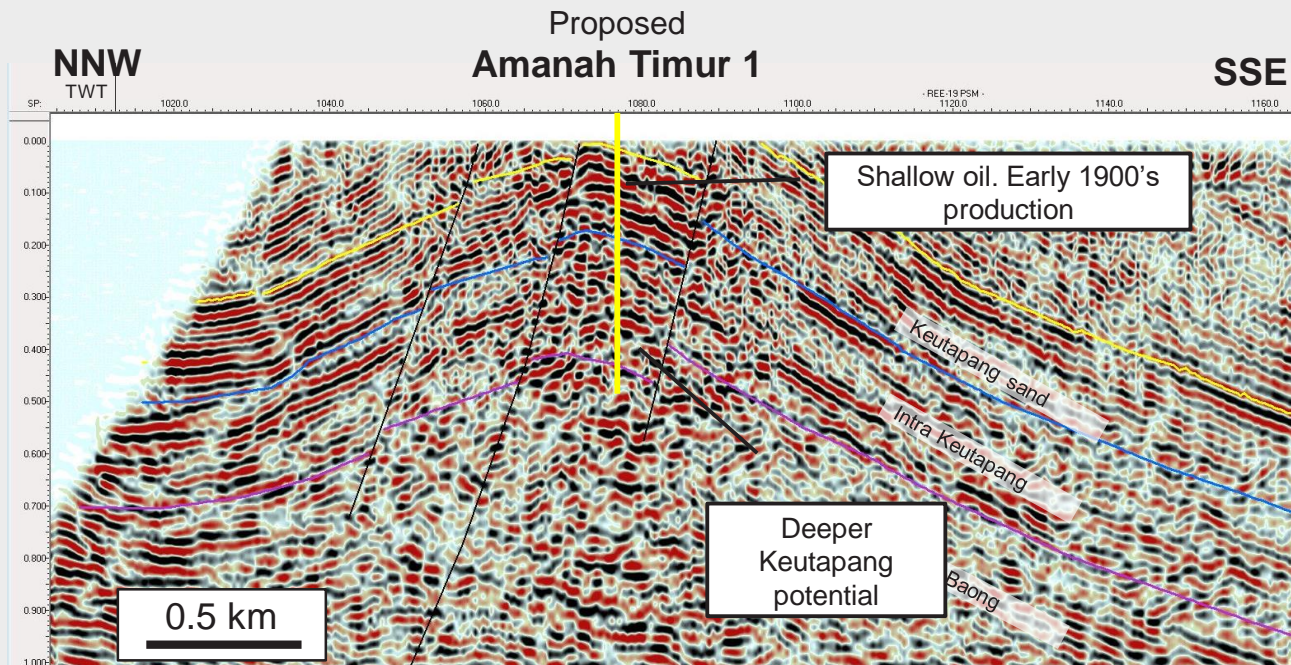
Prospective resource unrisks (100%):

• Oil (mmbbl) P90: 1.7 P50: 3.9 Mean: 4.6 P10: 8.8

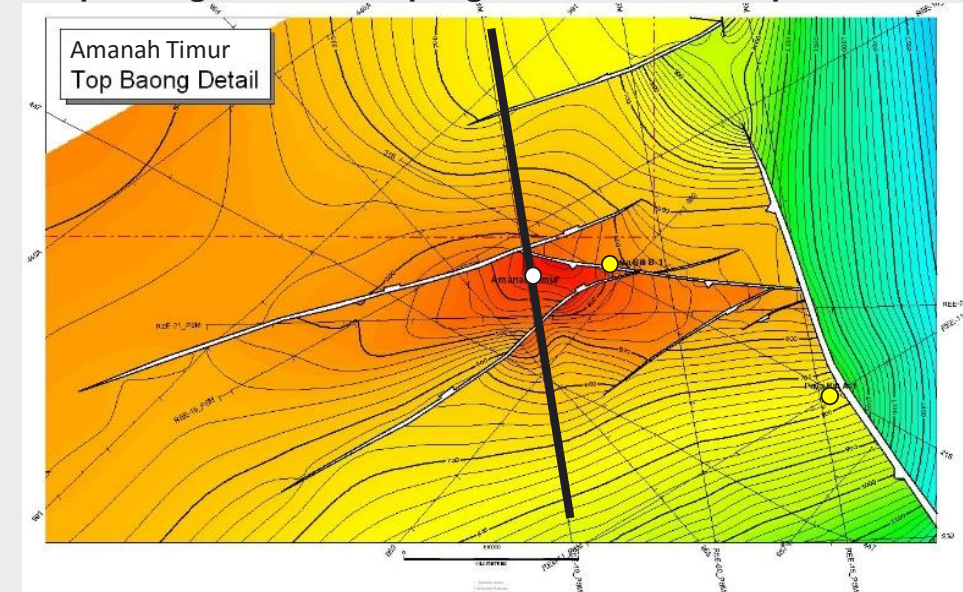
• Gas (bcf) P90: 2.0 P50: 4.5 Mean: 5.3 P10: 10.0

POS 46% Volumes for four zones

Prospective resources: the estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.



Top Baong/ Basal Keutapang Time Structure Map



Amanah Timur well plan and location

Well cost US\$1.7 mm dry hole (turn key), US\$2mm tested



Formation	litology	Well Profile	Casing design	Est Pressure	HOLE, BIT, BHA	MUD	CEMENT	Formation Evaluation	Well Control	Drilling Hazard
Weathered,			13 3/8" Csg @ 30 m K-55 48 ppf, BTC			Spud Mud				
Dominant clay, interbed with sandstones.				Gradient 0.465 psi/ft	Bit 12 1/4" +	MW : 9 - 10 PPG	Excess : 50 %	1. Sample cutting per 2 meter 2. Fullhole Core 1 int. 3. Logging Job : - Open hole: ILD/IDL-MSFL- Sonic-SP-GR; FDC-CNL-GR; MSCT/SWC, Quick look int. - Cased hole : CSL-VDL & Perforating 1 int.	Deverter 10" Hydrill 13 3/8" x 3K	Dip of formation, internal clay pressure and/or Belling
Zone 400-sand			K-55, 40 ppf, BTC R3 9 5/8" Csg @ 190 m	Temp = 1.50deg F/100 ft	BHA Pendulum	KCL Polymer	Tail : 1.9 SG			
Zone-500 sand				Grad. 0.465 psi/ft	Bit 8 1/2" +	MW : 9 - 14 PPG	Excess : 50 %	1. Sample cutting per 2 meter 2. Fullhole Core 2 int. 3. Logging Job : - Open hole: ILD/IDL-MSFL- Sonic-SP-GR; FDC-CNL- Chelshoot, MDT, MSCT (SWC), Quick look int. - Cased hole : CSL-VDL & Perforating 2 int.	Hydrill 13 3/8" x 3K Single Ram 13 3/8" x 3K	Dip of formation, internal clay pressure and/or Belling
Claystone interbedded with Sandstones				Temp = 1.50deg F/100 ft	BHA Pendulum	KCL Polymer	Tail cement 1.9 SG : 200 mtr Lead cement 500 m			
Zone-700 sand										
Zone-900 sand			K-55 23 ppf, BTC 7" Csg @ 730 m							
Keterangan Well Completion Plan : 1. Well test /DST three (3) interval perforation using Drill Pipe or Tubing + DST tool 2. Set BP at above first perforation, above second perforation and above third perforation. 3. Set steel cap at surface (well head).										



Located in Palm plantation with good roads and gentle topography ~10km to Langsa city (Population 150,000) - ready market for gas



Well plan (TD 700m) allows for evaluation of shallow oil and deeper pressured lower Keutapang

Jerneh Prospect



Largest undrilled structure in onshore North Sumatra, world-class potential (64-760 bcf)

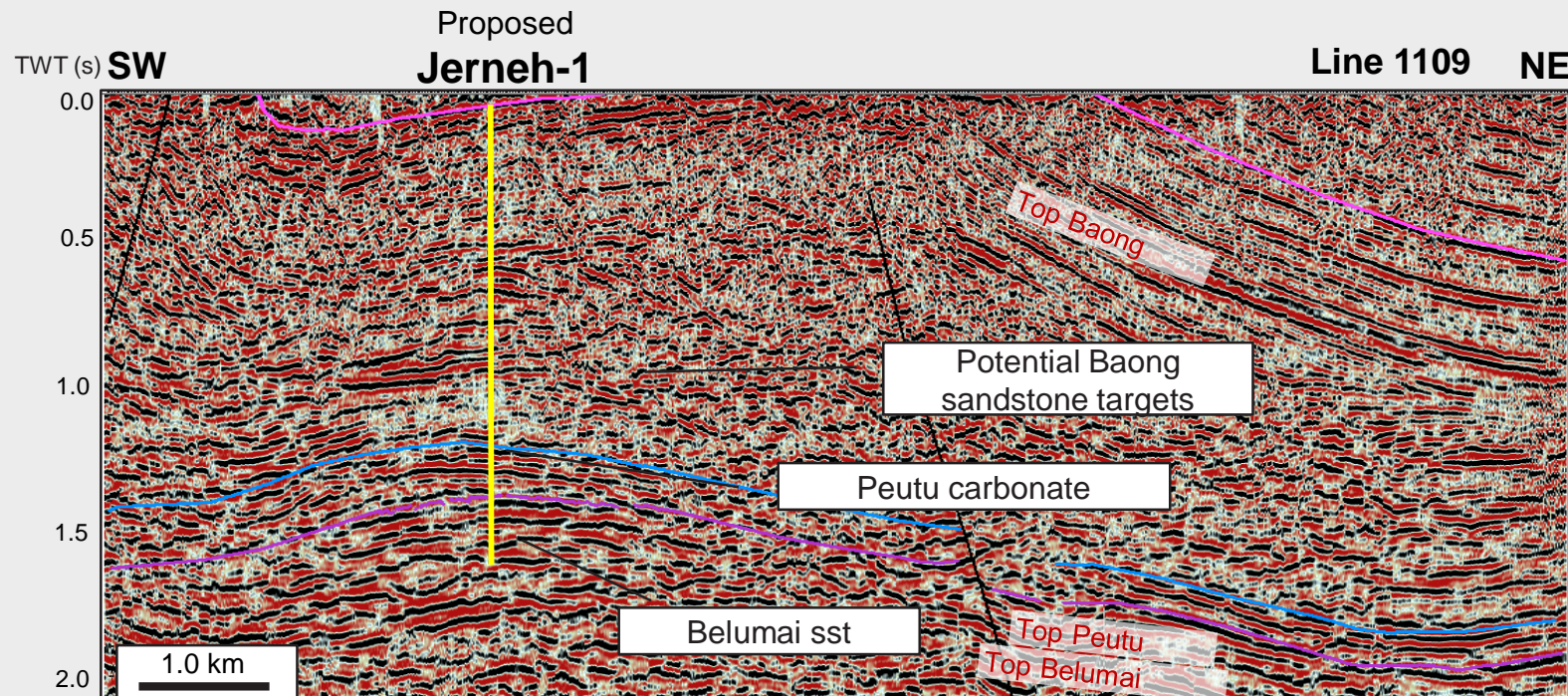
- 7.9 km² 4-way, up to 63 km² sub thrust closure
- Analogue with PASE (240 bcf) and Matang (up to 400bcf) fields
- Primary objectives: Early Miocene Peutu Lst and Belumai sst
- Well to 1900m would test structure
- Cost estimate \$6.4 million

Prospective resource unrisked (100%):

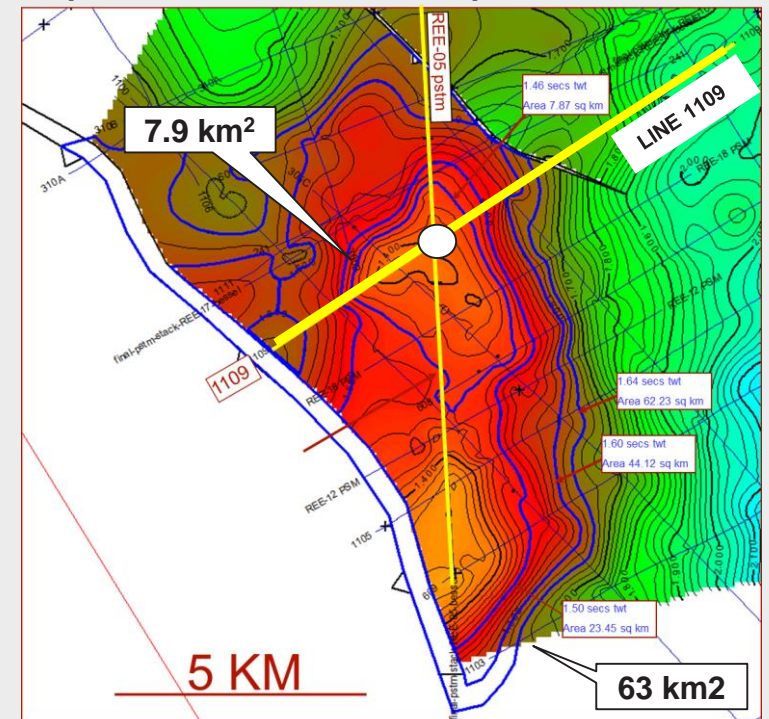
- Gas (bcf) P90: 64 P50: 223 Mean: 329 P10: 760
- Cond (mmbbl) P90: 1.5 P50: 5.3 Mean: 7.5 P10: 17.6

POS =34%

*Volumes not estimated for secondary objective
Baong turbidite sandstones*



Top Peutu Time Structure Map



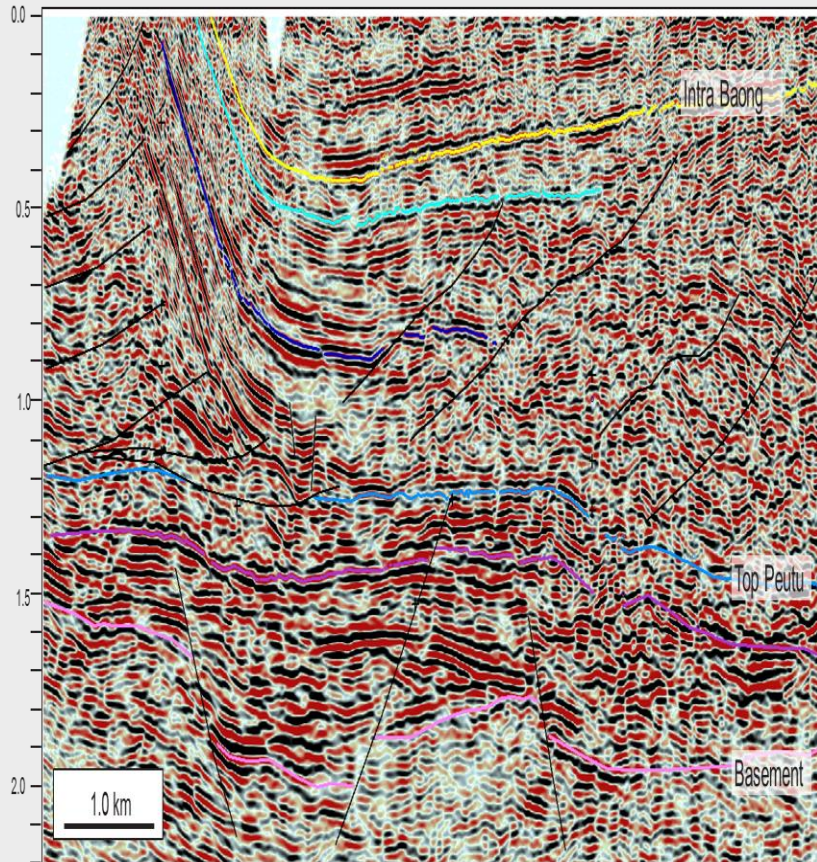
Prospective resources: the estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

Jerneh - Matang Comparison

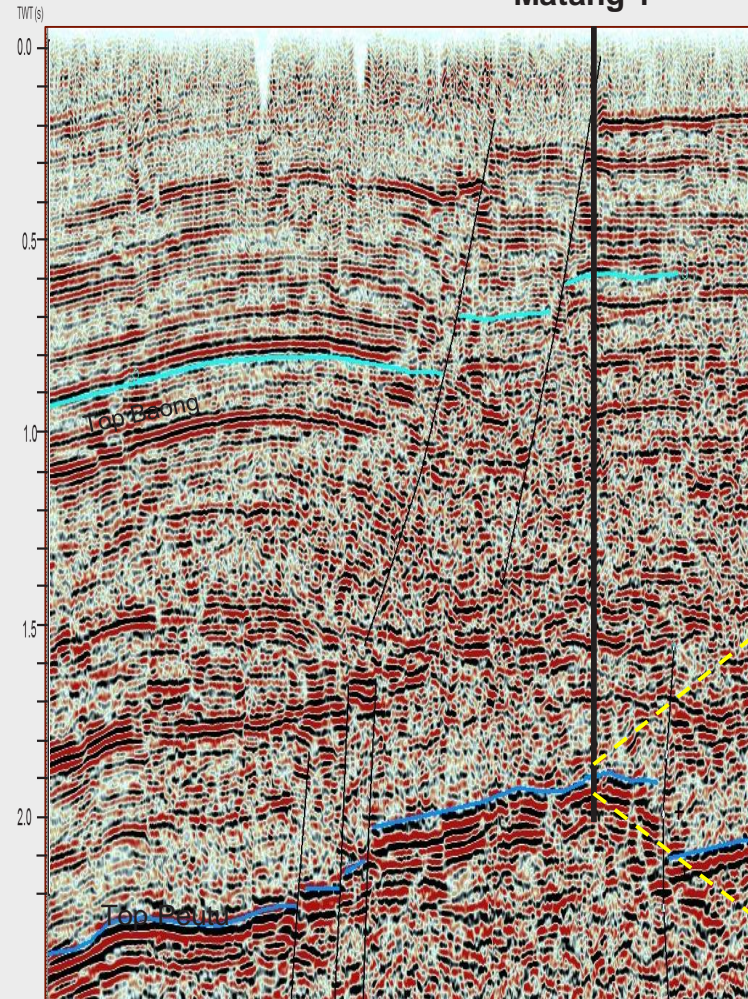
Similarities in seismic character - well developed limestone reservoir in Matang-1



Jerneh Prospect

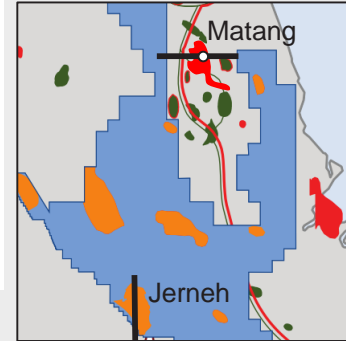


Matang 1

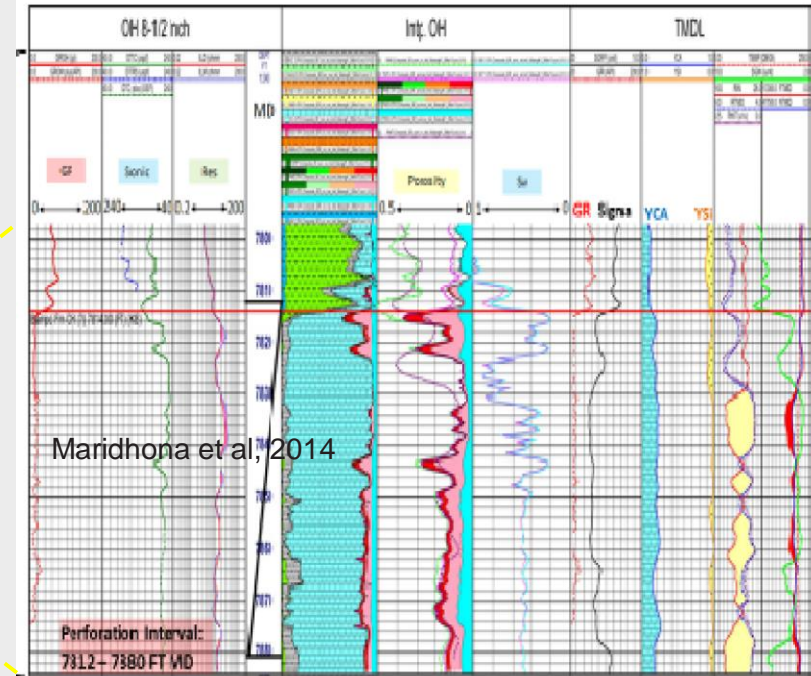


Matang-1

100' gas bearing E. Mio. carbonate (~400' expected, lost circulation & gas kick resulted in early TD)
 Porosity 10-30% av. 14%
 SW av. 40%
 Tested 25 mmscfd (11-15% CO₂)

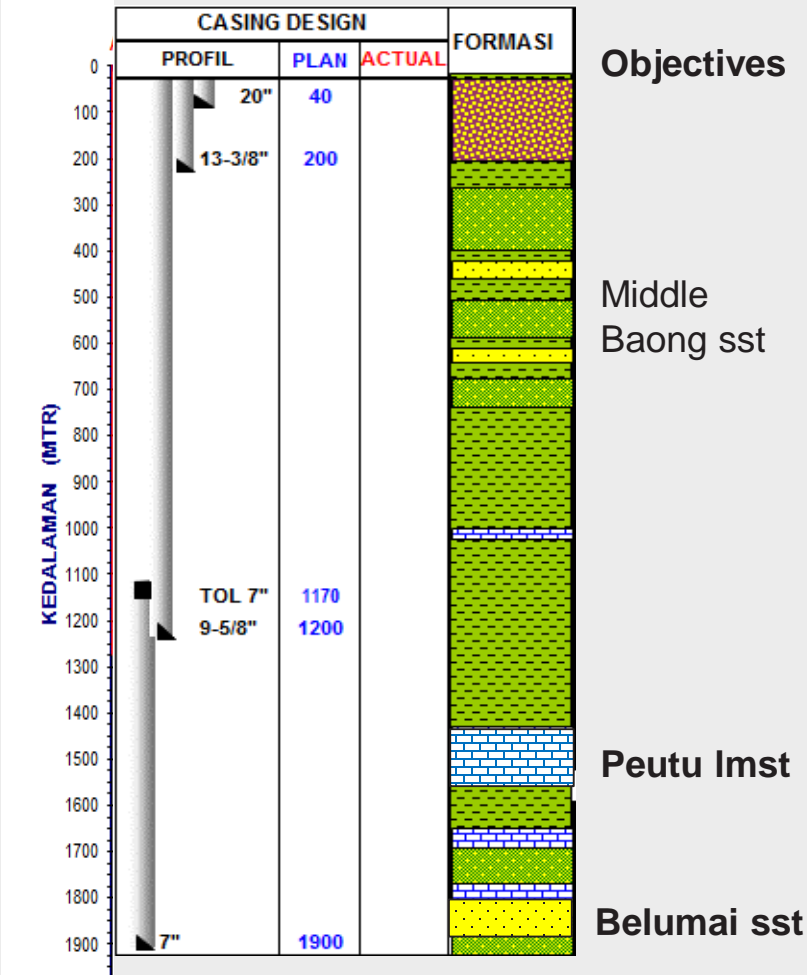


Matang 1 Logs

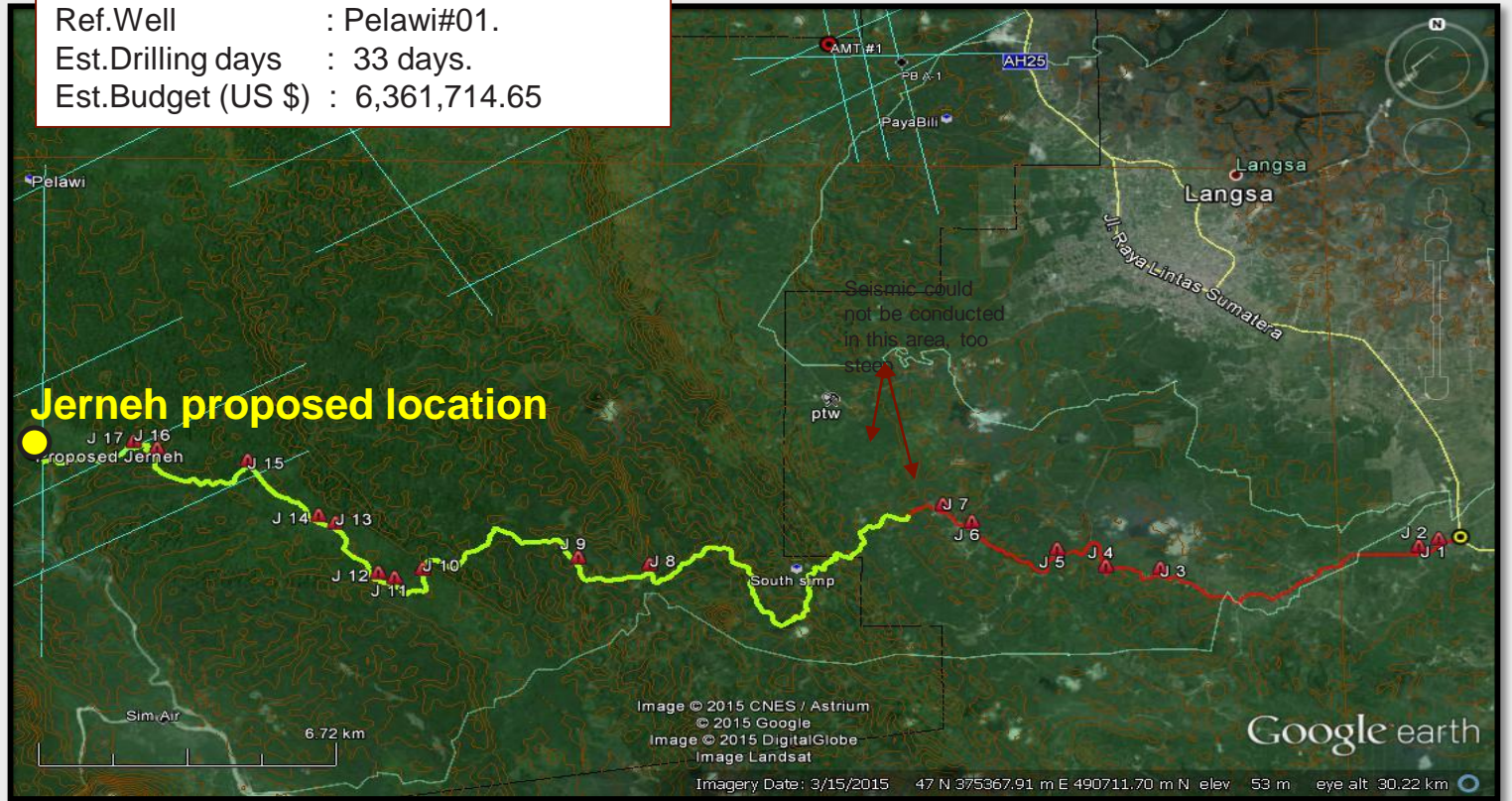


Jerneh well plan

Well cost estimate ~US\$6.4 million



Well name : Jerneh (J#01)
 Clasification : Vertical Exploratory Well
 Objective : Middle Baong Sand and Peutu/Belumai Limestone
 Total Depth : 1900 meter
 Ref.Well : Pelawi#01.
 Est.Drilling days : 33 days.
 Est.Budget (US \$) : 6,361,714.65



Aceh and North Sumatra under supplied gas markets, High growth potential, competition against re-gassified LNG

Existing Supply:

- Block B and NSO, now Pertamina, in rapid decline and likely abandoned in a few years without further investment.
- Arun plant stopped exporting in 2014 and converted to LNG regasification terminal. LNG from Tangguh and Bontang.
- New 340 km pipeline connects regas terminal to Medan

New Supply

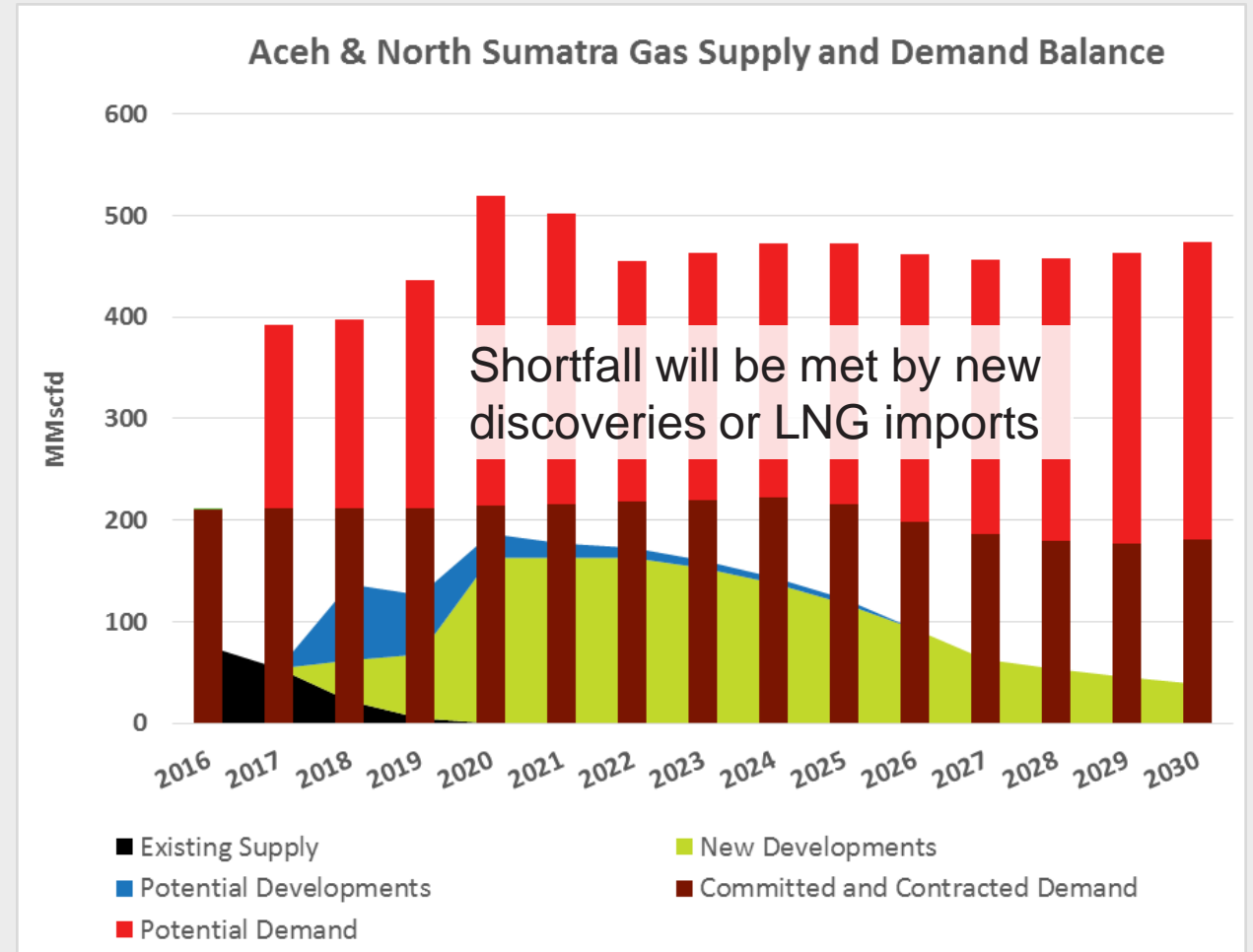
- Block A under development with first gas ~2018 at 80 MMscfd
- Offshore Krueng Mane PoD approved, first gas potentially 2020 at circa 100 MMscf

Demand

- PIM (fertiliser) in Aceh, Power & Industry in Medan are main markets.
- Medan (Indonesia's 3rd largest city) significant industrial and power demand. Growth potential in new gas connected industrial estates

Swing Supply

- LNG will act as the swing supplier to balance the market given its price and storage attributes.
- New discoveries compete with re-gassed LNG



SOUTH BLOCK A PSC

One of Asia's most prolific onshore basins



- Attractive portfolio with significant upside
- Proven plays
- Ready to drill prospects, on trend with major fields
- Established oil and gas infrastructure
- High demand gas market



Thank you

For more information please contact:

Kim Morrison
Chief Executive Officer
kmorrison@lionenergy.com.au
Office: +61 8 9211 1500
Mobile: +61 404 490 964

Chris Newton
Director
cnewton@lionenergy.com.au
Indonesia: +62 812 1065957