

# Lion Energy Limited Investor Presentation



November 2016

A **New** Approach to Asian Energy

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## 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 Reserves and Resources



| Indonesia Reserves & Resources, 31 Dec 2015 (Recoverable, net to Lion) <sup>1</sup> | Gas/Associated Gas Recoverable (BCF) |               |                         | Oil/Condensate Recoverable (MMbbl) |              |                          | Method               |
|---|--------------------------------------|---------------|-------------------------|------------------------------------|--------------|--------------------------|----------------------|
|   | 1P                                   | 2P            | 3P                      | 1P                                 | 2P           | 3P                       |                      |
| <b>Reserves<sup>1</sup></b>   |                                      |               |                         |                                    |              |                          |                      |
| <b>Total Reserves<sup>2,3</sup></b>   |                                      |               |                         | <b>0.122</b>                       | <b>0.153</b> | <b>0.216</b>             | <b>Deterministic</b> |
| <b>Contingent Resources<sup>4</sup></b>   | <b>1C</b>                            | <b>2C</b>     | <b>3C</b>               | <b>1C</b>                          | <b>2C</b>    | <b>3C</b>                |                      |
| <b>Total Contingent Resources</b>   | <b>21.997</b>                        | <b>50.536</b> | <b>0.26<sup>5</sup></b> | <b>0.240</b>                       | <b>0.520</b> | <b>0.439<sup>5</sup></b> | <b>Deterministic</b> |
| <b>Prospective Resources<sup>6</sup></b>  | <b>Low</b>                           | <b>Best</b>   | <b>High</b>             | <b>Low</b>                         | <b>Best</b>  | <b>High</b>              |                      |
| <b>Total Prospective Resources<sup>7</sup></b>                                      | <b>77.7</b>                          | <b>209.4</b>  | <b>579.7</b>            | <b>3.6</b>                         | <b>10.1</b>  | <b>28.1</b>              | <b>Probabilistic</b> |

## Notes:

1. Reserve estimates have been calculated using the deterministic method. Analysis of performance trends were used to estimate proved developed reserves. The performance trends associated with new well were used to assess how wells scheduled for future drilling would perform for the purpose of estimating proved undeveloped reserves as well as the probable and possible reserves associated with the future wells. Reserves were estimated only to the expiration date of the PSC.

2. Includes Undeveloped Reserves which are quantities expected to be recovered through future investments: (a) from new wells on undrilled acreage in known accumulations, (b) from deepening existing wells to a different (but known) reservoir, (c) from infill wells that will increase recovery, or where a relatively large expenditure is required to either recomplete an existing well or install production or transportation facilities for primary or improved recovery projects.

3. Undeveloped Probable and Possible reserves are included in this table however it should be noted there is uncertainty on whether these can be recovered prior to PSC expiry in 2019 as they recovery will require significant investment.

4. Contingent resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent resources have an associated chance of development (economic, regulatory, market and facility, corporate commitment or political risks). These estimates have not been risked for the chance of development. There is no certainty that any portion of the contingent resources will be developed and, if developed, there is no certainty as to either the timing of such development or whether it will be commercially viable to produce any portion of the resources.

5. 3C contingent resources have not been calculated for the Lofin Field. The 3C number provided refers to Oseil area only.

6. Prospective resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated chance of discovery (geological chance of success or GCOS) and a chance of development (economic, regulatory, market and facility, corporate commitment or political risks). The chance of commerciality is the product of these two risk components. There is no certainty that any portion of the prospective resources will be discovered and, if discovered, there is no certainty that it will be developed or, if it is developed, there is no certainty as to either the timing of such development or whether it will be commercially viable to produce any portion of the resources. For the prospective resources, an oil case has been estimated below the total depth of the existing Lofin-1 ST well.

7. Aggregation method. Prospective Resources in this Table have been estimated probabilistically at lead level but combined arithmetically to provide the portfolio number. The aggregate P90 may be a very conservative estimate and the aggregate P10 may be a very optimistic estimate due to the portfolio effects of arithmetic summation.

8. No prospective resources provided for the Unconventional Joint Studies or Joint Study Applications as these have not yet been converted to PSC's as at 31 Dec 2015.

- Lion has consistently met or out-performed its Prospectus targets
- Lion is well positioned in Indonesia, which has an improving investment climate and an enviable and growing economy
- Lion's existing assets have performed well and its title is secure
- The Lofin discovery in Seram is Indonesia's largest in the last 10 years
- Lion's management team has an excellent track record
- We are now drilling the Amanah Timur well - significant upside and near term cash flow - Lion has 40.7% exposure to potential success

# Lion overview - poised for major growth

Fiscally disciplined company with strong management team and exciting asset portfolio



## Capital structure

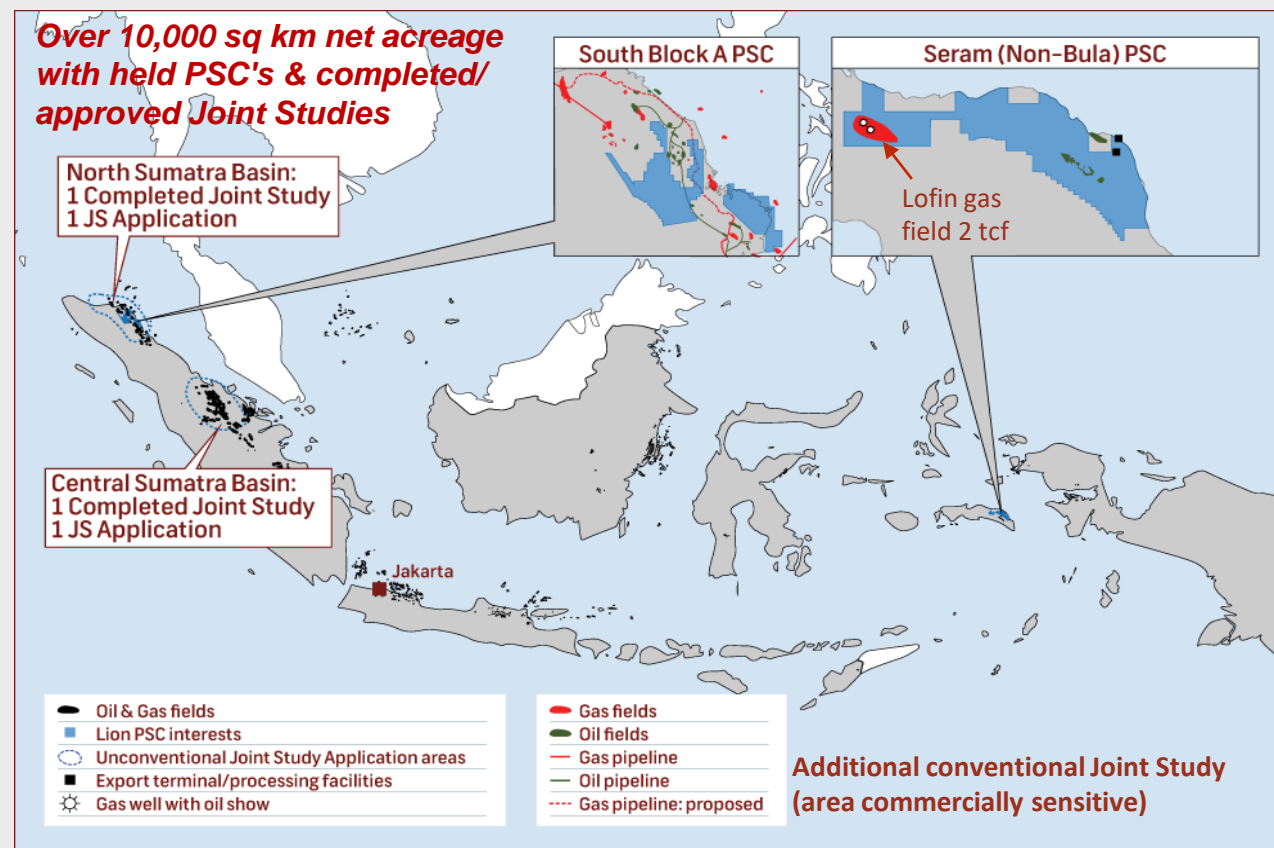
- Shares on issue: 96.6m
- Market cap @ 6.5cps: A\$6.3 million
- Cash: US\$1.3mil (30/9/2016)

## Major shareholders

- Risco Energy Investments (54.7%) – supportive, well connected, Indonesian backed
- Tower Energy (6.6%) - highly respected, Indonesian based
- Management (~14%) - "skin in the game"

## Finance/organisation

- Maintain/expanded highly skilled team
- Seram project cashflow positive: ~US\$40,000 pm
- Cost reductions across the company, joint ventures: monthly G&A ~US\$60,000



Lion's joint studies give priority right to enter Production Sharing Contract (PSC)

**Active new business program targeting oil and gas production**

# Jan 2014 company repositioned: delivering on our promises

Outperformed appraisal/production forecasts, adjusted course to conventional growth strategy

## **Lofin Appraisal well in Seram PSC** ✓

- 2015 Lofin-2 well successful with ~1300m gas column defined and certified Contingent Resource (2C) of 2.02 tcf (50 bcf net to Lion)

## **Enhance value from existing Seram PSC position** ✓

- Successful Oseil development drilling, increasing production from av. 2600 bopd (31 July 2013 - 30 June 2014) to current ~3600 bopd with solid cash flow to Lion

## **Evaluate conventional and unconventional resource potential of the South Block A PSC** ✓

- South Block A PSC: 183 km 2D seismic survey high-graded portfolio; Lion takes lead in technical work & drilling of attractive, low risk oil well by year end

## **Convert JS applications into PSC options, exploit synergies between conventional and unconventional exploration** ✓

- Two unconventional joint studies completed post year end with positive results, progress on other unconventional joint study applications over North and Central Sumatra Basins, provide low cost options over large areas,

## **Continuously generate new portfolio opportunities** ✓

- Ongoing production opportunity evaluation, exciting Eastern Indonesia JS
- Active new business initiatives with focus on acquiring production assets,



# Indonesian Overview, improvements across most economic metrics



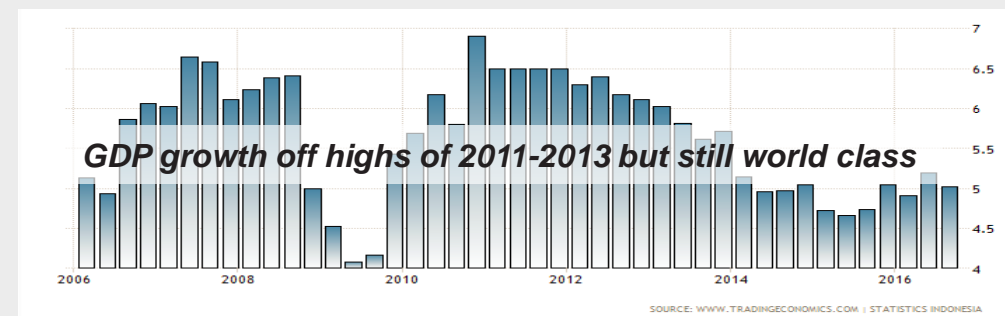
Strong, resilient economy with solid annual GDP growth (~5%)

- Currently world's 16th largest economy with predictions to be 7th largest economy by 2030 (GDP US\$862bill)
- Population currently 255 million (4th largest in world)
- President Joko Widodo focused on infrastructure; 2011-2025 development plan comprises US\$440 billion expenditure (US\$196 billion assigned to roads, railways, ports, power plants)
- Electricity growth forecast of 8.7% pa over next 10 years
- Gas consumption growth 5% pa+ (set to become gas importer), Indonesia became net crude oil importer in early 2000's
- Indonesian economy expanded 5.02% year-on-year in the third quarter of 2016, compared to an upwardly revised 5.19% growth in the June quarter.
- Other metrics: Inflation 3.3%, Jobless rate 5.5%, Debt/GDP 27%

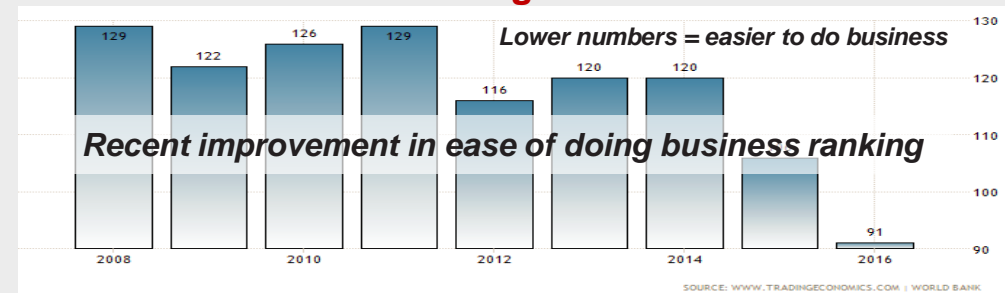
**Opportunity rich country; low sovereign risk**

Source: Trading Economics, Investing in Indonesia 2015 KPMG report, Lion internal

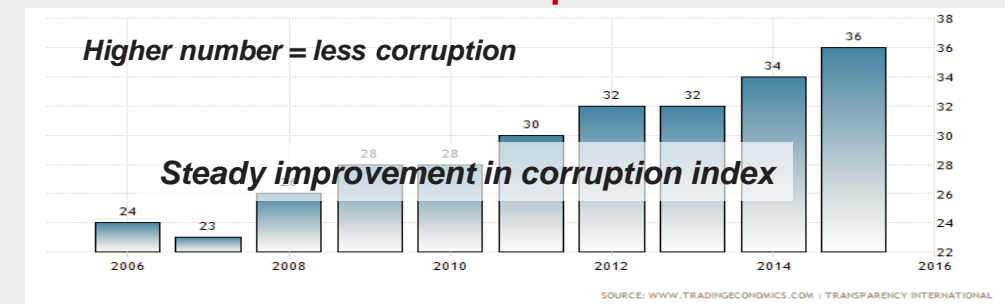
## Indonesia Annual GDP Growth



## Ease of doing business



## Indonesia Corruption Index



# Lion management and advisory panel

World class talent, Indonesian expertise, proven track records, diverse skills



## Russell Brimage - Chairman



- 35+ years experience in oil and gas upstream.
- Founder of Oilserv Australia Ltd, providing production, facility design and operation, drilling, workover and well testing services.
- Senior management positions in upstream private and public companies operating in SE Asia and the US.

## Tom Soulsby – Non Executive Director



- Founding Director of Risco, former Director at PT Energi Mega Persada (EMP)
- Responsible for adding over 500mmboe 2P reserves through M&A in last 10 years
- Accounting and Investment banking background KPMG, UBS and ANZ

## Mr Amrullah Hasyim – Advisor

- 30+ years experience in the oil & gas industry.
- Extensive operations, technology and business development experience.
- Has held senior positions with international service company, Halliburton Energy Services and Ephindo Energy Private Limited.
- Lion recently placed as GM of SBA PSC operator

## Mr Michael Ellis – Technical Advisor

- Drilling/Operations Engineer with 34 year in majors through small companies including US unconventional experience
- 20+ years in Jakarta & KL for ARCO, BP, Hess & Pexco. VP Exploitation for Maxus-YPF Repsol, responsible 150,000 bopd production

## Kim Morrison - Managing Director & CEO



- Exploration geologist, 30 years of international experience including a strong SE Asian focus
- Senior roles with Woodside, Shell, Marathon. Led Shell's Asia Pacific New Ventures team
- Co-founded KRX Energy in 2010 which became part of Lion in 2014

## Chris Newton – Non Executive Director



- Founding Director of Risco, former CEO of EMP, President of Santos Indonesia; MD, Fletcher/Shell in Brunei & President of IPA.
- 35 years experience, 14 in Indonesia in leadership, technical and commercial roles
- Geologist background, post graduate qualifications in finance and investment

## Advisory Panel

### Dr Harold Williams – Technical Advisor

- Geochemist (BSc, MSc and a PhD) with strong unconventional expertise, Shale gas experience in Western Canada, Australia (NT) and Europe
- Senior technical positions with Caltex in Indonesia and published widely-cited papers on Sumatran petroleum systems.
- Strong operations experience with geological supervision of unconventional wells.

### Mr Roger Whyte – Principal Advisor

- Geophysicist with extensive SE Asia exposure, Co-founder of KRX which is now a wholly owned subsidiary of Lion
- Excellent technical and management skills Indonesia Country Manager, Oilex; MD/CEO GulfX Limited; Commenced career with Shell, senior roles Union Texas, Trend Energy

## Stuart Smith – Finance Director



- Chartered Accountant, 20+ years in the Energy industry. Formerly Head of Oil & Gas Research for Asia Pacific with Merrill Lynch
- Leadership roles with private E&P companies, including CFO of leading Indonesian CBM company Ephindo Energy

## Sammy Hamzah – Principal Advisor



- Founder of Tower Energy; Founder/CEO of Ephindo, Indonesia's leading CBM company
- Senior management positions at: Unocal and Chevron Indonesia; Siemens; and Lafarge
- Excellent Government/Industry relations; Board Member of IPA and KADIN

### Dr Andrew Cullen – Technical Advisor

- Petroleum geoscientist (BSc, MSc and PhD)
- Involved in international and Nth American discoveries/reserves additions >700 mmboe
- Senior Advisor to Chesapeake Energy working on major unconventional projects
- Nearly 20 years with Shell in Nigeria, Malaysia, the Netherlands and the US

### Mr Zane Lewis – Company Secretary, Accounting

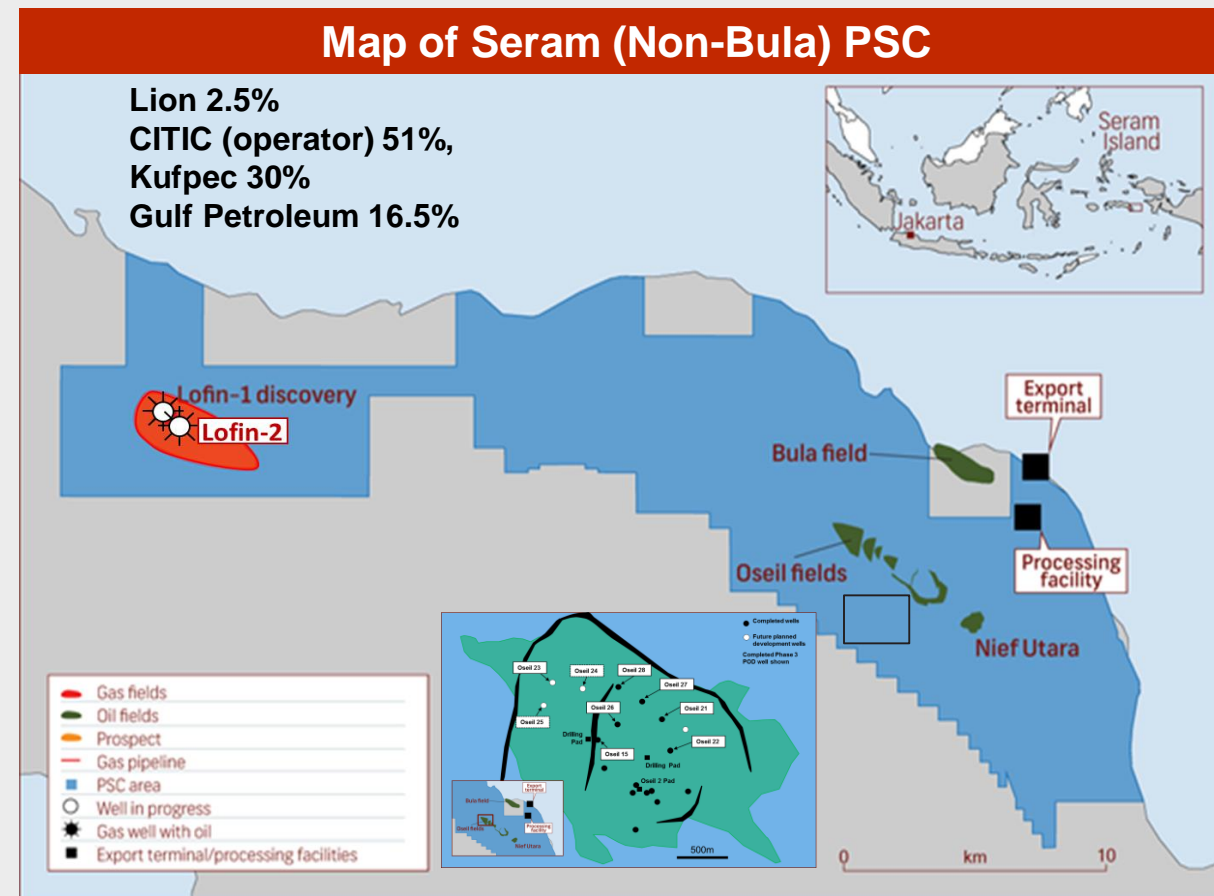
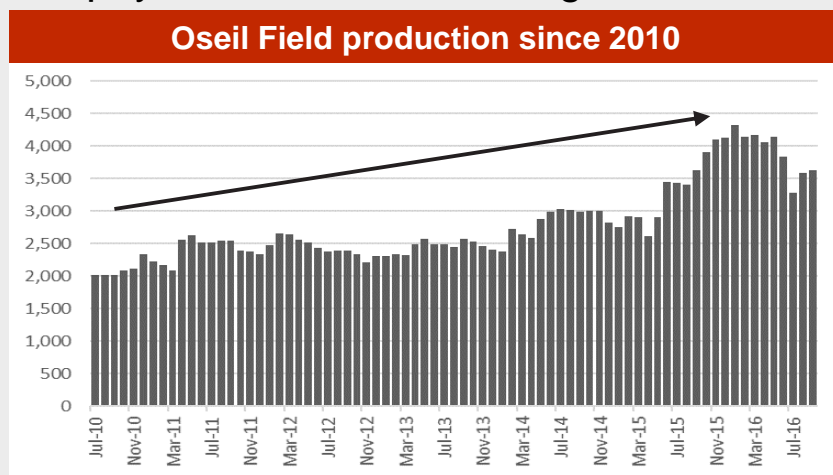
- Principal and joint-founder of corporate advisory firm SmallCap Corporate,
- Wealth of knowledge obtained from diverse financial and corporate experience
- Member of Chartered Secretaries Australia.



# Seram (Non-Bula) PSC overview

Appraisal and development success, cash flow positive at current prices (~US\$40K pm net)

- Over 15 mm barrels produced since production started in January 2003 through to 30 September 2016
- Oseil Field production now ~3600 bopd (~90bopd net)
- 4.9 mmbbl 1P reserves (100%) as at Jan 1 2016
- Recent development success has increased production from ~2000 bopd in 2010
- Operating cost for Sept. 2016 quarter ~US\$11.85 per barrel - Operator continuing to work on cost reductions
- Lofin appraisal success: 2 TCF contingent resource (2C)
- PSC expiry Dec 2019, JV working on renewal

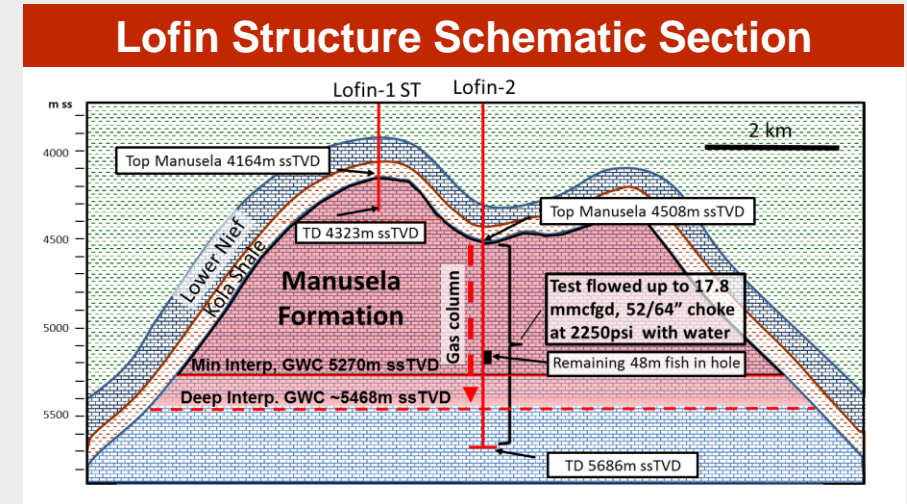


# Lofin Field - one of largest discoveries in region in recent years

2 tcf gas / 18.3 mmbbl condensate 2C contingent resource\*/Lion Share 50 bcf /0.5 mmbbl

- 2015 Lofin-2 appraisal of 2012 Lofin discovery, confirmed gas column up to 1300m
- Gas test at up to 17.8 mmcfgd on 52/64" choke (2250 psi flowing pressure)
- Contingent resources\* (2C Best Estimate):
  - 2020 bcf gas and 18.25 mmbbl condensate (100% basis)
  - 50 bcf gas and 0.46 mmbbl condensate (Lion 2.5%)
- Development options:
  - LNG, Sulawesi's single train Senoro project, capacity 2mm tonne LNG pa (300 mmscfgd and 8000 bbl condensate per day) Medco operated, commenced exports June 2015
  - Condensed natural gas (CNG) providing gas to Eastern Indonesian market
- Joint venture working on PSC extension post Dec 2019 to allow resources to be booked

\* see page 3 for definition

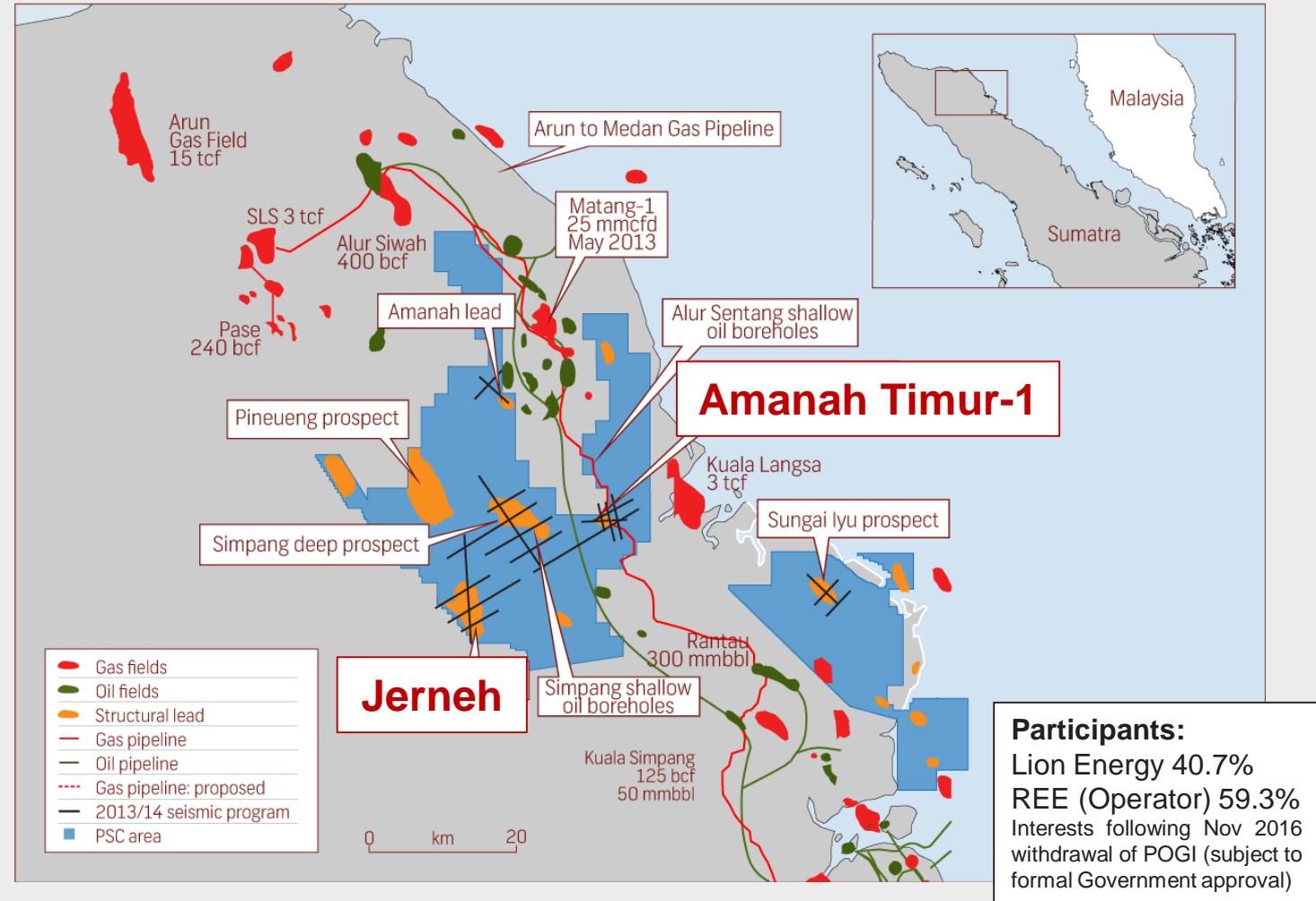


# South Block A PSC - Lion 40.7%

Company maker potential, imminent drilling with Amanah Timur-1 well

- Exciting, underexplored block (1579km<sup>2</sup>), 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
- New 400 mmscfd pipeline through SBA (Arun LNG regas to Medan)
- 2014 183km seismic program high-graded two prospects:
  - Amanah Timur: low risk, shallow oil
  - Jerneh: large upside gas/condensate (Prospective resource: 60-760 bcf)

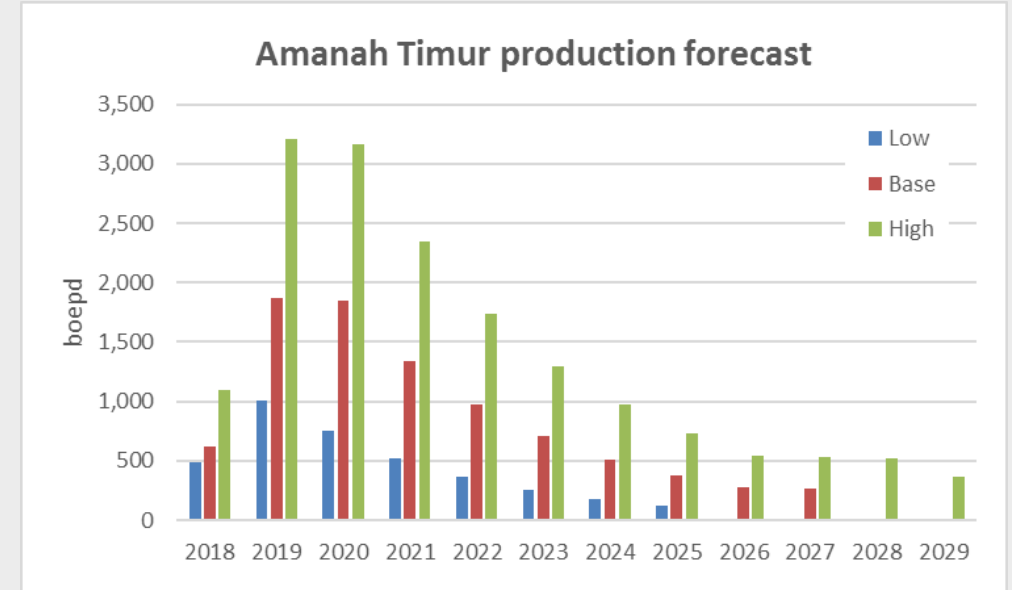
<sup>1</sup>**Prospective resources:** the estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.



# Amanah Timur Prospect

Drilling plans advanced, low cost well (US\$1.3mil) with line of sight to production

- Pre-war field produced (~200,000 bbls) from shallow section
- Unswept and recharged oil likely, deeper sands undrilled
- 600m well will test prospect
- Near term production potential, close to oil and gas infrastructure
- Base case production ramps to 1900 boepd by 2019 (~600 boepd net to Lion)



Potential to commence production in 2017 with Put on Production (POP) approval

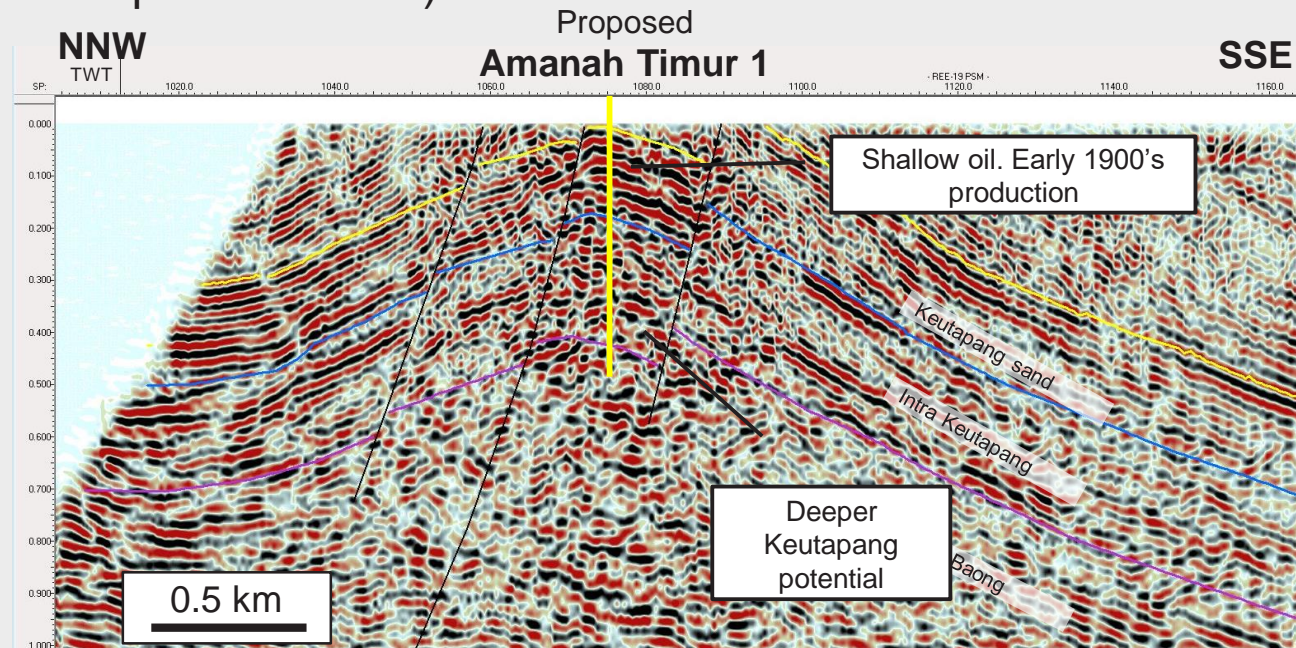
**Prospective resource<sup>1</sup> unrisked (100%):**

- Oil/cond (mmbbl) P90: 1.7 P50: 3.9 P10: 8.8
- Gas (bcf) P90: 2.0 P50: 4.5 P10: 10.0

**POS 46%**

*Volumes for four zones*

<sup>1</sup>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.



# Lion has taken lead on AMT-1 technical evaluation, drill operations

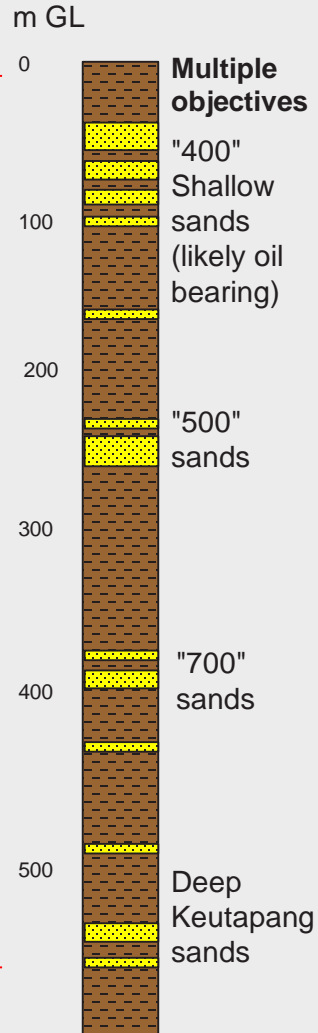


Excellent drilling team assembled, well cost reduced from >US\$3mm in 2014 to current US\$1.3mm

## Amanah Timur 1 predicted section planned TD ~530m

Upper Miocene Keutapang Fm  
Fluvio-deltaic sandstone, shales

Middle Miocene Baong Fm  
Marine shales

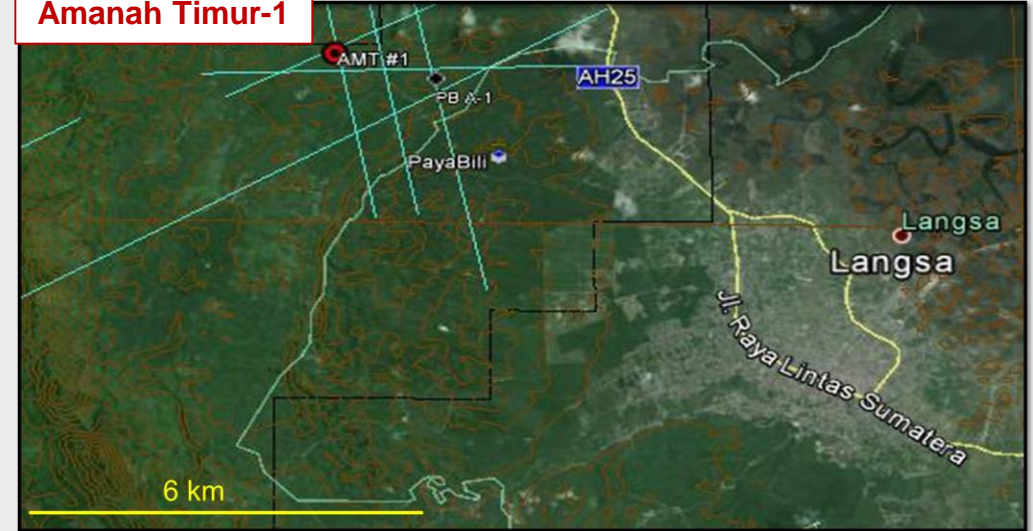


Drilling Mgr, Operator GM, Pertamina Superintendent and Lion CEO visiting rig to drill AMT-1



AMT-1 location with Operator GM, Drilling Mgr and site contractor

## Amanah Timur-1



- AMT-1 located in palm plantation with good roads/ topography
- ~6km to Langsa city (Population 150,000)
- Rantau oil receival facility within 40km
- Strong market for gas in area
- Arun LNG to Medan 400mmscfgd pipeline ~100 metres from location!
- Excellent PERTAMINA rig selected, currently working nearby
- Well cost estimate includes testing

***Plan to accelerate production in event of success***

# Aceh and North Sumatra under supplied gas markets

## High growth potential and 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

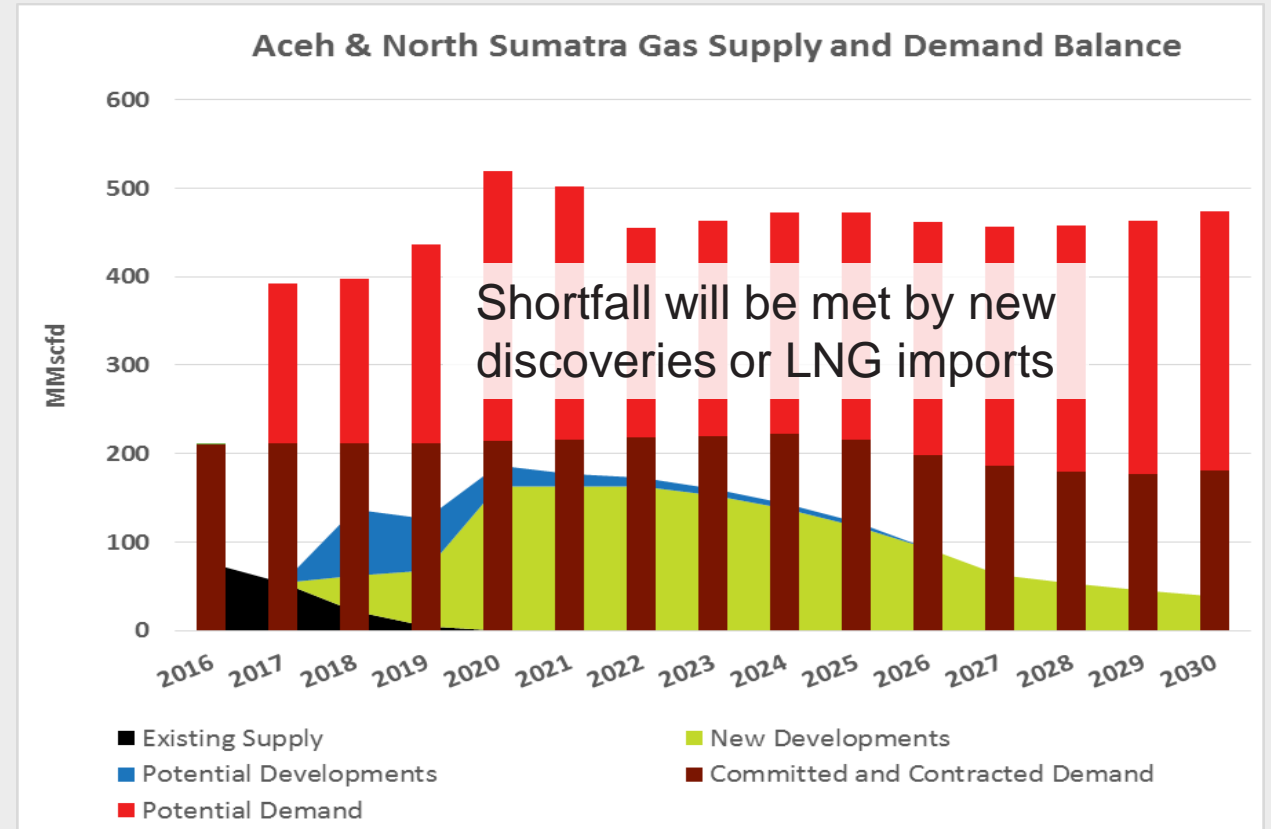
- Block A under development with first gas ~2018 at 80mmscfd (Contracted gas price US\$9.45/mmbtu)
- Offshore Krueng Mane PoD approved, first gas potentially 2020 at circa 100mmscf

### Demand

- PIM (fertiliser) in Aceh
- Power & industry in Medan (Indonesia's 3<sup>rd</sup> 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 on price

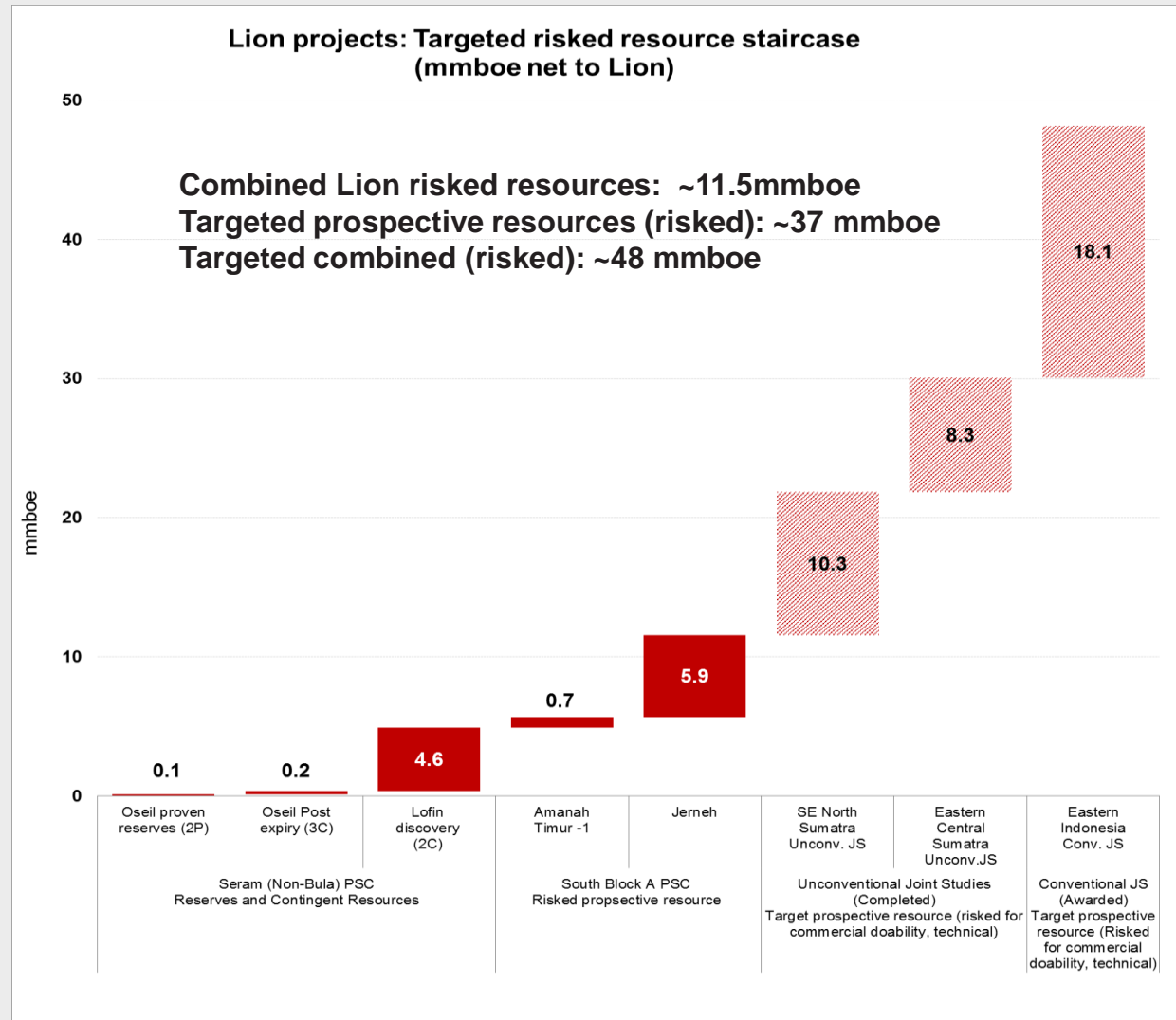


***Lion leverage to gas market through South Block A PSC and unconventional rights though Joint Studies***

# Lion building well balanced, highly material position



Lion has experience & resources to execute in opportunity rich environment



***Strategy for production to fund conversion of high impact prospective resources to reserves***

**Contingent resources:** those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent resources have an associated chance of development (economic, regulatory, market and facility, corporate commitment or political risks). These estimates have not been risked for the chance of development. There is no certainty that any portion of the contingent resources will be developed and, if developed, there is no certainty as to either the timing of such development or whether it will be commercially viable to produce any portion of the resources.

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**POS:** probability of success (includes technical, commercial, regulatory risk evaluation)

# Lion's major growth upside: team, assets, regional opportunities



Significant near to mid term catalysts to drive share price appreciation

## Solid fundamentals

### South Block A PSC

- Near term drilling, on trend with major fields
- Established oil and gas infrastructure
- World class gas prospects with high demand gas market

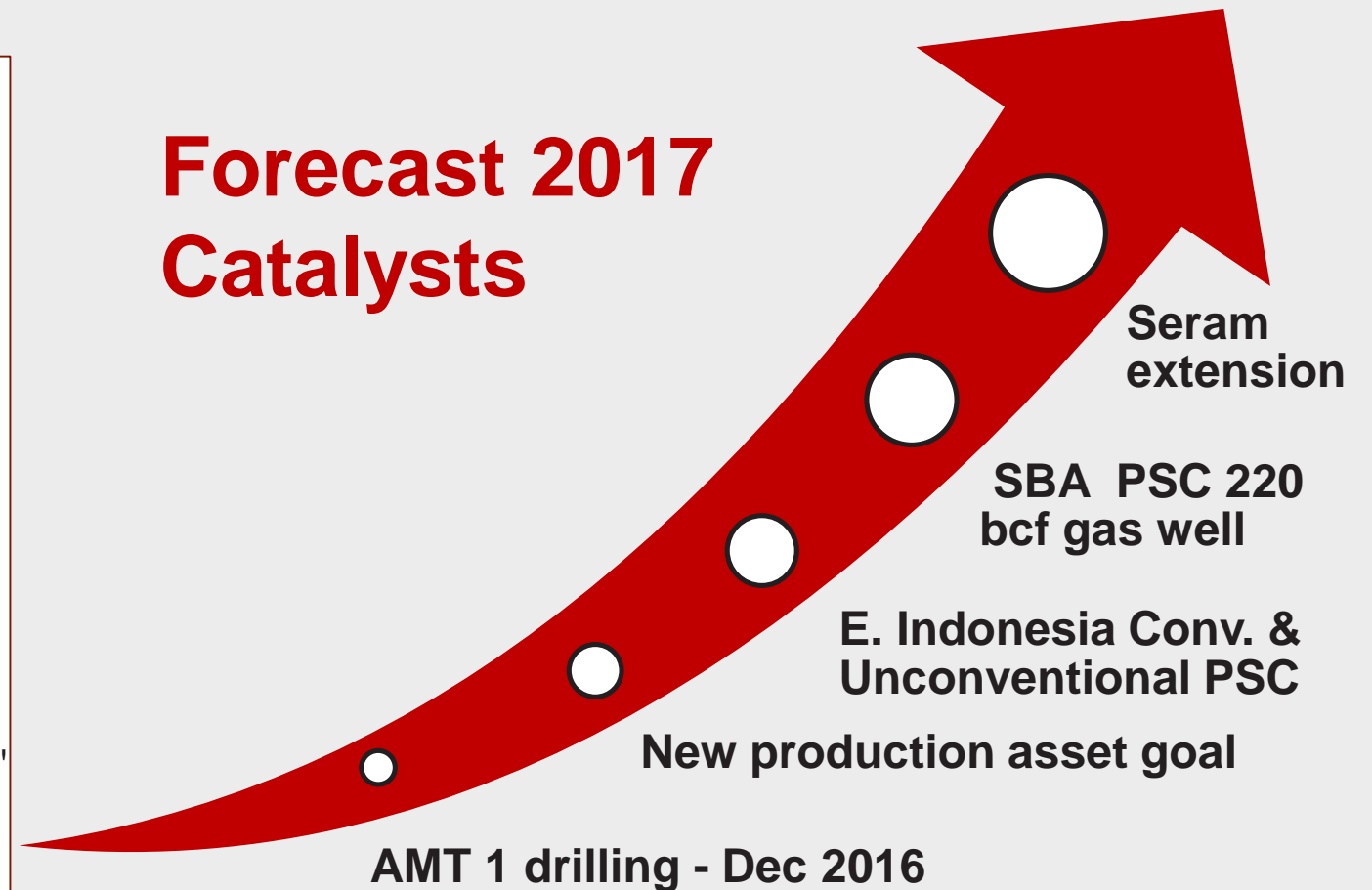
### Seram PSC

- Steady cash flow
- Significant oil appraisal potential
- Major upside with Lofin gas field (LNG/CNG development)

### New business

- Exciting joint studies - multi-tcf gas /multi-100s' mmbbl oil potential
- Opportunity rich environment for acquiring oil and gas production

## Forecast 2017 Catalysts







# Thank you

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