

Quarterly Report

1 July to 30 September 2023



H2 project approval progresses to the Qld Govt, new seismic confirms world-class potential

Lion Energy Limited ("Lion" or "Company") is pleased to report further value creating developments in its core businesses.

Highlights include:

- Following on from key equipment procurement in our Port of Brisbane hydrogen project, Port of Brisbane development consent was obtained, and state development approval documents submitted.
- Multiple parties engaged in green hydrogen offtake discussions
- A 20% increase in Best Estimate (P50) Prospective Resource for the fold-belt structures targeted by the 2022 seismic survey (Kobi, Waru and Tanah Baru) - new combined (unrisked) P50 for the three prospects is 828 mmboe, up from previously reported 675 mmboe.
- The Kobi Prospect, located 10 km NW of the 1.5 TCF Lofin gas field, has mapped areal closure of up to 110 km² & a prospective resource range (P90-P10) of 98 – 1047 mmboe (40% oil predicted).
- Cash at quarter-end was US\$2.6million (excluding joint-venture cash), compared to US\$3.5 million at the end of Q3 2023.
- A crude oil lifting of 206,525 bbls was completed 28 June 2023 (Lion share 4,566 bbls pre government share, with Lion gross revenue entitlement of ~USD274,000 received end July 2023).
- Seram (Non-Bula) PSC production for the quarter was 105,800 bbls (Lion's share 2,645 bbls).

Mr Tom Soulsby, Lion's Chairman, commented: *"The development plans for our green hydrogen hub have been submitted to the Queensland State Assessment and Referral Agency (SARA) after obtaining Development Consent from the Port of Brisbane (PoB). Detailed equipment design review progresses which is a key step prior to the manufacture of our electrolyzers and related ancillary equipment. Our PoB Lease agreement negotiations are now finalised. The hub is geared towards heavy mobility fleets with an early focus on supplying domestic bus fleets."*

In oil and gas, the interpretation results of the new seismic and gravity surveys in our operated East Seram PSC have exceeded expectations. Given the extremely large size of the prospects confirmed by the new seismic, we are confident we have a world-class prospect portfolio. Our focus is now on continuing our technical work aimed at proposing the best prospect to drill. Lion is well placed with a 60% participating interest to farm down and

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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get a carried interest through a well. With the Lofin-2 well now completed we look forward to continued testing with the goal of commercial production initially serving local markets identified by the Operator.”

Green hydrogen update

Lion announced that it signed a milestone Heads of Agreement (HOA) with Port of Brisbane Pty Ltd (“PBPL”) for a long-term lease of land within the POB in Q1 2023, where it plans to build and operate its first hydrogen generation and refuelling hub. In Q3, Lion and PBPL advanced well on the lease agreement negotiations such that they are now finalised, and the parties have actively engaged on the development approval document preparation. Lion has now formally received development consent from the POB and we have now submitted our plan to the Queensland State Assessment and Referral Agency.

The hub is geared towards heavy mobility fleets with a focus on public bus fleets, and the application of fuel cells providing onsite off-grid power to the Queensland construction and mining sectors. The POB project is the first site of a planned wider network and constitutes a major step in Lion’s hydrogen strategy and integral to a broader hub and spoke/depot supply model.

The location is strategic due to its proximity to the majority of Brisbane’s 70+ bus depots, and also the significant heavy vehicle traffic to and from the Port. The site will initially produce and dispense some 420kg/day of green hydrogen but has the ability to quickly double production to respond to increasing demand. The image below is a representation of the architects drawings for the development approval submission and should closely resemble the actual hydrogen generation and refilling station .



Image 1: Artist’s impression of Lion’s H2 hub at the Port of Brisbane reflecting the development plan submitted to the State Assessment and Referral Agency

Lion earlier reported that it signed a General Equipment and Procurement Agreement with various vendors for supply of electrolyzers, a refuelling package and tube trailers for the POB location. The equipment includes 2 x 1MW alkaline electrolyser packages, a compressor, storage banks, dispenser and two tube trailers and we have used our time in Q3 2023 to refine design documents and progress local compliance requirements with each vendor. The equipment is capable of refuelling zero emission hydrogen fuel cell buses in ten to sixteen minutes on a back-to-back basis.

Lion has been working closely with the bus and genset supply industries on their requirements around refuelling reliability and speed as part of its green hydrogen strategy. Lion is continuing to respond to requests for proposals for green hydrogen supply for bus operators in South East Queensland. We are also fielding enquiries for hydrogen supply to the fuel cell genset market.

Lion had a major marketing initiative at the Hydrogen Queensland Connect conference in September, attended by users, equipment suppliers and potential hydrogen producers.



Image 2: Lion's hydrogen development team explains our PoB plans to Stephen Miles, Acting Premier of Qld at the H2Q in September 2023

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.

Table 1: Lion's provisional green hydrogen roadmap vs response (as at end September 2023)

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
Review the best value and fit for purpose solar, wind and electrolyser technologies	GPA phase 2 work completed, 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 Wasco, Armana including 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	FEED completed, work in progress
Secure any required land rights conditional upon Lion proceeding with an opportunity	Work in progress
Investigate investing in a pilot or demonstration plant including H2 distribution and hydrogen fuel cell heavy equipment and vehicles	Submissions made to back to base fleet businesses
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	Working up proposals with counterparties

Oil and Gas Operations update

East Seram PSC

Lion holds a 60% interest and is Operator of the 4557 km² East Seram PSC.

Lion acquired 200 kms of 2D seismic data in the East Seram PSC from June 2022 to January 2023. The survey was designed to mature some of the largest undrilled structures in Indonesia, 6 lines totalling approximately 100 kms were acquired in the NW Kobi area to the northwest of the 1.5 TCF Lofin gas field. A total of 5 lines were recorded over the Waru Prospect totalling 70 km and 2 lines totalling 30 km over the Tanah Baru Prospect.

The survey was completed safely and within 10% of budget despite the challenging remote setting.

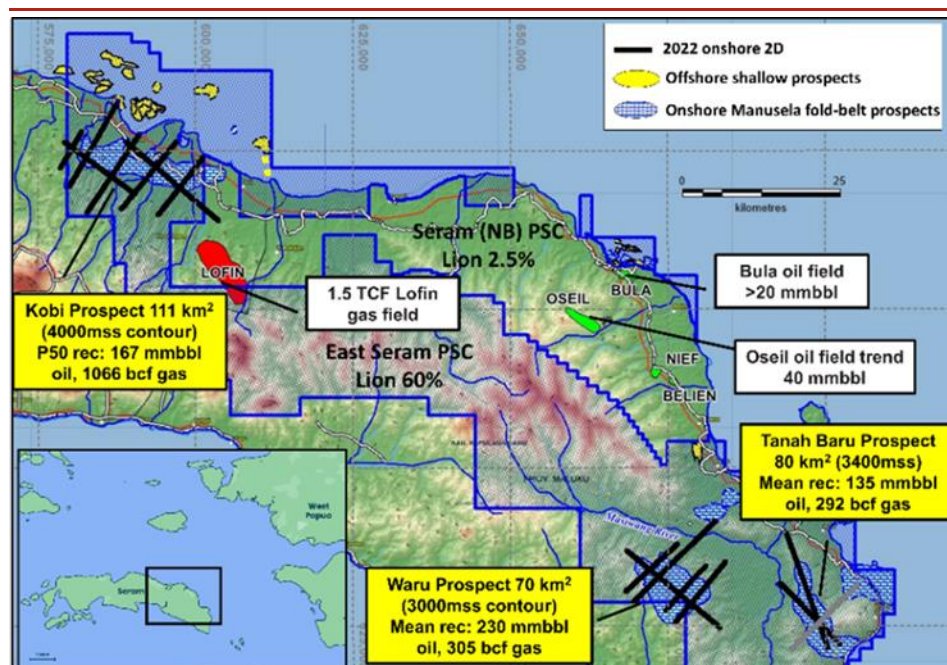
During the quarter Lion continued with the evaluation of the new 2D seismic data including:

- Continued interpretation of the seismic data.
- Depth mapping of the targeted Kobi, Waru, and Tanah Baru prospects.
- Additional seismic processing (test of Pre-stack Depth Migration on selected lines over the Kobi Prospect).
- Gravity analysis/modelling.
- Volumetric assessment to quantify the prospective resource potential for the prospects in the East Seram PSC.

Key highlights of the work include:

- 20% increase in Best Estimate (P50) Prospective Resource for the fold-belt structures targeted by the 2022 seismic survey (Kobi, Waru and Tanah Baru) - new combined (unrisked) P50 for the three prospects is 828 mmboe, up from previously reported 675 mmboe (Refer Lion ASX Release dated 11 October 2023)
- Gravity modelling undertaken on lines over the key prospects has validated the seismic interpretation by providing a separate assessment of depth to the primary objective Manusela limestone.
- The Kobi Prospect, located 10 km NW of the 1.5 TCF Lofin gas field, has mapped areal closure of up to 110 km² and a prospective resource range (P90-P10) of 98 – 1047 mmboe (40% oil predicted).
- The Kobi Prospect has emerged as the standout prospect given its size and accessible location.

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



- The Waru Prospect, located 35 km south of the Oseil Oil field, has areal closure of up to 70 km² and a prospective resource range of 89 - 766 mmboe (75% oil predicted)
- The Tanah Baru Prospect has areal closure of up to 80 km² and a prospective resource range of 35 - 670 mmboe (65% oil predicted)

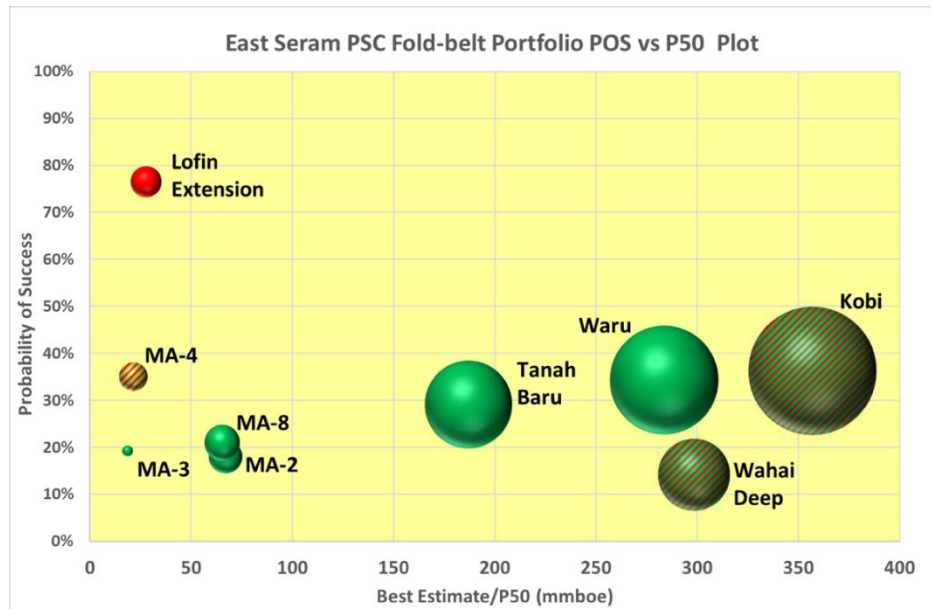


Figure 2 East Seram Fold-Belt Prospects and leads P50 Prospective Resource vs Probability of Success plot (Bubble size is comparative EMV)

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.

Lion expects the divestment of 0.25% interest in Seram (Non-Bula) PSC to be finalized during the second half of 2023. At completion, Lion’s participating interest in the Seram (Non-Bula) PSC will reduce to 2.25% from 2.5% currently.

As previously reported by Lion, in 2015, the Lofin-2 appraisal well confirmed a highly material gas discovery in the SNB PSC. The Lofin Gas Field has Contingent Resources (2C) of 1450 bcf (100%), Lion share 36.3 bcf.

Re-entry and testing of the Lofin-2 well commenced on 18 December 2022. The testing completed on 4 March 2023, with completion of the final pressure build-up. The land rig remained on location to complete the well ready for production. The running of the completion was completed, and the rig was released on 15 June 2023.

For details of the Lofin-2 testing and completion, refer to the Company’s ASX release of 11 July 2023 “Lofin-2 well completed following successful well testing program”.

The Operator is currently preparing to conduct an extensive 4 rate flow test of the completed well, the results of which are required as part of imminent commerciality negotiations with prospective customers.

Production

During the quarter, gross crude oil production from Oseil and surrounding oilfields was 105,800 bbls (Lion’s gross share 2,645 bbls). Daily production averaged 1,170 bopd (Lion’s interest being 29 bopd). Crude oil available for lifting as of 30 September 2023 was 113,534 bbls. The next crude oil lifting is scheduled for late December 2023 and expected to be approximately 200,000 bbls. Operating costs were US\$31.10 per barrel for the Quarter, higher than the annualised operating cost (\$23.62/bbl in 2022), due to a significant Land Building Tax. Year to date Operating cost is \$26.70 per barrel.

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

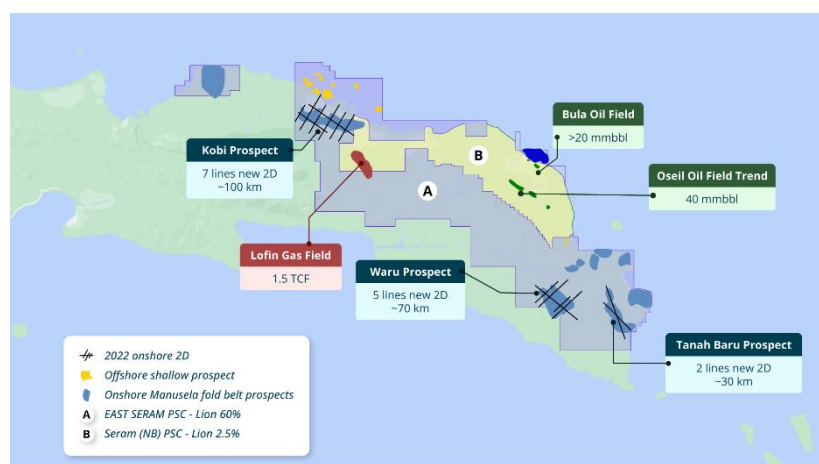
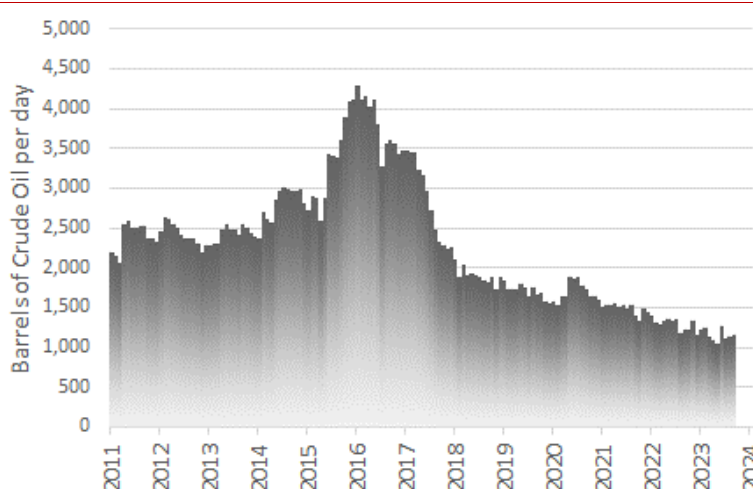


Chart 1 Seram (NB) Block – daily production per calendar month (bopd)



Regulatory update

In January 2021, CITIC Seram, as 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.

The process remains unresolved as the Seram (Non-Bula) joint venture continues negotiations with the Government of Indonesia to resolve the issue to the satisfaction of all parties. At completion, Lion's participating interest in the 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.

Related Party Payments

During the quarter, the Company made payments of US\$134,000 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 30 September 2023

	% 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	JV: joint venture	PSC: Production Sharing Contract
bcf: billion cubic feet	KB: Kelly bushing	psi: pounds per square inch
bopd: barrels oil per day	mmscfd: million standard cubic feet of gas / day	tcf: trillion cubic feet
BOP: blow out preventer	mmbbl: million barrels	Sq.km: square kilometres
ESP: Electric submersible pump	mmboe: million barrels oil equivalent	ss TVD: sub-sea true vertical depth
FTP: first tranche petroleum	MD: measured depth	TD: total depth