East Seram PSC Opportunity
High impact, under-explored fold belt & exciting shallow Plio-Pleistocene prospects

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View from Manusela National Park lookout toward Sawai Bay
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Prospective Resources

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. Further exploration, appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

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 presentation are based on and fairly represent information and supporting documentation that has been prepared and/or compiled by Mr Kim Morrison, Exploration Manager 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.

Conversion from gas volume to barrels of oil equivalent (BOE) in this document is based a BOE conversion ratio of 6 mcf:1 bbl.

East Seram PSC region contains prolific hydrocarbon provinces
Seram Basin proven area (oil production, major gas discovery), plenty of running room

Salawati Basin
- 500 mmbbl oil
- 0.8 TCF gas
- 135 mmbbl condensate
- 220 exploration wells

Bintuni Basin
- 50 mmbbl oil
- 20 TCF gas
- ~100 mmbbl condensate
- 65 exploration wells

Papuan/Aure Fold belt
- 700 mmbbl oil
- 30 TCF gas
- 400 mmbbl condensate
- ~100 exploration wells

Bonaparte Basin
- 750 mmbbl oil
- 35 TCF gas
- ~500 mmbbl condensate
- 60 fields
- ~270 exploration wells

Seram Basin
- ~60 mmbbl oil
- 1.5 TCF gas
- 15 mmbbl condensate
- 9 exploration wells testing fold belt play (6 discoveries)
- ~30 exploration wells testing shallow oil play (11 disc.)
East Seram PSC - Partner sought to help fund exploration drilling
2020 offshore & 2022 onshore 2D (being processed) delineate highly attractive portfolio

East Seram PSC (Lion 60% Operator)
- OPIC (Taiwanese NOC) 40%
- 4457 km², underexplored (only 4 shallow wells)
- In year 5 of potential 10 year exploration term
- 27 P&L’s: ~2bboe mean prospective resource

Seram (Non Bula) PSC (Lion 2.5%)
- Oseil field currently ~1200 bopd
- 1-2 TCF Lofin field – current successful well test

Lion operated Bula field 2000-2005

Kobi offshore area 507 km 2D acquired
Bula Bay area 157 km 2D acquired

Onshore Kobi Prospect Area ~100 Km
1.5 TCF Lofin Gas Field
Ceram B 1X
Belis-1

MA-7 Prospect Area ~65 Km
Tanah Baru Prospect Area ~35 Km

20 mmbbl Bula Oil Field

157 km 2D acquired

Wahai-1
Wahai-2

507 km 2D acquired

East Seram PSC
World-class fold belt structures, emerging Plio-Pleistocene play, Multiple targets with abundant evidence of present hydrocarbon charge

Fold-thrust belt play: fracture massive Manusela carbonate objective (up to 2000m thick), coeval organic rich carbonate source interpreted in anoxic lows (Saman-Saman Fm)

Plio-Pleistocene Play (Fufa Fm shallow marine sandstone, reefal build ups & turbidites)
Prospects in Bula Bay area
2020 high-resolution data on 0.5km grid has uncovered highly attractive structures

- **PP3 Prospect**
  - Carbonate reef + overlying sandstone target
  - 9.2 mmbbl oil

- **PP8 Prospect**
  - Attractive structure, multiple targets
  - 13.0 mmbbl oil

- **PP9 Prospect**
  - Well-defined carbonate reef + sandstone potential
  - 19.0 mmbbl oil

- **PP10 Prospect**
  - Carbonate reef + overlying sandstone target
  - 22.7 mmbbl oil

Prospects in Bula Bay area
2020 high-resolution data on 0.5km grid has uncovered highly attractive structures
Bula Bay NW-SE Line over PP8 Prospect
PP8 faulted 4-way anticlinal structure has clear amplitude support

Clear amplitudes in interpreted turbidite sands, positive AVO response
PP9 Prospect: 19mmbo\(^1\)

- Newly identified, well defined Plio-Pleistocene reefal buildup up to 2.7 km\(^2\) with 80m relief
- Amplitudes in overlying Fufa C/D turbidite sandstones fault block
- Water depth 20-60m
- Reservoir depth ~600 mss

\(^1\) mean prospective resource

Prospect can be drilled from onshore deviated well for ~USD 4mm
Prospects in offshore Kobi area

2020 data delineates shallow marine prospects, 20km² PP6 Prospect & DW amplitude play
Kobi area NNE-SSW seismic line
Faulted shallow marine traps and deeper water, amplitude supported trend

PP4 Prospect

PP11 Prospect

Line A

Interpreted thrust faults

Prograding section

Clear HC related amplitudes interpreted

Note potential for stacked turbidite sands

Fufa A
Fufa B
Fufa C
Base Plio-Pleistocene

1 km
PP6 Prospect: 73 mmboe\(^1\)

- 4-way dip closure up to 20 km\(^2\) & 4 potential zones & 100m+ relief
- Good amplitudes response over crest of feature
- Channelised turbidite reservoir development
- Water depth: 50-150m
- Objective interval 550-1200 mss

\(^1\) mean prospective resource
Onshore Kobi area - large fold belt structures near Lofin Gas Field

Impressive structures defined by seismic, surface mapping, gravity & topography, oil & gas seeps in area

Wahai Deep – Large structure (up to 80km²) identified on seismic, gravity, topography
376 mmboe mean prospective resource¹

MA11 – up to 40km² anticline, new seismic & gravity being processed
234 mmboe mean prospective resource¹

Lofin Field ~40km², 750-1764 bcf gas additional potential in East Seram PSC
168bcf/2.2 mmbc mean prospective resource¹

MA10 (Lofin NW) – 40km² + inversion structure, new seismic/gravity being processed
184 mmboe mean prospective resource¹

¹Prospective Resource: 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. P90-P10 range given.
Onshore Kobi: key leads analogous to Lofin but shallower depth
2022 seismic & gravity program (7 lines) cover key leads, preliminary results positive

MA-11 Lead – up to 42 km² (+)
Prospective resource¹ 43 - 520 mmboe (P90-P10)

MA-10 Lead ~40 km²
Prospective resource¹ 39 - 417 mmboe (P90-P10)
MA-10 Prospect - Line BLM22-107 early processing product
Analogous to Lofin field (Manusela at ~2900mss vs 4150mss at Lofin) – stay tuned!
SE Area, large fold belts structure, analogues with Oseil oil field

Impressive structures defined by seismic, surface mapping, gravity & topography

Top Manusela Depth Map
CI 200m

**MA7** – Large 55 km² NW-SE trending anticline, topographic and gravity high, oil seep in area 389 mmboe mean prospective resource

**MA4 NE** 6 km²

**MA1** 13 km²

**MA8** 23 km²

**MA2** 16 km²

**MA-4 NE** 6 km²

**MA-1** 13 km²

**MA-8** 23 km²

**MA-2** 16 km²

**MA-4** 9 km²

**Tanah Baru North** – up to 17 km² may connect with structure to south, seismic planned
56 mmboe mean prospective resource

**Tanah Baru South** - Large structure (up to 43 km²) recognised by previous operator
205 mmboe mean prospective resource

**MA-3** 39 km²

**MA-4 NE** 6 km²
SE Area of Seram fold belt play: MA-7 is standout structure

2022 seismic and gravity program being processed

MA-7 lead – up to 55 km²
Prospective resource¹
45 – 1006 mmboe
(P90-P10)

Gravity & topographic high, seeps in area
5 new lines confirm structure

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SE Area MA7 Prospect – BLM22-111 (field processing)
Clear fold belt high on seismic with gravity & topographic expression
MA-7

Interpreted Top Manusela
East Seram Investment Value Proposition
Up to 35% working interest available

Proven Basin, Immature Plays with High Prospectivity
- Proven, underexplored fold-belt: new 2D data delineates major prospects
- 2020 marine seismic has uncovered exciting new Plio-Pleistocene prospects
- Impressive P&L portfolio exceeding 2 bboe (mean Prospective Resource)

Attractive Fiscal Terms Operating Flexibility
- New Gross Split PSC with light handed regulation and operating flexibility, regulator approves work programs, not budgets or procurement
- Contractor take after all tax at least 48%

Lion Data, Knowledge, & Insight Advantage
- Unrivalled Seram data & knowledge from long history in Seram E&P
- Strong relationships: experienced Indonesian team

Established Oil Production & Export Infrastructure
- Bula and Oseil oil production facilities with capacity up to 21,000 bopd, significant ullage

Low Commitments & Low Cost Flexible Program
- Modest signature bonus (US$0.5mm) & performance bond (US$1.5mm) - paid
- Firm work commitment met (664 km marine 2D/200 km land 2D).
- Up to 5 yrs left on exploration PSC, 20 yr production licence on discovery
Thank you!

Please visit our poster display or for more information contact

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