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27 January 2016

# ASX ANNOUNCEMENT

## Potential for lithium "mica" mineralisation extended at Coolgardie Rare Metals Venture

- **Detailed soil geochemistry has been completed over areas adjacent to the Lepidolite Hill mine south of Coolgardie in Western Australia.**
- **Highly anomalous soil values adjacent to the workings further validate pioneering geochemical techniques**
- **Soil indicators show potential for mineralisation to continue for some 300m north of the pit**
- **Broad anomalous geochemical response extends for 500m southwest and east of the pit enhances potential for discovery of concealed lithium bearing pegmatites**
- **Follow up exploration will commence immediately and include detailed sampling over confirmed anomalies, geological mapping and planning for drill programs.**

Lithium Australia NL (ASX: LIT) is pleased to announce results from the recently completed high resolution geochemical survey undertaken at the Coolgardie Rare Metals Venture (CRMV). The joint venture is focused on pegmatite swarms and includes the Lepidolite Hill occurrence located 15km south of Coolgardie, Figure 1. The geochemical survey was centred on the main workings at Lepidolite Hill and areas to the northwest and southeast with the aim of indicating concealed pegmatites under areas of extensive soil cover. A "heat map" derived using previously validated pathfinder elements shows extensive areas of potential lithium "mica" mineralisation adjacent to the workings but more importantly some 500m to the southwest and east of the main workings, Figure 2.

**Background**

LIT commenced a joint venture with Focus Minerals Limited (ASX: FML) in September 2014 with plans to evaluate lithium and rare metals within 20 prospecting licences and two mining leases to the south of Coolgardie in Western Australia (ASX: 17 September 2014).

A fast tracked evaluation of the project commenced with the collection of bulk samples of lepidolite (lithium mica) from the Lepidolite Hill quarry and dumps and the subsequent proof of concept testing to produce lithium carbonate. A major breakthrough was made in October 2014 when it was announced that battery grade lithium carbonate with a purity of 99.6% had been produced from these samples (ASX: 27 October 2014). This metallurgical success concentrated efforts on the search, both locally and globally, for lithium "micas" as a feedstock for lithium carbonate production.

LIT then successfully produced lithium hydroxide from the 99.6% battery grade lithium carbonate as listed above but awaits final reconciliation of this material. The ability to produce a lithium hydroxide product directly from mica is a significant step and its achievement was announced on 11 December 2015. That ability creates the opportunity to tap into a premium product market by producing the highest value lithium intermediate chemical i.e. lithium hydroxide, as opposed to the lower-priced lithium carbonate or concentrate. LIT will provide further commentary when final and definitive results become known to it.

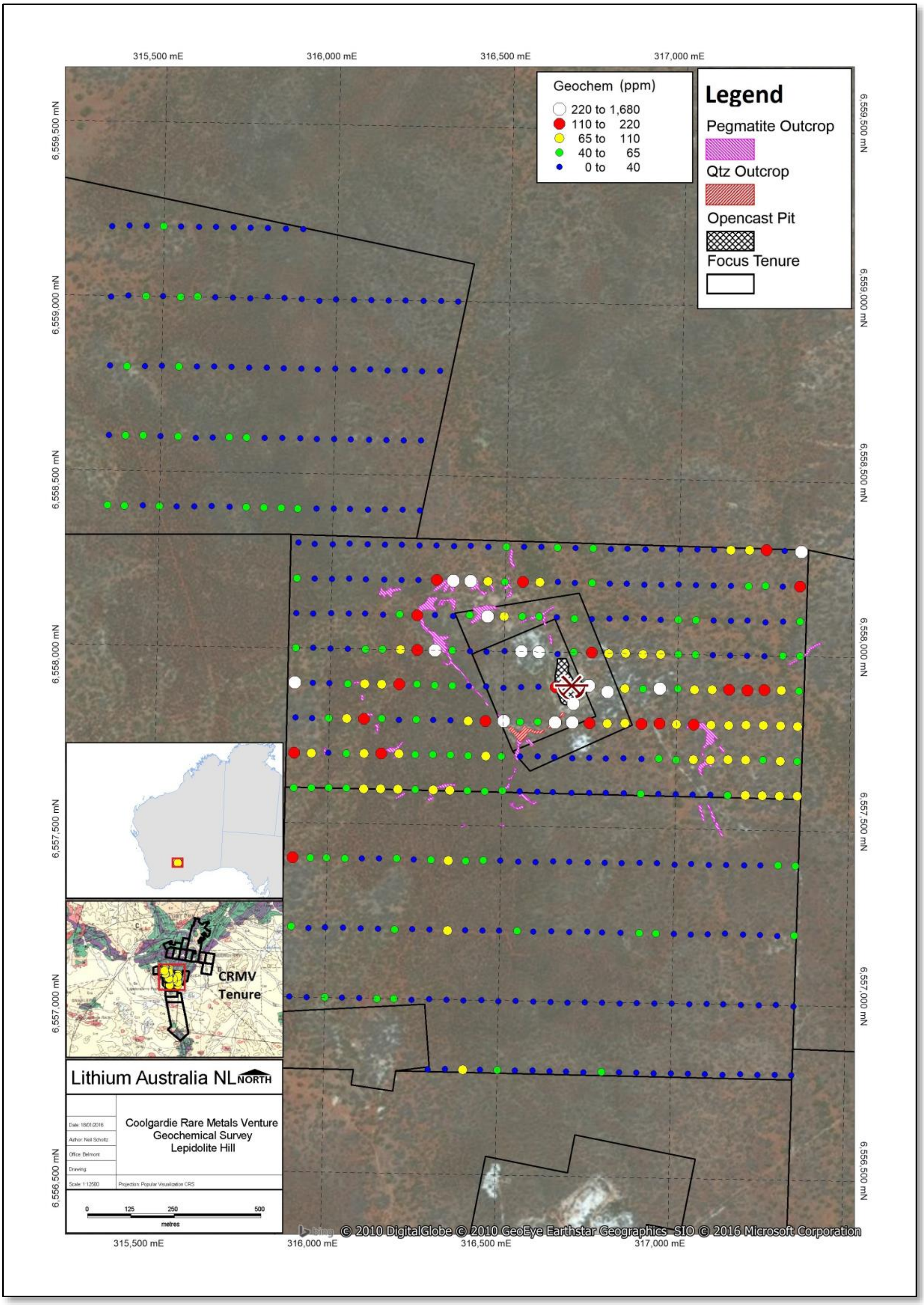


*Figure 1: Geochemical survey plan with soil values, Lepidolite Hill area*

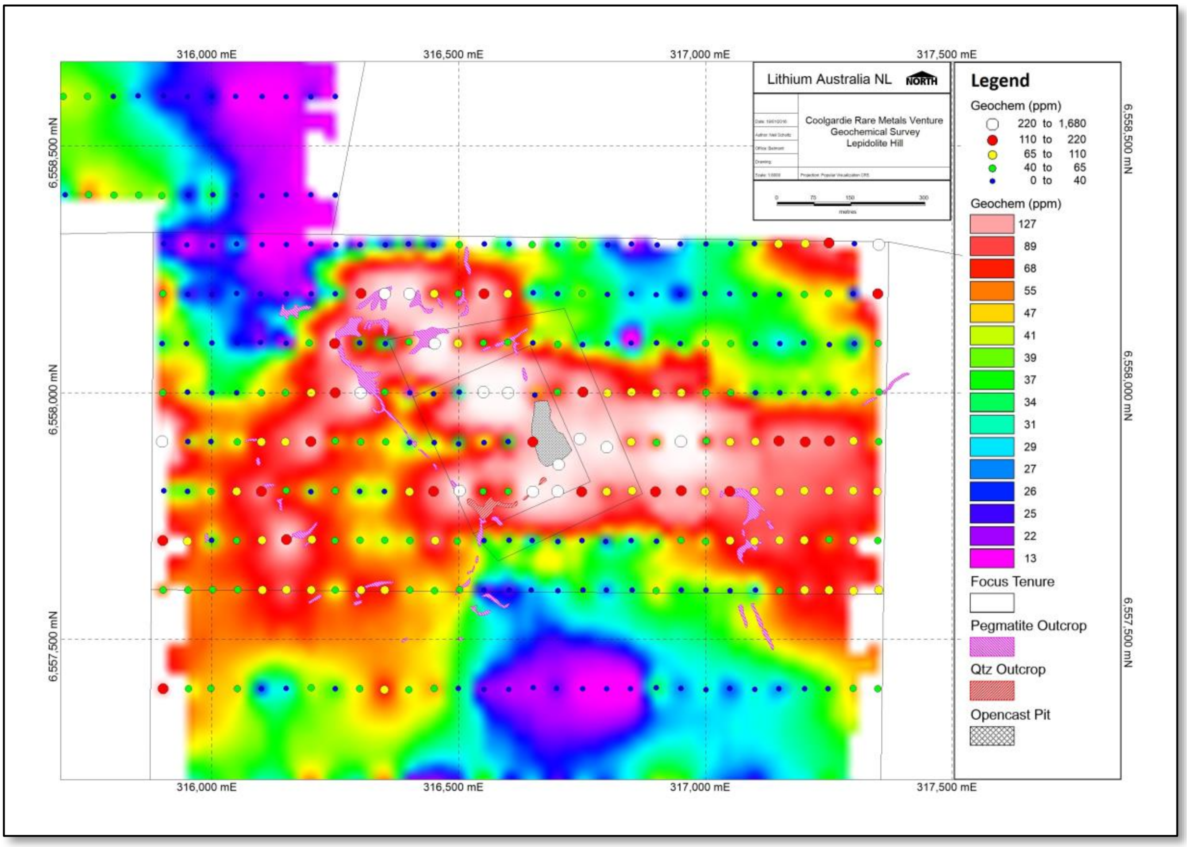


***Figure 2: Lepidolite Hill "heat map "showing zones of high prospectivity (red and white) to the north, southwest and east of the pit.***

**Principal survey outcomes**

The geochemical techniques used at the CRMV were successfully pioneered on other lithium mica projects within LIT's project portfolio. The techniques use pathfinder elements as a proxy for lithium, primarily lithium derived from micas. The following observations have been made:

1. The elements used show an extremely strong correlation with lithium mineralisation occurring in the area of the historic workings;
2. Highly anomalous indicators extend some 300m northwest of the workings;
3. Two broad zones of anomalism extend southwest and east of the workings.
    a. Anomalous values extend for some 500m east of the pit; and
    b. There is a broad zone of anomalism extending some 600m west and southwest of the pit.

The results are likely attenuated due to the effects of soil cover but are considered significant as they may indicate concealed pegmatite bodies.

**Geochemical survey details**

LIT's detailed 443 sample geochemical survey covered 22km of traverse lines with samples taken on a 50m by 100m grid in the vicinity of the Lepidolite Hill Mine and on a 50m by 200m grid over adjacent areas of the tenure.

Samples were analysed using a Niton field-portable XRF (XL3T) with successfully trialled pathfinder elements used to indicate prospectivity (lithium cannot be detected by field-portable XRF).

**Future objectives**

Under the terms of the CRMV, LIT will sole fund exploration to the point of committing to a definite feasibility study, within five years of the commencement date, at which time the CRMV will be replaced by a contributing joint venture (80% LIT and 20% FML).

LIT is encouraged by the results from the recent exploration and will undertake infill sampling to better delineate anomalous zones in the vicinity of Lepidolite Hill. The results from these subsequent phases of exploration will allow better targeting of planned drill programs designed to test for concealed pegmatites.

**Lithium Australia Managing Director, Mr Adrian Griffin:**

*"The Lepidolite Hill complex is a well-documented lithium occurrence (lepidolite/petalite) with a mining history dating back to 1971, when over 10,000 tonnes of lithium ore (mainly petalite) was extracted with 400,000 tonnes of lepidolite-rich material discarded into the surrounding mine dumps.*

*LIT has produced lithium carbonate initially which was used as the feed for the production of lithium hydroxide. That ability creates the opportunity to tap into a premium product market by producing the highest value lithium intermediate chemical i.e. lithium hydroxide, as opposed to the lower-priced lithium carbonate or concentrate.*

*The results as reported to date demonstrate enormous potential, significantly extending the area of interest well beyond the historical boundaries of the mine and the dumps."*

**Adrian Griffin**
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**About Lithium Australia NL:**
LIT is a dedicated developer of disruptive lithium extraction technologies. LIT has strategic alliances with a number of companies, potentially providing access to a diversified lithium mineral inventory on three continents.

**MEDIA CONTACT:**

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**COMPETENT PERSONS STATEMENT**

***Competent Persons Statement:***

*The information contained in the report that relates to Exploration Results of projects owned by Lithium Australia NL and is based on information compiled or reviewed by Mr. Adrian Griffin, who is an employee of the Company and is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Griffin has given consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sampling techniques*** | *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 handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* | *Lithium Australia NL (LIT) has completed a 443 sample geochemical survey program over 22km of traverse lines. Results being reported are for 443 samples over tenement E45/2232.See Figure 2 (above).* |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | *LIT's detailed geochemical survey covered 22 km of traverse lines with samples taken on a 50mx100m grid in the vicinity of Lepidolite Hill Mine and on a 50mx200m grid elsewhere. At each sample site a ±100-150mm deep pit was dug. The 443 samples were sieved, bagged and transported to Perth for analyses. Samples were analysed using a Niton XL3t field-portable XRF. Two reference type materials (standards) were used after every twentieth sample in order to ensure quality control.* |
| | *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.* | *The 443 samples were all geochemical "soil" samples analysed using a Niton XL3t field-portable XRF for a suite of 33 elements.* |

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| ***Drilling techniques*** | *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).* | *Not applicable* |
| ***Drill sample recovery*** | *Method of recording and assessing core and chip sample recoveries and results assessed.* | *Not applicable* |
| | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | *Not applicable* |
| | *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.* | *Not applicable* |
| ***Logging*** | *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.* | *Not applicable* |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | *Not applicable* |
| | *The total length and percentage of the relevant intersections logged.* | *Not applicable* |
| ***Sub-sampling techniques and sample preparation*** | *If core, whether cut or sawn and whether quarter, half or all core taken.* | *Not applicable* |
| | *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.* | *At each sample site a ±100-150mm deep pit was dug. Fresh, dry soil from the bottom of each pit was sieved to -2mm fraction. A ±100g sample was bagged and transported by LIT personnel to Perth for analyses. In Perth a single reading was taken for each bagged sample by using the Niton XL3t XRF analyser.* |

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| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | *For the Niton based geochemical survey two reference type materials (standards) were used after every twentieth sample in order to ensure quality control.* |
| | *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.* | *Not applicable* |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | *Sampling sizes are considered to be appropriate* |
| ***Quality of assay data and laboratory tests*** | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | *The quality of the data from samples analysed by using field-portable Niton XRF analyser is considered appropriate due to consistent and accurate results from reference materials* |
| | *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.* | *A field-portable Niton XL3t XRF analyser was used for the geochemical survey. Each reading consisted of a 45 second interval reading on the soil-type setting. The 45 second interval consisted of a 15 second main range, 15 second low range and 15 second high range. The instrument was serviced 26th of August 2015 and a system check was done every time the instrument was switched on or after a battery change.* |
| | *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | *The quality of the data from samples analysed by using field-portable Niton XRF analyser is considered appropriate due to consistent and accurate results from reference materials.* |
| ***Verification of sampling and assaying*** | *The verification of significant intersections by either independent or alternative company personnel.* | *Not applicable* |
| | *The use of twinned holes.* | *Not applicable* |

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| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | *Spatial data and XRF data were imported from GPS and Niton XRF analyser respectively and stored into a single Excel datasheet. Two types of standards (reference materials) were used after every 20th sample. Field standard locations were used to verify the locations of sample points. These locations were also verified through a GIS verification.* |
| | *Discuss any adjustment to assay data.* | *Not applicable* |
| ***Location of data points*** | *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.* | *Locations were marked by using a Garmin GPSmap 62s GPS. Approximately 5-10m accuracy.* |
| | *Specification of the grid system used.* | *The Grid used was MGA (GDA94, Zone 51)* |
| | *Quality and adequacy of topographic control.* | *Not applicable* |
| ***Data spacing and distribution*** | *Data spacing for reporting of Exploration Results.* | *LIT's detailed geochemical survey covered 22 km of traverse lines with samples taken on a 50mx100m grid in the vicinity of Lepidolite Hill Mine and on a 50mx200m grid elsewhere.* |
| | *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.* | *Not applicable* |
| | *Whether sample compositing has been applied.* | *Not applicable* |
| ***Orientation of data in relation to geological structure*** | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* | *Geological strike is NNW-SSE. Around Lepidolite Hill Mine the N-S line spacing is 100m and the E-W sample spacing is 50m adequately establishing geochemical continuity.* |
| | *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.* | *Not applicable* |

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| ***Sample security*** | *The measures taken to ensure sample security.* | *All samples were transported to and analysed in Perth by LIT field geologist.* |
| ***Audits or reviews*** | *The results of any audits or reviews of sampling techniques and data.* | *The locations and XRF data have been reviewed by cross-verification of all the data in the digital excel datafile against GIS locations, reference material and raw data.* |

## Section 2 Reporting of Exploration Results

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

| Criteria | JORC Code explanation | Commentary |
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| ***Mineral tenement and land tenure status*** | *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, wilderness or national park and environmental settings.* | *The Coolgardie Rare Metals Venture is a joint initiative between Focus Minerals Limited (ASX: FML) and Lithium Australia NL (ASX: LIT) which plans to evaluate lithium and rare metals (Cesium, rubidium, gallium, tantalum and niobium) within 20 prospecting licenses and two mining licences located to the south of Coolgardie, in Western Australia.*<br><br>*Under the terms of the CRMV, LIT will sole fund exploration to the point of committing to a definite feasibility study, within five years of the commencement date, at which time the CRMV will be replaced by a contributing joint venture (80% LIT, and 20% FML).*<br><br>*Tenure includes: M15/664; M15/1809; P15/4916; P15/4917; P15/4950; P15/4951; P15/4952; P15/4953; P15/5519; P15/5574; P15/5575; P15/5625; P15/5626; P15/5629; P15/5739; P15/5740; P15/5741; P15/5742; P15/5743; P15/5749.* |

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| | *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.* | *No known impediments* |
| **Exploration done by other parties** | *Acknowledgment and appraisal of exploration by other parties.* | *Western Mining Corporation Limited held tenure over Lepidolite Hill between 1963-1987. Work undertaken comprised geological mapping, percussion drilling and diamond drilling.*<br>*Petalite mined between 1971 and 1973.* |
| **Geology** | *Deposit type, geological setting and style of mineralisation.* | *The CRMV tenure covers pegmatite swarms known to contain lepidolite (lithium mica), petalite (lithium aluminium silicate), tantalite (and oxide of iron, manganese and tantalum), pollucite (cesium zeolite), beryl (beryllium silicate) and other minerals that may be of commercial importance. These pegmatites intruded the Greenstones of the Eastern Goldfield terranes of the Yilgarn Craton. The lepidolite is most abundant at Lepidolite Hill where, in addition to lithium, the mica contains high concentrations of rubidium. The CRMV also covers Tantalum Hill, a well-documented tantalite occurrence.* |
| **Drill hole Information** | *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 and 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.* | *Not applicable* |
| **Data aggregation methods** | *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.* | *Not applicable* |

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| | *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.* | *Not applicable* |
| | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | *Not applicable* |
| ***Relationship between mineralisation widths and intercept lengths*** | *These relationships are particularly important in the reporting of Exploration Results.* | *Not applicable* |
| | *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* | *Not applicable* |
| | *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').* | *Not applicable* |
| ***Diagrams*** | *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.* | *Appropriate and relevant figures are included.* |
| ***Balanced reporting*** | *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.* | *Not applicable* |
| ***Other substantive exploration data*** | *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.* | *All meaningful & material exploration data has been reported.* |

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| ***Further work*** | *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* | *LIT plans to evaluate targets on CRMV Project by conducting an initial target generation/prioritisation phase followed by closer spaced soil sampling, and detailed geological mapping. Based on positive results from this work LIT will then complete an initial first-pass drilling programme and/or trenching program of better targets.* |
| | *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | *Not applicable* |