

# Press Release

For Immediate release 4 March 2019



**LION**  
energy

## Additional high impact leads identified Lion's East Seram PSC

### Highlights

- Best estimate (P50) prospective resource<sup>1</sup> up 60% to 1238 mmboe
- Exciting new leads, both onshore and offshore, identified with potential closures up to 85 km<sup>2</sup>
- Seismic survey planning underway
- Currently targeting well-resourced partner to join Lion in PSC

Lion Energy Limited ("Lion" or "Company") is pleased to report that ongoing technical work using newly acquired data on the East Seram PSC has resulted in a significant increase to the prospective resource estimate with combined P50 (best estimate) recoverable prospective resources of over 1.24 billion boe. In September 2018 Lion reported P50 prospective resources of 0.77 billion boe. Two new onshore Manusela carbonate leads, Wahai Deep and MA-11, add to the portfolio of 100 mmboe plus leads which also include MA-7, Tanah Baru South and Lofin NW. In addition, two significant offshore leads (PP-4, PP-5) have been identified with shallow targets (<1000m) and closures up to 30 km<sup>2</sup>.

The 6510 km<sup>2</sup> East Seram PSC covers much of the eastern part of Seram Island in Eastern Indonesia. Lion has a 100% interest in the PSC which was signed on July 17, 2018. Importantly it contains the SE extension of the 2 TCF Lofin field and the offshore extension of the 20 mmbbl Bula Field. A 500 km 2D seismic survey is scheduled for 2020 which will cover these field extensions and high graded prospects and leads. Planning for the survey is well underway and Lion is confident this will result in a suite of drill ready targets and position the East Seram PSC as one of the most exciting blocks in the SE Asian region.

Tom Soulsby Lion's Executive Chairman noted "Lion continues to be encouraged by our East Seram PSC and the newly identified leads as part of our ongoing technical effort. This work has highlighted the similarities of the proven, yet underexplored, Seram fold belt play to some of the great petroleum provinces of the world. We are also making good progress on planning for a seismic survey and on efforts to find a well-resourced partner to join us in our exploration and development efforts."

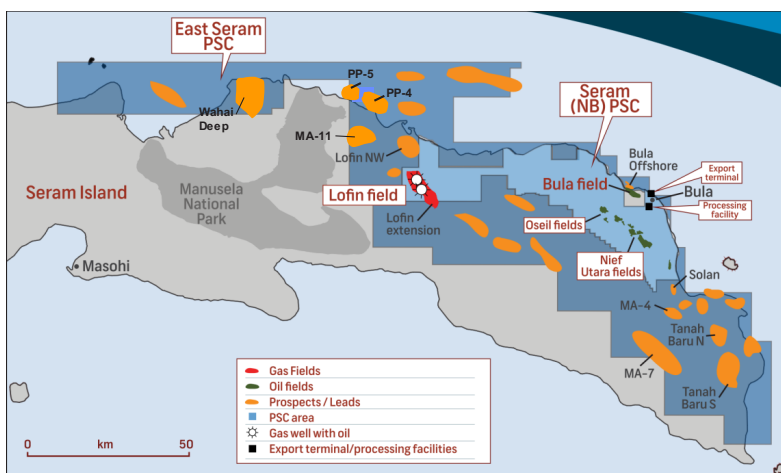


Figure 1 Map of East Seram PSC Showing existing fields and key prospect and leads

<sup>1</sup> "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 at a glance

- ASX listed oil and gas E&P company focused on Indonesia; two conventional PSC's.
- Net production of around 50bopd from the Seram PSC which also contains the Lofin gas/condensate discovery.
- New focus on production opportunities in Southeast Asia, initial focus on Seram Island.
- Executive team and strategic investors with impressive track records for value creation in Indonesia.

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### Directors & Officers

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<b>Russell Brimage</b>	Non-Executive Director
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## East Seram PSC Technical Overview

The East Seram PSC encompasses a significant part of the Eastern Indonesian Seram Basin. The PSC has geological affinities to nearby provinces that host major oil and gas reserves, this includes the prolific Papuan fold belt in PNG as well as the Salawati and Bintuni basins in Irian Jaya. Recent technical work including a new structural study by Lion highlights similarities of the Seram fold belt, in terms of geological age, paleo-geographic setting, fractured Jurassic limestone reservoir and Triassic-Jurassic source rock type, to world-class fold belt plays in Iran (Zagros fold belt) and in Pakistan (Sulaiman fold belt).

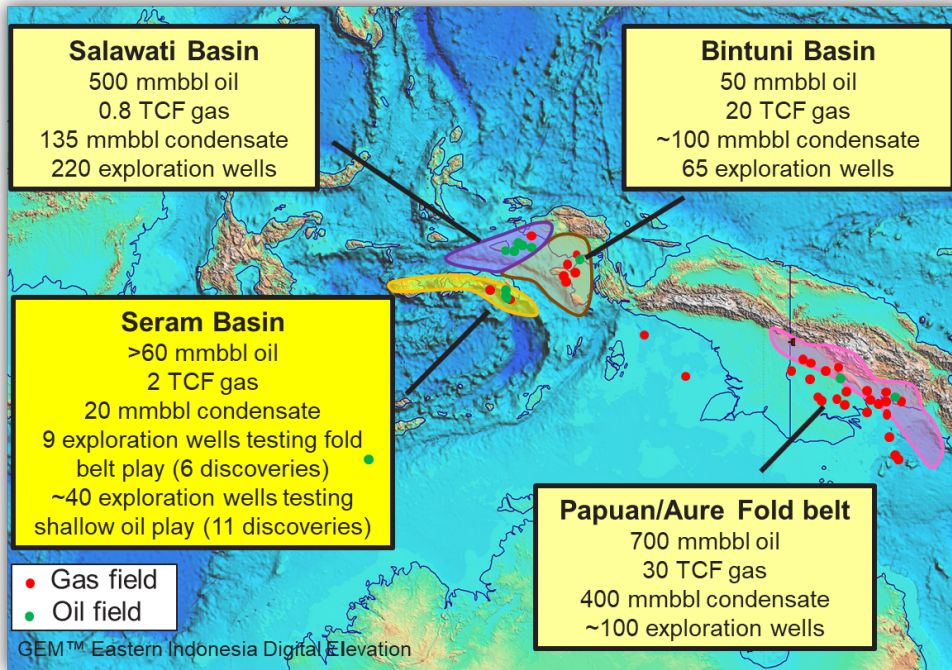


Figure 2 Key exploration statistics for provinces in vicinity of the Seram Basin

The East Seram block contains two main proven plays:

- The Triassic to Early Jurassic Manusela limestone oil and gas play is the primary reservoir objective with over 430mboe discovered to date in the basin including the producing Oseil field and the Lofin gas field. **All 6 wells that have intersected the Manusela limestone to date in the area have been discoveries.** The limestone is often fractured resulting in good flow rates. MA-7 is the highest ranked lead and is expected to be oil prone with expected reservoir objective at approximately 1500m .
- A shallow Plio-Pleistocene oil play with sandstone & carbonate objectives in the Fufa Formation. The play includes the 20 mmbbl Bula Oil field. The East Seram PSC contain the potential offshore extension of this field, as well as a number of additional on and offshore leads including the newly identified PP-4 with areal potential up to 30 km<sup>2</sup>.

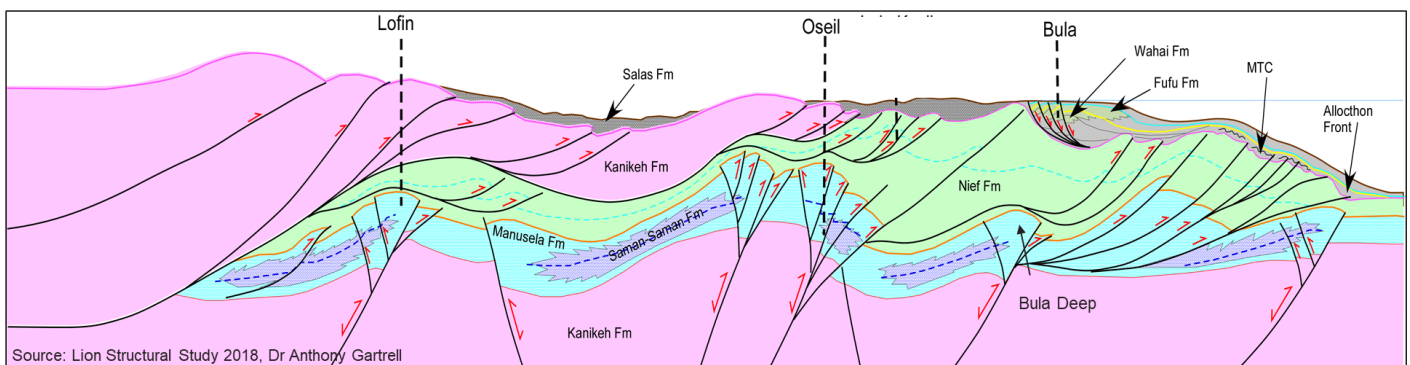


Figure 3 Schematic diagram from Lion structural study showing the structural style of East Seram with key fields

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## East Seram PSC Portfolio

A total of 18 prospects and leads are currently characterised and this portfolio is anticipated to expand with ongoing work.

East Seram PSC Prospective Resource <sup>1,2,3</sup>		Lion Working Interest (100%)									
		HC Gas Recoverable			Oil/Cond Recoverable			Combined <sup>4</sup> mmmboe			COS <sup>5</sup>
Lead/Prospect	Target	Low P90 IU	Best P50 2U	High P10 3U	Low P90 IU	Best P50 2U	High P10 3U	Low P90 IU	Best P50 2U	High P10 3U	%
<b>Fold belt Play</b>											
MA 7	Manusela carbonate	33.7	160.6	748.3	39.4	189.8	881.4	45.2	216.6	1006.1	24%
Wahai Deep	Manusela carbonate	196.4	689.6	2632.9	34.1	129.1	466.8	66.8	244.1	905.6	14%
MA 11	Manusela carbonate	164.2	587.4	2017.5	15.9	55.1	184.3	43.3	153.0	520.5	26%
Tanah Baru S	Manusela carbonate	77.4	281.9	911.1	22.7	90.0	339.1	35.6	137.0	490.9	24%
Lofin NW (MA 10)	Manusela carbonate	147.6	485.6	1623.5	13.9	49.0	146.7	38.5	129.9	417.3	20%
MA 3	Manusela carbonate	62.5	236.3	860.1	10.7	40.9	143.5	21.1	80.3	286.8	19%
Tanah Baru N	Manusela carbonate	36.1	123.7	424.6	4.6	17.5	61.1	10.6	38.1	131.9	20%
MA 2	Manusela carbonate	23.8	96.4	349.6	4.8	19.2	75.0	8.8	35.2	133.3	18%
MA 8	Manusela carbonate	23.8	96.4	349.6	4.8	19.2	75.0	8.8	35.2	133.3	21%
MA 1	Manusela carbonate	32.1	100.4	294.6	5.4	17.8	53.3	10.8	34.5	102.4	27%
Lofin Extension <sup>6</sup>	Manusela carbonate	69.2	154.4	291.7	0.9	2.0	3.9	12.4	27.7	52.5	75%
MA 4	Manusela carbonate	18.2	58.8	176.0	0.9	3.3	9.7	3.9	13.0	39.0	35%
MA 4 NE	Manusela carbonate	14.5	41.5	122.6	1.1	3.5	11.0	3.5	10.4	31.4	31%
<b>Shallow play</b>											
PP4	Fufa sst/carbonate	3.7	11.6	35.9	10.5	37.4	130.2	11.1	39.3	136.2	25%
PP5	Fufa sst/carbonate	3.9	8.2	19.5	10.7	28.0	71.5	11.4	29.3	74.8	25%
PP3	Fufa carbonate				3.1	6.4	13.1	3.1	6.4	13.1	23%
Solan	Fufa Sst	0.7	1.5	3.6	1.5	3.6	8.7	1.6	3.8	9.3	32%
Offshore Bula	Fufa sst/carbonate				0.5	1.6	4.8	0.5	1.6	4.8	43%
<b>Combined</b>		<b>907.7</b>	<b>3134.2</b>	<b>10860.8</b>	<b>185.5</b>	<b>713.3</b>	<b>2679.0</b>	<b>336.9</b>	<b>1235.6</b>	<b>4489.1</b>	<b>26%</b>

**Table 1 East Seram PSC Prospective Resource Summary**

Notes:

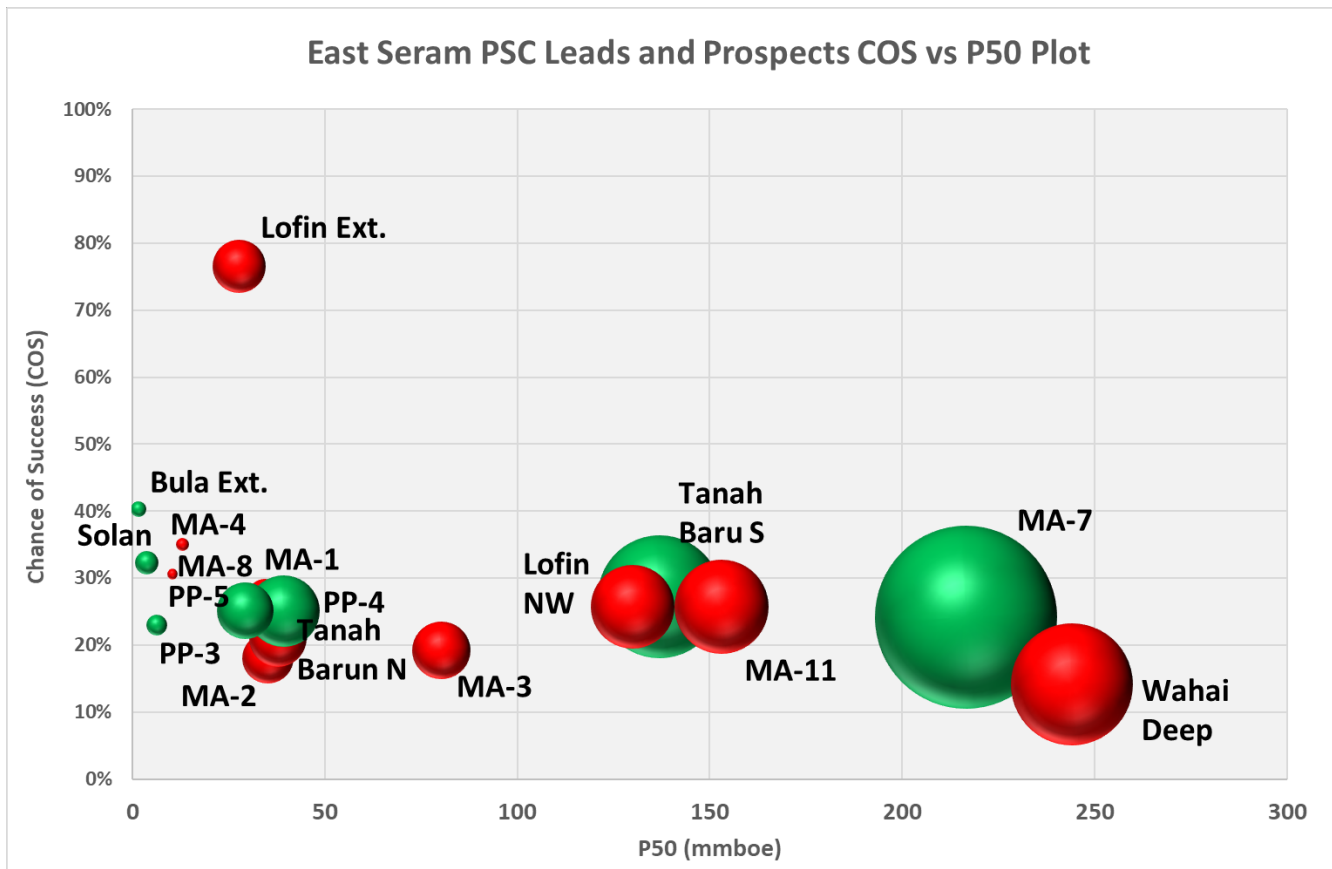
- Prospective resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective Resources have both an associated chance of geologic discovery and a chance of development. Prospective Resources are further categorized in accordance with the range of uncertainty associated with recoverable estimates, assuming discovery and development, and may be sub-classified based on project maturity.
- 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.
- Closure areas for individual leads are based on seismic interpretation with realistic low side and high side estimates. Other key parameters, such as net pay, porosity, hydrocarbon saturation and oil versus gas ratios, used to calculate prospective resource are taken from known field data and regional trends.

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4. Conversion for gas factor of 6mcf=1boe used to convert gas to barrels of oil equivalent
5. Chance of success (chance of geological discovery): The estimated probability that exploration activities will confirm the existence of a significant accumulation of potentially recoverable petroleum
6. Lofin Field Extension potential in East Seram PC potential currently assigned as prospective resource rather than contingent resource pending further analysis.



**Figure 4 Chance of success versus P50 mmboe prospective resource.** Green coloured bubble refers to leads which are dominantly expected to be oil filled by volume whereas red is dominantly expected gas filled. Bubble size is related to relative NPV (net present value)

## East Seram PSC Terms

Lion has a 100% interest in the 6510 km<sup>2</sup> PSC which was signed on July 17, 2018. The East Seram contract is awarded under Indonesia's new Gross Split PSC system which significantly reduces the bureaucratic burden on companies while providing internationally competitive fiscal terms with company profit share of at least 75% before income tax. The modest firm commitment consists of 500km 2D seismic (to be acquired either onshore or offshore) and geological/geophysical studies. No commitment wells are included in the primary 3-year term.

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## Glossary

bcf: billion cubic feet

boe: barrels of oil equivalent

COS: chance of success

FVF: formation volume factor

mmbbl: million barrels

PSC: production sharing contract

mamboe: million barrels oil equivalent

ss: subsea

tcf: trillion cubic feet

1U, 2U, 3U: Undiscovered prospective resource classification for low, mid & high estimates

## 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, former 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 30 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 website. 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. **END**