



ESSENTIAL METALS

for a sustainable future

ASX Code: ESS

Corporate Profile

Shares on issue: 251,773,629
Listed options: 15,434,525
(\$0.15 exercise: 30/11/22 expiry)

Cash: \$10.5m (30 June 2022)
Debt: Nil

KEY PROJECTS

LITHIUM Pioneer Dome
GOLD Golden Ridge
GOLD Juglah Dome

Joint Ventures (ESS %)

2x nickel projects (20-25%)*
4x gold projects (25-30%)*
* Free carried to a decision to mine

Corporate Directory

Non-Executive Chairman
Craig McGown

Non-Executive Directors
Paul Payne
Warren Hallam

Managing Director
Timothy Spencer

Company Secretary
Greg Fitzgerald

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27 October 2022

Receipt of lithium assays from latest round of drilling paves way for Resource update

Updated Dome North lithium Mineral Resource expected towards the end of November, to underpin Pioneer Dome Scoping Study

HIGHLIGHTS

- Drilling to test the northern end of the Davy deposit confirmed the presence of two sub-parallel spodumene bearing pegmatites. Best intersections from this drilling included:
 - 3m @ 1.22% Li₂O from 134m (PDRCD720)
 - 2.6m @ 0.86% Li₂O from 179m (PDRCD720)
 - 5m @ 0.89% Li₂O from 77m (PDRC712)
 - 3m @ 0.79% Li₂O from 71m (PDRC715)
 - 3m @ 0.87% Li₂O from 170m (PDRC719)
- The final assays will feed into the preparatory work currently underway updating the Dome North lithium Mineral Resource. The update is expected to be ready for reporting towards the end of November.
- A structural geology review has been completed and has identified numerous other potential targets outside of the current resource deposits and will be methodically followed up over the coming months.
- Once the Mineral Resource update has been completed, it will be used to generate open pit optimisations for the three deposits – Cade, Davy and Heller – which in turn will be incorporated into the ongoing Scoping Study.
- The Scoping Study outcomes to be used to help finalise a framework for potential partner/s to be involved in advancing the Pioneer Dome Lithium Project to production.

Essential Metals Managing Director, Tim Spencer, said: *“The completion of the Resource drill programme marks another important step towards determining the scale of operation to be considered in the Scoping Study and will allow us to finalise an update to the Dome North Mineral Resource. Along with the metallurgical test work results released earlier this month, the updated lithium Mineral Resource will be a key input for the ongoing Scoping Study and in attracting an off-take and project partner on terms favourable to Essential Metals.”*



PIONEER DOME LITHIUM PROJECT

The 450km² Pioneer Dome Project (ESS: 100%) is located in the core of Western Australia's lithium corridor in the Eastern Goldfields, approximately 130km south of Kalgoorlie and 275km north of the Port of Esperance. A Mineral Resource¹ of 11.2Mt @ 1.21% Li₂O has been defined at 'Dome North' in the northern area of the Project.

The southern Yilgarn area is recognised as being well-endowed with spodumene deposits, including the Bald Hill Mine, the Mt Marion Mine and the Buldania Project, all of which are located within 80km of the Pioneer Dome Project. The world-class Greenbushes Deposit, the Mt Holland Mine and the Mt Cattlin Mine are located further west, south-west and south-south-west, respectively.

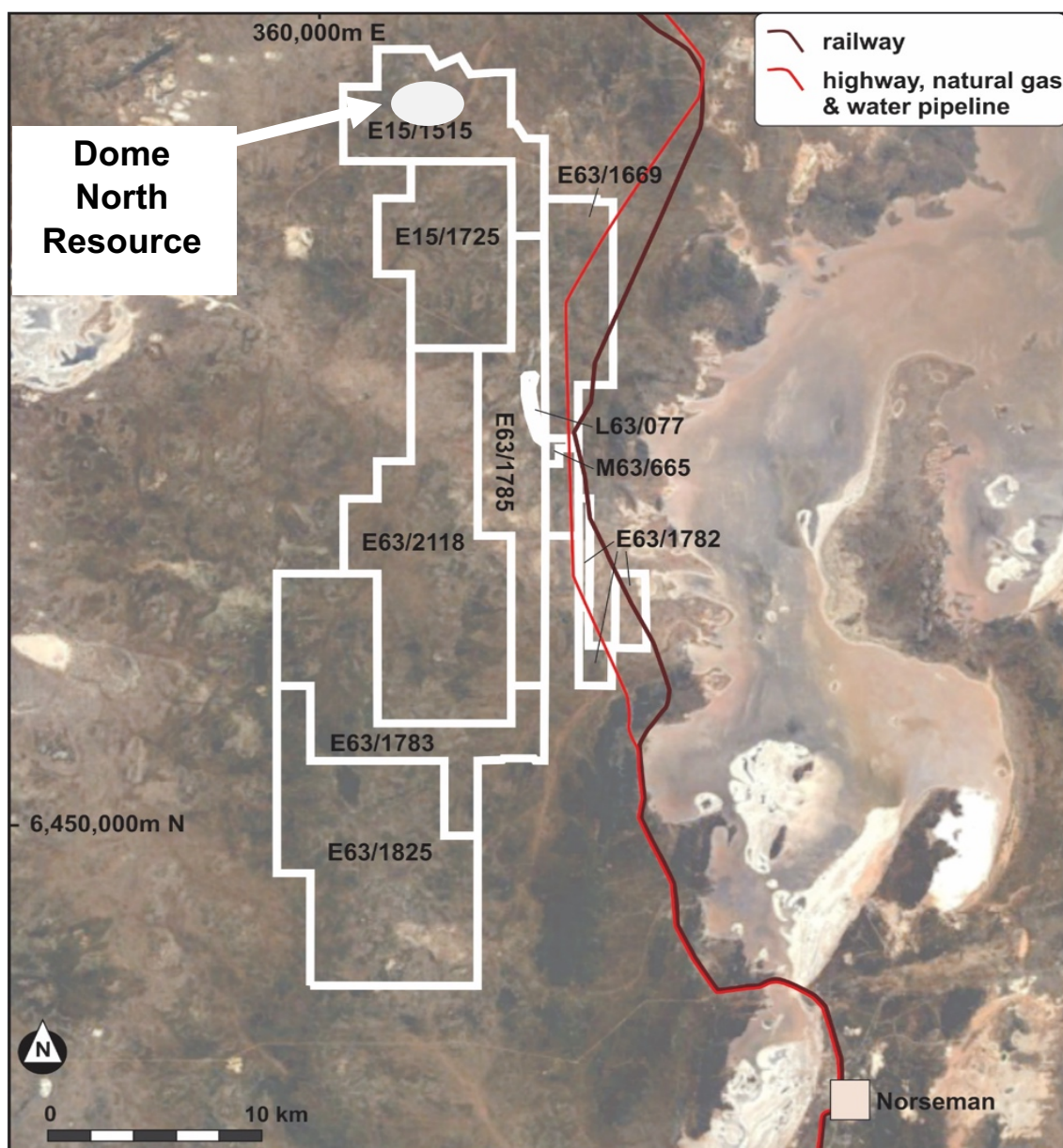


Figure 1 - The location of the tenements of the Pioneer Dome Lithium Project relative to major infrastructure.

¹ Refer to ASX announcement dated 29 September 2020 "Dome North Lithium Project - Resource Upgrade"



DOME NORTH RESOURCE DRILL PROGRAMME

Assays have been received for the Dome North Resource drilling programme, which was designed to target depth extensions at the Cade and Davy deposits, as well as to test the northern and southern strike extensions of the Davy deposit.

A total of 21 holes were drilled using a combination of Reverse Circulation (RC) (5,402m) and diamond core tails (RCD) (2,093m) drilling for a total of 7,495m (see Figure 2 for the hole locations).

Observations and assay results indicate that the depth potential for spodumene mineralisation at Cade and Davy is constrained below the current Mineral Resource domains, as well as at the southern end of Davy.

Drilltesting at the northern end of the Davy deposit has confirmed the presence of two sub-parallel spodumene-bearing pegmatites. Best intersections from this drilling included:

- 3m @ 1.22% Li₂O from 134m (PDRCD720)
- 2.6m @ 0.86% Li₂O from 179m (PDRCD720) – second pegmatite in hole.
- 5m @ 0.89% Li₂O from 77m (PDRC712)
- 3m @ 0.79% Li₂O from 71m (PDRC715)
- 3m @ 0.87% Li₂O from 170m (PDRC719)

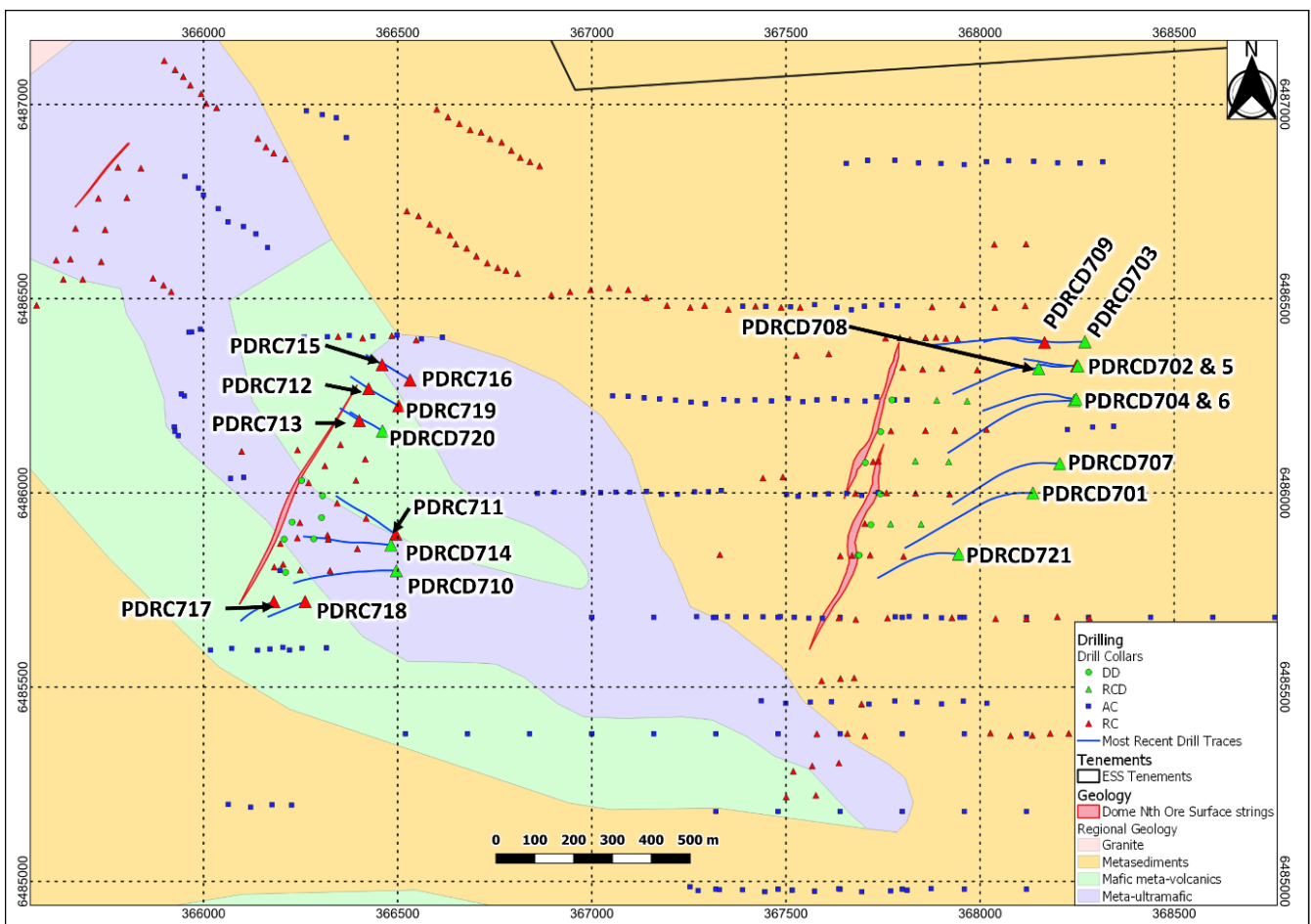


Figure 2 - Hole location and drill traces (blue lines) of most drilling at Dome North.



CADE DRILLING

A total of 10 holes for 4,654m were drilled to test the potential depth extent of the spodumene zones (Figure 3Figure 2).

Pegmatite was intersected in all seven deeper holes drilled to target depth. The 0.6m wide pegmatite intersection in hole PDRCD703 appears to limit the northern extent of the pegmatite and, while the holes drilled under the Mineral Resource intersected thick intervals of pegmatite, particularly to the south, the assays confirm that – even though the pegmatite continues at depth – the spodumene zone currently defined within the Cade deposit appears to pinch out.

No assays greater than 0.5% Li₂O were returned for these holes. The identified spodumene in this drilling was altered and it is interpreted that the lithium was depleted in these instances. This drill programme limits the underground potential at Cade.

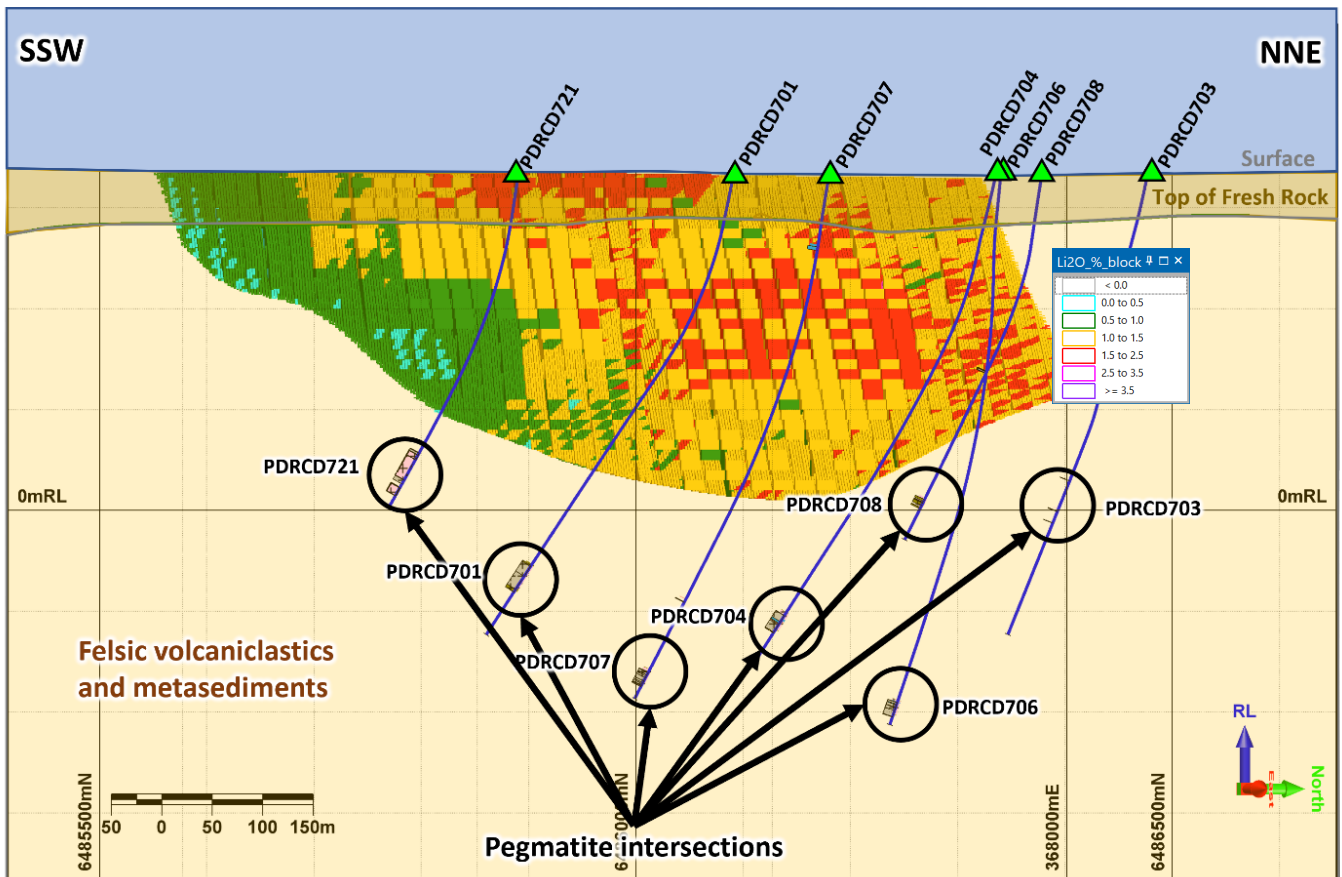


Figure 3 – Long section of the Cade deposit with the reported drill traces (blue lines). Pegmatite intersections from the most recent drill programme are shown beside the drill traces. Note that, for clarity, only the holes that reached target depth are shown.



DAVY DRILLING

Eleven holes for 2,841m were drilled at Davy to investigate the potential extension of the spodumene mineralisation at depth and along strike both to the south and north of the previous drilling (Figure 4).

Assay results and logging confirm the presence of two spodumene-bearing pegmatites at the northern end of the Davy deposit. Significant intersections included:

- 1m @ 0.68% Li₂O from 349m (PDRC711)
- 5m @ 0.89% Li₂O from 77m (PDRC712)
- 2m @ 0.72% Li₂O from 92m (PDRC713)
- 3m @ 0.79% Li₂O from 71m (PDRC715)
- 1m @ 0.65% Li₂O from 151m (PDRC716)
- 3m @ 0.87% Li₂O from 170m (PDRC719)
- 3m @ 1.22% Li₂O from 134m (PDRCD720)
- 2.6m @ 0.86% Li₂O from 179m (PDRCD720) – second pegmatite in hole.

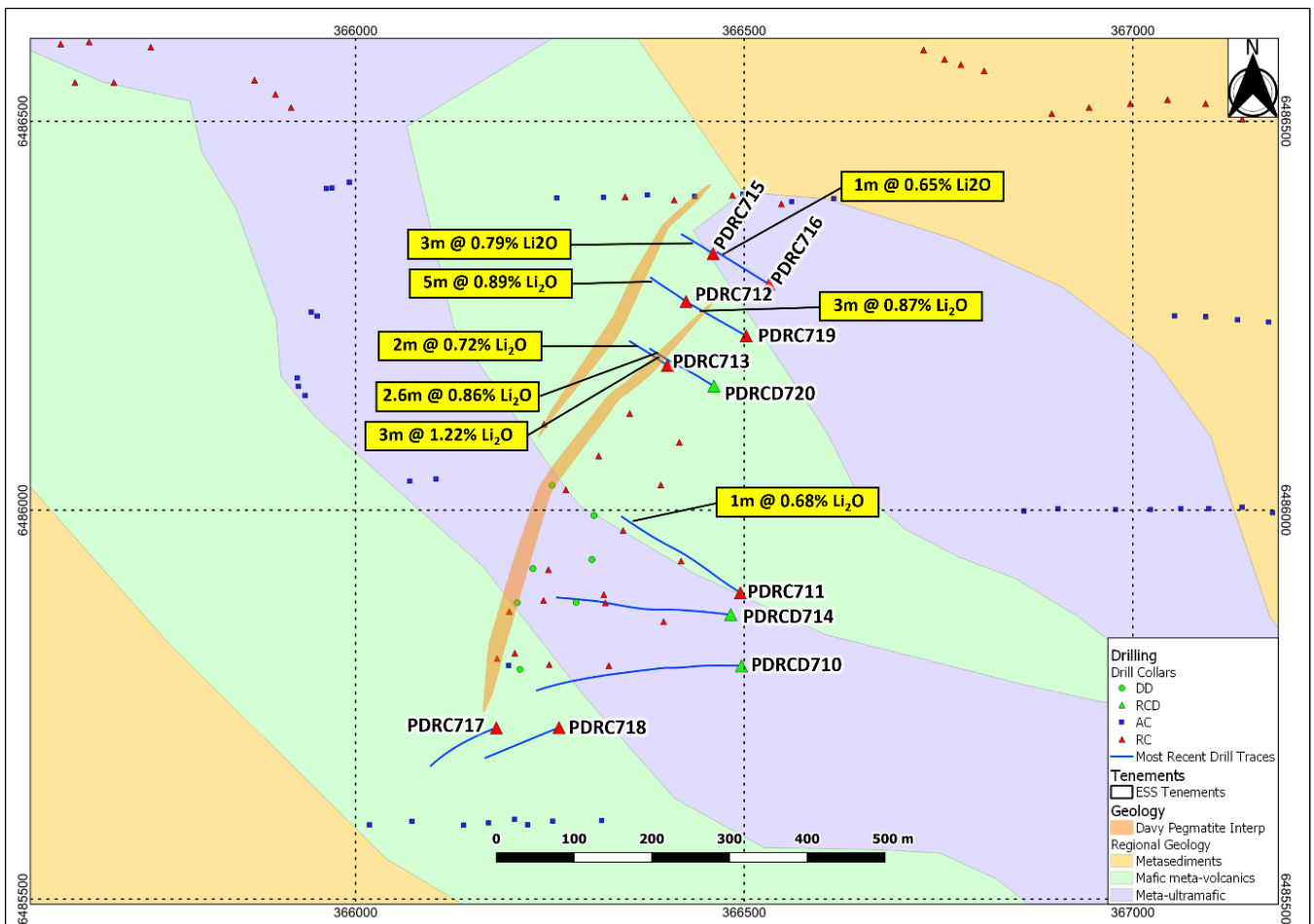


Figure 4 - Hole location and drill traces (blue lines) of most recent drilling at Davy. Note that new interpretation of the pegmatites that are projected to surface is shown by the orange shaded areas.

The visual observations and assay results constrain the potential spodumene resource to the south and at depth.

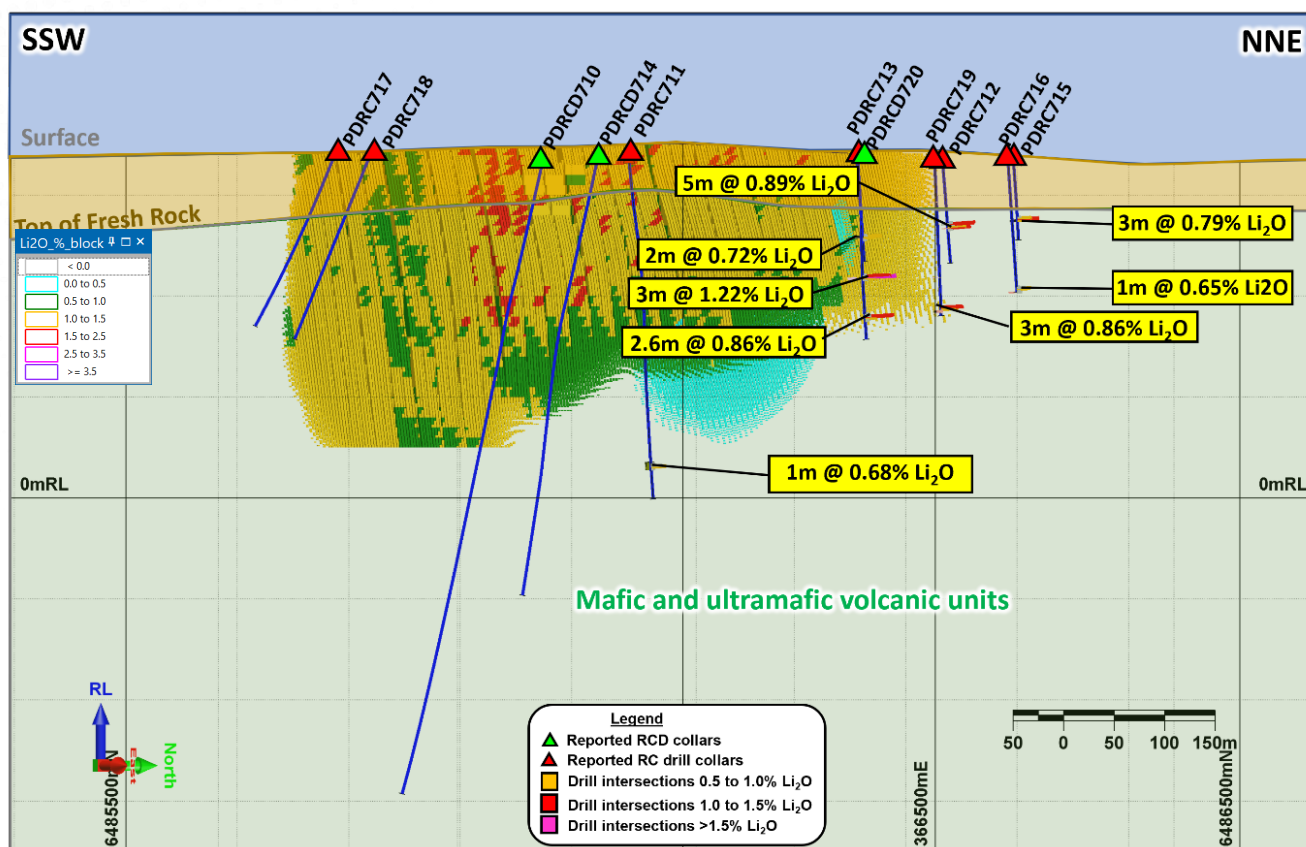


Figure 5 - Long section of the Davy deposit with the reported drill traces (blue lines). Significant intersections from the most recent programme are labelled with the yellow call outs.

PROJECT SCALE STRUCTURAL GEOLOGY REVIEW

A review the Pioneer Dome Lithium Project was undertaken with the aim of resolving the controls, primarily structural, on the location and size of Lithium-Caesium-Tantalum (LCT) pegmatites. The objective was to highlight LCT targets generated from the review and to provide recommendations with regard to future work programs to test or further define LCT targets.

The targeting exercise **highlighted around 40 targets**, with known deposits also added into the targeting matrix for reference. A number of the targets defined in the study are coincident with previously defined targets. Importantly this study entirely independently generated these targets and the correlation with previous work provides for some confidence in the process.

The targets have been ranked based on the targeting criteria and and field checking of the targets, in order of ranking, will take place over the coming months.



UPCOMING KEY EVENTS

October

- Completion of an interpretation of the Pioneer Dome structural setting and controls of lithium-caesium-tantalum (LCT) pegmatite emplacement

November

- Completion of the Dome North Mineral Resource update

December

- Receipt of non-binding expressions of interest from parties seeking a financing and off-take partnership to assist with advancing the Pioneer Dome Lithium Project into production.

January

- Completion of the Pioneer Dome Lithium Project Scoping Study.

Exploration activities will continue in parallel with the above key milestone activities, focused on discovering new spodumene-bearing pegmatites at the Pioneer Dome Lithium Project.

This ASX release has been approved by the Board of Directors.

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ABOUT ESSENTIAL METALS LIMITED

Essential Metals is a well-funded and active explorer focussed on the discovery of lithium and other key global demand-driven commodities, for the creation of shareholder wealth through exploration and project development. The Company operates **three strategically located lithium and gold projects** in Western Australia.

100% OWNED AND MANAGED PROJECTS:

- **LITHIUM:** The **Pioneer Dome Lithium Project** is highly prospective for lithium-caesium-tantalum (LCT) mineral systems and includes the **Dome North Lithium Mineral Resource** of 11.2 million tonnes @ 1.21% lithium (Li₂O).²
- **GOLD:** The **Juglah Dome Project** is located 60km east-south-east of Kalgoorlie and is considered to be highly prospective for gold and has potential for VHMS style polymetallic deposits.
- **GOLD:** The **Golden Ridge Project** is located ~20km south-east of Kalgoorlie, WA. Our activities are focussed on reappraising known prospects as well as identifying new areas within the large land tenure.

JOINT VENTURE INTERESTS:

- **GOLD:** The **Acra** Project is near Kalgoorlie. Northern Star Resources Limited (ASX:NST) has earned a 75% Project Interest and continues to fully fund exploration programmes until approval of a Mining Proposal by DMIRS is received with Essential Metals holding a 25% interest.
- **GOLD:** The **Kangan** Project is in the West Pilbara and part of a joint venture with Novo Resources Corp (TSXV:NVO), who will fund 100% of gold exploration programmes until a decision to mine is made, with Essential Metals holding a 30% interest.
- **GOLD:** The **Balagundi** Project is subject to a farmin & JV agreement where Black Cat Syndicate Limited (ASX:BC8) is earning a 75% interest in the Project located at Bulong, near Kalgoorlie. Black Cat will then fully fund gold exploration programmes until a decision to mine is made, with Essential Metals retaining a 25% interest.
- **GOLD:** The Company holds a 25% free-carried interest (20% for nickel rights) in the **Larkinville** Project near Kambalda, WA, with Maximus Resources Ltd (ASX:MXR).
- **NICKEL:** The nickel mineral rights on the **Blair-Golden Ridge** Project, which includes the suspended Blair Nickel Sulphide Mine, are subject to a Farmin/Joint Venture with Australian Nickel Company Ltd, a nickel exploration specialist which is earning up to a 75% interest. The Company will retain a 25% free-carried interest up to a decision to mine.
- **NICKEL:** The Company holds a 20% free-carried interest (nickel only) in the **Wattle Dam** project near Kambalda, WA, with Maximus Resources Ltd (ASX:MXR).

² Refer to ASX announcement dated 29 September 2020 "Dome North Lithium Project – Resource Upgrade"



Forward Looking Statement

This announcement may contain forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.

Reference to previous market announcements

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 and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The company confirms that the form and context in which Exploration Results or Competent Person's findings are presented have not been materially modified from the original market announcements.

Exploration Results – Competent Person Statement

Mr Andrew Dunn (MAIG) holds the position of Exploration Manager and is employed full-time by Essential Metals Limited. Mr Dunn compiled the technical aspects of this Announcement pertaining to Exploration Results, which is based on and fairly represents information compiled by Mr Dunn.

Mr Dunn is eligible to receive equity-based securities in Essential Metals Limited under the Company's employee incentive schemes. Mr Dunn is a member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to this style of mineralisation and type of deposit under consideration and to the activity that is being reported on 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". Mr Dunn consents to the inclusion in the report of the matters in the form and context in which it appears.

Dome North Lithium Mineral Resource – Competent Person Statement

The information in this Report that relates to Mineral Resource Estimates for the Dome North Lithium Project is based on and fairly represents information compiled by Competent Persons Mr Stuart Kerr and Mr Lauritz Barnes as extracted from the report entitled "Dome North Lithium Project – Resource upgrade" created on 29 September 2020 and is available to view on www.essmetals.com.au. 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 and, in the case of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. 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.

**Dome North Lithium Mineral Resource (29 September 2020)**

Project area	Category	Tonnes (Mt)	Grade (Li₂O %)	Tonnes Li₂O
Cade Deposit	Indicated	5.4	1.30	70,000
	Inferred	2.8	1.18	33,000
Davy Deposit	Inferred	2.3	1.13	25,000
Heller Deposit	Inferred	0.7	1.02	8,000
Total		11.2	1.21	136,000



Appendix 1 – Significant intersections* from the most recent RC and RCD drilling

Table 1

Deposit	Hole_ID	Hole Type	Hole Depth (m)	MGA94_z 51 East	MGA94_z51 North	RL	Azimuth	Dip	From Depth (m)	To Depth (m)	Width (m)	Grade
Cade	PDRCD701	RCD	584.0	368137	6486000	333	271	-60				NSA
Cade	PDRCD702	RC	294.0	368252	6486327	336	270	-60				NSA
Cade	PDRCD703	RCD	603.3	368271	6486389	337	271	-59				NSA
Cade	PDRCD704	RCD	600.8	368243	6486238	333	268	-61				NSA
Cade	PDRCD705	RC	240.0	368249	6486327	336	269	-61				NSA
Cade	PDRCD706	RCD	600.2	368248	6486242	334	278	-65				NSA
Cade	PDRCD707	RCD	600.2	368206	6486076	331	273	-61				NSA
Cade	PDRCD708	RCD	432.2	368151	6486321	334	272	-61				NSA
Cade	PDRCD709	RC	300.0	368167	6486387	336	274	-55				NSA
Davy	PDRCD710	RCD	684.3	366497	6485800	337	272	-61				NSA
Davy	PDRCD711	RC	384.0	366495	6485894	337	303	-56	349	350	1	0.68
Davy	PDRCD712	RC	120.0	366425	6486268	340	305	-61	77	82	5	0.89
Davy	PDRCD713	RC	120.0	366401	6486186	340	304	-61	92	94	2	0.72
Davy	PDRCD714	RCD	489.3	366483	6485866	337	277	-56				NSA
Davy	PDRCD715	RC	96.0	366460	6486330	339	303	-61	71	74	3	0.79
Davy	PDRCD716	RC	155.0	366532	6486291	338	302	-60	151	152	1	0.65
Davy	PDRCD717	RC	198.0	366181	6485720	342	250	-60				NSA
Davy	PDRCD718	RC	210.0	366262	6485721	341	249	-61				NSA
Davy	PDRCD719	RC	180.0	366503	6486224	339	301	-61	170	173	3	0.87
Davy	PDRCD720	RCD	204.4	366461	6486160	338	302	-60	134 179	137 181.6	3 2.6	1.22 0.86
Cade	PDRCD721	RCD	399.4	367945	6485843	335	275	-61				NSA

Intersections calculated using 0.5% Li2O lower cut-off. All depths and widths are down hole measurements. True width may be less than down hole length.



Appendix 2

JORC Code 2012 Table 1 Section 1 – Diamond and Reverse Circulation (RC) Drill Hole Sampling Techniques and data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut Faces, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down-hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. 	<ul style="list-style-type: none"> RC pre-collar drilling was carried out using a 5-3/8-inch (137mm) face sampling hammer bit. Diamond drilling is being carried out using HQ sized equipment.
	<ul style="list-style-type: none"> Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 	<ul style="list-style-type: none"> Duplicate samples and Certified Reference Standards will be inserted at regular intervals to provide quality checks for assays.
	<ul style="list-style-type: none"> 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 (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g 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 (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> RC pre-collar had three-metre composite samples for intervals using an aluminium scoop from the sample piles to produce a nominal 3.0 kg samples. These samples will be crushed and pulverised by pulp mill to nominal P80/75um to produce a pulverised sample for analysis. Lithium exploration package of elements will be digested by a four-acid digestion and determined with a Mass Spectrometer (Intertek analysis code 4A Li48-MS). Any over range Li values will be re-analysed by a sodium peroxide zirconium crucible fusion with Mass Spectrometry (MS) finish.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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). 	<ul style="list-style-type: none"> RC pre-collar drilling. <ul style="list-style-type: none"> 137mm face sampling RC bit. Diamond Drilling. <ul style="list-style-type: none"> HQ size (nominal core diameter of 63.5mm).
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. 	<ul style="list-style-type: none"> Core recoveries were logged for the diamond component.
	<ul style="list-style-type: none"> Measures taken to maximise sample recovery and ensure representative nature of the samples. 	<ul style="list-style-type: none"> HQ core drilling was used to maximise the core recovery through the expected mineralised zones.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No bias between sample recovery and grade has been observed.



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. 	<ul style="list-style-type: none"> Geological information was captured during drilling. This included lithology, mineralogy, alteration, texture, recovery, weathering and colour. For diamond core structural measurements were taken. The details captured were considered appropriate.
	<ul style="list-style-type: none"> Whether logging is qualitative or quantitative in nature. Core (or costean, Face, etc) photography. 	<ul style="list-style-type: none"> Logging has primarily been qualitative, but it includes quantitative estimates of mineral abundance. All drill core is photographed in full.
	<ul style="list-style-type: none"> The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> The entire length of the drill holes were geologically logged.
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 riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. 	<ul style="list-style-type: none"> Diamond – competent was quarter core cut for analysis. RC pre-collar material were composite sampled with equal amounts from each of the individual three metre piles using an aluminium placed in a calico bag. For pegmatite intervals the individual calico bags representing one metre samples from the rig-mounted cone splitter were sent for further analysis.
	<ul style="list-style-type: none"> Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	<ul style="list-style-type: none"> Geologist observed and recorded sample recoveries to track representivity.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Duplicates were submitted for the RC pre-collar component. Results from this indicated that sampling was representative.
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> The sample size is considered appropriate for the style of deposit being sampled.
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. 	<ul style="list-style-type: none"> The sample preparation and assay method used is considered standard industry practice for exploration. Where pegmatite was logged then the corresponding 1m rig-mounted cone splits will be sent for analysis. The assay technique is considered a total or near total determination of elements that will be analysed.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> NA
	<ul style="list-style-type: none"> Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> Standard Reference Materials were inserted at a rate of 1 per 30 samples. Duplicate field samples were routinely taken at a rate of 1 per 30 samples for RC drilling. Laboratory quality control samples were inserted by the laboratory with the performance of these control samples monitored by the laboratory and the company. Analysis of the aforementioned measures indicated that the sampling was representative and reliable.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. 	<ul style="list-style-type: none"> Significant intersections were calculated by geological staff with these intersections checked by the Exploration Manager.



	<ul style="list-style-type: none"> The use of twinned holes. 	<ul style="list-style-type: none"> The significant assay results were compared to the logging to confirmed they matched the spodumene zones. No holes have been twinned.
	<ul style="list-style-type: none"> Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. 	<ul style="list-style-type: none"> The geological and sampling information was collected in MDS software, validated in Micromine and then uploaded to the Company's SQL drilling database.
	<ul style="list-style-type: none"> Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> The Company has adjusted the lithium (Li) assay results to determine Li₂O grades. This adjustment is a multiplication of the elemental Li assay results by 2.1527.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. 	<ul style="list-style-type: none"> The collar locations of the holes were initially surveyed by handheld GPS. Subsequently the diamond holes were be picked up using RTK DPGS by a qualified surveyor.
	<ul style="list-style-type: none"> Specification of the grid system used. 	<ul style="list-style-type: none"> MGA94 (Zone 51)
	<ul style="list-style-type: none"> Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> SRTM was used to validate the RL. This is sufficient for the exploration holes. The holes to be used in MRE will be surveyed by RTK differential GPS.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 	<ul style="list-style-type: none"> Drill spacing was nominally 80m from existing drill panels with holes spaced 80- 100m apart.
	<ul style="list-style-type: none"> Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. 	<ul style="list-style-type: none"> Current drilling is sufficient to establish geological and grade continuity at the Cade and Davy deposits, which is similar to the data used to estimate the previous Dome North lithium Mineral Resource Estimate.
	<ul style="list-style-type: none"> Whether sample compositing has been applied. 	<ul style="list-style-type: none"> Three metre composite samples have been submitted for the RC pre-collar material and for when pegmatite was not present.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	<ul style="list-style-type: none"> The geometry of the spodumene mineralisation at Cade and Davy is broadly has a north-north-east striking and dips steeply to the east. The majority of the drill holes were designed to test the mineralisation at a near optimal orientation. Significant hole deviation was observed in the current drilling at Cade, it is not likely that this has introduced significant sampling bias.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> The Company uses standard industry practices when collecting, transporting and storing samples for analysis.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Sampling techniques for assays have not been specifically audited but follow common practice in the Western Australian exploration industry.

Section 2 - Reporting of Exploration Results

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



Criteria	JORC Code explanation	Commentary
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 interests, historical sites 	<ul style="list-style-type: none"> The drilling reported herein is within E15/1515 which is a granted Exploration Licence. The tenement is located approximately 55km north-north-west of Norseman, WA. The Company is the registered holder of the tenement and holds a 100% unencumbered interest in all minerals within the tenement. The tenement is on unallocated vacant crown land. The Ngadju Native Title Claimant Group has a determined Native Title Claim which covers the Pioneer Dome project, which includes E15/1515.
	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> At the time of this report E15/1515 was in Good Standing. To the best of the Company's knowledge, other than industry standard permits to operate there are no impediments to Company's operations within the tenement.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> There has been no previous LCT exploration drilling or sampling on the Pioneer Dome project other than that carried out by the Company. Previous mapping by the Western Australian Geological Survey and Western Mining Corporation (WMC) in the 1970's identified several pegmatite intrusions, however, these were not systematically explored for lithium.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The Project pegmatites are consistent with highly fractionated Lithium Caesium Tantalum (LCT) pegmatite intrusion. This type of pegmatite intrusions are the target intrusions of hard rock lithium deposits. The Dome North deposits are classified as a Spodumene sub type and are highly enriched in Lithium.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes, including easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole, down hole length and interception depth plus 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. 	<ul style="list-style-type: none"> Refer to Appendix A of this announcement.
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. 	<ul style="list-style-type: none"> Weighted average Li₂O assays within the release are calculated using 0.5% Li₂O lower cut-off grade, minimum thickness 1m, with a maximum of 4m of internal waste and no external dilution. No top-cuts were used in the calculation of the intersections.



	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> There are no metal equivalent values reported.
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 (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> Downhole lengths are reported in the Appendices attached to ASX announcements, which list drill hole statistics. Due to the deviation of the drill holes the down hole thicknesses are expected to be greater than the true widths.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to, a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Refer to figures in this report.
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. 	<ul style="list-style-type: none"> All of the drill details for the latest drill programmes have been provided in this announcement. Only holes that made it to target depth were shown on the long-sections included in the report.
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 contaminating substances. 	<ul style="list-style-type: none"> All meaningful and material exploration data has been reported.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg 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, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Update Mineral Resource Estimate (MRE). Scoping study for Dome North spodumene project. Assess deposits for further drilling to extend the known extent of mineralisation.