The East Seram PSC Opportunity

Potential to be one of the most exciting blocks in Southeast Asia

Lion Energy Limited
Seapex Conference Farmout Forum
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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 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.
Overview of Lion Energy and East Seram PSC
ASX listed, majority Indonesian owners, Seram focused E&P company

• 100% East Seram PSC
  • 6,510 km², signed July 17 2018
  • 500 km 2D commitment, no wells
  • Jurassic fold belt play
  • Shallow Plio-Pleistocene play
  • Only 4 shallow wells drilled, all in 70’s, no valid tests

• 2.5% Seram (Non Bula) PSC
  • Fold belt play main target
  • Oseil field currently ~1800 bopd
  • Contains 2 TCF Lofin gas field
  • Operated Bula field 2000-2005
Region contains prolific hydrocarbon provinces

Proven Seram Basin fold belt play (partly) analogous to Papuan Fold belt

**Seram Basin**
- >60 mmbbl oil
- 2 TCF gas
- 20 mmbbl condensate
- 9 exploration wells testing fold belt play (6 discoveries)
- ~40 exploration wells testing shallow oil play (11 disc.)

**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

*GEM™
Eastern Indonesia Digital Elevation*
Seram Island stratigraphy

Massive fractured carbonate reservoir, world-class source & seal

**Seram Region Stratigraphic Table (after Charlton, 2004; also Kemp et al, 1996)**

<table>
<thead>
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<th>System/Series</th>
<th>Seram</th>
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<td>Upper</td>
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<td>Lower</td>
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</tbody>
</table>

**Fufa Fm- Primary reservoir**
- Shallow water sandstone & limestone
- Intraformational shale/siltstone seal
- Bula Field reservoir porosity 25-30%

**Kola Shale - Regional seal**
- Shelfal/neritic calc. claystone & siltstone
- Seals Lofin 1300m gas column

**Manusela Fm - Primary reservoir**
- Shallow water-shelf carbonate,
- Fracturing results in high flow rates

**Saman-Saman Fm – Source**
- Calcareous organic rich shales, marl
- Equiv. Buru Is shales TOC to 16% HI 540
  (after Charlton, 2004; also Kemp et al, 1996)

Seram has Triassic rift related outboard highs with Jurassic shallow water carbonates and co-eval rich marine source rock deposited in syn-rift lows.
Tectono-stratigraphic model - key play elements

1. Triassic-Jurassic Manusela carbonate, rich co-eval Saman-Saman source, Kola Fm seal
2. Shallow Plio-Pleistocene sands and reefal buildups, intraformational seals, Saman-Saman source

- Late Miocene reactivation of rift faults producing inversion anticlines (e.g. Lofin, Oseil fields)
- With ongoing collision section overridden by low-angle thrust faults & Kanikeh overlying younger rocks & driving burial & maturation of syn-rift source rocks
- Plio-Pleistocene thrust foreland basin from erosion of uplifted section, faults provide conduits for mature Saman–Saman charging shallow structures (e.g. Bula field)
Lofin gas discovery - 1300m gas column with closure of ~40 km²
Largest onshore discovery in Indonesia in decades, extends into East Seram PSC

- 2015 Lofin-2 confirmed 1300m gas column in fracture carbonate, flowed 17.8 MMscfg/d
- Numerous fractures from cores, image logs, losses while drilling, gas peaks
- Contingent Resource (2C) = 2.020 TCF, 18.25 MMbbl cond
Fold belt play prospect & lead portfolio
Impressive portfolio defined by seismic, surface mapping, gravity & topography

12 P&L (to date) with combined mean (unrisked) 1.77 billion boe
Seram fold belt play: impressive undrilled structures

2020 seismic program to cover key leads

MA-7 lead – closure up to 55 km² (+)
Prospective resource¹ P90: 45 – P10: 1006 mmboe
Structure supported by seismic and gravity and has topographic expression and seeps recorded in area

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.
Global statistics for fold-thrust belt (FTB)
Globally host around 25% of total discovered reserves

- >700 bboe discovered
- ~520 bboe in Zagros FTB
- ~180 bboe in ~30 other FTB’s (av 6 bboe)
- Source rock richness key success factor (marine oil prone source typical)
- ~40% reservoirs shelf carbonates
- ~60% reservoirs are fractured

Seram FTB has ~400 mmboe discovered to date
Mid case YTF 2.5 bboe

Source of FTB statistics (Goffey et al, 2010)

From Goffey et al, 2010 (map credited to Albert Bally)
Shallow play: Offshore 20 mmbbl Bula Field extension

Offshore extension potential recognised in 1990’s, area not under licence until now

- Bula North flank wells show good production (122,000-300,000 bbls)
- Up to 5 mmbbl potential in East Seram PSC
- Additional upside with faulted traps & reefal buildups
- 2020 seismic planned

Source of production numbers: Kalrez (Lion) 2002 report

Potential offshore extensions of Bula Air and K. Denser fields

Attractive shallow portfolio in East Seram PSC

Example log Bula Field
East Seram Investment Value Proposition

Up to 50% working interest and operatorship available

1. Proven Basin, Immature Plays with High Prospectivity
   - Extension of existing Bula oil and Lofin gas field into PSC
   - Proven, un-creamed, high upside fold-belt and low cost shallow play.
   - Impressive P&L portfolio exceeding 1.8 bboe (mean, unrisked)

2. 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%

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

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

5. Low Commitments & Low Cost Flexible Program
   - Modest signature bonus (US$0.5mm) & performance bond (US$1.5mm) - paid
   - 3 year commitment only 500km of 2D seismic (on or offshore) targeting May 2020. No drilling commitment.
Thank you

Please contact Lion for more information

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Manusela Limestone with oil stain – Neif Gorge