ASX Announcement

April 13, 2021

Seram (Non-Bula) PSC Oseil and Lofin Field reserves and contingent resources update amended

Highlights

- **A material increase of 203% in the Oseil Field 2P oil reserves**
- **Work on the Lofin Field re-confirms highly material discovery with 2C Contingent Resources of 1450 Bcf (Lion share 36.3 Bcf) on more conservative assumptions**

Lion Energy Limited ("Lion" or "Company") is pleased to advise that a new Report on the Seram (Non-Bula) PSC (Lion 2.5% interest) has been undertaken by US Oil and Gas Consultants, Miller and Lents (M&L), on behalf of the Joint Venture ("the Report"). This Report, effective 31 December 2020, notes a significant increase in oil reserves for the Oseil Oil Field with Proven and Probable (2P) Reserves reported as 4.37MMbbl (0.109 MMbbl Lion share), effectively a 203% increase on Lion's previously reported 2P reserves.

In addition, a volumetric assessment on the Lofin Gas Field resource by M&L is reported, confirming the highly material discovery. The M&L recoverable Contingent Resource estimate (100%) is 1C: 752 2C: 1450 3C: 1764 Bcf gas (Lion share 1C: 18.8 2C: 36.3 3C 44.1 Bcf). In contrast, the previous reported estimates, based on a 2015 Independent Expert Report, are (100%) 1C: 879 2C: 2020 Bcf gas (3C was not estimated). The key difference in M&L's numbers is a lower gas recovery factor estimate (2C: 55% vs previous 70% recovery factor) and some more conservative assumptions on the structural model interpretation of the Lofin structure.

The Reserves and Resources as at 31 December 2020 based on the Report are shown in Table 3 with key changes summarised below.

<u>Oseil Field area (includes following oil accumulations - Oseil 1/4 , Oseil 2, Oseil Tengarra, Neif Utara A, Neif Utara B, East Neif and Oseil Selatan) :</u>

- Gross Proven (1P) Developed Oil Reserves for the Oseil Field area as at 31 December 2020 are 1.542 MMbbl. This compares to Proven (1P) Developed Reserves reported by Lion as at 31 December 2019 of 0.5 MMbbl. This increase is a result of a number of factors:
  - Steady production during 2020 with 0.63 MMbbl produced at an average 1726 bopd. The natural decline rate was less than anticipated with good well management by the PSC Operator, CITIC Resources.
  - The impact of the Oseil-29 well drilled in May 2020 which commenced production in late May and as at 31 December had produced 53 Mbbl.
  - The success of the water shut off operation undertaken on Oseil-28 in early 2020. This operation involves setting cement plugs and isolating deeper water producing zones with a resultant significant oil production increase. Further similar work programs are planned in coming years on a number of additional wells and the forecast impact is included in 1P Reserve estimates.

Lion at a glance

- ASX listed oil and gas E&P company focused on Indonesia; two conventional PSC's.
- Net production of around 40bopd from the Seram (Non-Bula) PSC which also contains the Lofin gas/condensate discovery.
- New focus on production opportunities in Southeast Asia, initial focus on Seram Island.
- Executive team and strategic investors with impressive track records for value creation in Indonesia.

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- Gross Proven (1P) Undeveloped Reserves as at 31 December 2020 are 1.796 MMbbl compared to 0.281 MMbbl previously reported by Lion effective as at 31 December 2019. The increase is due primarily to 3 additional development wells scheduled for drilling in 2023/2024 in the Oseil-2 Block area.
- Gross 2P (Proven and Probable) Reserves as at 31 December 2020 are reported at 4.347 MMbbl. This compares to 2.776 MMbbl reported by Lion effective 31 December 2019. Adjusted for the 2020 production this previous figure equates to 2.146 MMbbl as at 31 December 2020. This effective 203% increase in 2P reserves relates to the 3.187 MMbbl increase in 1P (Proven Developed and Undeveloped) as discussed above, balanced partly by a 0.99 MMbbl decrease in Probable Reserves as a result of movement from the Probable to Proven category due to the impact approved development activities.
- Gross 3P (Proven plus Probable plus Possible) Reserves as at 31 December 2020 are 6.508 MMbbl compared the 4.181 MMbbl reported by Lion effective 31 December 2019, or, adjusted for 2020 production, a previously reported comparison figure of 3.551 MMbbl. The Possible only category in the Miller and Lents figure is 2.161 MMbbl compared to 1.405 MMbbl previously reported by Lion. This increase is due to an additional planned well (Oseil-23) testing a potential field extension in the Oseil-2 Block area and also more optimistic (higher) estimated ultimate oil recovery from existing wells. Timing of drilling or Oseil-23 is to be determined.
- There have also been some changes in Oseil Field area Oil Contingent Resource based on the Miller and Lents Report. Analysis was undertaken for Contingent Resources on the Oseil Field, Oseil Tenggara, Neif Utara A and East Neif accumulations. Analysis was not done on Neif Utara B and Oseil Selatan and the previously reported Oil Contingent Resources for these accumulations are still valid (refer Lion Press Release 7 September 2018). Key aspects of the Contingent Resource estimate are:
  - The overall number in the Report reflects a modest increase in 1C and 2C estimated recoverable (34% and 36% respectively) although with 17% decreases in the Total 3C recoverable numbers (New 3C recoverable number of 8.48 MMbbl vs 10.2 MMbbl reported previously by Lion). This decrease in 3C recoverable is primarily a result of Miller and Lents not currently assigning any recoverable volume to the Oseil Tenggara or Neif Utara A accumulations calculated Oil-in-Place Contingent Resource.
  - Lion notes the overall low recovery factor (6.1%) assumed for Contingent Resources in the Oseil Field area. There is significant upside if drilling and production techniques that have proven successful in the Oseil-2 and Oseil-1/4 field areas (recovery factors estimated at 25% to 28%) can be successfully applied to other Oseil Field area accumulations.

Oseil Field Area Oil Contingent Resource Volumes Details as at 31 December 2020

Field	Reservoir	Seram (Non-Bula) PSC (100%)						Assumed 3C oil recovery factor
		Oil-in-Place (MMbbl)			Recoverable (MMbbl)			
		1C	2C	3C	1C	2C	3C	
Oseil Field	Manusela	0	1.76	5.27	0.00	0.62	2.37	45.0%
Oseil Tenggara	Manusela	0	16.70	16.70	0.0	0.0	0.0	0.0%
East Neif	Manusela	3.7	8.77	67.2	0.2	0.53	3.54	5.3%
Neif Utara A	Manusela	3.7	14.09	29.8	0.0	0.0	0.0	0.0%
Neif Utara B	Manusela	0.0	0.0	12.2	0.0	0.0	0.8	6.9%
Oseil Selatan	Manusela	0.0	0.0	8.8	0.0	0.0	1.7	19.8%
Total		***7.43***	***41.32***	***139.86***	***0.19***	***1.14***	***8.48***	***6.06%***

Table 1 Oil Contingent Resource volumes details

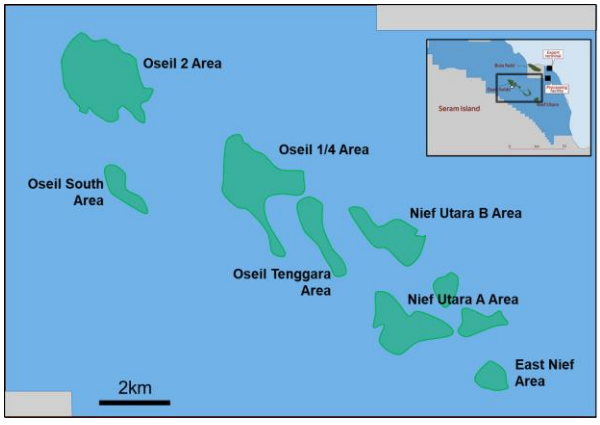

Figure 1 Oseil Field area accumulations

Lofin Field

The Lofin Gas Field in the Seram (Non-Bula) PSC was discovered in 2012 with Lofin-1 and successfully appraised in the 2015 Lofin-2 which indicated up to a 1300m gas column confirming a highly significant gas resources in the Jurassic age Manusela Formation carbonates. On the basis of work done by Canadian based consultancy firm, Sproule International Limited, Lion reported a Gross 1C Gas-in-Place Contingent Resource estimate of 1337 Bcf and a recoverable Contingent Resource of 879.5 Bcf with 8 MMbbl condensate. The 2C Gross Gas-in-Place estimate was 3,070 Bcf and 2C recoverable resource of 2,020 Bcf and 18.3 MMbbl condensate, with a 3C estimate not provided (refer Press Release 8 October 2015).

As part of the Miller and Lents Report a new volumetric assessment of the Lofin Gas Field is documented with the following Contingent Resource estimates shown in Table 2. No estimate of condensate volumes is provided in the report and as a result in the Seram (Non-Bula) Resource Summary (Table 3) an estimate of recoverable condensate is based on the ratio of Gas to Condensate established by testing of the Lofin 1 and Lofin 2 wells (8.5 bbls/MMscf).

Miller and Lents Lofin Field Resources (31 December 2020)	Gross Gas (100%)					
	Original Gas-in-Place (Bcf)			Technical Estimated Ultimately Recoverable (EUR) (Bcf)		
Contingent Resources	**1C**	**2C**	**3C**	**1C**	**2C**	**3C**
Seram PSC Lofin Field	1671	2636	2714	752.0	1450.0	1764.0

Table 2 Miller and Lents Lofin Field Contingent Resource estimate

The decrease in Contingent Resources compared to the previously reported numbers, is primarily due to Miller and Lents more conservative estimate for gas recovery factors (1C: 45%, 2C: 55% and 3C: 65%) compared to previous estimate range for recovery factor of 55% - 70% and also a more conservative structural model interpretation resulting in a lower gross rock volume (approximately 15% reduction) of the Lofin structure for the 2C estimate.

Lion acknowledges that while the Lofin Field is clearly a highly significant gas and condensate resource, there is still considerable uncertainly on its volume potential. Planned work by the Joint Venture includes further well testing of the Lofin-2 well and also 3D seismic to help more accurately define the resource potential. Based on this uncertainly and to be prudent, Lion have elected to report the lower Miller and Lents Contingent Resource numbers for the field until additional information becomes available.

No work was conducted by Miller and Lents on the 2008 Dawang Gas discovery and Contingent Gas Resources remain unchanged for this accumulation which forms the Oseil area Contingent Resource (1C-3C) gas volumes as shown in Table 3.

Seram (Non-Bula) PSC Resources[1] (as at 31 Dec 2020)	Play	Expect-ed Fluid	100% (Gross)						Lion WI Share					
			Gas/Associated Gas Recoverable (Bcf)			Oil/Condensate Recoverable (MMbbl)			Gas/Associated Gas Recoverable (Bcf)			Oil/Condensate Recoverable (MMbbl)		
Reserves[2,3,4,5,6]			**1P**	**2P**	**3P**	**1P**	**2P**	**3P**	**1P**	**2P**	**3P**	**1P**	**2P**	**3P**
Oseil Area Developed	Manusela	Oil				1.542	1.542	1.542				0.039	0.039	0.039
Oseil Area Undeveloped[7]	Manusela	Oil				1.796	2.805	4.966				0.045	0.070	0.124
Total Reserves						**3.338**	**4.347**	**6.508**				**0.083**	**0.109**	**0.163**
Contingent Resources[8]			**1C**	**2C**	**3C**	**IC**	**2C**	**3C**	**1C**	**2C**	**3C**	**1C**	**2C**	**3C**
Seram Oseil Area[9]	Manusela	Oil/Gas	0.39	1.34	10.36	0.19	1.14	5.91	0.01	0.03	0.26	0.00	0.03	0.15
Seram PSC Lofin Field[10]	Manusela	Gas/Cond	752.0	1450.0	1764.0	6.4	12.3	15.0	18.80	36.25	44.10	0.16	0.31	0.37
Total Contingent Resources			**752.37**	**1451.34**	**1774.36**	**6.58**	**13.47**	**20.90**	**18.81**	**36.28**	**44.36**	**0.16**	**0.34**	**0.52**
Prospective Resources[11,12]		**Category**	**Low P90**	**Low P90**	**Best P50**	**Low P90**	**Best P50**	**High P10**	**Low P90**	**Best P50**	**High P10**	**Low P90**	**Best P50**	**High P10**
Bula Dangkal	Kanikeh/Manusela	Oil				1.9	8.2	25.9				0.046	0.20	0.65

Table 3 Seram (Non-Bula) PSC Reserves and Resources

Notes:

1. Reserve and contingent resource estimates as at 31 December 2020 primarily based on Miller and Lents Report. Contingent Resource estimates for the Neif Utara B, Oseil Selatan oil accumulations and also the 2008 Dawang Gas discovery based on previously reported work of resource certifier DeGolyer and McNaughton.
2. Reserve estimates have been calculated using the deterministic method. Analysis of performance trends were used to estimate proved developed reserves. The performance trends associated with new well were used to assess how wells scheduled for future drilling would perform for the purpose of estimating proved undeveloped reserves as well as the probable and possible reserves associated with the future wells.
3. The key difference in latest Oseil Oil Reserves estimates is additional well production history during 2020 with analysis of these trends with low, mid and high side future production estimates, the impact of the successful water shut-off operations on the Oseil-28 well during 2020 with the 3 additional shut-off operations planned in future years.
4. Economic assumption by Miller and Lents in their analysis includes a net oil price equivalent to the net realized oil price in dollars per barrel ($/BBL) that has been adjusted for quality considerations using a differential defined as a percentage of the benchmark oil price. Fixed and variable operating expenses which included well servicing and water shutoff expenses employed in this evaluation were provided by the Operator CITIC based on realistic estimates. Development costs employed in this evaluation were also provided by the Operator CITIC and included costs for: (1) drilling and completion of new wells and facilities, (2) reactivation of shut-in wells, (3) cement water shut-off for high water-cut wells, and (4) abandonment costs for new wells. No future escalation was applied to these values in the economic model. These costs were applied to M&L's 1P, 2P, and 3P future production forecasts in the economic model.
5. The Proved Developed cases include forecasts of currently producing wells reserves and proved developed nonproducing reserves. The estimated Proved Developed Reserves were estimated by production decline extrapolations or volumetric calculations. Production declines were extrapolated to an assumed minimum technical limit. Extrapolations of future performance are based, whenever possible, upon the average performance trend of active wells during periods of stable field activity. The estimated Proven Developed Non-producing reserves can be produced from existing wells, but require expenditures for well-related workover activities. Reserves for these wells were estimated based on M&L's review of similar well-related workover activities. The estimated Proven Undeveloped Reserves require significant capital expenditures to drill and complete the planned future wells. The Proved Undeveloped Reserves are expected to be produced from undeveloped portions of known reservoirs that have been adequately defined by wells. Reserves estimates are based upon volumetric calculations that employ recovery factors derived from the performance of existing wells. Forecasted production rates are based upon analogy and were scheduled according to the drilling plans provided by the Operator CITIC.
6. Developed reserves include production for Oseil 2, Oseil 1/ 4 Oseil Tenggara and Neif Utara A area with estimates of 1P, 2P and 3P based on forecasts of Miller and Lents and include estimated impact of planned water shut off operations. The main difference between the 1P and 2P and 3P reserves estimates area based on higher recovery factor estimates from wells from 1P to 2P and from 2P to 3P based on individual well production analysis (which may include additional workovers, water shut off operations than currently approved). Note 2P and 3P Reserve estimates provided by Miller and Lents do not include a breakdown of Developed vs Undeveloped and for simplicity reserves in these categories are assigned to the Undeveloped category.
7. Includes undeveloped reserves which are quantities expected to be recovered through future investments: (a) from new wells on undrilled acreage in known accumulations, (b) from deepening existing wells to a different (but known) reservoir, (c) from infill wells that will increase recovery, or where a relatively large expenditure is required to either recomplete an existing well or install production or transportation facilities for primary or improved recovery projects. The Oseil 2 area with approved plan for 3 additional wells planned for 2023/2024 is included in this Proven Undeveloped category with range of outcomes based on production estimates from the Operator. The Possible Category includes the potential impact of Oseil-23 well (date to be determined) drilling a potential field extension in the Oseil-2 area. The oil fields in the Oseil area are currently producing at ~1500 bopd. The marketing arrangement, infrastructure and environmental approvals are in place to cope with production of any reserves currently categorised as undeveloped.
8. Contingent resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent Resources have an associated chance of development (economic, regulatory, market and facility, corporate commitment or political risks). These estimates have not been risked for the chance of development. There is no certainty that any portion of the contingent resources will be developed and, if 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.
9. Contingent Oil Resources in the Oseil area are outlined in more detail in Table 1 of this Release. The contingent oil resources are within the Seram (Non-Bula) PSC which had a 20 year extension granted effective 1st November 2019 to 1st November 2039. The Contingent Resources are calculated deterministically based on field structural data and reservoir and testing information from discovery and appraisal/development wells on the accumulations. Developing these resources will require additional development drilling on these accumulations and application of development techniques, including horizontal drilling, that have proven successful in the Oseil 1/2 and Oseil 4 areas.

10. The Contingent Gas resources for the Lofin Field provided in the table are based on analysis of Miller and Lents using a deterministic approach. Data was provided by the PSC Operator CITIC. No new information was available on the field, with changes to previous Contingent Resource estimates related to more conservative (lower) estimates for recovery factor based on Miller and Lents understanding of similar type accumulations and also a more conservative interpretation on the structural model for the field. The Lofin Gas Field development is subject to planned work including further testing of the Lofin-2 well, currently scheduled for late 2021/early 2022 to more accurately determine gas deliverability, reservoir characteristics, water contact information and potential reservoir extent. Planned 3D seismic in 2022/2023 over the Lofin Field area will more accurately assess the field extent and contingent resource volumes. Development plans and the potential gas marketing strategy will be partly contingent on the results of this planned work. The Lofin Gas Field is within the Seram (Non-Bula) PSC which had a 20 year extension granted effective 1st November 2019 to 1st November 2039.
11. 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 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.
12. Prospective Resources in this table have been estimated probabilistically for Bula Dangkal Prospect in Seram (Non-Bula) PSC by the Operator CITIC.

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 document are based on and fairly represent information and supporting documentation that has been prepared and/or compiled by Mr Kim Morrison, previous Chief Executive Officer 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.

Glossary

bbl: barrels
Bcf: billion cubic feet
bopd: barrels oil per day
GIP: gas in place
JV: joint venture
KB: Kelly bushing
Mbbl: thousand barrels
MMbbl: million barrels
PSC: Production Sharing Contract
psi: pounds per square inch
TCF: trillion cubic feet
Sq.km: square kilometres
TD: total depth

END

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