

Quarterly Report

1 January to 31 March 2022



Highlights – green hydrogen proposals progress, onshore Seram Island seismic signed and set to commence

Lion Energy Limited (“Lion” or “Company”) is pleased to report progress in both green hydrogen and oil and gas in Q1 2022.

Highlights include:

- Progressed proposals working with BLK Auto, Australia’s first supplier of hydrogen fuel cell powered coaches.
- Progressed proposals with the Pulitano Group, a transport and property group with city bus and coach operations in Queensland and Victoria.
- Completed the QUT study, with the software now in use to assist green hydrogen production and distribution location selection.
- Progressed proposals working with the Foton Group, one of the world’s largest zero emission bus manufacturers.
- Presented the ARRB study conclusions to public transport authorities and fleet operators on the supply of green hydrogen.
- Negotiations finalised with key seismic contractor, BGP, for onshore 2D survey in Lion’s exciting East Seram PSC with contract signed post quarter end.
- 200km seismic survey set to commence in Q2 2022 targeting the under-explored Seram fold-belt with some of the largest undrilled structures in Indonesia.
- Cash at quarter-end was US\$8.8 million (excluding joint-venture cash), compared to US\$8.6 million at the end of Q4 2021.

Lion continues to develop its business case for green hydrogen in Australia and is close to finalising its first location and updating the market in due course, whilst preparing for the critical onshore seismic campaign in the East Seram PSC (Lion 60%).

Mr Soulsby, Lion’s Chairman said that “*we continue to aim to position Lion at the forefront of hydrogen production and refuelling in Australia at a time when zero emissions are becoming more and more important for Federal and State Governments. Our new relationships and business development work continues to refine this work. The execution of the BGP contract for the East Seram PSC seismic campaign will cover some of the most material oil and gas prospects in Southeast Asia and could lead to drillable targets in 2023.*”

Lion at a glance

- ASX listed oil and gas E&P company with two conventional PSCs in Seram Island, Indonesia.
- Net production of around 37bopd from the Seram PSC which also contains the Lofin gas/condensate discovery.
- New focus on green hydrogen opportunities in Australia.

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Quarterly Report

1 January to 31 March 2022



Green Hydrogen

During the quarter, Lion focused on a collaborative approach with government and partners in green hydrogen production and distribution with multiple proposals being progressed with public transport bus operators in multiple Australian states including Queensland, NSW and WA. This focus is driven by:

- State governments are driving the zero-emission transition through regulatory measures and financial commitment largely by 2025.
- Lion is focusing on working with the heavy mobility sector (buses then trucks) to comply with these ambitious targets.
- Hydrogen refuelling infrastructure is a key component of the transition but is currently lagging.
- Lion, together with its partners, envisions building and operating a network of hydrogen production hubs and refuelling stations.
- Lion is working closely with equipment suppliers, bus manufacturers and fleet operators to open its first hydrogen refuelling station.

ARRB Study

The Australian Road and Research Board (ARRB) completed their work for Lion and this work was presented to the Minister for Transport and Main Roads for Queensland as well as Translink. ARRB concluded that two key ZEB technologies will effectively support a transition to net zero emissions by Australian states:

Battery Electric Buses (BEB's) enjoy low operating costs but are constrained by limited depot space for charging infrastructure, high infrastructure investments (chargers, energy storage and electricity connection/substation upgrades), shorter range and longer charging times of BEBs likely requiring additional BEBs to maintain service levels.

Fuel Cell Electric Buses (FCEB's) are currently more expensive, but have fewer operating constraints, such as small footprint of H2 refuelling infrastructure, fast refuelling, no range restrictions (comparable with current internal combustion engine buses) and simpler depot management. FCEB (vehicle and gas) purchase prices will further reduce as the technology matures and production volumes increase.

As such, ARRB confirmed Lion's views that FCEBs will be part of the future ZEB mix to complement BEBs.

ARRB went further to say that this goal requires targeted government support to encourage investments into FCEBs and H2 refuelling infrastructure. A systematic approach to the ZEB transition is required with more flexible bus operation contracts and stakeholder collaboration involving governments, bus operators, OEMs, H2 and electricity suppliers being key elements.

Partnerships

Lion and BLK have regular discussions and meetings with third parties to pursue specific opportunities for both coach and city bus transport solutions.

In December, Lion firmed up a relationship with the Pulitano Group, a leading transport and property group headquartered in Queensland. The Pulitano Group is a major bus operator in Australia managing more than 400 buses in Queensland and Victoria. In the quarter, Lion and the Pulitano Group continued to work up proposals to their government counterparty.

In December, Lion partnered with one of the world's leading zero emission bus manufacturers, Foton Mobility. During the quarter, Lion worked with Foton on largely city bus transport solutions to bus operators.

Quarterly Report

1 January to 31 March 2022



Roadmap

As part of recent announcements, Lion presented the following provisional roadmap and has responded to the objectives as listed in Table 1, in the quarter under review.

Lion is currently assessing multiple locations for its first hydrogen production and refuelling site.

Table 1: Lion's provisional green hydrogen roadmap vs response

Stated objective	Response
Stage 1	
Publish broad green hydrogen strategy	Completed
Register business name	Completed
Stage 2	
Establish team of hydrogen experts	Completed
Appoint experts to systematically analyse optimal electrolyser locations in Australia	Completed, QUT work in final iteration
Review the best value and fit for purpose solar, wind and electrolyser technologies	GPA phase 2 work commenced, appointed Armana Energy as special advisors
The review of opportunities in which Lion may be able to combine its expertise and resources with a suitable market and partner to progress a green hydrogen development using identified electrolyser locations and appropriate technologies	Partnerships expanded: Wagners, Censtar H2 Technology, Foton Mobility, BLK Auto and Pulitano Group. Lion is working with public transport authorities and bus fleet operators in NSW, Vic and NSW.
Expand the scope of the Advisory Board to review opportunities in H2 distribution and hydrogen fuel cells for heavy equipment and vehicles	Advisory board have an ongoing role and involvement in the work being undertaken by GPA and reviewing submissions by Censtar and other equipment providers
Stage 3	
Appoint consultants to undertake a feasibility study to ascertain the economic viability of a short listed opportunity and the anticipated cost	Conditional upon stage 2 work being completed
Secure any required land rights conditional upon Lion proceeding with an opportunity	Conditional upon stage 2 work being completed
Investigate investing in a pilot or demonstration plant including H2 distribution and hydrogen fuel cell heavy equipment and vehicles	MOU's signed with Wagners and Censtar, work in progress
Stage 4	
Subject to a positive feasibility study, progress the opportunity by participating in the development of a smaller or larger solar/wind farm and relevant energy storage facilities to produce green hydrogen at low cost for domestic or export markets	Conditional upon stage 3 work being completed
Form a joint venture with a suitably experienced and funded partner	Conditional upon stage 2 work being completed

Lion aims to be among the first movers in green hydrogen production and distribution infrastructure development in Australia and is mobilising its resources to meet this objective with a focus on the Eastern States of Australia.

Lion's work with QUT utilising a geospatial tool, will enable Lion to quickly ascertain the suitability of larger hydrogen production locations factoring in market and renewable energy delivery infrastructure. QUT's work is complete.

Quarterly Report

1 January to 31 March 2022



Operations update East Seram PSC

During Q1 2022 Lion finalised much of the operational planning and contractual negotiations for the scheduled 200km onshore seismic. The contract with BGP, which is one of the world's largest and most experience seismic contractors, was signed post quarter end on April 13 2022 and operations on the survey are due to commence in May 2022 with the survey planned to be completed by Q1 2023.

This survey is designed to mature the high-graded prospects and leads of the exciting Seram fold-belt play. A combined, unrisked, P50 (Best estimate) prospective resource¹ of 675 mmbbl is calculated for the 5 key targeted leads (MA-7, Tanah Baru North, Tanah Baru South, MA-10 and MA-11). The largest lead, MA-7, has an oil prospective resource¹ of Low (P90) 39 mmbbl, Best (P50) 190 mmbbl, and High (P10) 881 mmbbl and a chance of success currently estimated at 24% (refer Lion ASX release dated 4 March 2019).

The onshore seismic program has an estimated cost of USD7.2mm and approximately 80% of this cost is funded by Lion's partner, OESC.

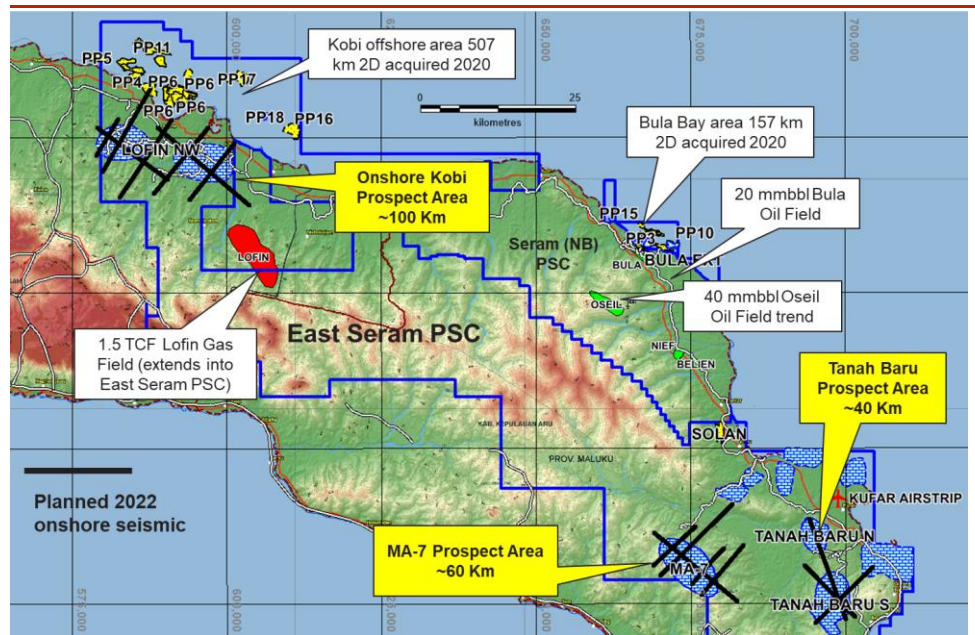
Lion, via its wholly owned subsidiary Balam Energy Pte Ltd, holds a 60% participating interest in the East Seram PSC, located on and offshore east Seram Island in eastern Indonesia.

The East Seram PSC contains a significant part of the underexplored Seram fold-belt, a northwest to south east trending structural province. Globally, fold-belts have proven highly prospective provinces with approximately 700 billion barrel of oil equivalent discovered (Goffey G.P, et al, 2010) representing around 25% of the world's discovered hydrocarbons. The Seram Basin play, with a Jurassic age Mansuela Formation fractured carbonate objective, is already proven with the oil producing Oseil Oil Field and the 1.5 tcf Lofin Gas Field.

In 2020 Lion shot a 664 km marine seismic which targeted the shallow Plio-Pleistocene play and allowed Lion to mature a highly attractive offshore portfolio (refer ASX release dated 16 June 2021). Work conducted in 2021 showed some of these offshore structures, including the PP9 reefal prospect, can be drilled from onshore greatly enhancing their economic attractiveness.

¹Prospective 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.

Figure 1: East Seram PSC – location map of planned 2022 seismic survey



Quarterly Report

1 January to 31 March 2022

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Seram (Non-Bula) PSC

Lion, via its wholly owned subsidiary Lion International Investment Ltd, holds a 2.5% participating interest in the Seram (Non-Bula) PSC ("SNB PSC"), located onshore Seram Island in eastern Indonesia.

The block contains the Oseil oil field and surrounding structures that have yielded cumulative crude oil production of 19,382,453 barrels since production started in January 2003 through to 31 March 2022.

As previously reported by Lion, in 2015 the Lofin-2 appraisal well confirmed a highly material gas discovery in the SNB PSC. Re-entry and testing of the Lofin-2 well has been approved by the joint venture (refer Lion ASX Release 21 December 2021) and by the Government of Indonesia as part of the 2022 work program and budget. The test, expected to commence in H2 2022, is a key step toward commercialisation of the Lofin Gas Field Contingent Resources (2C) of 1450 bcf (100%), Lion share 36.3 bcf.

Production

During the quarter, gross crude oil production from Oseil and surrounding oilfields was 122,243 bbls (Lion's gross share 3,058 bbls). Daily production averaged 1,358 bopd (Lion's interest being 34 bopd).

Crude oil available for lifting as of 31 March 2022 was 131,733 bbls.

Well services were performed on three wells during the Quarter, Oseil 23, 26 and 29.

Operating costs remained steady at US\$20.42 per barrel

Regulatory update

In January 2021, CITIC Seram, the operator of the Seram (Non-Bula) PSC, was requested by the Government of Indonesia, in accordance with the terms of the PSC, to offer a 10% participating interest to a Regional-Owned Company appointed by the local Government of Maluku. The 10% would be transferred by the existing participants in the PSC pro-rata to their respective participating interests.

In March 2021, CITIC Seram received a first Letter of Intent from the Regional-Owned Company requesting to start a due diligence process. In January 2022, the Regional-Owned Company advised that it had completed its due-diligence and intends to acquire the 10% participating interest subject to commercial terms to be agreed. Based on a letter

Figure 2 Seram (Non-Bula) Block PSC - location map

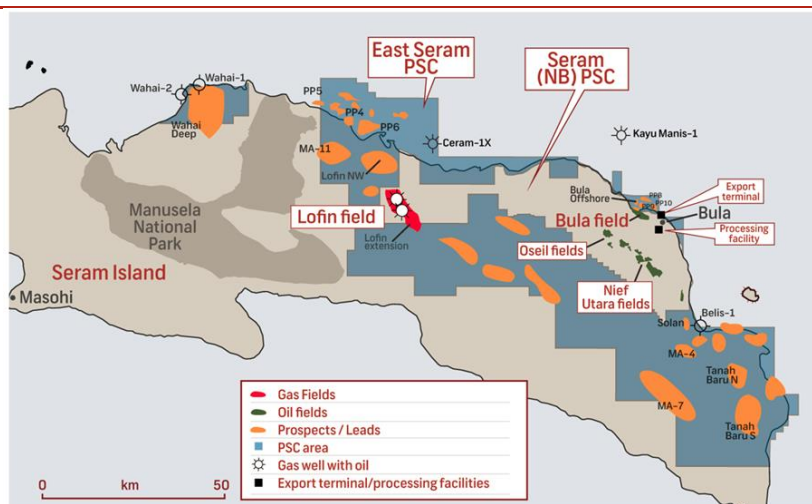
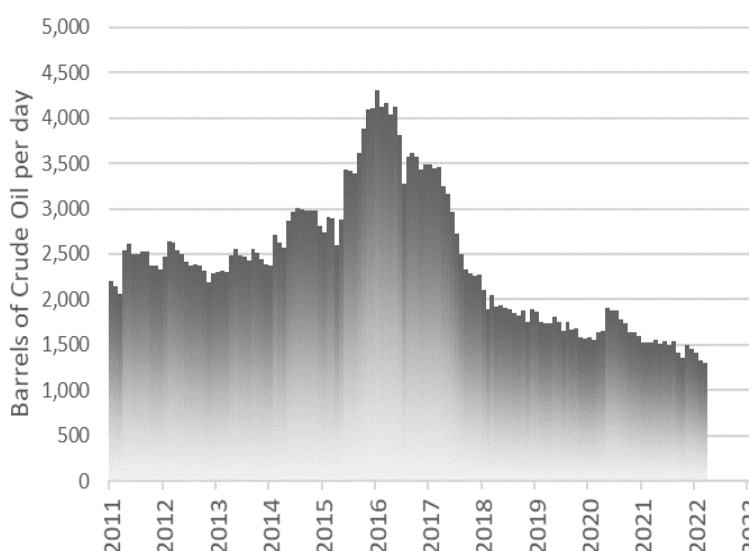


Chart 1 Seram (NB) Block - daily production per calendar month (bopd)



Quarterly Report

1 January to 31 March 2022



issued by the Minister of Energy and Mineral Resources in the Republic of Indonesia, the price for the 10% participating interest will 10% of the performance bond provided by the PSC at the time of the PSC extension in 2019.

The process is expected to complete by Q2 2022. At completion, Lion's participating interest in Seram (Non-Bula) PSC will reduce to 2.25% from 2.5% currently.

Corporate

The Company continues to maintain a focus on costs, whilst pursuing activities in Indonesia and in Green Hydrogen in Australia. Lion expects G&A costs to track steady year on year below US\$1m. During the quarter the Company received US\$437k from oil sale receipts while incurring US\$139k in production costs from the operations of the Seram Non-Bula operation.

Related Party Payments

During the quarter, the Company made payments of US\$130,000 to related parties and their associates. These payments relate to the existing remuneration agreements for the Executive and Non-Executive Directors.

Summary of petroleum tenements held as of 31 March, 2022

	% interest	Tenement	Location
Held at end of quarter	60%	East Seram PSC	Seram Island, Indonesia
	2.5%	Seram Non-Bula PSC	Seram Island, Indonesia

ENDS

This ASX announcement was approved and authorised for release by the Board of Directors.

Qualified petroleum reserves and resources evaluator requirements

In accordance with ASX Listing Rule 5.43 the Company confirms that references to petroleum reserves, contingent resources and prospective resources have previously been announced (7/9/2018, 10/9/2018, 04/03/2019, 13/04/2021 and 16/06/2021). The Company confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all the material assumptions and technical parameters underpinning the estimates in this announcement continue to apply and have not materially changed.

Glossary

bbl: barrels

bcf: billion cubic feet

bopd: barrels oil per day

BOP: blow out preventer

ESP: Electric submersible pump

FTP: first tranche petroleum

JV: joint venture

KB: Kelly bushing

mmscfd: million standard cubic feet of gas per day

mmbbl: million barrels

mmboe: million barrels oil equivalent

MD: measured depth

PSC: Production Sharing Contract

psi: pounds per square inch

tcf: trillion cubic feet

Sq.km: square kilometres

ss TVD: sub-sea true vertical depth

TD: total depth