

QUARTERLY ACTIVITIES REPORT – 30 June 2023

COMPANY DETAILS

ABN: 94 647 135 108

PRINCIPAL AND REGISTERED OFFICE

Suite 1, Level 1
680 Murray Street
West Perth WA 6005
T | +61 8 9214 9737
F | +61 8 9214 9701
E | info@lithiumenergy.com.au
W | www.lithiumenergy.com.au

ASX CODE: LEL

SECURITIES ON ISSUE

103,010,000 shares
36,250,000 unlisted options

BOARD OF DIRECTORS

William Johnson (Executive Chairman)
Farooq Khan (Executive Director)
Peter Smith (Executive Director)

COMPANY SECRETARY

Victor Ho
E | cosec@lithiumenergy.com.au
T | (08) 9214 9737

AUTHORISED FOR RELEASE BY - FOR FURTHER INFORMATION:

William Johnson
Executive Chairman
E | chair@lithiumenergy.com.au

31 July 2023

ABOUT LITHIUM ENERGY LIMITED (ASX:LEL)

Lithium Energy Limited is an ASX listed battery minerals company which is developing its flagship Solaroz Lithium Brine Project in Argentina and the Burke and Corella Graphite Projects in Queensland. The Solaroz Lithium Project (LEL:90%) comprises 12,000 hectares of highly prospective lithium mineral concessions (where an initial JORC Inferred Mineral Resource of lithium has been delineated) located strategically within the Salar de Olaroz Basin in South America's "Lithium Triangle" in north-west Argentina. Lithium Energy shares the lithium rights in the Olaroz Salar basin with lithium carbonate producers Allkem Limited (ASX/TSX:AKE) and Lithium Americas Corporation (TSX/NYSE:LAC). The Burke and Corella Graphite Projects (LEL:100%) in Queensland, Australia, contains high grade JORC Indicated and Inferred Mineral Resources of graphite; Lithium Energy is undertaking a Prefeasibility Study on a proposed vertically integrated battery anode material manufacturing facility in Queensland.

HIGHLIGHTS

Solaroz Lithium Brine Project (Argentina)

- Significant initial maiden **JORC Inferred Mineral Resource Estimate (MRE)** of **3.3 Million tonnes of Lithium Carbonate Equivalent (LCE)** defined at Solaroz.
- **Assay results of 594mg/l** returned for drillhole 6 (SOZDD006), **the highest lithium concentration grade encountered to date** at Solaroz - SOZDD006 results will be used to review the existing MRE.
- Drilling is underway at step-out Hole 7 (SOZDD007), to test the Northern Block of concessions.
- Framework Agreement with Lanshen to construct a DLE demonstration plant on Mario Angel concession to produce 3,000tpa battery grade lithium carbonate – Lanshen will fund the cost of manufacturing and commissioning with Lithium Energy entitled to purchase if acceptance criteria are satisfied.
- Scoping Study being finalised for the production of battery grade lithium carbonate from Solaroz, via both conventional pond evaporation and DLE technology.

Burke and Corella Graphite Projects (Queensland, Australia)

- Total Graphite Inventory has doubled to **2.6Mt of contained graphite** with delineation of maiden JORC Inferred Mineral Resource Estimate of **13.5Mt at 9.5% total graphitic carbon (TGC)** for **1.3Mt contained graphite** at Corella Tenement.
- Commencement of Prefeasibility Study (PFS) for the development of a vertically integrated PSG manufacturing facility in Queensland.
- BGRIMM (China) has completed Burke metallurgical testwork and produced graphite flake concentrate for next step Purified Spherical Graphite (PSG) development testwork by ProGraphite (Germany).
- Corella metallurgical testwork and production of graphite flake concentrate will assess suitability as additional feedstock (supplementing Burke Graphite) for proposed PSG Plant being assessed in the PFS.

Corporate

- Completion of \$6.4M share placement of 8M shares at \$0.80 per share.



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www.lithiumenergy.com.au

LITHIUM ENERGY LIMITED

Suite 1, Level 1, 680 Murray Street, West Perth, Western Australia 6005

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A.B.N. 94 647 135 108

E | info@lithiumenergy.com.au

CHAIRMAN'S REVIEW

During the June quarter, the Company achieved a very significant milestone in establishing a maiden 3.3Mt JORC Inferred Mineral Resource of Lithium Carbonate Equivalent at its 90% owned Solaroz Lithium Brine Project in Argentina, confirming the world class potential of Solaroz. Being located directly adjacent to two major lithium projects already in production makes Solaroz a highly strategic lithium asset.

Development options for Solaroz are currently being evaluated, with a Scoping Study led by global engineering consultancy Hatch nearing completion.

In the context of evaluating alternative lithium extraction technologies, the Company executed a landmark agreement with Lanshen to manufacture and commission a 3,000tpa battery grade lithium carbonate demonstration plant on the Mario Angel concession at Solaroz, using their proprietary sorbent-based DLE technology. The structure of the agreement for the construction and commissioning of the DLE Plant, in which Lanshen will supply, build and initially operate the Plant at its own cost, is regarded as very positive for Lithium Energy as it significantly reduces the upfront capital costs in evaluating this DLE production option for Solaroz.

Significant advances were also made during the quarter with the Company's Prefeasibility Study for the development of a vertically integrated Purified Spherical Graphite manufacturing facility in Queensland, including the successful completion of a metallurgical testwork programme to develop an optimised flake concentrator flowsheet.

*The Company doubled its total Graphite Inventory to 2.6Mt of contained graphite, **with** the delineation of a maiden JORC Inferred Mineral Resource Estimate for graphite at the Corella Graphite Project, which allows the Company to explore the suitability of Corella Graphite as additional feedstock to supplement Burke Graphite at the proposed PSG Plant currently being examined under the PFS.*

In the coming quarter, the Company is continuing with its drilling programme at Solaroz with the objective of achieving further resource upgrades. The Solaroz Scoping Study and work with Lanshen will provide valuable information regarding the development alternatives for Solaroz. The Burke Graphite PFS will continue to advance with a PSG testwork programme now underway.

With the continued successful advancement of both the Solaroz Lithium and the Burke Graphite Projects, Lithium Energy is rapidly positioning itself to be a leading player in the global energy transformation.

William Johnson
Executive Chairman

PROJECTS

SOLARAZ LITHIUM BRINE PROJECT (ARGENTINA)

(90%)

Initial Maiden JORC Mineral Resource

Lithium Energy has delineated an initial maiden JORC Inferred Mineral Resource Estimate (MRE) of **3.3Mt of LCE** (as outlined in Table 1 below). Within the 3.3Mt LCE Resource, there is a **high-grade core of 1.34Mt of LCE** with an average concentration of **405 mg/l Lithium** (at a 350 mg/l Lithium cut-off grade) (as outlined in Table 2 below).

Table 1: Solaraz JORC Inferred Mineral Resource Estimate

Units	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	LCE Tonnes
A (Upper Aquifer)	8,290,800,000	13.0	1,077,804,000	1,077,804,000,000	255	274,840,020,000	274,840	1,460,000
B (Halite Salt Unit)	1,968,600,000	4.0	78,744,000	78,744,000,000	345	27,166,680,000	27,167	140,000
C (Lower Aquifer)	7,584,000,000	11.5	872,160,000	872,160,000,000	374	326,187,840,000	326,188	1,730,000
Total	17,843,400,000	11.4	2,028,708,000	2,028,708,000,000	310	628,194,540,000	628,195	3,330,000

Notes:

- (a) The Mineral Resource Estimate encompasses the Mario Angel, Chico I, Chico V, Chico VI, Payo 2 South and Silvia Irene concessions
- (b) Lithium (Li) is converted to lithium carbonate (Li₂CO₃) equivalent (LCE) using a conversion factor of 5.323
- (c) Totals may differ due to rounding
- (d) Reported at a zero Lithium mg/l cut-off grade

Table 2: High-Grade Core within Solaraz JORC Inferred Mineral Resource Estimate

Units	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	LCE Tonnes
A	325,000,000	13.0	42,250,000	42,250,000,000	376	15,886,000,000	16,000	85,000
B	690,400,000	4.0	27,616,000	27,616,000,000	379	10,466,464,000	10,000	56,000
C	4,787,600,000	11.5	550,574,000	550,574,000,000	408	224,634,192,000	225,000	1,195,000
Total	5,803,000,000	10.7	620,440,000	620,440,000,000	405	250,986,656,000	251,000	1,340,000

Notes:

- (a) The high-grade core is a JORC Inferred Mineral Resource estimated within the mineralisation envelope of (not in addition to) the Mineral Resource Estimate outlined in Table 1 (above)
- (b) Reported at a 350 mg/l Lithium cut-off grade
- (c) Refer Notes (b) and (c) of Table 1 (above)

Table 3 : Mario Angel Concession - JORC Inferred Mineral Resource Estimate

Units	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	LCE Tonnes
A	285,680,000	13.0	37,138,400	37,138,400,000	337	12,515,640,800	12,500	67,000
B	170,230,000	4.0	6,809,200	6,809,200,000	364	2,478,548,800	2,500	13,000
C	641,550,000	11.5	73,778,250	73,778,250,000	358	26,412,613,500	26,500	140,000
Total	1,097,460,000	10.7	117,725,850	117,725,850,000	352	41,406,803,100	41,500	220,000

Notes:

- (a) This Mineral Resource Estimate encompasses the Mario Angel concession only
- (b) This Mineral Resource Estimate is within (not in addition to) the Mineral Resource Estimate outlined in Table 1 (above)
- (c) Refer Notes (b) to (d) of Table 1 (above)

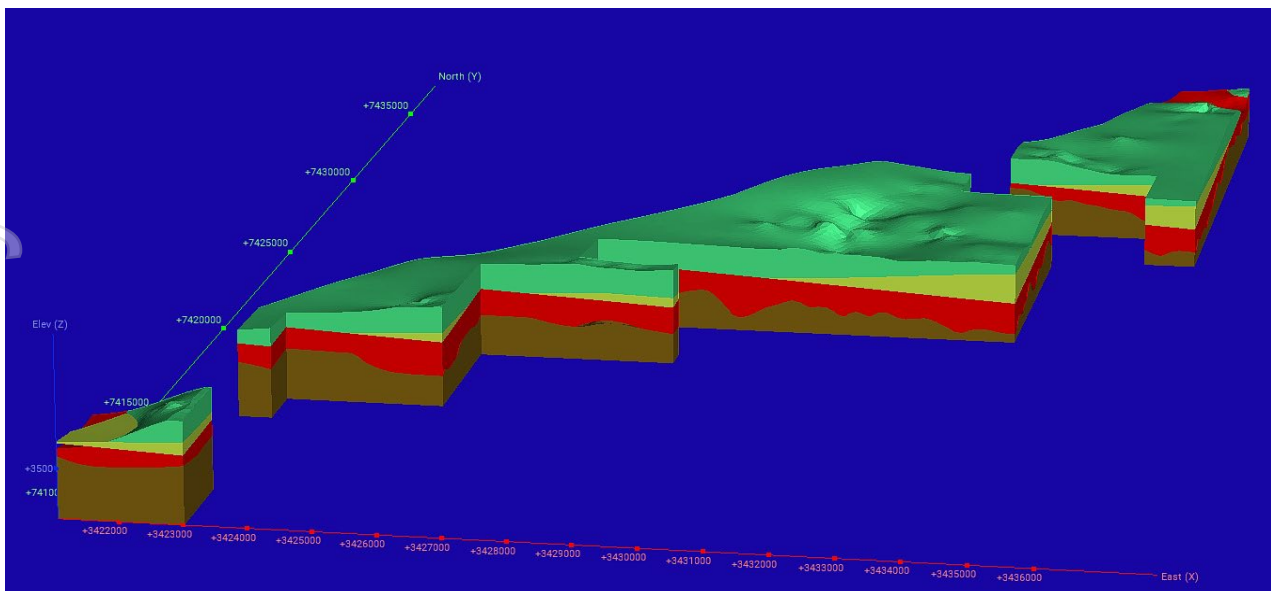


Figure 1: Solaroz Geological Model (with x2 vertical exaggeration) showing Unit A/Upper Aquifer (green), Unit B/Halite Layer (yellow) and Unit C/Lower Aquifer/Deep Sand Unit (red) over the bedrock (brown)

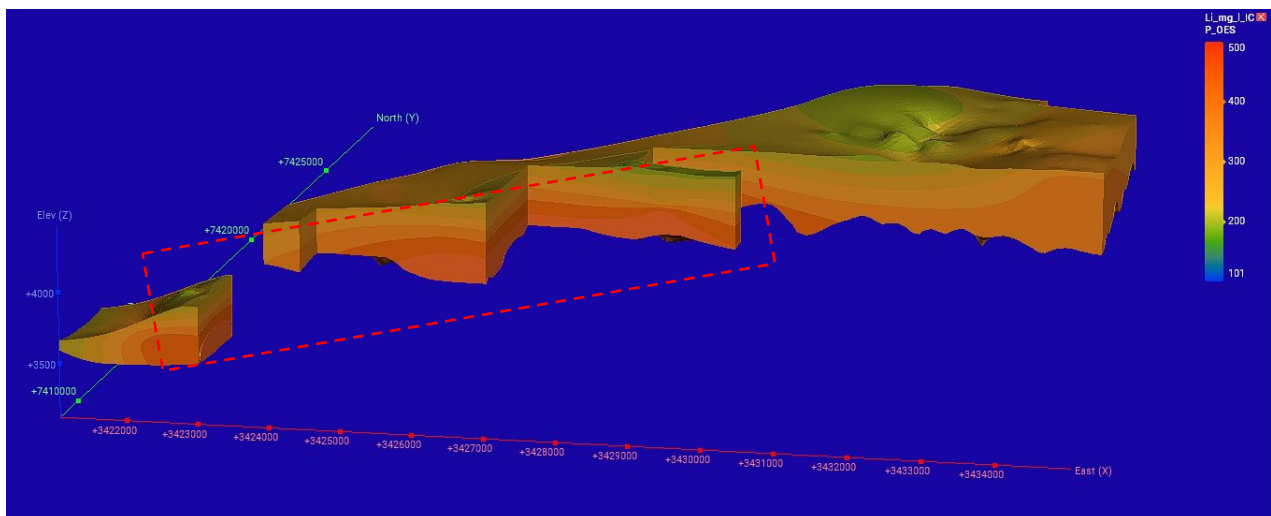


Figure 2: Solaroz Resource Model (with x2 vertical exaggeration) showing the distribution of lithium concentrations through the Central Block and Mario Angel concessions; Warmer colours are higher lithium concentrations; Red dashed line shows the area of the high-grade core Mineral Resource referred to in Table 2 (above)

This initial **3.3 Mt LCE Resource** encompasses an area covered by the first 5 holes of an initial 10 hole drilling programme, together with extensive geophysics, and encompasses portions of the 'Central Block' of concessions (Chico I, V and VI, Payo 2 South and Silvia Irene) and the southern Mario Angel concession (refer Figures 3 and 4) totalling 4,777 hectares out of the total ~12,000 hectare area of the Solaroz concessions.

The MRE was based on the first 5 holes drilled, which are located mostly along the eastern boundaries of the Central Block of concessions. In the absence of drilling data to date to the north and west of these holes, the Mineral Resource Estimate interpolates the average lithium concentrations progressively decline in these directions away from the Olaroz Salar. This interpretation will be tested by further drilling, highlighting the potential for further upgrade to the Resource size and grade from the area covered by this initial MRE.

The 'Northern Block' of concessions (Payo 1 and Payo 2 North) (totalling ~2,731 hectares) and the western areas of the Central Block' were yet to be drilled at the time of the MRE. Step-out drillhole 7 (SOZDD007, on the Payo 1 concession; refer Figure 3) has recently commenced, to test conductive brines identified by geophysics.

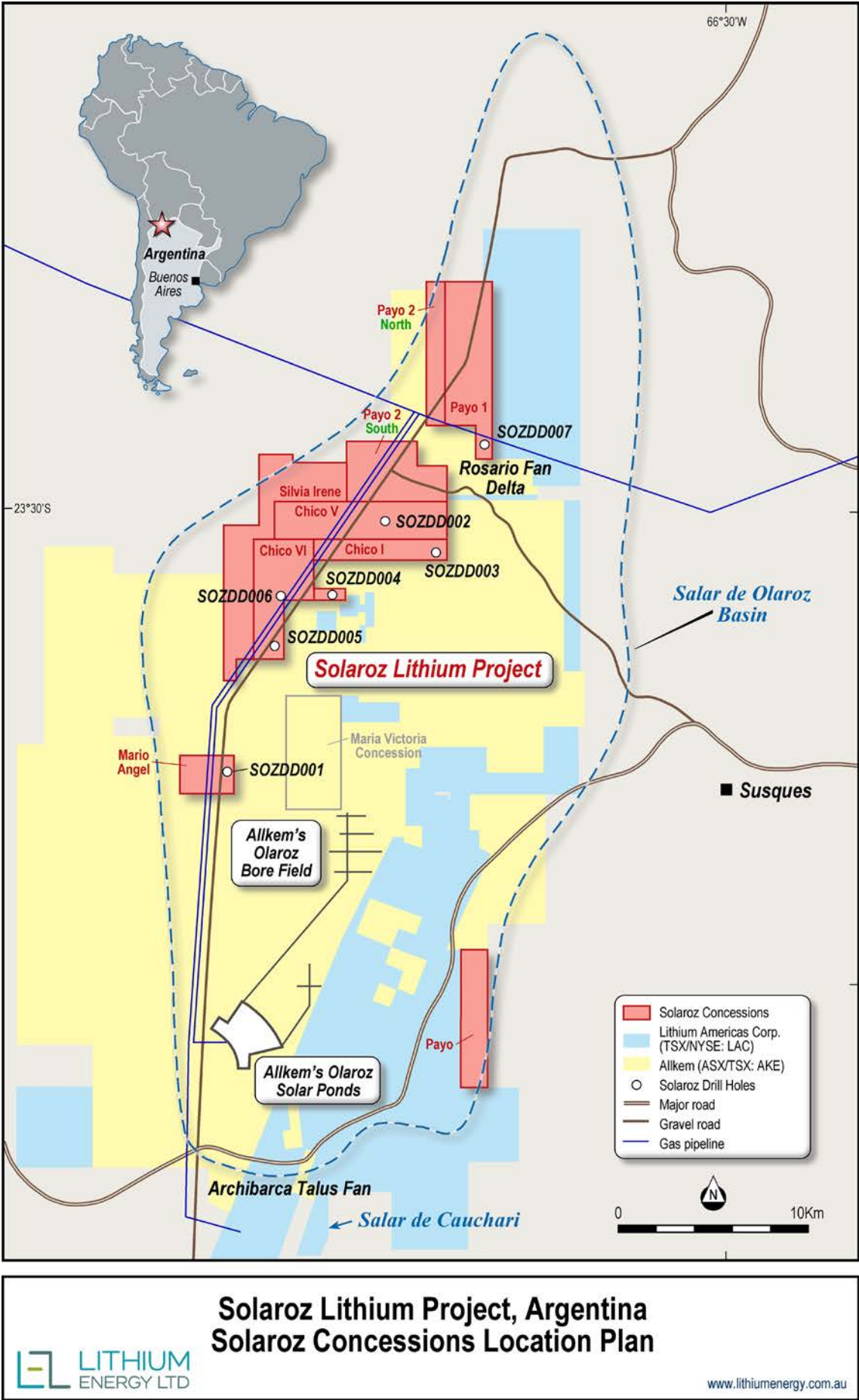


Figure 3: Solaroz Concessions (and Drillhole Locations) in Olaroz Salar
(Adjacent to Allkem and Lithium Americas Concessions)

Lithium Energy is also planning further infill drilling to upgrade the Inferred Resource category and test production wells to support the ongoing engineering and development studies for Solaroz.

For further details on the MRE, refer to the Company's ASX Announcement dated 29 June 2023 entitled "Significant Maiden JORC Lithium Resource of 3.3Mt LCE at Solaroz Project in Argentina".

Development Options for Solaroz Lithium Brines

Lithium Energy is finalising a Scoping Study (being prepared by Hatch) for the production of battery grade lithium carbonate from the lithium rich brines at Solaroz. The Scoping Study will encompass alternative configurations for the processing and upgrading of lithium brines and production of battery grade lithium carbonate:

- (1) A conventional brine evaporation pond process design - as implemented by Solaroz neighbours, the Olaroz Lithium Facility of Allkem Limited (ASX/TSX:AKE) and the Cauchari-Olaroz Project of Lithium Americas Corporation (TSX/NYSE:LAC), and other lithium brine projects in South America; and
- (2) A Direct Lithium Extraction (**DLE**) option, which replaces the use of evaporation ponds - DLE consists of several chemical processes that can bypass the need for large evaporation ponds for the production of lithium from brines, reduce development/production time and improve environmental sustainability.

Lithium Energy has entered into an agreement for Xi'an Lanshen New Material Technology Co., Ltd (**Lanshen**) to manufacture and commission a 3,000tpa battery grade lithium carbonate demonstration plant (**Plant**) on the Mario Angel concession, using their proprietary sorbent-based DLE technology.¹

Lanshen will supply, build and initially operate the Plant at its own cost, with Lithium Energy being responsible for securing all necessary approvals and permits and establishing the necessary supporting site infrastructure. Lithium Energy is entitled to purchase the plant once constructed, if it meets pre-agreed acceptance criteria – the value together with detailed plant specifications, technical, engineering and operating parameters (including the final acceptance criteria) will be outlined in a more detailed agreement to be executed. The parties have formed a working group to examine these matters, including required approvals and permits. Testwork will also be undertaken on the Mario Angel lithium brines.

Mario Angel was selected for the site of the proposed Plant as it is a relatively small (543 hectares), discrete stand-alone concession ideally suited for DLE test purposes. The testing and plant operation at Mario Angel will also not impact on the development of the broader concession holdings at Solaroz.

The structure of the agreement for the construction and commissioning of the Plant is regarded as very positive for Lithium Energy as it significantly reduces the upfront capital costs in evaluating this DLE production option for Solaroz.

¹ Refer LEL ASX Announcement dated 20 June 2023: Agreement with Lanshen to Build and Fund a 3,000tpa Battery Grade Lithium Plant at Solaroz

Drilling Programme

Lithium Energy is progressing towards the completion of its initial 10 hole, 5,000 metre drilling programme.

An overview of the drilling highlights at Solaroz to date are shown in Figure 4 - massive **intersections of lithium-rich brines** in the upper and lower (Deep Sand Unit) aquifers **of up to 489 metres thick** (in Hole 5 - SOZDD005²) and **lithium concentrations of up to 594 mg/l** (in Hole 6 - SOZDD006³) have been encountered along a ~15 kilometre zone between SOZDD001 and SOZDD003.

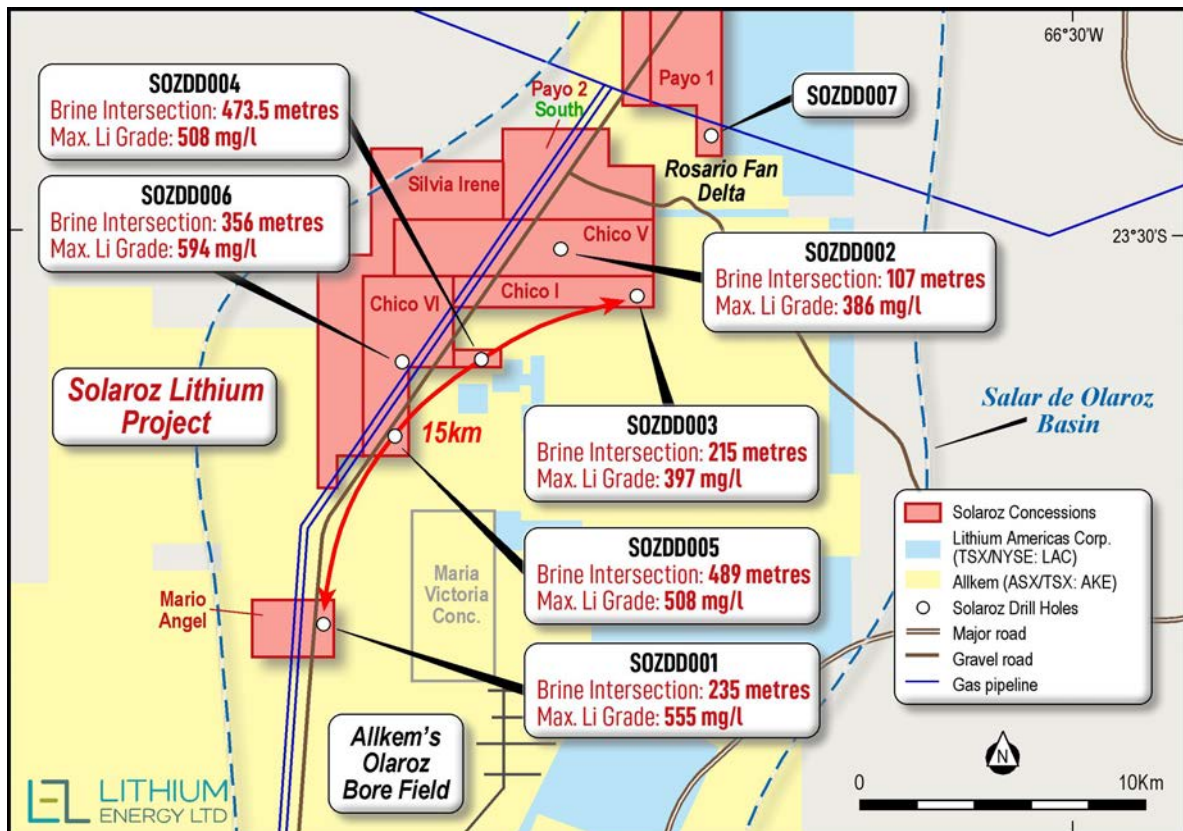


Figure 4: Location of Drillholes Across 15km Zone Between Solaroz Drillholes
Where Massive Intersections of Conductive Brines Where High Lithium Concentrations Encountered

The following summary of drillhole results provide an update since the last March 2023 Quarterly Report.

2 Refer also LEL ASX Announcement dated 15 May 2023: Further Assays Confirm Significant Lithium Brine Concentrations Across Massive Intersections at Solaroz
3 Refer LEL ASX Announcement dated 27 July 2023: Highest Lithium Concentrations Encountered at Solaroz Lithium Project in Hole 6

Drillhole 7 – SOZDD007 (Payo 1 concession)

Drillhole 7 (SOZDD007, on the Payo 1 concession) is a step-out drillhole from the resource area encompassing the initial 3.3Mt LCE Mineral Resource at Solaroz, to test conductive brines identified by geophysics in this relatively large, previously undrilled Northern Block area (refer Figures 3 and 4).

SOZDD007 has progressed through a large intersection of fresh/industrial water interval (from surface to ~166m). Drilling has transitioned into the targeted upper aquifer in sandtones/gravels with the current hole depth at ~224 metres.

Based on the interpretation of previously conducted geophysical surveys, Lithium Energy proposes to drill Hole 7 to a target depth of ~500 metres below surface to test the extent of lithium mineralisation.

The results of field testing of the initial airlift (pumping) fresh/industrial water samples collected at SOZDD007 are shown in Table 9.

The lithology stratigraphy of SOZDD007 is illustrated in Figure 26.



Figure 5: Diamond Drill Rig at SOZDD0007, Payo 1 Concession on Olaroz Salar



Figure 6: Drill Site at SOZDD0007, Payo 1 Concession on Olaroz Salar

Drillhole 6 – SOZDD006 (Chico VI concession)

Drilling at Drillhole 6 (SOZDD006, on the Chico VI concession, refer Figures 3 and 4) has been completed with final assay results confirming a total **356 metre intersection of lithium-rich brines** (across the upper and lower aquifers) with concentrations of up to **594 mg/l Lithium**, including as follows:

- Significant **131 metre intersection** of lithium-rich brines encountered across the upper aquifer, from a depth of 134 to 265 metres, in brine hosting unconsolidated sandstone units and fine gravels - assays have returned Lithium concentrations of up to **354 mg/l**.
- The transition from the upper to lower aquifers is evidenced by a clay (lateral halite equivalent) layer of 22 metres encountered from a depth of ~265 to 287 metres.
- The lower aquifer (Deep Sand Unit) commences at a depth of ~287 metres, in brine hosting sandstone units and some unconsolidated conglomerates, **intersecting 225 metres** of lithium-rich brines from ~287 to 512 metres (to the depth of the last packer sample taken) - assays have returned Lithium concentrations of up to **594mg/l**.
- Drilling has been completed to a depth of ~623 metres (in consolidated clays/siltstones).
- The hole is currently being prepared for geophysical hole logging, where measurements will be undertaken for total porosity, specific yield, conductivity, resistivity and spectral gamma.
- The results of the brine samples for SOZDD006 are shown in Table 10.
- The lithology stratigraphy of SOZDD006 is illustrated in Figure 27.

The Company notes that whilst SOZDD006 is located within the 'Central Block' concession area covered by the recently announced initial maiden JORC Inferred Mineral Resource Estimate (MRE) of 3.3 Million tonnes of Lithium Carbonate Equivalent (LCE)⁴, assay data from SOZDD006 was not available at the time of the MRE. The full assay and geophysical hole logging results from SOZDD006 will now be used to review and potentially upgrade the MRE, both in terms of resource size and confidence (to a JORC Indicated Mineral Resource category).



Figure 7: Diamond Drill Rig at SOZDD0006, Chico VI Concession on Olaroz Salar

4 Refer LEL ASX Announcement dated 29 June 2023: Significant Maiden JORC Lithium Resource of 3.3Mt LCE at Solaroz Project in Argentina

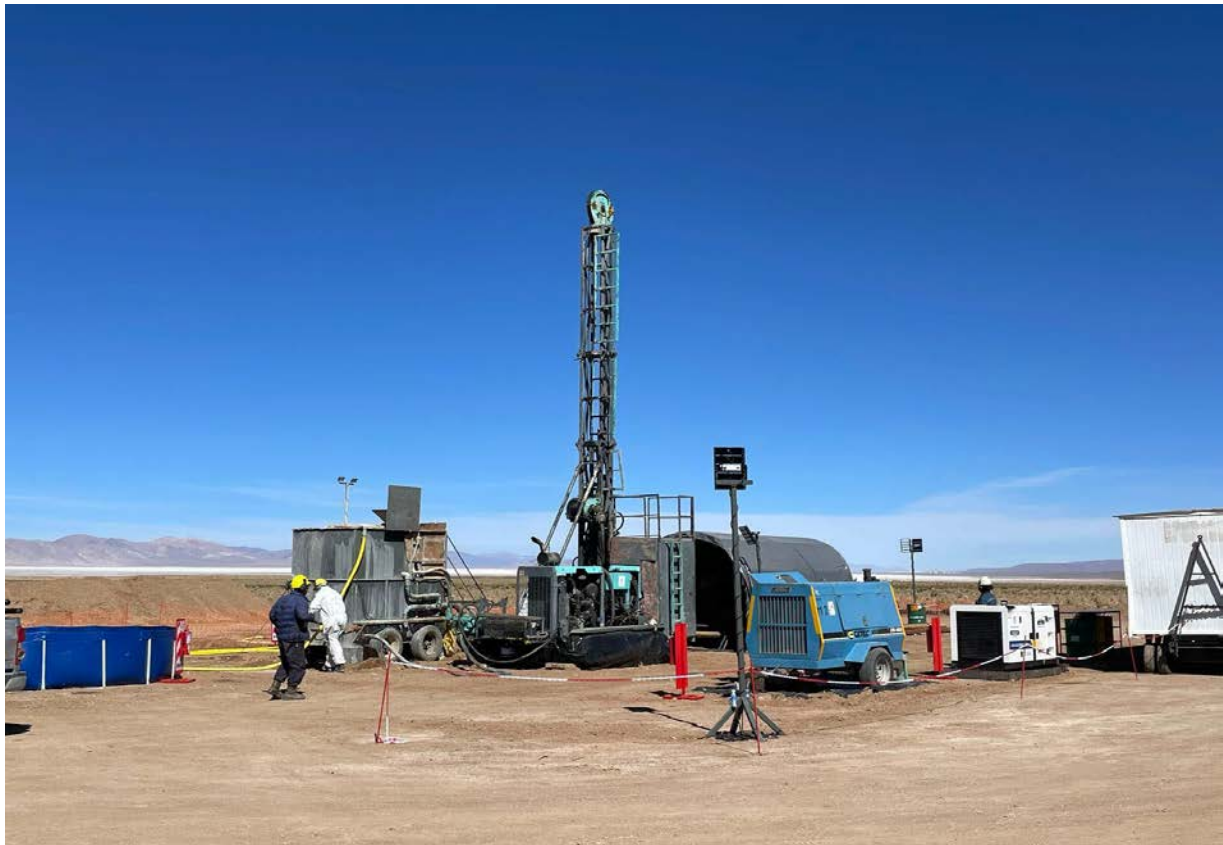


Figure 8: Drill Site at SOZDD0006, Chico VI Concession on Olaroz Salar

Drillhole 5 – SOZDD005 (Chico VI concession)

Drillhole 5 (SOZDD005, on the Chico VI concession, refer Figures 3 and 4) has intersected a total of **489 metres** intersection of **lithium-rich brines** (across the upper and lower aquifers) with assays returning up to **508 mg/l Lithium**, including as follows:

- Significant **163 metre** intersection of lithium-rich brines encountered across the upper aquifer, from a depth of 110 to 273 metres, in mostly uniform brine hosting sandstone units and fine gravels - assays have returned Lithium concentrations of up to **433 mg/l**.
- Halite layer of 39 metres encountered, from 273 to 312 metres.
- Beneath the halite layer, drilling entered the Deep Sand Unit (lower aquifer) intersecting **326 metres** of lithium-rich brines from 312 to 638 metres (to the depth of the last packer sample taken, in brine hosting sandstone units and fine gravels) - assays have returned Lithium concentrations of up to **508 mg/l**.
- Drilling was completed to a depth of ~690 metres – due to drill hole conditions, no brine samples were able to be collected between the last packer sample taken at 638 metres and the hole depth at 690 metres (being a total of ~52 metres).
- Geophysical hole logging has been completed (to a depth of ~403 metres) where measurements were undertaken for total porosity, specific yield, conductivity, resistivity and spectral gamma⁵ - due to drill hole conditions, geophysical hole logging was not able to be completed to the hole depth at 690 metres.
- Assays from core samples (currently being analysed at a laboratory in the US) and the interpretation of geophysical logging results are pending review/analysis and will be released in due course at the conclusion of the Company's assessment.

5 Refer also LEL ASX Announcement dated 15 May 2023: Further Assays Confirm Significant Lithium Brine Concentrations Across Massive Intersections at Solaroz

- The results of the brine samples for SOZDD005 are shown in Table 11.
- The geophysical logging results and lithology stratigraphy of SOZDD005 is illustrated in Figure 28.

Drillhole 4 – SOZDD004 (Chico I concession)

Drillhole 4 (SOZDD004, on the Chico I concession, refer Figures 3 and 4) has intersected a total **473.5 metres intersection of lithium-rich brines** (across the upper and lower aquifers) with concentrations of up to **508 mg/l Lithium**, including as follows:

- Significant **158 metre** intersection of lithium-bearing brines encountered across the **upper aquifer**, from a depth of 120 to 278 metres, in mostly uniform brine hosting sandstone units and fine gravels - assays have returned Lithium concentrations of up to **288 mg/l**.
- Halite (salt unit) layer of 42 metres encountered, from 278 to 332 metres.
- Beneath the halite layer, drilling entered the Deep Sand Unit (lower aquifer), intersecting **315.5 metres** of lithium-rich brines from 332 to 647.5 metres (to the depth of the last packer sample taken, in brine hosting sandstone units and fine gravels) - assays have returned Lithium concentrations of up to **508 mg/l**.
- Drilling was completed to a depth of ~787.5 metres – due to drill hole conditions, no brine samples were able to be collected between the last packer sample taken at 647.5 metres and the hole depth at 787.5 metres (being a total of ~140 metres).
- Geophysical hole logging has been completed (to a depth of ~305 metres) where measurements were undertaken for total porosity, specific yield, conductivity, resistivity and spectral gamma⁶ - due to drill hole conditions, geophysical hole logging was not able to be completed to the hole depth at 787.5 metres.
- Assays from core samples (currently being analysed at a laboratory in the US) and the interpretation of geophysical logging results are pending review/analysis and will be released in due course at the conclusion of the Company's assessment.
- Due to challenges encountered with completing the drill hole for geophysical hole logging, the drilling company has commenced drilling an adjacent hole ~25 metres from SOZDD004 (at no additional cost), to a target depth of ~600 metres. The current depth of this 'twin-hole' (SOZDD04R) is ~380 metres. The results of geophysical logging of SOZDD04R will be released in due course at the conclusion of the Company's review/analysis and assessment.
- The results of the brine samples for SOZDD004 are shown in Table 12.
- The geophysical logging results and lithology stratigraphy of SOZDD004 is illustrated in Figure 29.

Drillhole 2 – SOZDD002 (Chico V concession)

Drillhole 2 (SOZDD0042, on the Chico V concession, refer Figures 3 and 4) has intersected **lithium-bearing brines** across an upper aquifer and in fractured shales at depth, as follows:

- Significant **107 metre** intersection of lithium-bearing brines encountered across the **upper aquifer**, from a depth of 185 to 292 metres, hosted in unconsolidated sands - assays have returned Lithium concentrations of up to **386 mg/l**.
- Drilling at depth encountered lithium-bearing brines in fractured shales, from 292 to 439 metres (to the depth of the last packer sample taken) - assays have returned Lithium concentrations of up to **339 mg/l**.
- Drilling was completed to a depth of ~482.5 metres, where the hole was terminated due to unstable drill hole conditions.⁷

6 Refer also LEL ASX Announcement dated 15 May 2023: Further Assays Confirm Significant Lithium Brine Concentrations Across Massive Intersections at Solaroz

7 Refer LEL ASX Announcement dated 27 February 2023: Drilling Continues to Advance at Solaroz Lithium Brine Project

- The fractured shales interval is interpreted as being part of the basement bedrock and as such, have not been included in the geological model encompassing the initial maiden MRE.
- Geophysical hole logging has been completed (to a depth of ~328 metres) where measurements were undertaken for total porosity, specific yield, conductivity, resistivity and spectral gamma.
- Assays from core samples (currently being analysed at a laboratory in the US) and the interpretation of geophysical logging results are pending review/analysis and will be released in due course at the conclusion of the Company's assessment.
- The results of the brine samples for SOZDD002 are shown in Table 13.
- The geophysical logging results and lithology stratigraphy of SOZDD002 is illustrated in Figure 30.

Solaroz Lithium Brine Project Background

Lithium Energy's flagship Solaroz Lithium Brine Project (LEL:90%) comprises 8 mineral concessions (totalling ~12,000 hectares) (**Solaroz**) located on the Salar de Olaroz basin (the **Olaroz Salar**) in North-West Argentina within South America's 'Lithium Triangle'.

The Olaroz Salar covers ~45,000 hectares and Lithium Energy is one of only three groups that control the lithium concession rights on the Olaroz Salar, with the remainder of these lithium rights held by Allkem Limited (ASX/TSX:AKE) (**Allkem**)⁸ and Lithium Americas Corporation (TSX/NYSE:LAC) (**Lithium Americas**).

Allkem's Olaroz Lithium Facility (in a joint venture with Tokyo Stock Exchange listed Toyota Tsusho Corporation (TYO:8015)) has been extracting lithium brine and producing lithium carbonate since ~2015.⁹ Lithium Americas' Cauchari-Olaroz Project (in a joint venture with Ganfeng Lithium) has recently commenced production of lithium carbonate on the neighbouring Salar de Cauchari.¹⁰



Figure 9: Lithium Projects Located in 'Lithium Triangle'

The location of Lithium Energy's Solaroz concessions is outlined in Figure 3. The list of Solaroz concessions is also in the List of Mineral Tenements section.

⁸ Allkem has recently announced a US\$10.6 billion merger with lithium processing technology company, Livent Corporation (NYSE:LTHM) - refer Allkem ASX Announcement 10 May 2023: Allkem and Livent to Create a Leading Global Integrated Lithium Chemicals Producer

⁹ Source: Allkem ASX announcements

¹⁰ Source: Lithium Americas public releases

BURKE AND CORELLA GRAPHITE PROJECTS (QUEENSLAND, AUSTRALIA)

(100%)

Prefeasibility Study

Lithium Energy is undertaking a Prefeasibility Study (**PFS**) (being prepared by Wave International Pty Ltd (**Wave**) and the Measured Group) for the development of a vertically integrated Purified Spherical Graphite (**PSG**) (a battery anode precursor material) manufacturing facility in Queensland.¹¹

The PFS envisages mining graphite from the Burke Graphite Deposit and producing a +95% TGC graphite flake concentrate at the mine site. The flake concentrate will then be transported to a proposed PSG manufacturing facility in Queensland for processing by firstly mechanically shaping and spheronising the flakes and then chemically purifying the spheronised graphite to form a high-quality PSG product.

It is proposed that this PSG product will be sold as an anode precursor material for use in lithium-ion battery manufacturing or for battery energy storage solutions.

The Scope of Work for the PFS (expected to be completed in December 2023) encompasses three areas of investigation:

- (a) Mining Study;
- (b) Graphite Flake Concentrator (to be located at the Mine Site); and
- (c) PSG Plant (to be constructed at another location – currently proposed to be located near Townsville in Queensland).

Figure 10 is an illustration of the basic steps required to create a PSG product.

Metallurgical Testwork Programmes

Burke Deposit

The Beijing General Research Institute for Mining and Metallurgy Technology Group (**BGRIMM**) in China has completed a comprehensive flowsheet development metallurgical testwork programme on a ~one tonne representative sample of the Burke Graphite Deposit, to assess and develop an optimised flake concentrator flowsheet.¹²

BGRIMM has successfully achieved key objectives of grade (>95% TGC) and recovery (>85%) using standard flotation and regrind milling technology utilising Burke Graphite. These grade and recovery objectives align with typical requirements of the graphite processing industry.

BGRIMM has also completed the concentrator process flowsheet optimisation testwork that will be required to produce a >95% TGC graphite flake concentrate, which will be suitable as feedstock for a proposed PSG Plant. The key concentrator design input metrics of reagent dosing rates and types, flotation and regrind residence times and flotation cell capacity were defined for the Burke Graphite and will form part of the PFS.

BGRIMM's in-house Pilot Plant has also produced sufficient 95% TGC bulk flake concentrate from the Burke Graphite samples to now conduct the PSG development testwork required to support the PFS.

¹¹ Refer LEL ASX Announcement dated 23 May 2023: Excellent Metallurgical Testwork Results at Burke Graphite Project Pave Way for Commencement of PFS

¹² Refer LEL ASX Announcements dated 28 July 2023: Burke and Corella Graphite Projects Testwork Update and 23 May 2023: Excellent Metallurgical Testwork Results at Burke Graphite Project Pave Way for Commencement of PFS

Corella Deposit

Lithium Energy's total Graphite Inventory (across the Burke Graphite Deposit¹³ and the Corella Graphite Deposit¹⁴) has doubled to **2.6Mt of contained graphite**, following the recent delineation of a JORC Inferred Mineral Resource Estimate for graphite at the Corella Graphite Project.

The significant increase in the total Graphite Inventory has now allowed the Company to explore the suitability of Corella Graphite as additional feedstock to supplement Burke Graphite at the proposed PSG Plant currently being examined under the PFS.

As the first step in this process, a ~500kg sample of Corella Graphite has been sent to BGRIMM to undergo the same type of metallurgical testwork and flake concentrate production as the recently completed Burke Graphite testwork programme.

Key aspects will be to initially test the Corella Graphite performance in the flowsheet developed for the Burke Graphite, to determine whether the same or a similar flowsheet methodology can be used for graphite sourced from Corella.

Similarly, bulk flake concentrate produced by BGRIMM from the Corella Graphite will be sent to ProGraphite to undergo PSG testwork (refer below).

The outcomes of this critical metallurgical and PSG testwork will form the basis of an assessment of the PSG production capacities of the combined Burke and Corella Graphite Deposits.

The Corella flowsheet development and assessment and bulk flake concentrate testwork is anticipated to be completed by BGRIMM by October 2023, after which the PSG testwork programme will commence, with completion by ProGraphite anticipated in January 2024.

Purified Spherical Graphite Development Testwork Programme

The Burke Graphite flake concentrate (produced by BGRIMM) will be used as test feedstock material for a testwork programme to define and optimise the metallurgical and process conditions to produce PSG suitable for use in Lithium-ion battery anodes.

ProGraphite GmbH, a leading natural graphite consultancy and laboratory based in Germany, has been engaged to conduct comprehensive testwork programme on ~15kg of Burke Graphite 95% TGC flake concentrate processed by BGRIMM.

This ProGraphite testwork programme encompasses:

- Initial material characterisation;
- spherical graphite (micronising and spheronisation) testwork;
- purification of the spherical graphite; and
- electrochemical characterisation of the purified spherical graphite.

¹³ Refer LEL ASX Announcement dated 5 April 2023: Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence

¹⁴ Refer LEL ASX Announcement 16 June 2023: Maiden Corella Graphite Mineral Resource Delivers Doubling of Graphite Inventory

HOW Li-ion Battery Anode Material is Made

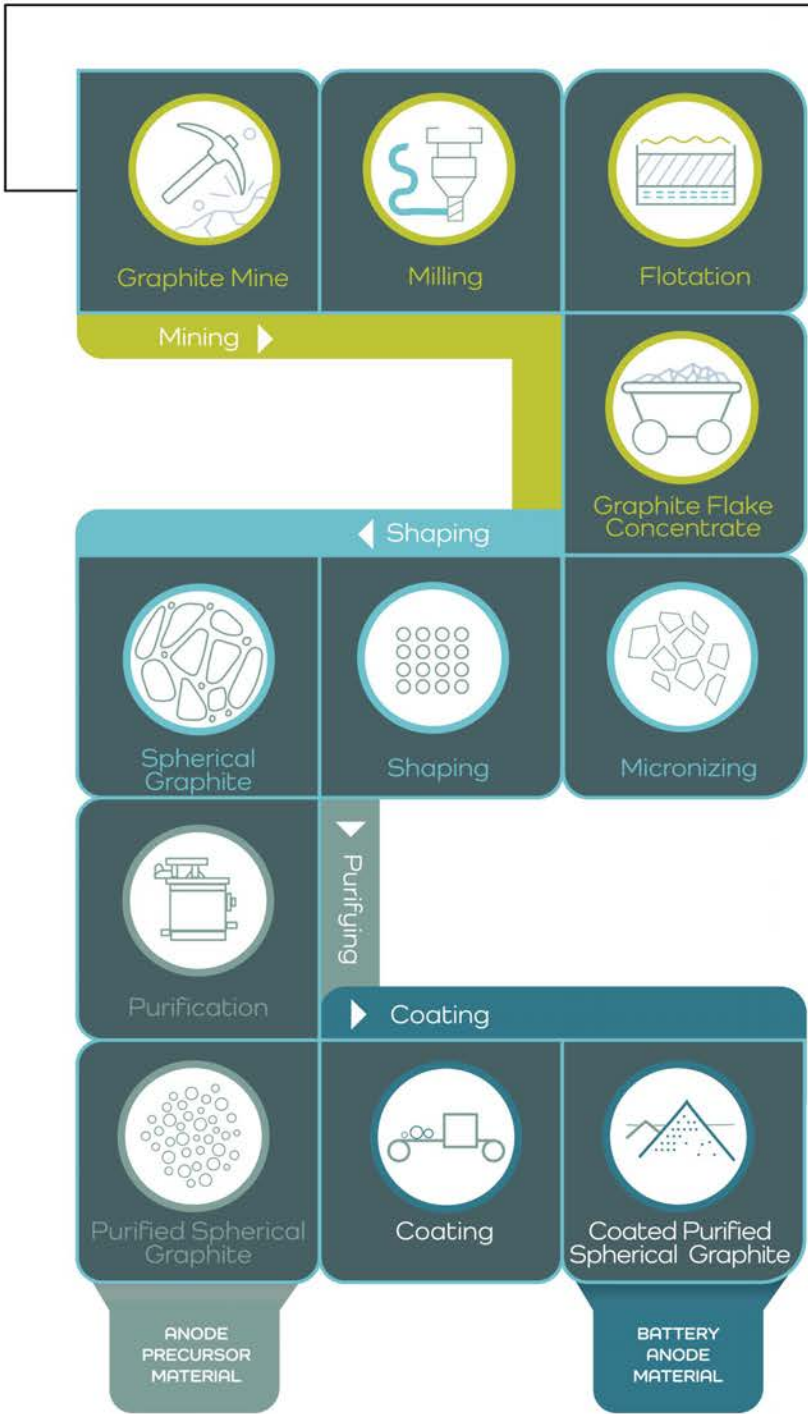


Figure 10: Illustrative Vertically Integrated Operations from Graphite Mine to Production of PSG (Anode Precursor Material) and Coated PSG (Battery Anode Material)

Corella Graphite Deposit

A maiden resource definition drilling programme (completed in April 2023¹⁵) on the Corella Tenement has delivered a maiden JORC Inferred Mineral Resource Estimate (**Corella Deposit**):

- Inferred Mineral Resource delivers **13.5Mt at 9.5% TGC for 1.3Mt contained graphite** (at a 5% TGC cut-off grade)
- Within the mineralisation envelope, there is included a higher grade Inferred Mineral Resource of **4.5Mt at 12.7% TGC** for 0.57Mt of contained graphite (at a 10% TGC cut-off grade)¹⁶

Table 4 : Corella Mineral Resource Estimate

Mineral Resource Category	Weathering State	Resource (Mt)	TGC (%)	Contained Graphite (kt)
Inferred Mineral Resource	Weathered	4.5	9.7	440
	Primary	9.0	9.3	840
	Total	13.5	9.5	1,280

Notes:

- Mineral Resource estimates are reported above a cut-off grade of 5% TGC; Mineral Resources reported on a dry in-situ basis; Totals may differ due to rounding.
- For further details, refer to LEL ASX Announcement dated 16 June 2023 entitled "Maiden Corella Graphite Mineral Resource Delivers Doubling of Graphite Inventory"

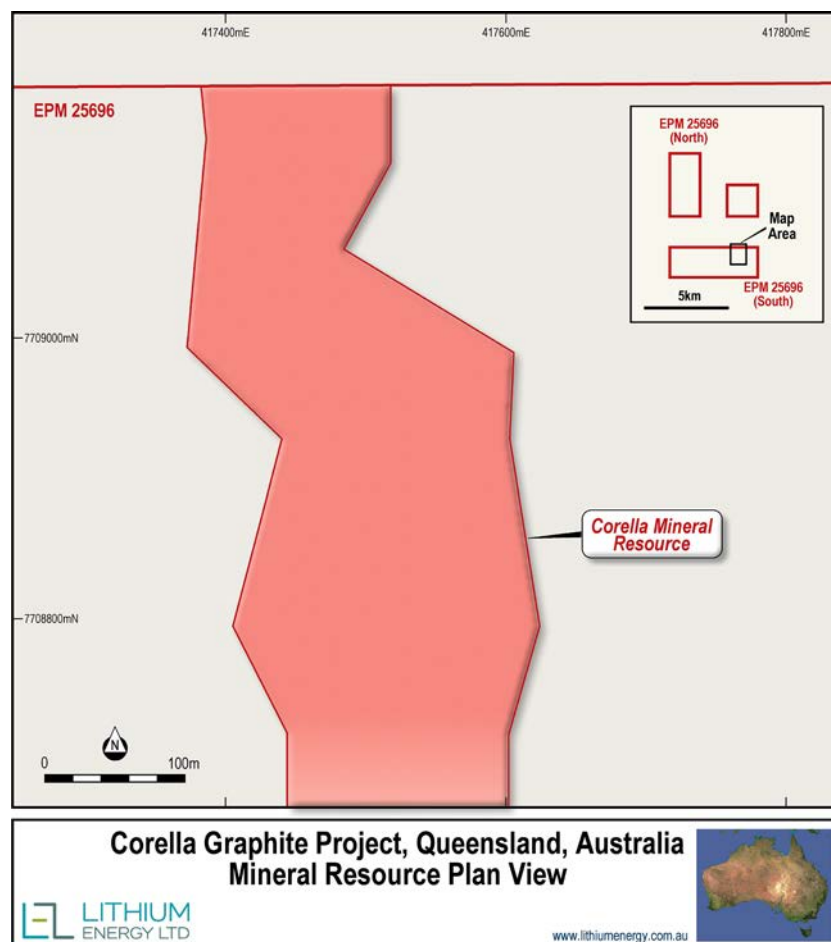


Figure 11: Corella JORC Inferred Mineral Resource - Plan View on Corella Tenement

15 Refer LEL ASX Announcements dated 17 April 2023: Completion of Drilling Programme at Corella Graphite Prospect and 2 June 2023: Significant High Grade Graphite Discovery at the Corella Project

16 Refer Mineral Resource estimates at different %TGC cut-off grades reported in Table 3 of LEL ASX Announcement 16 June 2023: Maiden Corella Graphite Mineral Resource Delivers Doubling of Graphite Inventory

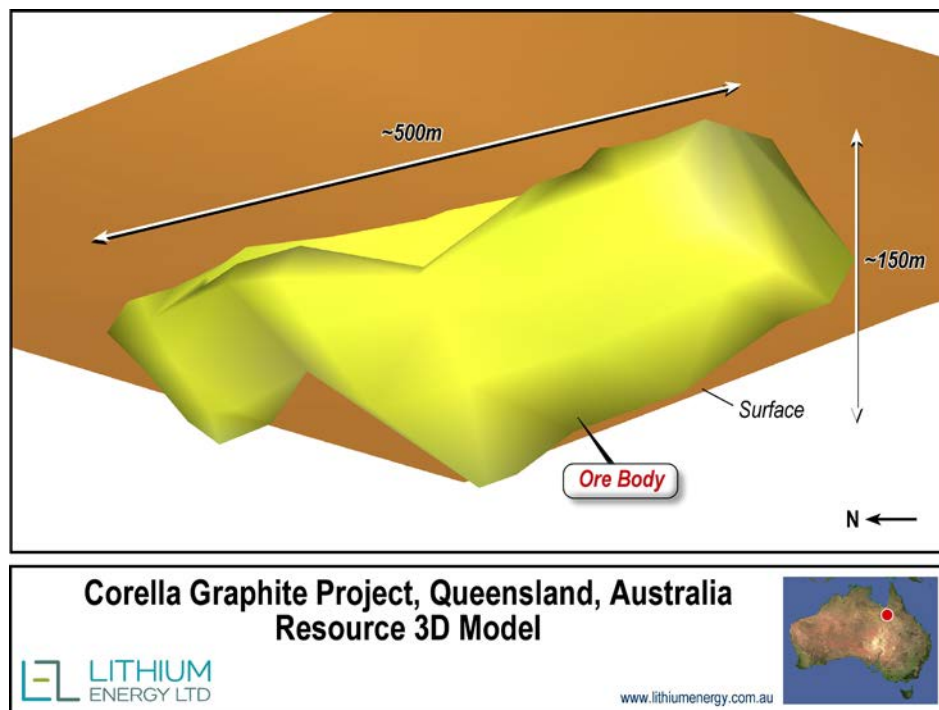


Figure 12: Corella JORC Inferred Mineral Resource – 3D Model View

Table 5 - Corella Graphite Project Mineral Resource Estimate at Different Cut-Off Grades

Grade Range TGC%	Incremental Resource			Cut-off Grade TGC%	Cumulative Resource		
	Tonnage t	TGC %	Contained Graphite (t)		Tonnage t	TGC %	Contained Graphite (t)
5.0 -> 6.0	832,485	5.56	46,283	5.0	13,457,108	9.48	1,275,161
6.0 -> 7.0	1,517,596	6.51	98,812	6.0	12,624,623	9.73	1,228,878
7.0 -> 8.0	2,179,430	7.53	164,168	7.0	11,107,027	10.17	1,130,067
8.0 -> 9.0	2,438,104	8.49	206,888	8.0	8,927,597	10.82	965,899
9.0 -> 10.0	2,013,205	9.48	190,811	9.0	6,489,493	11.70	759,011
10.0 -> 11.0	1,446,199	10.47	151,408	10.0	4,476,288	12.69	568,200
11.0 -> 12.0	981,155	11.47	112,534	11.0	3,030,089	13.76	416,791
12.0 -> 13.0	625,693	12.48	78,059	12.0	2,048,934	14.85	304,257
13.0 -> 14.0	512,938	13.48	69,162	13.0	1,423,241	15.89	226,198
14.0 -> 15.0	295,345	14.46	42,702	14.0	910,303	17.25	157,036

For further information on the maiden Mineral Resource Estimate for the Corella Deposit, refer to the Company's ASX Announcement dated 16 June 2023: Maiden Corella Graphite Mineral Resource Delivers Doubling of Graphite Inventory.

Corella Tenement - Maiden Resource Drilling Programme

Lithium Energy has completed a maiden resource definition drilling programme at the Corella Tenement (EPM 25696), with a total of 16 Reverse Circulation (RC) holes (totalling ~1,600m).¹⁷

The results from this drilling programme was used to delineate the initial maiden JORC Inferred Mineral Resource (the Corella Deposit) (as referred to above). RC chip samples were also used for an initial metallurgical testwork programme (as referred to above).

¹⁷ Refer LEL ASX Announcements dated 17 April 2023: Completion of Drilling Programme at Corella Graphite Prospect and 2 June 2023: Significant High Grade Graphite Discovery at the Corella Project



Figures 13 and 14: RC Drill Rig at Corella Tenement

Figure 15 shows the location of RC holes CGRC001 to CGRC016 and the location of the cross-section lines for the cross-sections shown in Figures 16 to Figure 21 (with the results of the previous Electro Magnetic (EM) surveys¹⁸ also shown).

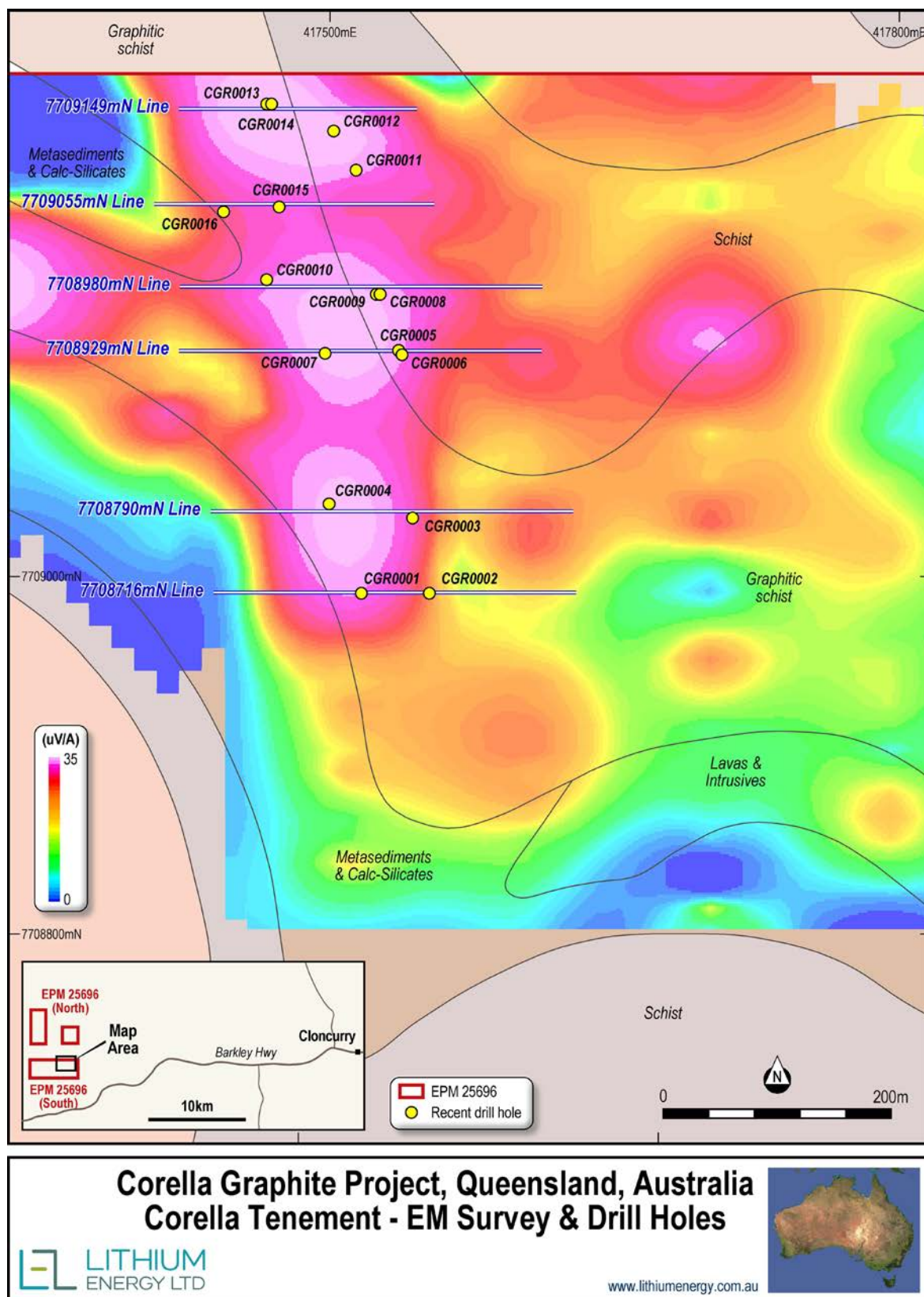


Figure 15: Location of RC Drillholes and Cross-Sections Lines on Corella Tenement

18 Refer SRK ASX Announcement dated 26 June 2018: Burke Graphite Project – New Target Area Identified from Ground Electro-Magnetic Surveys

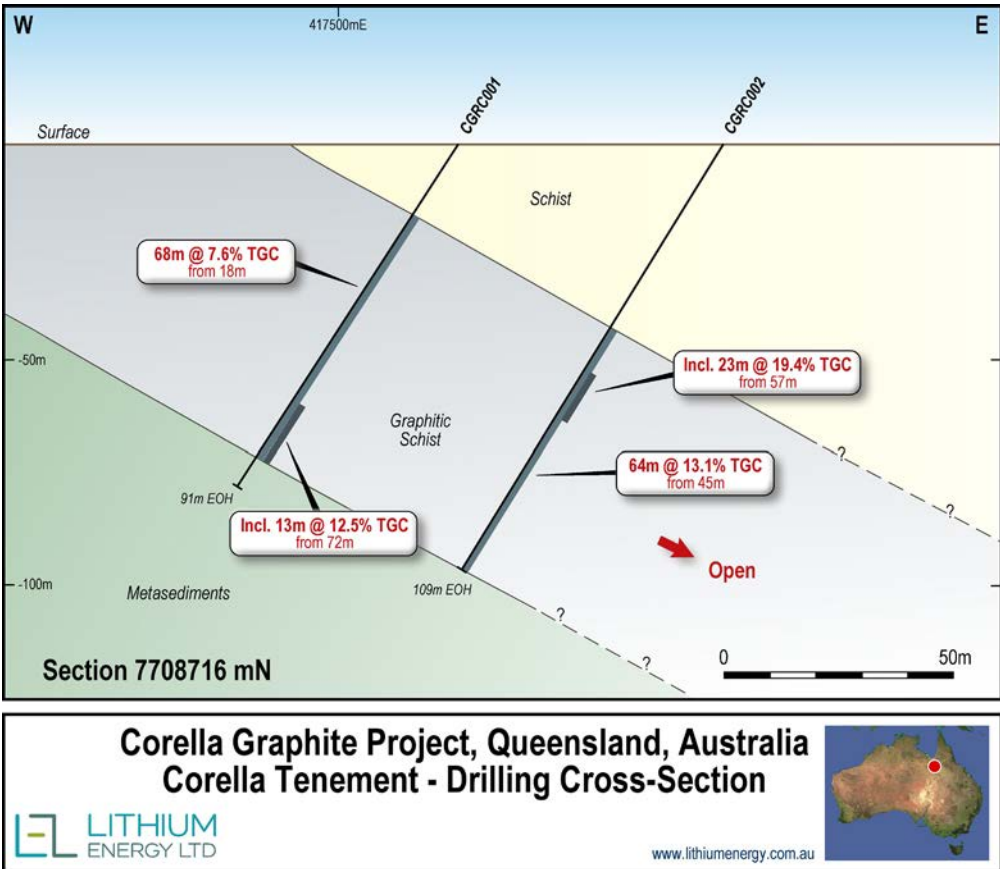


Figure 16: Cross-Section Line (7708716mN) Showing Holes CGRC001 and CGRC002 on Corella Tenement

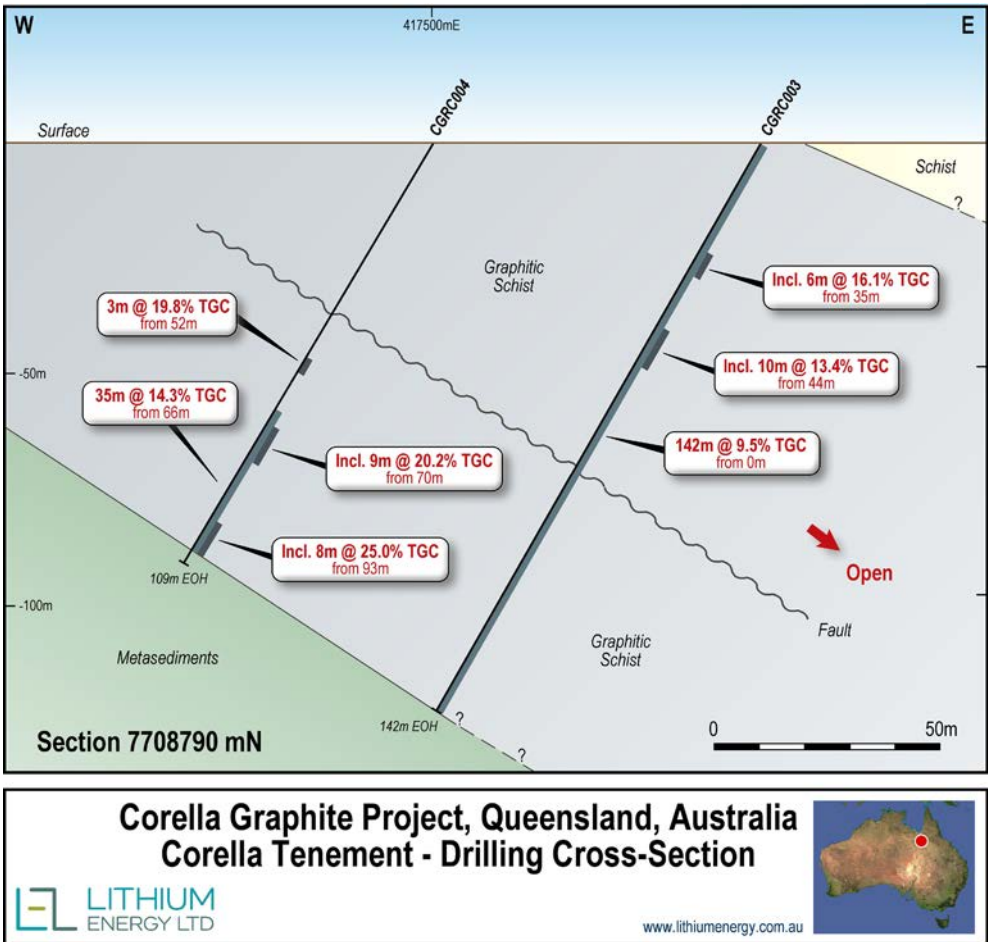


Figure 17: Cross-Section Line (7708790mN) Showing Holes CGRC003 and CGRC004 on Corella Tenement

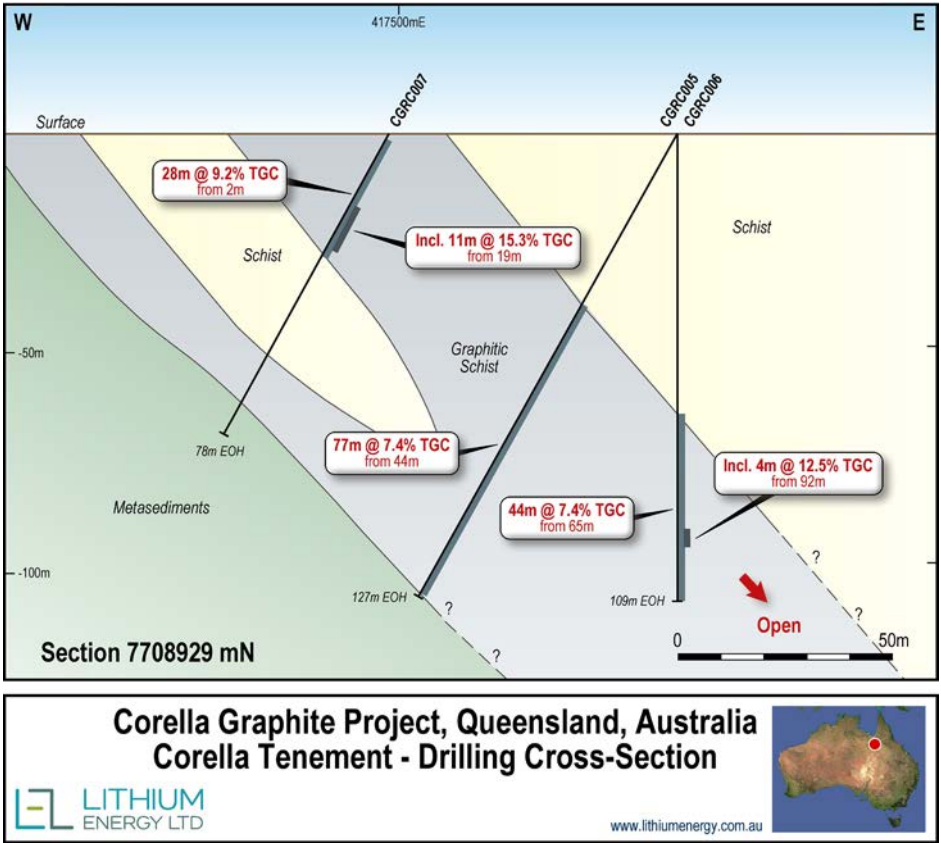


Figure 18: Cross-Section Line (7708929mN) Showing Holes CGRC005, CGRC006 and CGRC007 on Corella Tenement

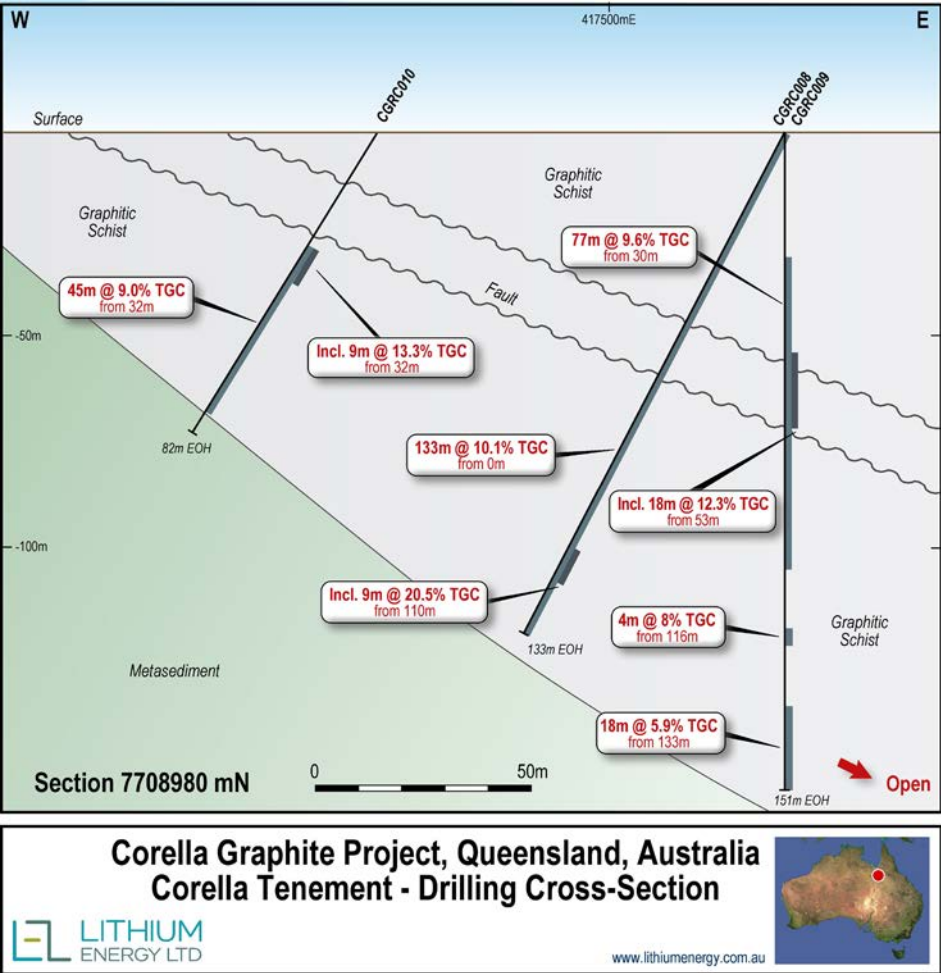


Figure 19: Cross-Section Line (7708980mN) Showing Holes CGRC008, CGRC009 and CGRC010 on Corella Tenement

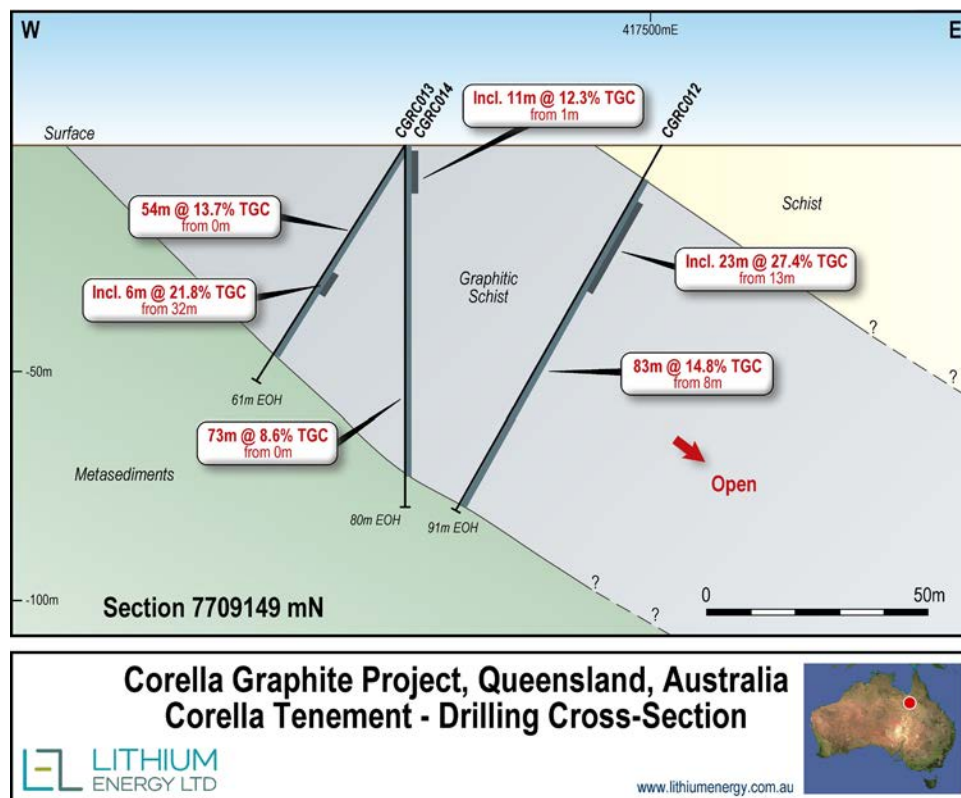


Figure 20: Cross-Section Line (7709149mN) Showing Holes CGRC012, CGRC013 and CGRC014 on Corella Tenement

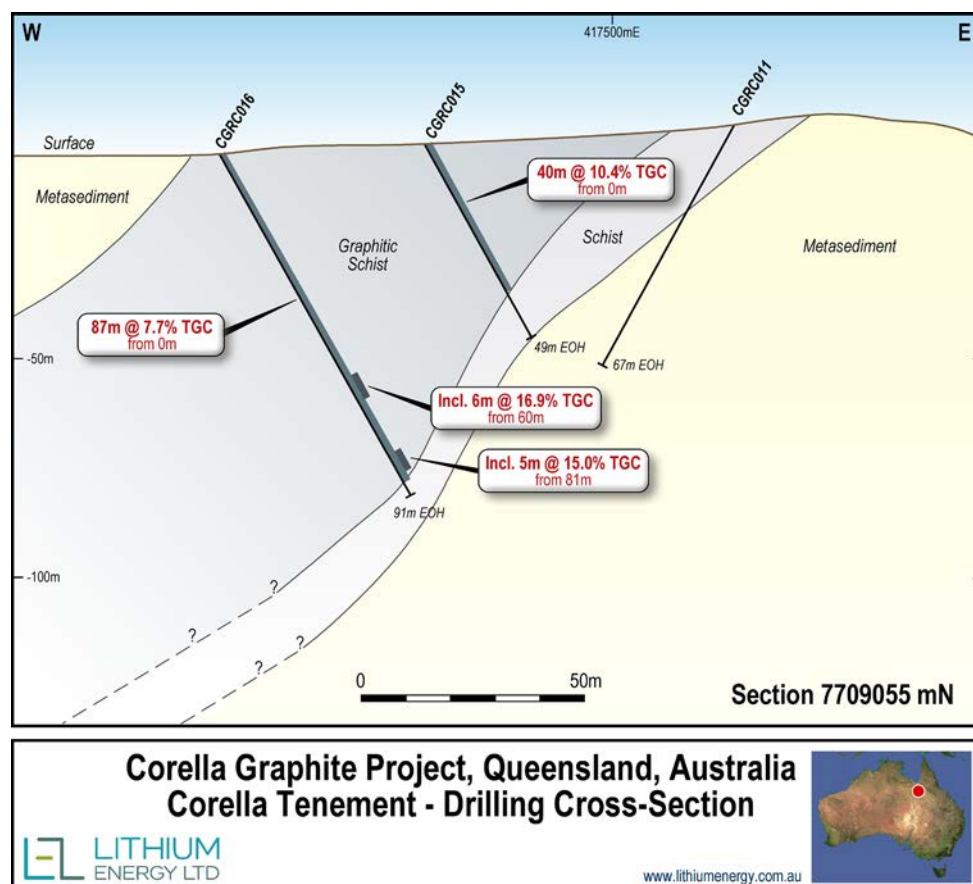


Figure 21: Cross-Section Line (7709055mN) Showing Holes CGRC011, CGRC015 and CGRC016 on Corella Tenement

For further details on the drilling results in relation to Holes CGRC001 to CGRC016, refer to the Company's ASX Announcements dated 2 June 2023: Significant High Grade Graphite Discovery at the Corella Project.

Burke Graphite Deposit

An infill drilling programme (completed in January 2023)¹⁹ on the Burke Tenement has delivered a significant increase in the size and confidence of the JORC Mineral Resource Estimate (**Burke Deposit**):

- **Total Mineral Resource of 9.1Mt at 14.4% Total Graphitic Carbon (TGC)** for a total of **1.3Mt contained graphite** (at a 5% TGC cut-off grade), comprising:
 - **Indicated Mineral Resource of 4.5Mt at 14.7% TGC** for **670kt of contained graphite**; and
 - **Inferred Mineral Resource of 4.5Mt at 14.2% TGC** for **640kt of contained graphite**.
- Within the mineralisation envelope there is included a higher grade **Total Mineral Resource of 7.1Mt at 16.2% TGC** for **1.1Mt of contained graphite** (at a 10% TGC cut-off grade).²⁰

Table 6 : Burke Mineral Resource Estimate

Mineral Resource Category	Weathering State	Resource (Mt)	Total Graphitic Carbon (TGC) (%)	Contained Graphite (kt)
Indicated Mineral Resource	Weathered	0.2	12.5	30
	Primary	4.3	14.8	640
	Sub-total	4.5	14.7	670
Inferred Mineral Resource	Weathered	0.1	8.1	10
	Primary	4.4	14.4	630
	Sub-total	4.5	14.2	640
Total Indicated and Inferred Mineral Resource	Weathered	0.3	11.1	40
	Primary	8.7	14.6	1,270
	Total	9.1	14.4	1,310

Notes:

- Mineral Resource estimates are reported above a cut-off grade of 5% TGC; Mineral Resources reported on a dry in-situ basis; Totals may differ due to rounding.
- For further details, refer to LEL ASX Announcement dated 5 April 2023 entitled "Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence"

Table 7 : Burke Deposit Total Mineral Resource Estimates at Different Cut-Off Grades

Grade Range TGC%	Incremental Mineral Resource			Cut-Off Grade TGC%	Cumulative Total Mineral Resource		
	Tonnage t	TGC %	Contained Graphite (t)		Tonnage t	TGC %	Contained Graphite (t)
5.0 -> 6.0	212,551	5.49	11,675	5.0	9,059,630	14.44	1,308,520
6.0 -> 7.0	300,426	6.55	19,687	6.0	8,847,079	14.66	1,296,845
7.0 -> 8.0	392,089	7.52	29,488	7.0	8,546,653	14.94	1,277,157
8.0 -> 9.0	496,488	8.53	42,338	8.0	8,154,564	15.30	1,247,669
9.0 -> 10.0	556,562	9.49	52,809	9.0	7,658,076	15.74	1,205,331
10.0 -> 11.0	543,521	10.51	57,103	10.0	7,101,514	16.23	1,152,522
11.0 -> 12.0	618,747	11.49	71,111	11.0	6,557,993	16.70	1,095,419
12.0 -> 13.0	587,090	12.49	73,347	12.0	5,939,246	17.25	1,024,308
13.0 -> 14.0	556,033	13.51	75,095	13.0	5,352,156	17.77	950,961
14.0 -> 15.0	530,771	14.51	76,992	14.0	4,796,123	18.26	875,866
15.0 -> 16.0	441,777	15.49	68,413	15.0	4,265,352	18.73	798,875

For further information on the upgraded Mineral Resource Estimate for the Burke Deposit, refer to the Company's ASX Announcement dated: 5 April 2023: Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence.

¹⁹ Refer LEL ASX Announcements dated 22 February 2023: Update – Infill Drilling Results at Burke Graphite Deposit and 16 February 2023: Significant High Grade Graphite Intercepts Continue at Burke Graphite Deposit

²⁰ Refer Mineral Resource estimates at different %TGC cut-off grades reported in Table 2 of LEL ASX Announcement dated 5 April 2023: Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence

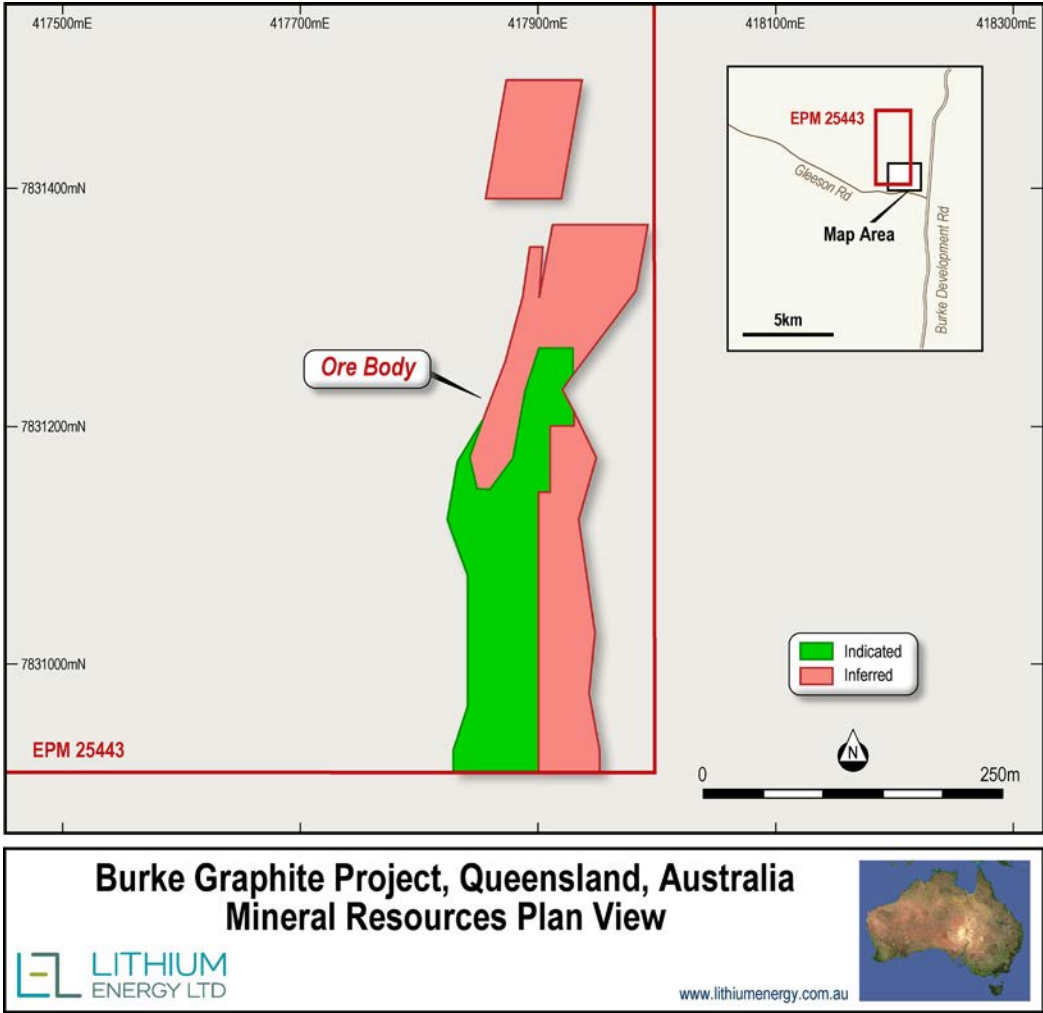


Figure 22: Plan View of Burke Deposit - JORC Indicated and Inferred Mineral Resources

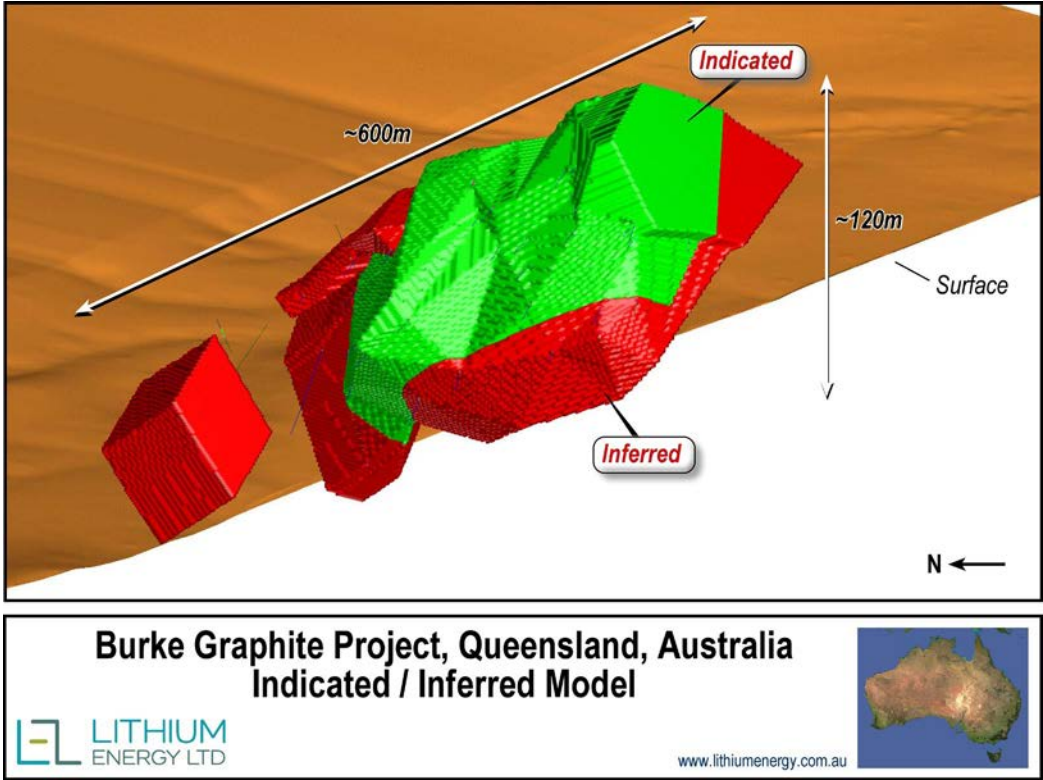


Figure 23: 3D Model of Burke Deposit - JORC Indicated and Inferred Mineral Resources

Burke and Corella Graphite Projects Background

Lithium Energy is developing (100% owned) graphite projects on granted Exploration Permits for Minerals (EPM) located in the Cloncurry region in North Central Queensland, where there is access to well-developed transport infrastructure to an airport at Mt Isa (~122km) and a port in Townsville (~783km) (refer Figure 24):

- (1) The **Burke Graphite Project** comprises EPM 25443 (the **Burke Tenement** or **Burke**) (of ~6.58km²), located 125km north of Cloncurry adjacent to the Mt Dromedary Graphite Project held by Novonix Limited (ASX: NVX); and
- (2) The **Corella Graphite Project** comprises EPM 25696 (the **Corella Tenement** or **Corella**) (of ~19.74km²), located 40km west of Cloncurry near the Flinders Highway that links Mt Isa to Townsville. Corella is located ~120km south of Burke.

The Leichhardt Crossing Tenement (EPM 28715) is located ~25km north north-west of the Burke Tenement, where the Company is targeting outcropping limestone required for potential graphite processing operations.

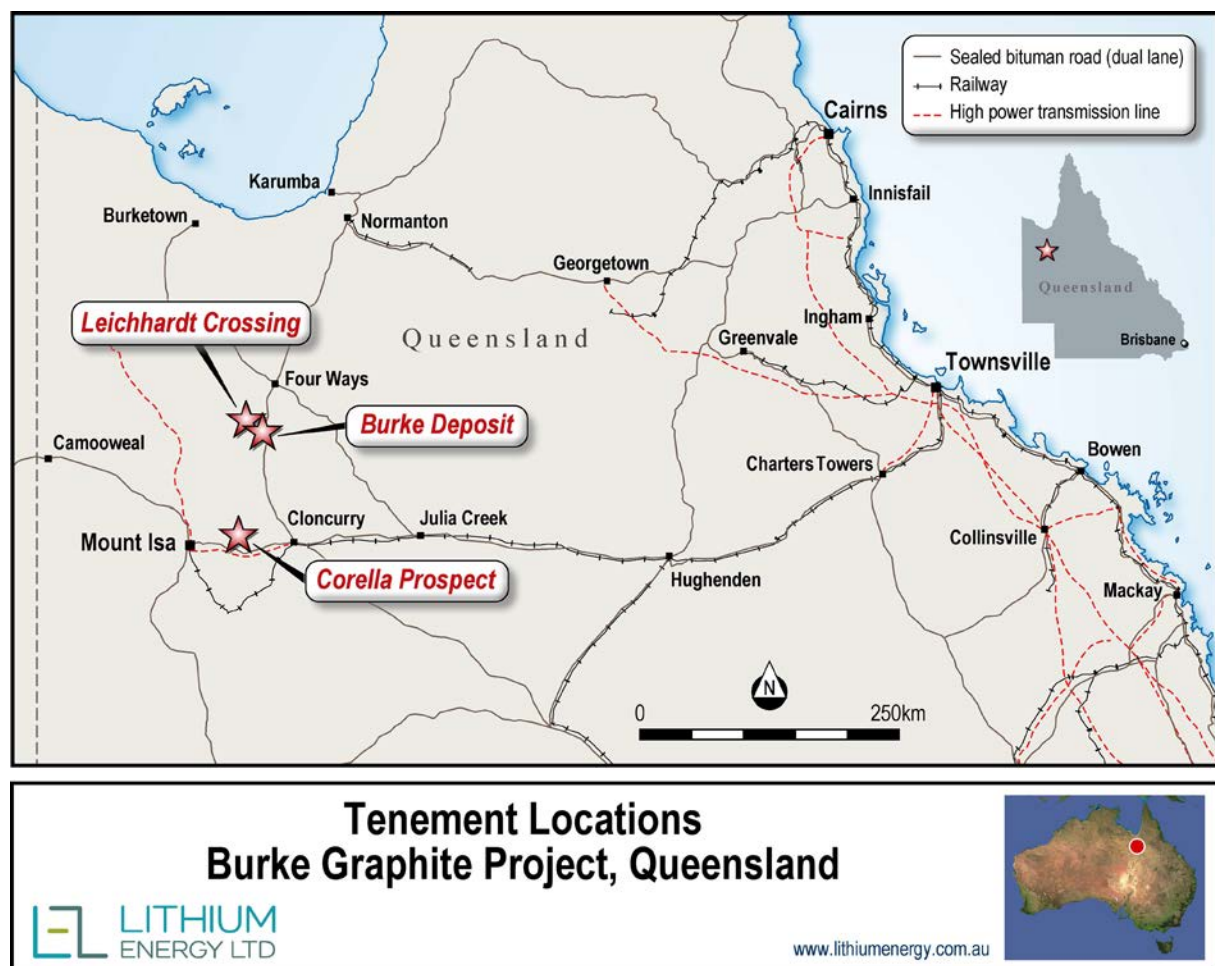


Figure 24: Burke Graphite Project Tenement Locations in North Central Queensland

The Lansdown Eco-Industrial Precinct near Townsville in North Queensland, where the Company is investigating basing its proposed vertically integrated battery anode material manufacturing business, is emerging as an important location for the production of critical materials for battery technologies in Australia.

CORPORATE

Completion of \$6.4 Million Capital Raising

In June 2023, Lithium Energy completed a \$6.4 million capital raising (before costs) via the issue of 8,000,000 shares at an issue price of \$0.80 per share.²¹ The issue was completed within the Company's additional 10% placement capacity (approved at the last AGM) under the ASX Listing Rules, to new and existing institutional and sophisticated and professional shareholders/investors. Canaccord Genuity (Australia) Limited acted as Lead Manager to the placement which was significantly oversubscribed.

Securities on Issue

Class of Security	Quoted on ASX	Unlisted	Total
Fully paid ordinary shares	103,010,000	-	103,010,000
Executive Options (\$0.30, 18 Mar 2024) ²²	-	10,000,000	10,000,000
Broker Options (\$0.30, 4 May 2024) ²³	-	4,000,000	4,000,000
Executive Options (\$1.39, 29 Nov 2024) ²⁴	-	3,500,000	3,500,000
SIP Options (\$1.595, 15 February 2025) ²⁵	-	100,000	100,000
Broker Options (\$1.50, 20 September 2025) ²⁶	-	750,000	750,000
Executive Options (\$1.06, 4 October 2025) ²⁷	-	17,500,000	17,500,000
SIP Options (\$1.32, 30 November 2025) ²⁸	-	400,000	400,000
TOTAL	103,010,000	36,250,000	139,260,000

Summary of Expenditure Incurred²⁹

A summary of expenditure incurred by Lithium Energy during the quarter, in relation to cash flows from operating and investing activities reported in the accompanying Appendix 5B Cash Flow Report is as follows:

	Expenditure Incurred / Cash Outflows		
	Operating	Investing	Total
For Quarter ending 30 June 2023		\$'000	
Exploration and evaluation expenditure and tenements	-	4,623	4,623
Personnel expenses	270	-	270
Occupancy expenses	36	-	36
Corporate expenses	120	-	120
Administration expenses	119	-	119
Total Expenditure	545	4,623	3,605

There were no mining production and development activities during the quarter.

- 21 Refer LEL Announcements dated 23 June 2023: Completion of Oversubscribed Capital Raising for Development of Lithium and Graphite Projects and 29 June 2023: Application for quotation of securities – LEL
- 22 Refer Section 16.3 (Rights Attaching to Executive Options) of the Company's Prospectus (dated 30 March 2021) for terms and conditions of the Executive Options
- 23 Refer Section 16.2 (Rights Attaching to Broker's Options) of the Company's Prospectus (dated 30 March 2021) for terms and conditions of the Broker Options
- 24 Refer LEL Announcement dated 2 December 2021: Notification regarding unquoted securities – LEL and Annexure B (Terms and Conditions of New Executive Options) of LEL's Notice of Annual General Meeting and Explanatory Statement dated 18 October 2021 and released on ASX on 28 October 2021
- 25 Refer LEL Announcement dated 18 February 2022: Notification regarding unquoted securities – LEL
- 26 Refer LEL Announcement dated 21 September 2022: Notification regarding unquoted securities – LEL
- 27 Refer LEL Announcement dated 5 October 2022: Notification regarding unquoted securities – LEL and Annexure B (Terms and Conditions of Executive Options) of LEL's Notice of Annual General Meeting and Explanatory Statement dated 22 August 2022 and released on ASX on 2 September 2022
- 28 Refer LEL Announcement dated 5 December 2022: Notification regarding unquoted securities – LEL
- 29 Per ASX Listing Rule 5.3.1

Reconciliation of Expenditure to Utilisation of Funds Statement in Prospectus³⁰

	Proposed Utilisation of Funds Disclosed in Prospectus ³¹	Actual Expenditure (Cash Outflows) to 30 June 2023 \$'000	Variance (Actual less Proposed)
Exploration and Evaluation Expenditure	5,235	10,611	5376
Cash Consideration Payments to Solaroz Owner	1,750	5,994 ³²	4,244
Expenses of the IPO	765	829	64
Balance: Corporate Overheads/Working Capital	1,250	2,477	1,227
Total	9,000	19,910	10,910

The Utilisation of Funds disclosed in Lithium Energy's Prospectus was an aggregate estimate over a 2 year period (as at the date of the Prospectus – 30 March 2021). The reported Actual Expenditure (above) is based on cumulative cash outflows from 14 January 2021 (the date of incorporation of the Company) to 30 June 2023 and as reported in the Company's Appendix 5B Cash Flow Reports for the quarters ending 30 June 2021 to 30 June 2023 (inclusive).

The Company notes that:

- \$9 million (before costs) was raised (at \$0.20 per share) under the Prospectus in May 2021;
- \$15 million (before costs) was raised (at \$1.00 per share) under a share placement in September 2022³³; and
- \$6.4 million (before costs) was raised (at \$0.80 per share) under a share placement in June 2023³⁴.

The proposed exploration expenditure programme (and allocation across Lithium Energy's projects) (as outlined in the Prospectus) will be refined according to the results of the programmes as they are undertaken/develop, to meet working capital allocation priorities, and potentially for new project generation. All exploration expenditure is subject to change, as they are of necessity highly dependent on results achieved.

Payments to Related Parties³⁵

During the quarter, Lithium Energy paid a total of \$128k in respect of Directors' remuneration, comprising salaries, PAYG remittances to the ATO and statutory employer superannuation contributions. This is disclosed in Item 6 of the accompanying Appendix 5B Cash Flow Report.

³⁰ Per ASX Listing Rule 5.3.4

³¹ Refer Section 6.1 (Utilisation of Funds) of the Company's Prospectus (dated 30 March 2021)

³² Refer LEL ASX Announcement dated 31 October 2022: Early Exercise of Option to Acquire Solaroz Lithium Brine Project Concessions

³³ Refer LEL Announcement dated 21 September 2022: Application for quotation of securities – LEL

³⁴ Refer LEL Announcement dated 29 June 2023: Application for quotation of securities – LEL

³⁵ Per ASX Listing Rule 5.3.5

LIST OF MINERAL TENEMENTS

Lithium Energy has interests in the following mineral tenements as at the end of the quarter and currently:

Solaroz Lithium Brine Project (Argentina)

(90%)

Concession Group	Tenement Name	Area (Ha)	Province	File No
Northern Block	Payo 1	1,973	Jujuy	1516-M-2010
	Payo 2 (North)	758	Jujuy	1515-M-2010
	Payo 2 (South)	1,435		
Central Block	Chico I	835	Jujuy	1229-M-2009
	Chico V	1,800	Jujuy	1312-M-2009
	Chico VI	1,400	Jujuy	1313-M-2009
	Silvia Irene	2,465	Jujuy	1706-S-2011
Southern Block	Mario Ángel	543	Jujuy	1707-S-2011
	Payo	990	Jujuy	1514-M-2010

Burke and Corella Graphite Projects (Queensland, Australia)

(100%)

Tenement Name	Tenement Type and No.	Grant Date	Expiry Date	Area (blocks)	Area (km ²)
Burke	EPM 25443	4/9/2014	3/9/2024	2 sub-blocks	~6.58
Corella	EPM 25696	2/4/2015	1/4/2025	6 sub-blocks	~19.74
Leichhardt Crossing	EPM 28715	12/4/2023	11/4/2028	30-sub-blocks	~97

JORC MINERAL RESOURCES

Solaroz Lithium Brine Project (Argentina)

(90%)

The Solaroz Project has an initial maiden JORC Mineral Resource, as follows³⁶:

- A JORC Inferred Mineral Resource Estimate (**MRE**) of **3.3Mt of LCE** (as outlined in Table 1 below).
- Within the 3.3Mt LCE MRE, there is a **high-grade core of 1.34Mt of LCE** with an average concentration of **405 mg/l Lithium** (at a 350 mg/l Lithium cut-off grade) (as outlined in Table 2 below).

Table 1: Solaroz JORC Inferred Mineral Resource Estimate

Units	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	LCE Tonnes
A (Upper Aquifer)	8,290,800,000	13.0	1,077,804,000	1,077,804,000,000	255	274,840,020,000	274,840	1,460,000
B (Halite Salt Unit)	1,968,600,000	4.0	78,744,000	78,744,000,000	345	27,166,680,000	27,167	140,000
C (Lower Aquifer)	7,584,000,000	11.5	872,160,000	872,160,000,000	374	326,187,840,000	326,188	1,730,000
Total	17,843,400,000	11.4	2,028,708,000	2,028,708,000,000	310	628,194,540,000	628,195	3,330,000

Notes:

- This Mineral Resource Estimate encompasses the Mario Angel, Chico I, Chico V, Chico VI, Payo 2 South and Silvia Irene concessions
- Lithium (Li) is converted to lithium carbonate (Li₂CO₃) equivalent (LCE) using a conversion factor of 5.323
- Totals may differ due to rounding
- Reported at a zero Lithium mg/l cut-off grade

Table 2: High-Grade Core within Solaroz JORC Inferred Mineral Resource Estimate

Units	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	LCE Tonnes
A	325,000,000	13.0	42,250,000	42,250,000,000	376	15,886,000,000	16,000	85,000
B	690,400,000	4.0	27,616,000	27,616,000,000	379	10,466,464,000	10,000	56,000
C	4,787,600,000	11.5	550,574,000	550,574,000,000	408	224,634,192,000	225,000	1,195,000
Total	5,803,000,000	10.7	620,440,000	620,440,000,000	405	250,986,656,000	251,000	1,340,000

Notes:

- The high-grade core is a JORC Inferred Mineral Resource estimated within the mineralisation envelope of (not in addition to) the Mineral Resource Estimate outlined in Table 1 (above)
- Reported at a 350 mg/l Lithium cut-off grade
- Refer Notes (b) and (c) of Table 1 (above)

Table 3: Mario Angel Concession - JORC Inferred Mineral Resource Estimate

Units	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	LCE Tonnes
A	285,680,000	13.0	37,138,400	37,138,400,000	337	12,515,640,800	12,500	67,000
B	170,230,000	4.0	6,809,200	6,809,200,000	364	2,478,548,800	2,500	13,000
C	641,550,000	11.5	73,778,250	73,778,250,000	358	26,412,613,500	26,500	140,000
Total	1,097,460,000	10.7	117,725,850	117,725,850,000	352	41,406,803,100	41,500	220,000

Notes:

- This Mineral Resource Estimate encompasses the Mario Angel concession only and is within (not in addition to) the Mineral Resource Estimate outlined in Table 1 (above)
- Refer Notes (b) to (d) of Table 1 (above)

For further details, refer to the Company's ASX Announcement dated 29 June 2023 entitled "Significant Maiden JORC Lithium Resource of 3.3Mt LCE at Solaroz Project in Argentina".

³⁶ Refer LEL ASX Announcement dated 29 June 2023: Significant Maiden JORC Lithium Resource of 3.3Mt LCE at Solaroz Project in Argentina

Burke Graphite Project (Queensland, Australia)

(100%)

The Burke Deposit (on the Burke EPM 25443 tenement) has a JORC Mineral Resource (initially defined in 2017³⁷ and upgraded in April 2023³⁸) as follows:

- **Total Mineral Resource of 9.1Mt at 14.4% Total Graphitic Carbon (TGC) for a total of 1.3Mt contained graphite** (at a 5% TGC cut-off grade), comprising:
 - **Indicated Mineral Resource of 4.5Mt at 14.7% TGC for 670kt of contained graphite;** and
 - **Inferred Mineral Resource of 4.5Mt at 14.2% TGC for 640kt of contained graphite.**
- Within the mineralisation envelope there is included a higher grade **Total Mineral Resource of 7.1Mt at 16.2% TGC for 1.1Mt of contained graphite** (at a 10% TGC cut-off grade).³⁹

Mineral Resource Category	Weathering State	Resource (Mt)	Total Graphitic Carbon (TGC) (%)	Contained Graphite (kt)
Indicated Mineral Resource	Weathered	0.2	12.5	30
	Primary	4.3	14.8	640
	Sub-total	4.5	14.7	670
Inferred Mineral Resource	Weathered	0.1	8.1	10
	Primary	4.4	14.4	630
	Sub-total	4.5	14.2	640
Total Indicated and Inferred Mineral Resource	Weathered	0.3	11.1	40
	Primary	8.7	14.6	1,270
	Total	9.1	14.4	1,310

Notes:

- Mineral Resource estimates are reported above a cut-off grade of 5% TGC; Mineral Resources reported on a dry in-situ basis; Totals may differ due to rounding..
- For further details, refer to LEL ASX Announcement dated 5 April 2023 entitled "Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence"

Corella Graphite Project (Queensland, Australia)

(100%)

The Corella Deposit (on the Corella EPM 25696 tenement) has a JORC Mineral Resource, as follows:⁴⁰

- Inferred Mineral Resource delivers **13.5Mt at 9.5% TGC for 1.3Mt contained graphite** (at a 5% TGC cut-off grade).
- Within the mineralisation envelope, there is included a higher grade Inferred Mineral Resource of **4.5Mt at 12.7% TGC** for 0.57Mt of contained graphite (at a 10% TGC cut-off grade).⁴¹

Mineral Resource Category	Weathering State	Resource (Mt)	TGC (%)	Contained Graphite (kt)
Inferred Mineral Resource	Weathered	4.5	9.7	440
	Primary	9.0	9.3	840
	Total	13.5	9.5	1,280

Notes:

- Mineral Resource estimates are reported above a cut-off grade of 5% TGC; Mineral Resources reported on a dry in-situ basis; Totals may differ due to rounding.
- For further details, refer to LEL ASX Announcement dated 16 June 2023 entitled "Maiden Corella Graphite Mineral Resource Delivers Doubling of Graphite Inventory"

37 Refer Strike Resources Limited (ASX:SRK) ASX Announcement dated 13 November 2017: Maiden Mineral Resource Estimate Confirms Burke Project as One of the World's Highest-Grade Natural Graphite Deposits

38 Refer LEL ASX Announcement dated 5 April 2023: Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence

39 Refer Mineral Resource estimates at different %TGC cut-off grades reported in Table 2 of LEL ASX Announcement dated 5 April 2023: Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence

40 Refer LEL ASX Announcement dated 5 April 2023: Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence

41 Refer Mineral Resource estimates at different %TGC cut-off grades reported in Table 3 of LEL ASX Announcement dated 5 April 2023: Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence

JORC CODE (2012 EDITION) CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA FOR EXPLORATION RESULTS RELATIING TO THE SOLAROZ LITHIUM BRINE PROJECT (ARGENTINA)

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	Explanation	Comments
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used Aspects of the determination of mineralisation that are material to the Public report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<p>The pre-collars from surface were drilled using the Tricone drilling method, and chips were logged as collected, to variable depths below surface, depending on the hole.</p> <p>The pre-collar was then cemented in and HQ Core drilled.</p> <p>Core recovery from the HQ was carefully measured by comparing the measured core to the core runs, and then a total recovery per section determined.</p> <p>HQ Drill core sampling was undertaken to obtain representative samples of the stratigraphy and sediments that host brine.</p> <p>Water/brine samples were taken from target intervals, using Single Packer (generally descending), Double Packer (generally ascending, as check samples) and Airlift sampling (depending on the condition of the drillhole)</p> <p>Brine was collected by purging isolated sections of the hole of all fluid, removing more than three volumes of the sampling chamber and drilling rods to minimise the possibility of contamination by drilling fluid. The hole was then allowed time to re-fill with ground water, where a sample for laboratory analysis is collected (~1.5L), with collection of the hole in triplicate.</p> <p>The casing lining the hole ensures contamination with water from higher levels in the borehole is likely prevented. Samples were taken systematically in the holes based upon geological logging and conductivity testing of water.</p> <p>Conductivity and Density measurements are taken with a field portable High Range Hanna multi parameter meter and floating densimeters.</p> <p>Testing of the chemical composition (including Lithium, Potassium, Magnesium concentrations) of brines are undertaken at a local laboratory in Argentina.</p> <p>At SOZDD002 - water/brine samples have been collected from various intervals, as outlined in Table 13.</p> <p>At SOZDD004 - water/brine samples have been collected from various intervals, as outlined in Table 12.</p> <p>At SOZDD005 - water/brine samples have been collected from various intervals, as outlined in Table 11.</p> <p>At SOZDD006 - water/brine samples have been collected from various intervals, as outlined in Table 10.</p> <p>At SOZDD007 – fresh/industrial water samples have been collected from various intervals, as outlined in Table 9.</p>
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method etc.). 	<p>The pre-collar from surface was drilled using Tricone drilling method; chips were logged as collected, to the pre-collar depth for the hole.</p> <p>The pre-collar was then isolated and drilling continued in HQ Core.</p> <p>Core recovery from the HQ was carefully measured by comparing the measured core to the core runs and then a total recovery per section determined.</p> <p>HQ Drill core sampling was undertaken to obtain representative samples of the stratigraphy and sediments that host brine.</p>

Criteria	Explanation	Comments
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measurements taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<p>Core recovery from the HQ was carefully measured by comparing the measured core to the core runs, and then a total recovery per section determined.</p> <p>No relationship exists between core recovery and lithium concentration, as the lithium is present in brine. Brine will be extracted and the sediments are not the target for lithium extraction.</p>
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography. The total length and percentage of the relevant intersections logged 	<p>Lithium Energy has geologists at each drillhole site logging the drill core 24/7.</p> <p>The core is logged by a senior geologist and contract geologists (who are overseen by the senior geologist). The senior geologist also supervises the taking of samples for laboratory analysis.</p> <p>Logging is both qualitative and quantitative in nature. The relative proportions of different lithologies which have a direct bearing on the overall porosity, contained and potentially extractable brine are noted, as are more qualitative characteristics such as the sedimentary facies. Cores are photographed.</p> <p>Downhole geophysical logging was undertaken by Zealandez, a Salta (Argentina) based specialist Borehole Geophysical Logging company, with a number of logging probes, including, Caliper, Conductivity, Resistivity, Borehole Nuclear Magnetic Resonance (NMR or BMR), Spectral Gamma.</p> <p>The BMR probe in particular provides information of Total Porosity, Specific Retention and Specific Yield.</p> <p>The total porosity of a rock formation represents the total pore space. Although Total Porosity has two principal components, Specific Retention and Specific Yield:</p> <p>(a) Specific Retention (Sr), represents the portion of the Total Porosity that is retained by clay and capillary bound sections of a sediment.</p> <p>(b) Specific Yield (Sy) is the amount of water/brine that is actually available within the sediment for groundwater pumping.</p> <div data-bbox="742 1406 1388 1832"> </div> <p>Figure 25: Specific Retention and Specific Yield, as part of Total Porosity (Source: Zealandez)</p> <p>Specific Yield is a key parameter when calculating a Lithium Brine Resource – the Company has determined Specific Yield from Geophysical Logging with a down hole BMR probe.</p> <p>Physical samples of the core are also sent to the Geosystems Analysis porosity laboratory in Arizona (USA) for measurements of</p>

Criteria	Explanation	Comments
		specific yield and total porosity. This sampling is undertaken as a check on the BMR sampling, with a comparison of variance and averages undertaken.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffles, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<p>Water/brine samples were collected by using an inflatable packer to purge the hole of all fluid, to minimise the possibility of contamination by drilling fluid. The packer allowed sampling of isolated sections of the hole, allowing the packer interval to re-fill with groundwater following purging. Samples were then taken from the relevant section, with three well volumes of brine purged where this was possible. Lower flows were obtained from the halite unit.</p> <p>Packer sampling is considered the most appropriate way for collecting brine samples. All methods have advantages and disadvantages.</p> <p>Field duplicate samples are collected in the field, with samples collected in triplicate. Single packer samples are taken during the progression of drilling. Once the hole is completed, double packer samples are taken in an upward progression leaving the hole, as a check on the initial single packer samples.</p> <p>Brine sample sizes are considered appropriate to be representative of the formation brine.</p> <p>Cores are geologically logged and ~30cm intervals from the base of Lexan tubes are collected every ~12m. These samples are cut from the bottom of the Lexan tubes and sealed with caps to prevent moisture loss, before sending to the Geosystems Analysis laboratory in the USA for testing. Cores are representative of the interval in which they are taken.</p>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<p>Samples are transported to the Geosystems Analysis (GSA) porosity testing laboratory in Arizona, USA. The laboratory has extensive experience testing core samples from salt lakes for porosity. Sub-samples are analysed in a secondary porosity laboratory, as a check on the GSA results.</p> <p>Brine samples were sent to the Alex Stewart International Laboratory in Jujuy, Argentina, where detailed chemistry was processed. The laboratory is ISO 9001 and ISO 14001 certified and specialises in the chemical analysis of brines and inorganic salts, with considerable experience in this field.</p> <p>Table 13 contains the brine sampling results, in respect of SOZDD002.</p> <p>Table 12 contains the brine sampling results, in respect of SOZDD004.</p> <p>Table 12 contains the brine sampling results, in respect of SOZDD005.</p> <p>Table 11 contains the brine sampling results, in respect of SOZDD006.</p> <p>Table 10 contains the field fresh/industrial water sampling results, in respect of SOZDD007.</p> <p>Field duplicate samples returned comparable values, within acceptable limits. Two certified standard samples are submitted regularly with the brine samples and analyses are considered to be acceptable. Blank distilled water samples are also submitted as part of the QA/QC regime, with 20% QA/QC samples (duplicates, standards, blanks).</p> <p>Samples are analysed in a secondary laboratory as an external check on the primary assay results. This is the Alex Stewart Laboratory in Mendoza, Argentina, where samples are submitted with different sample numbers to the primary samples.</p>
Verification of sampling	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative 	Field duplicates, standards and blanks are used to monitor potential contamination of samples and the repeatability of analyses.

Criteria	Explanation	Comments
<i>and assaying</i>	<p><i>company personnel.</i></p> <ul style="list-style-type: none"> <i>The use of twinned holes</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physically and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i> 	<p>Duplicate and blank samples were sent to the Alex Stewart Laboratory in Mendoza, Argentina, as blind duplicates and standards, for analysis in this secondary laboratory.</p> <p>Samples were accompanied by chain of custody documentation.</p> <p>Assay results were imported directly from laboratory spreadsheet files to the Project database.</p>
<i>Location of data points</i>	<ul style="list-style-type: none"> <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resources estimation.</i> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i> 	<p>Locations are positioned using modern Garmin handheld GPS units with an accuracy of +/- 5m.</p> <p>The grid system used is : POSGAR 94, Argentina Zone 3.</p> <p>Topographic control was obtained by handheld GPS units and the topography is mostly flat with very little relief.</p>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <i>Data spacing for reporting of Exploration Results.</i> <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Reserve and Ore Reserve estimation procedure(s) and classifications applied.</i> <i>Whether sample compositing has been applied.</i> 	<p>Water/brine samples were collected within isolated sections of the hole based upon the results of geological logging.</p> <p>Brine samples were collected with a frequency of every ~18 to ~24m down hole with single packer samples. Double packer sample frequency ascending in the holes depended on hole stability and other factors. Samples were taken over ~1m intervals, the limitation of the packer spacing, with samples taken less frequently than the descending single packer samples.</p> <p>Laboratory porosity samples were collected on a nominal ~12m spacing down hole, but samples analysed depended on the checking of sample condition at the laboratory.</p> <p>Samples were not composited for reporting.</p>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i> 	<p>The brine concentrations being explored for generally occur as sub-horizontal layers and lenses hosted by conglomerate, gravel, sand, salt, silt and/or clay. Vertical diamond drilling is ideal for understanding this horizontal stratigraphy and the nature of the sub-surface brine bearing aquifers</p>
<i>Sample security</i>	<ul style="list-style-type: none"> <i>The measures taken to ensure sample security.</i> 	<p>Data was recorded and processed by trusted employees and contractors and overseen by senior management ensuring the data was not manipulated or altered.</p> <p>Samples are transported from each drill site to secure storage at the site camp on a daily basis.</p>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <i>The results of and audits or reviews of sampling techniques and data.</i> 	<p>No audits or reviews have been conducted to date.</p> <p>Drilling is on-going. The Company's independent Competent Person (in respect of the recent delineation of a JORC Mineral Resource for the Project) has approved the procedures to date and visited the site (on multiple occasions) to review first-hand the drilling practice and logging, sampling, QA/QC controls and data management.</p>

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	Explanation	Comments
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interest, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<p>The Solaroz Lithium Brine Project comprises 8 concessions totalling approximately 12,000 hectares (Solaroz Concessions or Project) located in the Jujuy Province in northern Argentina (refer Figure 3):</p> <ol style="list-style-type: none"> (1) Payo 1 – File N°1516-M-2010 (1,973.24ha) (2) Payo 2 – File N°1515-M-2010 (2,192.63ha; comprising South block (1,435.13ha) and North block (757.5)) (3) Chico I – File N°1229-M-2009 (835.24ha) (4) Chico V – File N°1312-M-2009 (1,800ha) (5) Chico VI – File N°1313-M-2009 (1,400.18ha) (6) Silvia Irene, File N°1706-S-2011 (2,348.13ha) (7) Mario Angel – File N°1707-S-2011 (542.92ha) (8) Payo – File N°1514-M-2010 (987.62ha) <p>The Company has a 90% shareholding in Solaroz S.A. (formerly Hananta S.A.), an Argentine company which, in turn, owns the Solaroz Concessions - refer to the Company's ASX announcement dated 31 October 2022 entitled "Early Exercise of Option to Acquire Solaroz Lithium Brine Project Concessions".</p>
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgement and appraisal of exploration by other parties. 	<p>Extensive open file drilling, geochemistry, geophysical and development work from exploration to development, and an operating mine have been carried out by Allkem Limited (ASX/TSX:AKE) (formerly Orocobre Limited) (Allkem or Orocobre) and Lithium Americas Corporation (TSX/NYSE:LAC) (Lithium Americas).</p> <p>The Company has reviewed the relevant open file published documents and images relating to the Salar de Olaroz (Olaroz Salar) and from this review made its interpretations relating to the Company's Solaroz Concessions.</p> <p>The published data upon which the geological model for the Company's Solaroz Project has been developed includes the following works:</p> <ul style="list-style-type: none"> Houston, J., Gunn, M., Technical Report on the Salar De Olaroz Lithium-Potash Project, Jujuy Province, Argentina. NI 43-101 report prepared for Orocobre Limited, 13 May 2011. Orocobre Limited ASX/TSX Announcement dated 23 October 2014 entitled "Olaroz Project - Large Exploration Target Defined Beneath Current Resource". Allkem Limited ASX/TSX Announcement dated 27 March 2023, "Olaroz resource increases 27% to 20.7 million tonnes LCE". Reidel, F., Technical Report on Cauchari JV Project – Updated Mineral Resource Estimate, prepared for Advantage Lithium Corporation, 19 April 2019. Orocobre Limited ASX/TSX Announcement dated 10 January 2019 entitled "Cauchari Drilling Update – Phase III Drilling Complete". Burga, E. et al, Technical Report - Updated Feasibility Study and Mineral Reserve Estimation to support 40,000 tpa Lithium Carbonate Production at the Cauchari-Olaroz Salars, Jujuy Province, Argentina, prepared for Lithium Americas Corporation, 30 September 2020. Salfity Geological Consultants Map for Salar de Olaroz
Geology	<ul style="list-style-type: none"> Deposit type, geological settings and style of mineralisation. 	<p>The Salar de Olaroz originated as a structurally bounded, closed basin during the late Paleogene-Early Neogene. During much of the Miocene it appears to have slowly filled with medium to</p>

Criteria	Explanation	Comments
		<p>coarse grained alluvial fans and talus slopes eroded from the surrounding mountain ranges. As accommodation space was filled the sediments became progressively finer grained, braidplain, sandflat, playa and fluvial architectures are noted in the Upper Miocene and Pliocene. As the climate became more arid during the Pliocene evaporitic deposits first appeared. Normal faulting created additional accommodation space probably initiated at this time too.</p> <p>The lowest drilled sediments indicate an arid climate with abundant halite. These Units are probably Pleistocene in age and are likely contiguous with the lowest drilled and reported sediments in the Salar de Cauchari to the south, suggesting the two basins operated as a continuous hydrologic entity at that stage. Succeeding Units suggest continued subsidence in the centre of the basin, with a climate that was variable, but never as arid as during the period dominated by the abundant Halite development. Influx of water and sediment is primarily from the Rosario catchment at the north of Salar de Olaroz and alluvial fans around the edge of the basin.</p> <p>At depth a thick highly porous sand aquifer has been intersected in both the Salar de Cauchari (by Lithium Americas) and the Salar de Olaroz (by Orocobre). Due to its depth the aquifer was only intersected in a few holes, as of the 23 October 2014 Orocobre announcement. However, more recent drilling at Olaroz has confirmed the extent and importance of this unit.</p> <p>The significance of the 'Deep Sand Unit' is that sands of this type have free draining porosity of up to 25%, based on previous third party test work, and the sands unit could hold significant volumes of lithium-bearing brine which could be added to the resource base by future drilling" (per Orocobre's 23 October 2014 announcement).</p>
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material for the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> Easting and northing of the drill hole collar Elevation or RL (Reduced level-elevation above sea level in metres) and the drill hole collar Dip and azimuth of the hole Down hole length and interception depth Hole length If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<p>Details of the collar location, azimuth, depth for Drillhole ID's SOZDD001 to SOZDD007 are reported in Table 8.</p> <p>All holes are drilled vertically through the unconsolidated clastic sediments and halite (salt) unit.</p>

Criteria	Explanation	Comments
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration results, weighing averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<p>Where the Company has undertaken data aggregation:</p> <ul style="list-style-type: none"> Within a given defined aquifer, the Company has aggregated the assays based on a numerical average of the samples. Total Porosity and Specific Yield are averaged over the aquifers' interpreted width, with the underlying Total Porosity and Specific Yield being collected at ~2cm intervals from down hole geophysical logging. <p>Mg/Li ratio have been reported which is a standard representation.</p> <p>Elemental lithium has been converted to Lithium Carbonate Equivalent (LCE) using a conversion factor of 5.323 to convert Li to Li_2CO_3; reporting lithium values in LCE units is a standard industry practice.</p>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known') 	<p>It is assumed that the brine layers lie sub-horizontal and, given that the drillhole is vertical, that any intercepted thicknesses of brine layers would be of true thickness.</p>
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts would be included for any significant discovery being reported. These should include, but not be limited too plan view of drill hole collar locations and appropriate sectional views. 	<p>Figure 3 shows the location of the Solaroz Concessions (and relevant infrastructure) adjacent to the concessions held by Allkem and Lithium Americas, and the location of drillholes SOZDD001 to SOZDD007, on the Olaroz Salar.</p> <p>Figure 4 shows the location of drillholes SOZDD001 to SOZDD007 within the Solaroz Concessions and highlights of the drilling results (to date).</p> <p>Figure 1 illustrates the Project's geological model.</p> <p>Figure 2 illustrates the resource model for the mineral resource estimate.</p> <p>Downhole Geophysical logging of holes was undertaken with a number of logging probes, including, Caliper, Conductivity, Resistivity, BMR, Spectral Gamma. The BMR probe in particular provides information of Total Porosity, Retained Porosity (specific retention) and Specific Yield.</p> <p>Figure 26 shows the drillhole lithology stratigraphy for SOZDD007 (to date).</p> <p>Figure 27 shows the drillhole lithology stratigraphy for SOZDD006.</p> <p>Figure 28 shows the geophysical hole logging results and drillhole lithology stratigraphy for SOZDD005.</p> <p>Figure 29 shows the geophysical hole logging results and drillhole lithology stratigraphy for SOZDD004.</p>

Criteria	Explanation	Comments
		Figure 30 shows the geophysical hole logging results and drillhole lithology stratigraphy for SOZDD002.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<p>Historical and open file reports have been collated and are consistent across numerous companies' projects on the Olaroz Salar and Salar de Cauchari (to the south) - the Company has not validated these results but has no reason to doubt the balanced reporting of the various technical open file reports.</p> <p>The results in this report are from the second (SOZDD002), fourth (SOZDD004), fifth (SOZDD005), sixth (SOZDD006) and seventh (SOZDD007) holes drilled by the Company on the Solaroz Concessions.</p>
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations, geophysical survey results, geochemical survey results, bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or containing substances. 	<p>As part of the review of exploration results in the Olaroz Salar, the Company has analysed a number of Gravity and AMT surveys conducted by Orocobre, some of which were undertaken over or closely adjacent to the Solaroz Concessions. The proximity of these surveys has been very useful and highly encouraging for the Company to develop in greater detail an exploration outline for the Solaroz Concessions. The Gravity Line surveys undertaken by Orocobre were conducted principally to determine the depth below surface to the basement rock in the Olaroz Salar, which practically sets the lowest depth limit to which lithium-rich brines could be encountered in the basin. The AMT Line surveys (which measure resistivity) were conducted to identify the interfaces between fresh water and the more conductive brines, facilitating the identification of the location and extent of potentially lithium-rich brines occurring above the basement rock.</p> <p>The Company has undertaken its own geophysics programme across all the Solaroz Concessions, comprising:</p> <ul style="list-style-type: none"> Passive seismic surveys, to determine the depth of the underlying basement rock (i.e. the theoretical limit of potential lithium mineralisation) underneath the concessions; and Transient Electromagnetic geophysics (TEM), to identify the location and thickness of potential lithium-hosting conductive brines underneath the Solaroz Concessions. <p>Further details are also in the Company's ASX announcement dated 18 August 2022 entitled "Highly Encouraging Geophysics Paves Way for Commencement of Drill Testing of Brines at Solaroz".</p> <p>Some of the TEM survey lines undertaken across the Solaroz Concessions (also identified) are also shown in Figure 6 of the Company's ASX announcement dated 16 November 2022 entitled "Drilling Completed at Maiden Drillhole at Solaroz Lithium Brine Project".</p> <p>Two passive seismic surveys have been carried out – an initial survey consisting of lines in different orientations through the Solaroz Concessions, followed by a more detailed grid programme, with ~1,242 stations measured.</p> <p>The results of the two passive seismic programmes have been interpreted and referenced against the TEM survey data, to develop the best possible geophysical interpretation. This data has incorporated the initial results of the diamond core drilling programme to develop the geological model for the Project and the resource model for the mineral resource estimate.</p> <p>The (field and assay) results of packer sampling and geophysical hole logging at the first drillhole (SOZDD001, located on the Mario Angel concession) at Solaroz has also been previously announced – refer to the Company's ASX announcement dated 10 March 2023 entitled "Positive Specific Yields and Significant Averaged Lithium Concentrations in SOZDD001 at Solaroz Lithium Brine Project".</p>

Criteria	Explanation	Comments
		<p>The (field) results of initial packer sampling at the second drillhole (SOZDD002, located on the Chico V concession) at Solaroz has also been previously announced – refer to the Company's ASX announcement dated 31 January 2023 entitled "Drilling Continues to Encounter Significant Intersections of Highly Conductive Brines at Solaroz Lithium Project".</p> <p>The (field and assay) results of packer sampling and geophysical hole logging at the third drillhole (SOZDD003, located on the Chico I concession) at Solaroz has also been previously announced – refer to the Company's ASX announcement dated 14 March 2023 entitled "Further Significant Lithium Discovery Extends Mineralisation at Solaroz Lithium Brine Project".</p> <p>The initial (field and assay) results of packer sampling at the fourth drillhole (SOZDD004, located on the Chico I concession) and fifth drillhole (SOZDD005, on the Chico VI concession) have also been previously reported – refer to the Company's ASX Announcement dated 15 May 2023 entitled "Further Assays Confirm Significant Lithium Brine Concentrations Across Massive Intersections at Solaroz".</p>
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, providing this information is not commercially sensitive. 	<p>The Company is undertaking a major exploration programme on the Solaroz Concessions comprising comprehensive interpretation and modelling of results from geophysical surveys (passive seismic and TEM surveys) and a significant (diamond with rotary precollars) drilling programme (initially 10 holes, ~5,000m), aimed at defining lithium bearing brines of economic interest, obtaining information related to the hydrogeological and geochemical characteristics of the brine rich aquifers (including data related to basic physical parameters of the different hydrogeological units) that comprises the Olaroz Salar underneath the Solaroz Concessions. The Company has delineated an initial JORC Inferred Mineral Resource estimate of LCE on the Solaroz Concessions.</p> <p>7 holes have been drilled to date - SOZDD001 (on the Mario Angel concession), SOZDD002 (on the Chico V concession), SOZDD003 (on the Chico I concession), SOZDD004 (on the Chico I concession), SOZDD005 (on the Chico VI concession), SOZDD006 (on the Chico VI concession, pending hole completion) and SOZDD007 (on the Payo 1 concession, pending hole completion).</p> <p>Additional holes are planned in the Central Block (Chico I, V and VI, Payo 2 South and Silvia Irene concessions), to improve the confidence in correlation of lithology, porosity and brine concentration between holes in the Central Block. Drilling will be undertaken to evaluate the Northern Block (Payo 1 and Payo 2 North concessions). The Company expects that the current JORC Inferred Mineral Resource (of LCE) will be upgraded as a consequence of on-going additional drilling on the Solaroz Concessions.</p> <p>Large diameter wells will be drilled and installed on relevant areas for pump testing. Hydrological studies will be undertaken, to support groundwater modelling to define lithium brine extraction rates.</p> <p>Process test work (which is equivalent to metallurgical test work) will be undertaken on relevant lithium brine samples.</p> <p>The Company is finalising a Scoping Study for the production of battery grade lithium carbonate from the lithium rich brines at Solaroz, via both traditional pond evaporation and direct lithium extraction (DLE) technology).</p> <p>The Company will be undertaking an assessment of relevant mine economic criteria to assist in developing a pathway to the completion of feasibility study(s) for the development of the Project into production.</p>

Summary of Sampling and Testing

- A 'pre-collar' is isolated at the top of each hole, to separate the fresh/brackish water and prevent dilution with the sampling of the brines underneath; the depth of this pre-collar varies from hole to hole.
- Sampling of encountered brines are conducted by the use of single packers (generally descending the hole), double packers (generally ascending the hole, as check samples) and or airlift (pumping), depending on the condition of the drill hole. Sampling may not be contiguous across the hole depth range, due to the prevailing sampling conditions.
- Testing of brines for conductivity, flow rates and density are undertaken in the field, with testing of the chemical composition (e.g. Lithium, Potassium, Magnesium concentrations) of brines being undertaken at a local laboratory in Argentina.
- Core samples are collected for brine extraction and chemical analysis and specific yield and porosity testwork at a US-based laboratory.
- Geophysical hole logging is undertaken to provide measurements including total porosity and specific yield (which relates to the amount of brine that can ultimately be extracted), conductivity and spectral gamma.
- The assay results (from brine sampling) are reviewed in conjunction with the geophysical hole logging data (and core sampling results, where applicable) to calculate average lithium and magnesium concentrations across relevant (upper and lower) aquifers with respect to each hole.

Table 8 - Drillhole Collar Location, Azimuth and Depth for Diamond Core Holes SOZDD001 to SOZDD007

Hole ID	Easting	Northing	Elevation	Inclination	Azimuth (Grid)	Approx. Hole Depth
	POSGAR Zone 3		AHD	Degrees	Degrees	Metres
SOZDD001	3422471	7409972	3908	90	0	337.5
SOZDD002	3430878	7423314	3925	90	0	482.5
SOZDD003	3433485	7421712	3910	90	0	590
SOZDD004	3430878	7423314	3905	90	0	787.5
SOZDD005	3433485	7421712	3909	90	0	640
SOZDD006	3425341	7419415	3915	90	0	623
SOZDD007	3436083	7427413	3910	90	0	224

Notes:

- (1) SOZDD001 - Drilling was stopped for operational reasons whilst still in lithium brine mineralisation in the Deep Sand Unit, which remains open at depth⁴²
- (2) SOZDD002 – Drilling was terminated due to unstable drill hole conditions⁴³
- (3) SOZDD003 – Drilling was terminated due to drill rig limitations; the hole was still in lithium brine mineralisation (hosted in sandstone units and fine gravels); the full depth of lithium mineralisation is yet to be determined⁴⁴
- (4) SOZDD004 - Drillhole completed⁴⁵
- (5) SOZDD005 - Drillhole completed⁴⁵
- (6) SOZDD006 - Drillhole completed⁴⁶
- (7) SOZDD007 - Drilling on-going

⁴² Refer LEL ASX Announcements dated 10 March 2023: Positive Specific Yields and Significant Averaged Lithium Concentrations in SOZDD001 at Solaroz Lithium Brine Project, 16 November 2022: Drilling Completed at Maiden Drillhole at Solaroz Lithium Brine Project, 1 November 2022: Further Significant Lithium Concentrations Encountered in Maiden Drillhole at Solaroz Lithium Brine Project, 19 October 2022: Major Lithium Discovery Confirmed In First Drillhole of Maiden Programme at the Solaroz Lithium Brine Project and 5 October 2022: Significant Intersection of Highly Conductive Brines in Maiden Drillhole at Solaroz Lithium Brine Project

⁴³ Refer LEL ASX Announcements dated 27 February 2023: Drilling Continues to Advance at Solaroz Lithium Brine Project and 31 January 2023: Drilling Continues to Encounter Significant Intersections of Highly Conductive Brines at Solaroz Lithium Project

⁴⁴ Refer LEL ASX Announcement dated 14 March 2023: Further Significant Lithium Discovery Extends Mineralisation at Solaroz Lithium Brine Project

⁴⁵ Refer LEL ASX Announcements dated 15 May 2023: Further Assays Confirm Significant Lithium Brine Concentrations Across Massive Intersections at Solaroz, 12 May 2023: Massive Intersections of Brine Continue at Solaroz at up to ~780 Metre Depth, 1 May 2023: Massive Intersections of Lithium Rich Brine Confirm World Class Potential of Solaroz Lithium Project and 19 April 2023: Holes 4 and 5 Encounter Significant Intersections of Conductive Brines at Solaroz Lithium Project

⁴⁶ Refer LEL ASX Announcement dated 27 July 2023: Highest Lithium Concentrations Encountered at Solaroz Lithium Project in Hole 6

Table 9 : Results of Sampling at Drillhole SOZDD007

Zone	Intersection Samples	Hole Depth Range		Li mg/l	Mg mg/l	Mg/Li Ratio	Conductivity (mS/cm)	pH	TDS (g/l)	Flow Rate (l/min)	Density (g/ml)
		From (m)	To (m)								
Fresh/ Industrial Water	1AL	23	25	<10	14	1.4	0.004	8.4	1.8	14	1.00
	2AL	61	66	<10	17	1.7	0.003	8.4	1.5	13	1.00
	3AL	85	90	<10	18	1.8	0.003	8.15	1.25	14	1.00
	4AL	135	140	Pending assays			0.730	7.88	1.38	17	1.00
	5	170	185	Pending assays			61	7.6	30	6.1	1.03
	6	185	209	Pending assays			150	7.1	73	6.5	1.08
	Drilling continuing in brines; current depth of drillhole at ~224m; further sampling ongoing										

Notes:

- (1) A tri-cone pre-collar has been isolated at a drill hole depth of ~166 metres, to separate the fresh/brackish water and to prevent dilution with the sampling and assaying of the deeper brines.
- (2) Sampling were initially conducted using airlift and pumping (designated with 'AL' in the Sample ID) , before transitioning to the use of single packers.

Table 10 : Results of Sampling at Drillhole SOZDD006

Zones	Intersection Samples	Hole Depth Range		Li mg/l	Mg mg/l	Mg/Li Ratio	Conductivity (mS/cm)	pH	TDS (g/l)	Flow Rate (l/min)	Density (g/ml)
		From (m)	To (m)								
Fresh to Brackish Zone	1AL	67	71	25	187	7.48	28.26	7.44	14.1	12.5	1.01
	2AL	107	110	Not assayed			124.6	7.2	62.3	8.3	1.02
Upper Aquifer	3AL	134	152	214	509	2.37	179.4	7.33	89.84	3.07	1.1
	4	152.5	176.5	327	785	2.40	228.2	6.97	114	3.03	1.15
	5	176.5	200	331	708	2.14	235	7	117	3.38	1.16
	6	200	224.5	354	741	2.09	236.4	6.67	118	2.2	1.17
Lateral Halite Equivalent Unit	7	227.5	248.5	372	813	2.18	237.8	6.71	119	2.0	1.17
	8	272.5	296.5	328	666	2.03	218	6.82	109	0.3	1.14
Lower Aquifer	9	296	320	448	675	1.50	244	6.6	123	3.3	1.19
	10	344	368	483	880	1.96	249.8	6.58	125.9	2	1.2
	11	416	440	543	799	1.47	247	6.5	124	1.3	1.2
	12	488	512	594	1133	1.91	250	6.5	122	1.3	1.2

Notes:

- (1) A tri-cone pre-collar has been isolated at a drill hole depth of ~45 metres, to separate the fresh/brackish water and to prevent dilution with the sampling and assaying of the deeper brines.
- (2) Sampling were initially conducted using airlift and pumping (designated with 'AL' in the Sample ID), before transitioning to the use of single packers.
- (3) Exact aquifer/interval boundaries will be determined after completion of geophysical logging of the hole.

Table 11 : Results of Sampling at Drillhole SOZDD005

Zones	Intersection Sample ID	Hole Depth Range		Li (mg/l)	Mg (mg/l)	Mg/Li Ratio	Conductivity (mS/cm)	pH	TDS (g/l)	Flow Rate (l/min)	Density (g/ml)
		From (m)	To (m)								
Fresh to Brackish Zone	1	86.5	110.5	243	473	1.95	194.7	6.8	97.4	20	1.134
Upper Aquifer	2	110	134.5	295	540	1.83	218.6	6.7	109.8	11	1.16
	29DP	111.3	112.90	315	580	1.84	223.2	6.8	112	9.1	1.16
	3	134	158.5	305	562	1.84	219	6.75	109.7	13.3	1.165
	4	158.5	182.5	301	561	1.86	220.3	6.77	110.2	18.2	1.17
	28DP	159.3	160.9	Assays pending			238.9	6.51	119.4	6.1	1.18
	5	182.5	206.5	345	654	1.9	222.5	6.75	111.0	8	1.17
	6	230.50	254.5	421	771	1.83	226	6.72	113	11.1	1.18
Halite (Salt) Layer	7	254	278	433	709	1.64	225	6.6	113.1	7.9	1.19
	8	278.5	302.5	439	718	1.64	232.4	6.42	116.3	2.7	1.195
Deep Sand Unit (Lower Aquifer)	9	302.5	326	408	775	1.9	231.5	6.9	115.8	7	>1.2
	10	326.5	350.5	356	684	1.92	221	6.7	111.1	10	>1.2
	11	350.5	374	430	712	1.66	232.6	6.5	116.3	10	>1.2
	12	374.5	398.5	468	740	1.58	236.2	6.64	118.1	10	>1.2
	27DP	375.5	376.5	505	749	1.48	238.5	6.75	119.2	9.5	>1.2
	13	398	422	479	684	1.42	233	6.7	116.7	6.5	>1.2
	14	422	446	475	755	1.59	230	6.6	115.3	6.5	>1.2
	15	446	470.5	480	850	1.77	238.9	6.5	119.2	7.1	>1.2
	26DP	447.3	448.9	508	827	1.63	245.1	6.47	122.5	6.7	>1.2
	16	470	494	472	905	1.92	224.4	6.84	112.5	11.1	>1.2
	17	494.5	518.5	490	703	1.43	236.7	6.37	118.1	2.4	>1.2
	18	518.5	542.5	495	717	1.45	242.2	6.56	121.3	10.9	>1.2
	25DP	519.3	520.9	501	783	1.56	242.4	6.71	120.3	2.2	>1.2
	19	542.5	566.5	492	746	1.52	219.3	6.75	109.7	13.3	>1.165
	22	542.5	566.5	492	746	1.52	242.6	6.34	121.3	8.0	>1.2
	20	566.5	602.5	486	885	1.82	243.70	6.31	121.9	6.25	>1.2
	21	590.5	614.5	507	928	1.83	237.6	6.55	118.8	6.9	>1.2
	24DP	595.3	596.9	504	794	1.58	242.8	6.58	121	10	>1.2
	23	614	638	496	798	1.61	250.1	6.61	122.2	1.1	>1.2

Notes:

- (1) A tri-cone pre-collar has been isolated at a drill hole depth of ~45 metres, to separate the fresh/brackish water and to prevent dilution with the sampling and assaying of the deeper brines.
- (2) Sampling of encountered brines were initially conducted by the use of single packers; additional sampling were undertaken via double packers (designated with 'DP' in the Sample ID).
- (3) Table is sorted by starting Hole Depth Range; accordingly, Sample ID's are not sequential.
- (4) Sample 19 was affected by dilution due to packer leakage allowing fresh water to penetrate. The lithium concentration for this section is still to be properly determined.

Table 12 : Results of Sampling at Drillhole SOZDD004

Zones	Intersection Sample ID	Hole Depth Range		Li (mg/l)	Mg (mg/l)	Mg/Li Ratio	Conductivity (mS/cm)	pH	TDS (g/l)	Flow Rate (l/min)	Density (g/ml)
		From (m)	To (m)								
Fresh to Brackish Zone	1	91	100	224	530	2.37	169	7.5	84.4	14.3	1.1
	2	111	120	298	566	1.9	208	7.2	104	14.3	1.146
Upper Aquifer	3	121	144	220	442	2	218	7	108.5	50	1.157
	4	145	168	215	423	1.97	214	7	107.1	14.3	1.16
	5	168	192	215	443	2.06	219.7	6.95	110	40	1.16
	6	193	216	288	593	2.06	223.5	6.8	111.8	33	1.17
	7	241	264.5	288	593	2.06	214.3	6.71	107.3	33	1.17
	8	265	287.5	239	494	2.07	219.5	6.85	110.3	22	1.187
Halite (Salt) Layer	9	288	312	174	363	2.09	220	7.15	110	25	1.85
	10	313	336	154	334	2.17	223	7.28	112.2	15.4	1.194
Deep Sand Unit (Lower Aquifer)	11	337	360	424	627	1.48	212.7	6.8	106.4	20	1.2
	12	360	384	508	655	1.29	221	6.84	111.3	15.4	1.21
	13	384.5	407.5	500	638	1.28	219	6.65	108.7	25	1.2
	14	408.5	431.5	461	623	1.35	217.1	6.72	108.6	16.6	1.2
	15	432	456.5	474	668	1.41	213	6.8	106.5	40	1.198
	16	456	480	456	719	1.58	213.2	6.67	107.2	33.3	1.195
	17	480	504	482	790	1.64	222.2	6.77	110.7	28.6	1.2
	18	552.5	575.5	493	709	1.44	218.2	6.68	109	20	1.2
	19	600.5	623.5	482	751	1.56	219	6.8	109.1	32	>1.2
	20	624	647.5	501	786	1.57	218.3	6.54	108.6	32	>1.2

Notes:

- (1) A tri-cone pre-collar has been isolated at a drill hole depth of ~35 metres, to separate the fresh/brackish water and to prevent dilution with the sampling and assaying of the deeper brines.
- (2) Sampling of encountered brines were conducted by the use of single packers.

Table 13 : Results of Sampling at SOZDD002

Zones	Intersection Samples	Hole Depth Range		Li (mg/l)	Mg (mg/l)	Mg/Li Ratio	Conductivity (mS/cm)	Density (g/ml)
		From (m)	To (m)					
Fresh to Brackish Zone	1	185	186	297	641	2.2	197	1.16
Upper Aquifer	2	186	204	199	438	2.2	202	1.18
	3	186	204	194	429	2.1	223.4	1.18
	4	189	229	254	545	1.9	228.5	1.18
Fractured Shales	6	191	193	127	279	2.1	228.5	1.18
	7	197.7	198	246	429	2.0	214.8	1.92
	8	205	329	36	196	1.9	234.4	1.20
	9	206.5	223	242	526	1.9	223	1.20
	10	208.55	208.85	386	629	1.9	230	1.20
	11	210.4	210.7	312	630	2.0	No Results	
	12	210.7	211	243	488	2.0	225.93	1.17
	13	211	229	256	524	2.0	221.01	1.16
	14	222.7	223	24	64	2.7	212.61	1.14
	15	226	228	149	306	2.1	231.44	1.18
	16	240.7	241	259	528	2.0	232.97	1.18
	18	258.7	259	164	322	2.0	232.97	1.18
	19	266	283	162	313	1.9	231.98	1.18
	20	281	283	162	308	1.9	232.04	1.18
	21	284	301	125	278	2.2	235.2	1.19
	22	301	320	295	614	2.1	230.22	1.19
	23	320	343	339	664	2.0	232.16	1.19
	26	366	368	266	475	1.8	235.24	1.19
	27	368	391	294	564	1.9	234.54	1.20
	28	392	415	294	556	1.9	232.33	1.20
	29	416	439	325	609	1.9	234.06	1.20

Notes:

- (1) A pre-collar has been isolated at a drill hole depth of ~185 metres, to separate the fresh/brackish water and to prevent dilution with the sampling and assaying of the deeper brines
- (2) Samples 5, 17, 24 and 25 have not been reported as they were duplicates of other reported samples

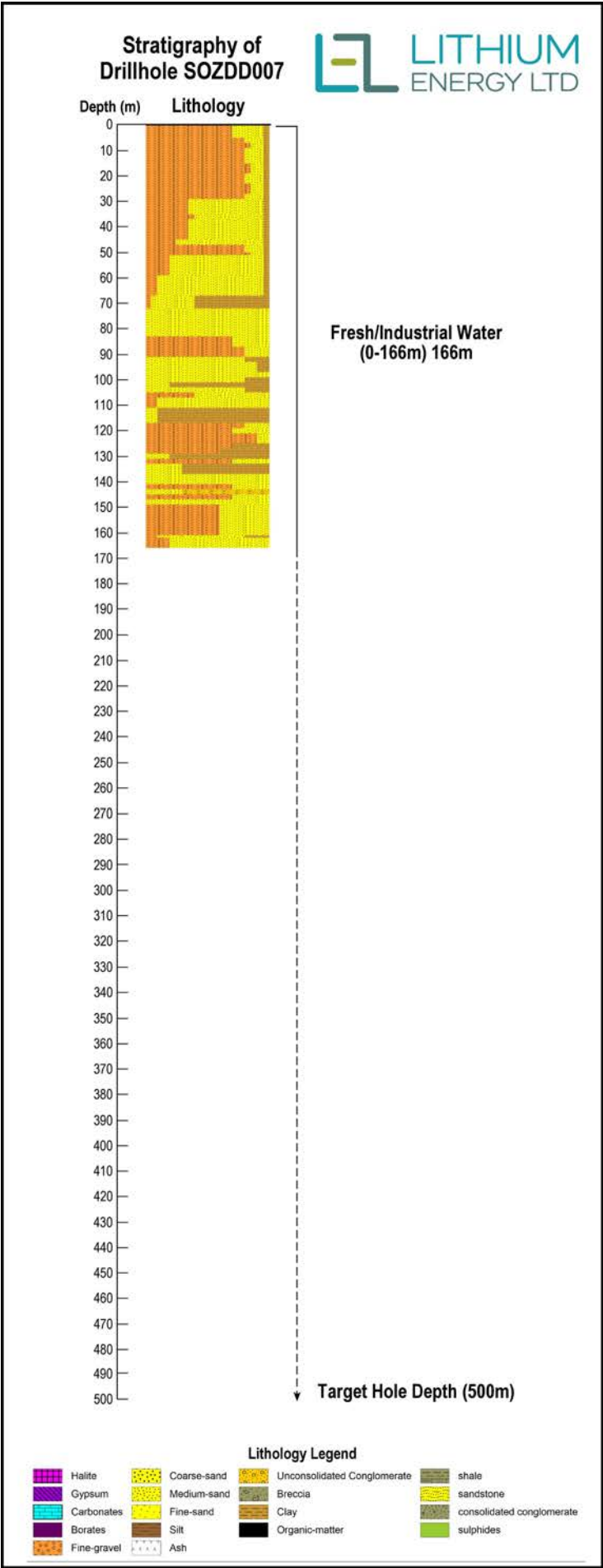


Figure 26: Drillhole Stratigraphy for SOZDD007

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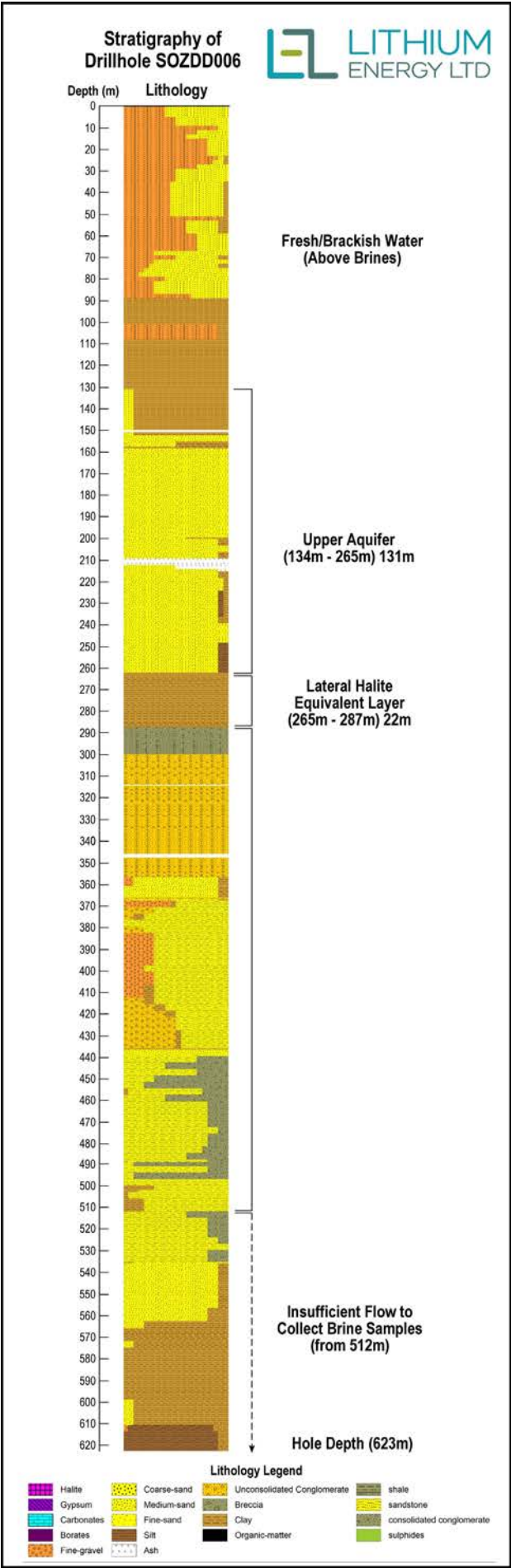


Figure 27: Drillhole Stratigraphy for SOZDD006

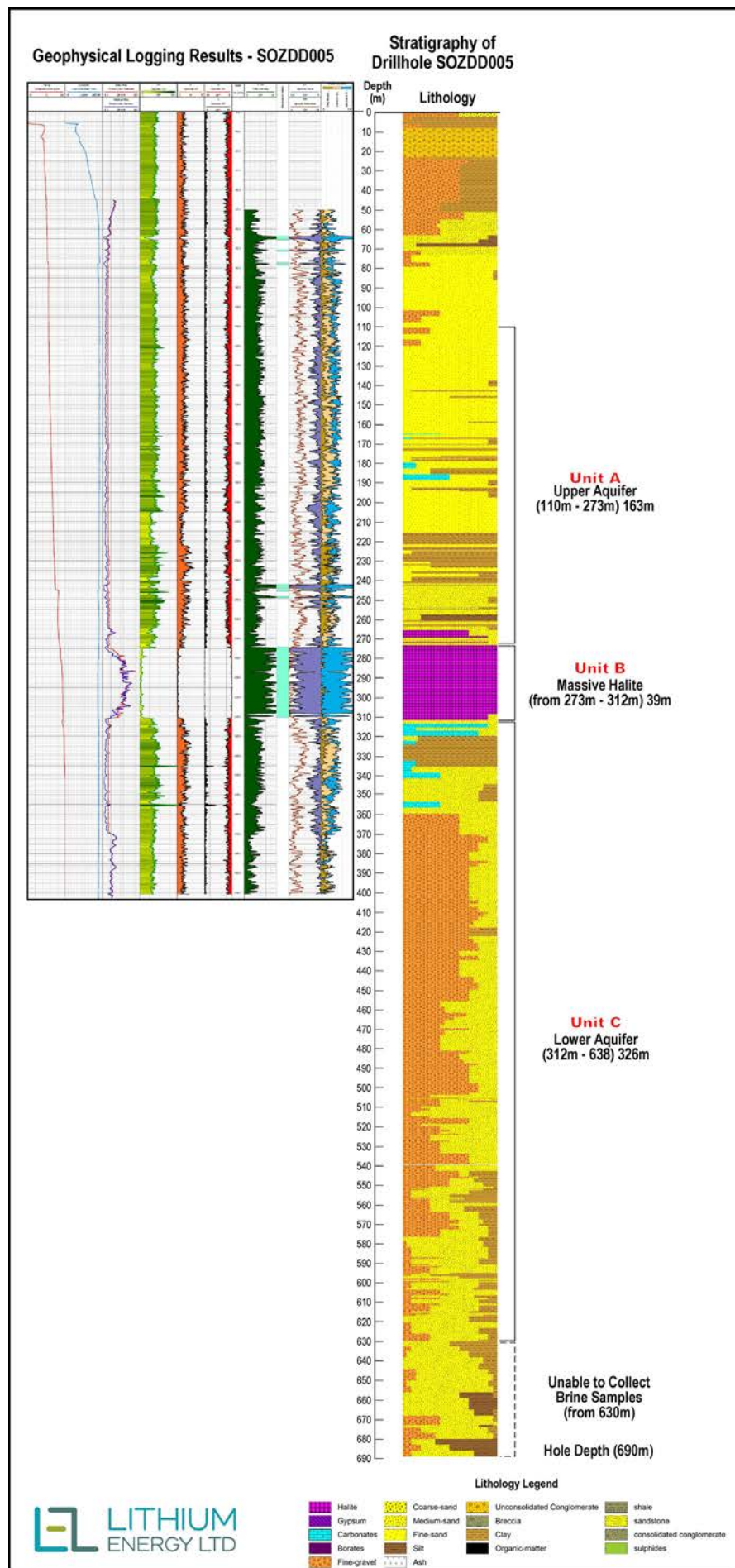


Figure 28: Geophysical Hole Logging Results and Drillhole Stratigraphy for SOZDD005

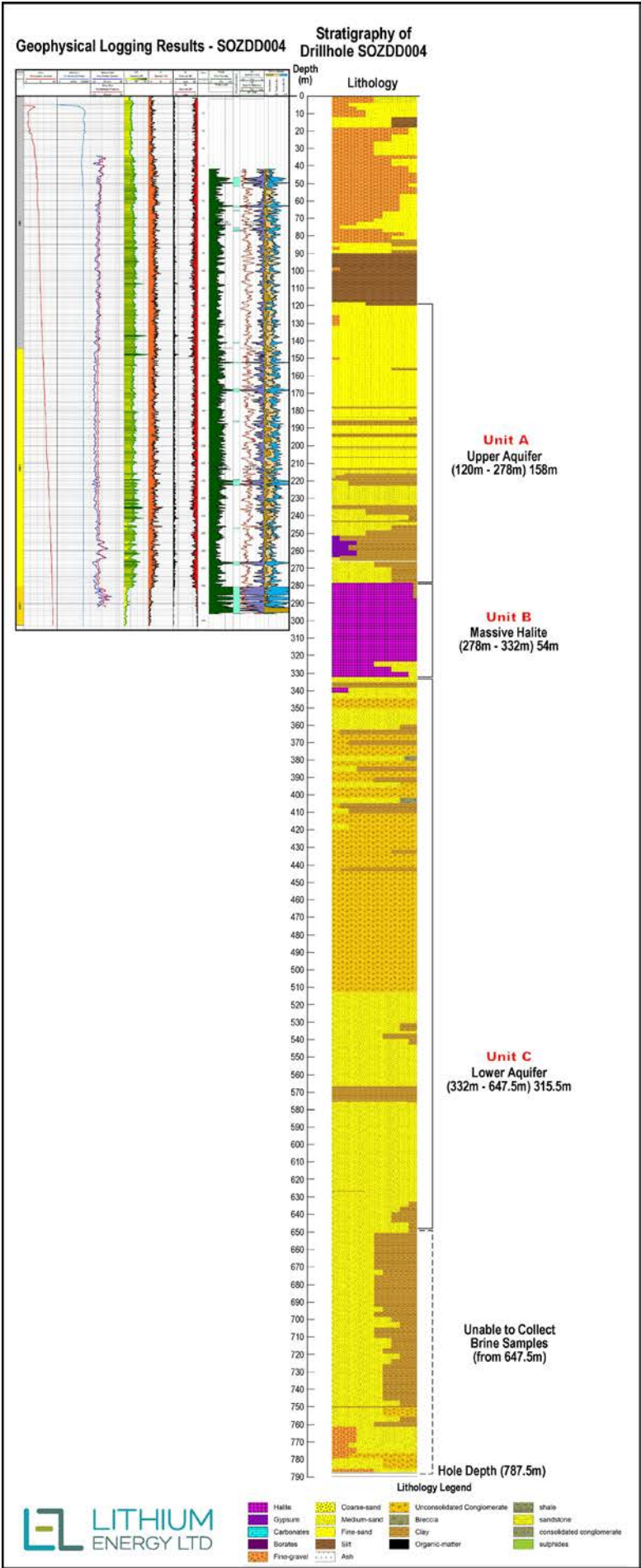


Figure 29: Geophysical Hole Logging Results and Drillhole Stratigraphy for SOZDD004

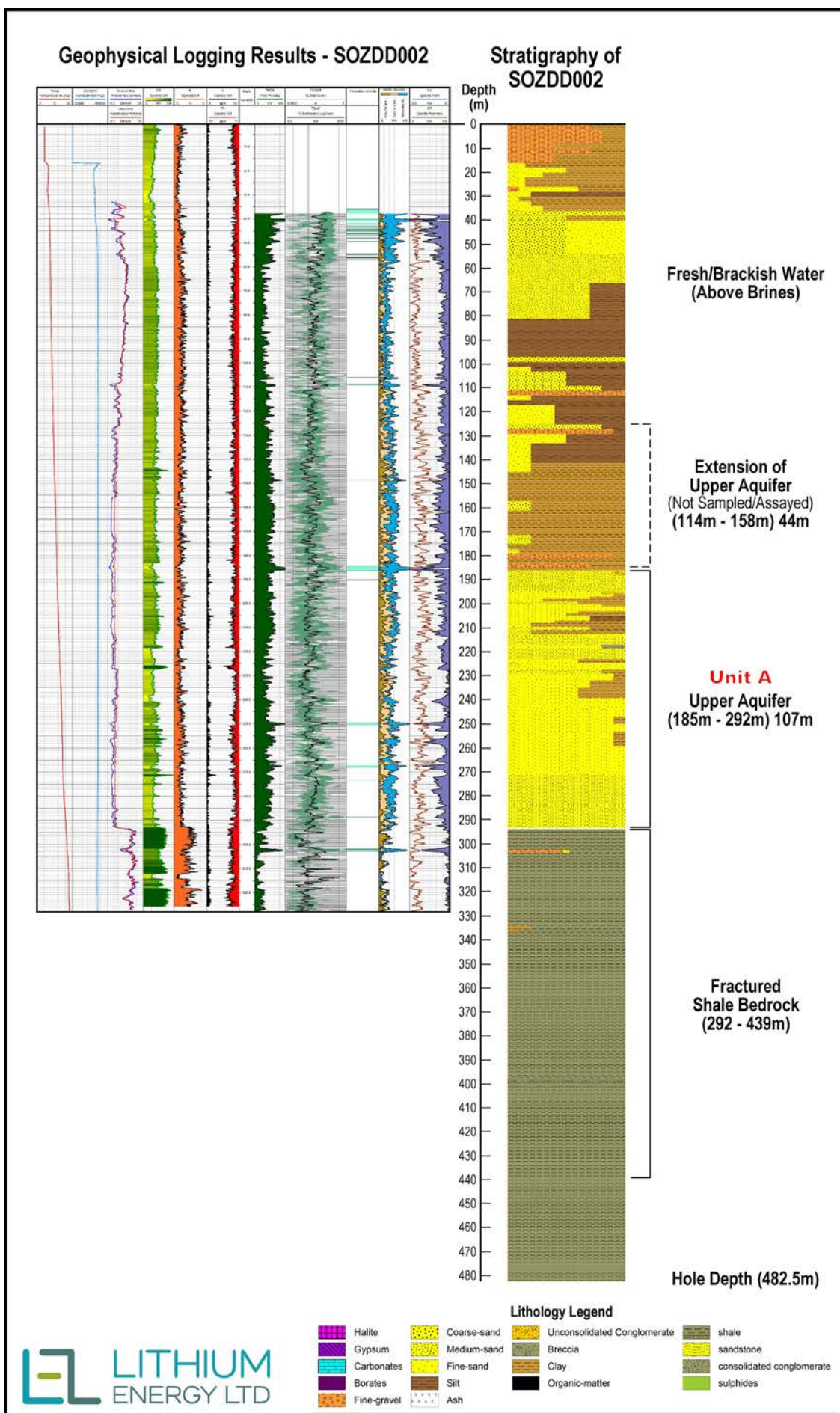


Figure 30: Geophysical Hole Logging Results and Drillhole Stratigraphy for SOZDD002

JORC CODE COMPETENT PERSON'S STATEMENTS

Solaroz Lithium Brine Project (Argentina)

- (1) The information in this document that relates to Exploration Results (in relation to drillholes SOZDD002, SOZDD004, SOZDD005 and SOZDD007) in relation to the Solaroz Lithium Brine Project are based on information compiled by Mr Peter Smith, BSc (Geophysics) (Sydney) AIG ASEG, a Competent Person who is a Member of the Australian Institute of Geoscientists (**AIG**). Mr Smith is an Executive Director of the Company. Mr Smith has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the **JORC Code**). Mr Smith consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

- (2) The information in this document that relates to Mineral Resources (and the interpretation and reporting of Exploration Results related thereto) in relation to the Solaroz Lithium Brine Project is extracted from the following ASX market announcements made by Lithium Energy Limited dated:

- 29 June 2023 entitled "Significant Maiden JORC Lithium Resource of 3.3Mt LCE at Solaroz Project in Argentina"

The information in the original announcement is based on information compiled by Mr Murray Brooker (MAIG, MIAH), a Competent Person who is a Member of AIG. Mr Brooker is an employee of Hydrominex Geoscience Pty Ltd, an independent consultant to Lithium Energy Limited. Mr Brooker has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement (referred to above).

- (3) The information in this document that relates to other Exploration Results in relation to the Solaroz Lithium Brine Project is extracted from the following ASX market announcements made by Lithium Energy Limited dated:

- 27 July 2023 entitled "Highest Lithium Concentrations Encountered at Solaroz Lithium Project in Hole 6"
- 13 July 2023 entitled "Drilling Commences at Hole 7 and Hole 6 Intersects Lithium-Rich Brines at Solaroz Lithium Project"
- 29 June 2023 entitled "Significant Maiden JORC Lithium Resource of 3.3Mt LCE at Solaroz Project in Argentina"
- 1 June 2023 entitled "Hole 6 Intersects Conductive Brines in Upper Aquifer at Solaroz Lithium Brine Project"
- 15 May 2023 entitled "Further Assays Confirm Significant Lithium Brine Concentrations Across Massive Intersections at Solaroz"
- 12 May 2023 entitled "Massive Intersections of Brine Continue at Solaroz at up to ~780 Metre Depth"
- 1 May 2023 entitled "Massive Intersections of Lithium Rich Brine Confirm World Class Potential of Solaroz Lithium Project"
- 19 April 2023 entitled "Holes 4 and 5 Encounter Significant Intersections of Conductive Brines at Solaroz Lithium Project"
- 14 March 2023 entitled "Further Significant Lithium Discovery Extends Mineralisation at Solaroz Lithium Brine Project"
- 10 March 2023 entitled "Positive Specific Yields and Significant Averaged Lithium Concentrations in SOZDD001 at Solaroz Lithium Brine Project"
- 18 August 2022 entitled "Highly Encouraging Geophysics Paves Way for Commencement of Drill Testing of Brines at Solaroz"
- 9 May 2022 entitled "Geophysics Expanded Across all Concessions to Refine Drill Targets at Solaroz Lithium Project"
- 26 May 2021 entitled "Geophysical Data Supports Highly Encouraging Exploration Potential for Solaroz"

The information in the original announcements is based on information compiled by Mr Peter Smith (BSc (Geophysics) (Sydney) AIG ASEG), a Competent Person who is a Member of AIG. Mr Smith is an Executive Director of Lithium Energy Limited. Mr Smith has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements (referred to above).

Burke and Corella Graphite Projects

- (1) The information in this document that relates to Mineral Resources in relation to the Burke and Corella Graphite Projects is extracted from the following ASX market announcements made by Lithium Energy Limited dated:
- 16 June 2023 entitled "Maiden Corella Graphite Mineral Resource Delivers Doubling of Graphite Inventory"
 - 5 April 2023 entitled "Burke Graphite Mineral Resource Upgrade Delivers Significant Increases in Size and Confidence"

The information in the original announcements is based on information compiled by Mr Shaun Searle, a Competent Person who is a Member of the AIG. Mr Searle is an employee of Ashmore Advisory Pty Ltd, an independent consultant to Lithium Energy Limited. Mr Searle has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements (referred to above).

- (2) The information in this document that relates to metallurgical test work results in relation to the Burke Graphite Project is extracted from the following ASX market announcement made by Lithium Energy Limited dated:
- 23 May 2023 entitled "Excellent Metallurgical Testwork Results at Burke Graphite Project Pave Way for Commencement of PFS".

The information in the original announcement is based on information compiled by Mr Graham Fyfe, who is a Member of the Australian Institute of Mining and Metallurgy (**AusIMM**). Mr Fyfe is an employee (General Manager, Projects) of Lithium Energy Limited. Mr Fyfe has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement (referred to above).

- (3) The information in this document that relates to other Exploration Results in relation to the Burke and Corella Graphite Projects is extracted from the following ASX market announcements released by:
- (a) Lithium Energy Limited dated:
- 2 June 2023 entitled "Significant High Grade Graphite Discovery at the Corella Project".
- (b) Strike Resources Limited (ASX:SRK) (**Strike**) (the former parent company of Lithium Energy Limited (and subsidiaries) that hold the interests in the Burke and Corella Graphite Projects; Lithium Energy Limited was spun out of Strike into a new ASX listing in May 2021) dated:
- 26 June 2018 entitled "Burke Graphite Project – New Target Area Identified from Ground Electro-Magnetic Surveys".

The information in the original announcements is based on information compiled by Mr Peter Smith (BSc (Geophysics) (Sydney) AIG ASEG), a Competent Person who is a Member of AIG. Mr Smith was a consultant to Strike and is an Director of Lithium Energy Limited. Mr Smith has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements (referred to above).

FORWARD LOOKING STATEMENTS

This document contains “forward-looking statements” and “forward-looking information”, including statements and forecasts which include without limitation, expectations regarding future performance, costs, production levels or rates, mineral reserves and resources, the financial position of Lithium Energy, industry growth and other trend projections. Often, but not always, forward-looking information can be identified by the use of words such as “plans”, “expects”, “is expected”, “is expecting”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, or “believes”, or variations (including negative variations) of such words and phrases, or state that certain actions, events or results “may”, “could”, “would”, “might”, or “will” be taken, occur or be achieved. Such information is based on assumptions and judgements of management regarding future events and results. The purpose of forward-looking information is to provide the audience with information about management’s expectations and plans. Readers are cautioned that forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Lithium Energy and/or its subsidiaries to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Such factors include, among others, changes in market conditions, future prices of minerals/commodities, the actual results of current production, development and/or exploration activities, changes in project parameters as plans continue to be refined, variations in grade or recovery rates, plant and/or equipment failure and the possibility of cost overruns. Forward-looking information and statements are based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and its perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date such statements are made, but which may prove to be incorrect. Lithium Energy believes that the assumptions and expectations reflected in such forward-looking statements and information are reasonable. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. Lithium Energy does not undertake to update any forward-looking information or statements, except in accordance with applicable securities laws.

Appendix 5B

Mining Exploration Entity or Oil and Gas Exploration Entity Quarterly Cash Flow Report

Name of entity

LITHIUM ENERGY LIMITED (ASX:LEL) and its controlled entities

ABN

94 647 135 108

Quarter Ended (current quarter)

30 June 2023

Consolidated statement of cash flows

	Current Quarter Jun-2023 \$A' 000	Year to Date 12 months \$A' 000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(270)	(791)
(e) administration and corporate costs	(275)	(689)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	112	241
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(433)	(1,239)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	(6,167)
(c) property, plant and equipment	-	(10)
(d) exploration & evaluation	(4,623)	(10,091)
(e) investments	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows	Current Quarter Jun-2023 \$A' 000	Year to Date 12 months \$A' 000
2.2 Proceeds from the disposal of:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) investments	-	-
(e) other non-current assets	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (provide details if material)	-	-
2.6 Net cash from / (used in) investing activities	(4,623)	(16,268)
3. Cash flows from financing activities		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	6,400	21,400
3.2 Proceeds from issue of convertible debt securities	-	-
3.3 Proceeds from exercise of options	-	-
3.4 Transaction costs related to issues of equity securities or convertible debt securities	(422)	(1,439)
3.5 Proceeds from borrowings	-	-
3.6 Repayment of borrowings	-	-
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (provide details if material)	-	-
3.10 Net cash from / (used in) financing activities	5,978	19,961
4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	8,049	6,672
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(433)	(1,239)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(4,623)	(16,268)
4.4 Net cash from / (used in) financing activities (item 3.10 above)	5,978	19,961
4.5 Effect of movement in exchange rates on cash held	5	(150)
4.6 Cash and cash equivalents at end of period	8,976	8,976

5. Reconciliation of cash and cash equivalents		
at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current Quarter \$A' 000	Previous Quarter \$A' 000
5.1 Bank balances	7,926	999
5.2 Call deposits	1,050	7,050
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)	8,976	8,049

6. Payments to related parties of the entity and their associates	Current Quarter \$A' 000
6.1 Aggregate amount of payments to related parties and their associates included in item 1	(128)
6.2 Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

7. Financing facilities		
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A' 000	Amount drawn at quarter end \$A' 000
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-

7.5 Unused financing facilities available at quarter end	-
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Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.

Nil

8. Estimated cash available for future operating activities	\$A' 000
8.1 Net cash from / (used in) operating activities (item 1.9)	(433)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(4,623)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(5,056)
8.4 Cash and cash equivalents at quarter end (item 4.6)	8,976
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	8,976
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	1.78

Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7

8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

LEL notes that some exploration and evaluation expenditure relates to activities which are expected to continue in future quarters; the Company will prudently manage its expenditure in future quarters having regard to its current and expected cash position.

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

LEL notes that it raised \$6.4 million (gross) via a share placement in June 2023; the Company will consider capital raising initiatives in the future if appropriate.

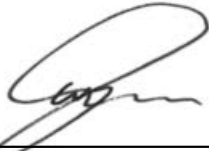
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Yes, LEL will prudently manage its expenditure in future quarters having regard to its current and expected cash position.

Compliance statement

1. This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
2. This statement gives a true and fair view of the matters disclosed.

Authorised By:



William Johnson
Executive Chairman

31 July 2023

See Chapter 19 of ASX Listing Rules for defined terms

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee"
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.

AUTHORISED FOR RELEASE - FOR FURTHER INFORMATION:

William Johnson
Executive Chairman
T | (08) 9214 9737
E | chair@lithiumenergy.com.au

Victor Ho
Company Secretary
T | (08) 9214 9737
E | cosec@lithiumenergy.com.au