

Quarterly Report

1 January to 31 March 2024



Hydrogen project achieves major milestones.

Lion Energy Limited (“Lion” or “Company”) is pleased to report strong progress in its green hydrogen business in Q1 2024.

Highlights include:

- **Lion obtained Development Approval for the Port of Brisbane Hydrogen Project in March 2024.**
- **Port of Brisbane site secured under long term lease for an initial 10 years, with an option for another 10-year extension.**
- **Detailed project design began in Q1, and construction tender documents set to be issued in Q2 2024.**
- **Multiple parties have requested proposals for green hydrogen offtake.**
- **Potential joint venture discussions are ongoing.**

Mr Soulsby, Lion’s Chairman, commented: *“Lion has positioned itself to be the leading prospective green hydrogen producer in South East Queensland. We have obtained project development approval from the Queensland Government and secured up to 20-year tenure at our Port of Brisbane site. Lion is also maturing joint venture discussions with multiple high-quality parties, who are currently performing due diligence on our project. At the same time, interest for green hydrogen in Queensland is gearing up, with Lion responding to multiple inquiries.”*

On the legacy oil & gas business, farmout efforts on our East Seram PSC kicked off during the Quarter and positive discussion were held with the Indonesian regulator for a four-year extension of the PSC with ongoing work, including specialised processing, aimed to mature the exciting Kobi Prospect for drilling in 2025.

Lion at a glance

- ASX listed oil and gas E&P company with a new green hydrogen business and two conventional PSCs in Seram Island, Indonesia.
- Expected to build Southeast Queensland’s first commercial scale green hydrogen production and distribution hub
- Net production of around 37bopd from the Seram PSC which also contains the Lofin gas/condensate discovery.

Contact

Lion Energy Limited
ABN 51 000 753 640
ASX Code: LIO

Suite 1 295 Rokeby Road
Subiaco WA 6008 Australia

T +61 8 9211 1500
E info@lionenergy.com.au
www.lionenergy.com.au

Directors & Officers

Tom Soulsby Executive Chairman
Damien Servant Executive Director
Russell Brimage Non-Executive Director
Chris Newton Non-Executive Director
Zane Lewis Non-Executive Director
Rowan Harland Company Secretary

For more information

Tom Soulsby
Executive Chairman
+61 487 527 958
tsoulsby@lionenergy.com.au

Green hydrogen update

Lion's plans for building our first hydrogen hub passed two major milestones in Q1 2024.

Lion announced in March 2024 that it signed a lease with Port of Brisbane Pty Ltd ("PBPL") for a 10-year lease with an option for a 10 year extension on land on the corner of Howard Smith Drive and Osprey Drive, strategically located at the Port Gate, within the Port of Brisbane. Lion will build and operate its first hydrogen generation and refuelling hub. Lion is proud to report that after development consent from the Port in August, we obtained Development Approval from the Queensland State Assessment and Referral Agency ("SARA") in March 2024.

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 in Howard Smith Drive, at the Port Gate, Port of Brisbane, reflecting the approved development plan

These developments are consistent with our earlier reports that we signed procurement agreements with various vendors for supply of key equipment, notably 2 electrolysers, a refuelling package and 2 tube trailers for the Port of Brisbane location. The refuelling package has arrived in Australia and our local vendor is progressing the relevant adjustments to local standards. During Q1 2024, Lion progressed the design of all equipment to ensure local compliance, and manufacturing has started in some cases.

The Lion team has also inspected our tube trailers which have been received and assembled in Sydney. They have already passed local compliance and are now being registered onto Queensland's roads.



Image 2: Lion's engineers inspect one of 2 new tube trailers in late March 2024

On the marketing side, 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 responding to enquiries for hydrogen supply to the fuel cell genset market as well as for other industries. Lion is confident that demand for hydrogen in Brisbane will far exceed the volumes to be produced at our site.

Finally, we have been managing negotiations with multiple prospective joint venture partners who have now started the due diligence phase with an interest in joining Lion in its East Coast hydrogen strategy and with an initial focus on the Port of Brisbane project. Our prospective partners have skills in power, renewable energy, transportation, large project execution and have strong balance sheets. However, there is no assurance at this stage that these discussions will result in an actual transaction.

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 March 2024)

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	Completed
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	Completed, partnering work continues
Expand the scope of the Advisory Board to review opportunities in H2 distribution and hydrogen fuel cells for heavy equipment and vehicles	Lion has developed inhouse and consulting expertise in this area
Stage 3	
Appoint consultants to undertake a feasibility study to ascertain the economic viability of a short listed opportunity and the anticipated cost	Wasco FEED announced
Secure any required land rights conditional upon Lion proceeding with an opportunity	Completed and announced
Investigate investing in a pilot or demonstration plant including H2 distribution and hydrogen fuel cell heavy equipment and vehicles	Completed and announced
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	Exploring opportunities at first site
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.

Since acquiring the PSC in 2018, Lion has conducted an active exploration program. A 664 km offshore 2D survey targeting the Plio-Pleistocene foreland basin play in 2020 delineated an attractive shallow oil portfolio. From June 2022 to January 2023 Lion recorded 14 2D seismic lines totalling 200km and a 1000 station gravity survey. Three exceptional prospects emerged from this onshore survey Kobi, Waru and Tanah Baru.

The 110 km² Kobi Prospect is a robust feature partly analogous to the nearby 1.5 TCF Lofin discovery.

The seven (7) new 2D seismic lines recorded indicate the P50 (unrisked) prospective resource¹ potential for Kobi is 357 mmboe with upside (P10) potential over one billion boe. In the southeast area of the PSC, which is modelled to be more oil prone, Lion recorded 5 lines over the 70 km² Waru fold-belt prospect. The P50 (unrisked) prospective resource¹ potential for Waru is 284 mmboe with upside (P10) potential of 766 mmboe. Two seismic lines were recorded over the Tanah Baru Prospect, a large structure with areal closure up to 80 km² and P50 (unrisked) prospective resource¹ potential of 187 mmboe with upside (P10) potential of 679 mmboe.

During the Quarter work continued on prospect evaluation including commencing Pre-stack Depth Processing (PSDM) on a further 10 lines to confirm crestal locations and continuing well planning activities with the Kobi prospect currently high-graded for potential drilling in 2025.

Positive discussions with the Indonesian regulator for a four-year extension of the East Seram PSC term beyond July 2024 were held during the Quarter. The PSC is in good standing with all firm commitments exceeded. In addition, plans for a partial relinquishment of the East Seram acreage, required at the end of Permit Year 6 in July 2024, were finalised and submitted to the Indonesia regulator post Quarter end. All key existing prospects and leads will be retained under the proposal PSC area of 1300 km² which will be subject to the four-year extension.

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

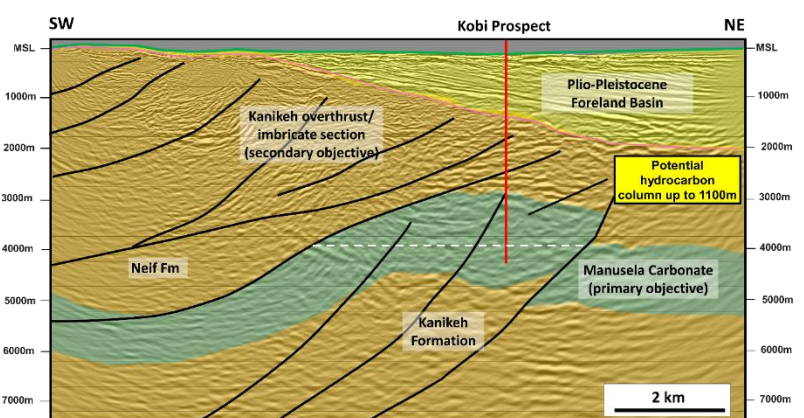
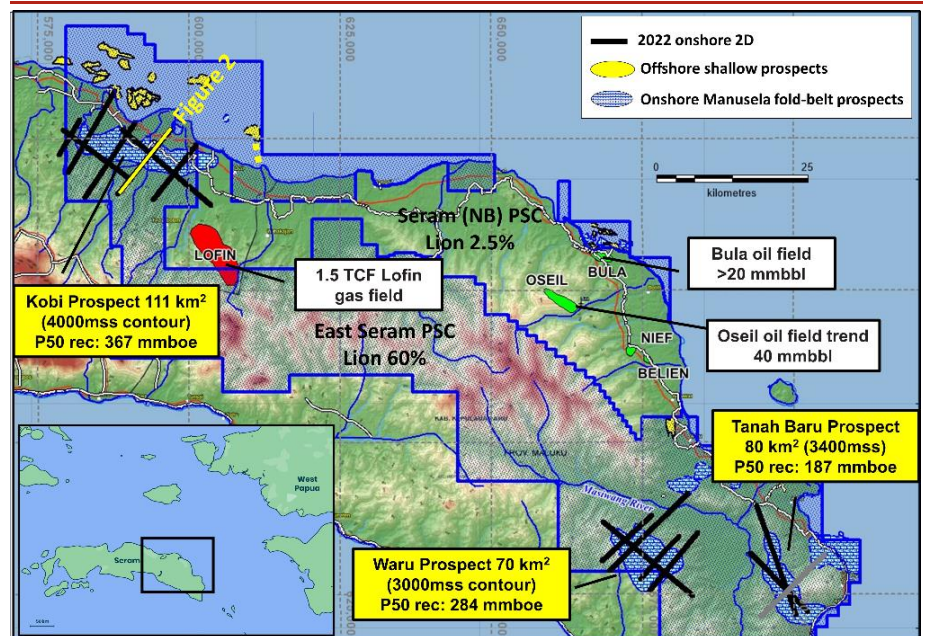


Figure 2 Geoseismic section showing interpretation on PSDM line over the Kobi Prospect

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 regulatory required divestment of 0.25% interest in Seram (Non-Bula) PSC to be finalized in 2024. At completion, Lion’s participating interest in the Seram (Non-Bula) PSC will reduce to 2.25% from 2.5% currently.

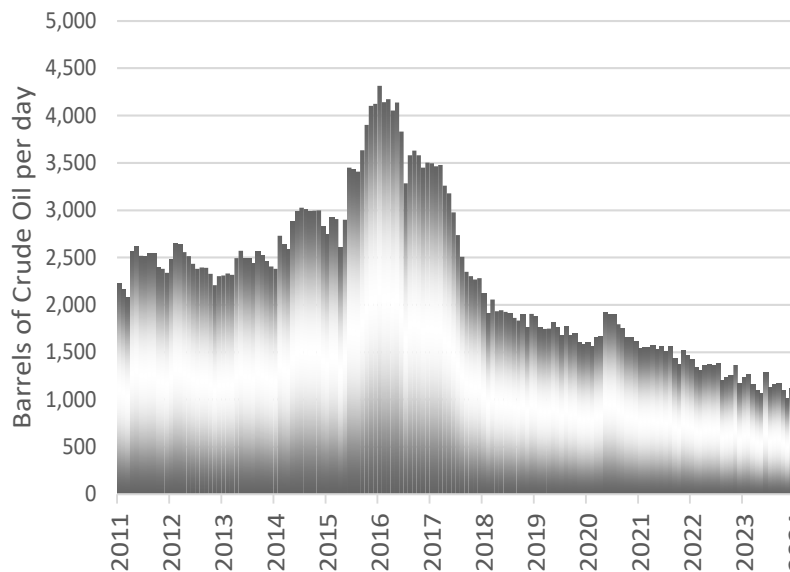
Figure 2 Seram (Non-Bula) Block PSC – location map



Production

During the quarter, gross crude oil production from Oseil and surrounding oilfields was 90,575 bbls (Lion’s gross share 2,264 bbls). Daily production averaged 995 bopd (Lion’s gross interest being 25 bopd). Lion received circa US\$235,000 lifting proceeds during the quarter, with an additional US\$101,000 expected to be received in May 2024. Crude oil available for lifting at 31 March 2024 was 83,001 bbls. The next crude oil lifting is expected for late June 2024. Operating costs were US\$25.92 per barrel for the Quarter, lower than the annualised operating cost of \$27.60/bbl for 2023.

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



Related Party Payments

During the quarter, the Company made payments of US\$155,000 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 December 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	mss: metres subsea	TD: total depth

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 discovery (geological chance of success or GCOS) and a chance of development (economic, regulatory, market and facility, corporate commitment, or political risks). The chance of commerciality is the product of these two risk components. There is no certainty that any portion of the prospective resources will be discovered and, if discovered, there is no certainty that it will be developed or, if it is developed, there is no certainty as to either the timing of such development or whether it will be commercially viable to produce any portion of the resources.