

# PAN ASIA METALS

ASX Announcement | November 22, 2022

## Reung Kiet Lithium Prospect, Thailand Exceptional Ore Sorting Test-Work Results Confirmed

### HIGHLIGHTS

- Final assays confirm the excellent amenability of mineralisation to ore sorting
- Results indicate 72.8% lithium recovery into 39.2% sample yield at an average grade of 0.92% Li<sub>2</sub>O
- 60.8 % of the feed discarded as waste/low grade siltstone at an average grade of 0.22%, which is below the current Mineral Resource cutoff grade of 0.25% Li<sub>2</sub>O
- Lithium grade almost doubles from 0.50% Li<sub>2</sub>O in the feed to 0.92% Li<sub>2</sub>O in the sorted products
- Mass reduction of 60.8%, will flow through to processing cost savings and other efficiencies
- Additional optimization test-work is ongoing with new samples being tested

Battery and critical metals explorer and developer **Pan Asia Metals Limited (ASX: PAM) ('PAM' or 'the Company')** is pleased to advise that final assays and weights have been reported for ore sorting test-work being conducted on drill core sample from the Reung Kiet Prospect (Reung Kiet) located in southern Thailand.

**Pan Asia Metals Managing Director Paul Lock said:** *"These results confirm that Steinhart Australia's ore sorting test-work can almost double the feed head grade to the beneficiation plant to 0.92% Li<sub>2</sub>O. This means we will be processing a higher grade ore than that reflected in our Mineral Resource, which is a fantastic outcome as it also means that we will see a reduction in capital and operating costs on a per tonne LCE basis as we will require less beneficiation capacity - lower capex - and we will be processing less product - lower opex. We have more results coming through and I am pleased to say that Reung Kiet is proving its place in the global peer group, particularly so as the project is so well placed in terms of proximity to inputs and markets and the fact that Southeast Asia is one of the lowest cost operating environments in the world."*

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## Ore Sorting Background

Ore Sorting is a relatively simple and low cost process that can facilitate in upgrading mineralisation and rejecting low grade and waste. Modern ore sorting has been employed for about 30 years. Recent improvements in technology, especially various sorting sensors combined with rapid data processing speeds, has allowed for large scale sorting to be undertaken. Sorting is particularly effective in minimizing dilution experienced in many modern mines. This can lead to improvements in capital and operating costs and other efficiencies. In ore sorting, individual ore particles are sorted from low grade/waste material based on differing physical and chemical properties of the materials. Crushed and screened run of mine ore, with fines removed, is fed into the Ore Sorter via conveyor. Sensors detect which individual rocks in the feed have mineralisation (ore) and which is waste. As the rock continues to the end of the conveyor and free falls, air jets are used to selectively “shoot” the ore (Accept) away from the waste stream (Reject), thus concentrating the grade of the ore in a reduced tonnage.

## Current test-work

The ore sorting sample is from drillhole **RKDD006** and comprises half HQ core (63mm diameter) for the interval **54.5m to 81.5m**. The total sample weight was approximately 107kg. The core was crushed at Nagrom in Perth and sized to -50mm, +25mm and -25mm, +10mm. A -10mm fines product was also produced. The crushed core samples show good physical separation of aplo-pegmatite, which is purple-white, from the siltstone which is dark grey to black (see Photo 1).



Photo 1. RKDD006: Sub-sample of crushed core feed for ore sorting,  
LHS +10mm to -25mm RHS +25mm to -50mm



The crushed sample was tested at Steinhart Australia's Test Centre in Perth. After theoretical modelling, the crushed samples were fed in a single-pass and subjected to 3D laser scanning and colour camera sensors used in combination. This produced excellent separation of the mineralised aplo-pegmatite from the low grade to waste siltstone as shown in Photo 2. The results of the ore sorting are shown in Table 1.



Photo 2. Sorted samples -50mm, +10mm

Table 1. Sorting test results

Sort sizes	Description	Mass yield (%)	Li <sub>2</sub> O grade (%)	Li recovery (%)
-50mm, +25mm	Pegmatite product	30.03	1.00	60.36
-25mm, +10mm	Pegmatite product	4.54	0.85	7.80
-10mm fines	Pegmatite and siltstone mixed	4.67	0.49	4.63
-50mm, +10mm	Siltstone/waste reject	60.76	0.22	27.21
<b>Pegmatite product and mixed fines</b>		<b>39.24</b>	<b>0.92</b>	<b>72.79</b>



The data indicates that the sorted -50mm, +10mm pegmatite product and mixed -10mm fines samples constitute 39.24% of the sample yield with 72.79% of the contained lithium at an average grade of 0.92% Li<sub>2</sub>O. Conversely the siltstone reject constitutes 60.76% of sample yield but only 27.21% of contained lithium at an average grade of 0.22% Li<sub>2</sub>O, which is below the current Mineral Resource cutoff grade of 0.25% Li<sub>2</sub>O. These results are almost identical to previous estimates reported in PAM ASX announcement on November 8, 2022 titled "Reung Kiet Lithium Prospect, Thailand Exceptional Recoveries from Ore Sorting Test Work".

This test-work demonstrates the sampled mineralisation is highly amenable to ore sorting which results in the separation of the material into essentially homogenous aplo-pegmatite with little siltstone contamination and siltstone with little pegmatite. The pegmatite contains the bulk of the lithium mineralisation.

Flotation test-work is now being undertaken on the sorted products. Additional ore sorting test-work will also be undertaken on more drillholes.

The Company looks forward to keeping Shareholders and the market updated on its progress and results obtained from the drilling and test-work programs and other activities related to the Company's ongoing evaluation of the Reung Kiet Lithium Project.

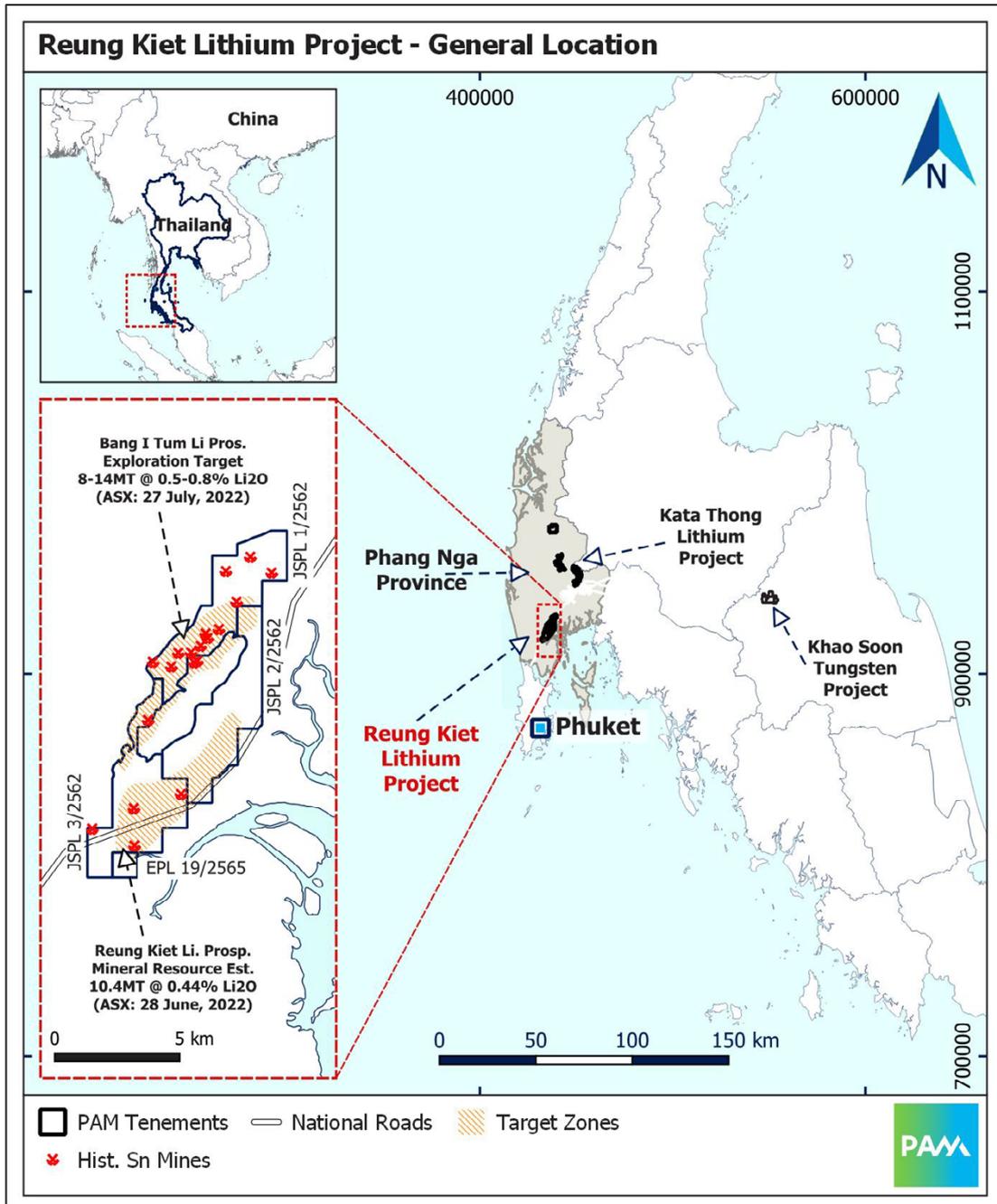
**Ends**

**Authorised by:  
Board of Directors**



### About the Reung Kiet Lithium Project

The Reung Kiet Lithium Project is a lepidolite style lithium project located about 70km north-east of Phuket in the Phang Nga Province in southern Thailand. Pan Asia holds a 100% interest in 3 contiguous Special Prospecting Licenses (SPL) and 1 Exclusive Prospecting License (EPL) covering about 40km<sup>2</sup>.



Regional map: Location of Phang Nga and the Reung Kiet Lithium Project



### **About Pan Asia Metals Limited (ASX:PAM)**

Pan Asia Metals Limited (ASX:PAM) is a battery and critical metals explorer and developer focused on the identification and development of projects in Asia that have the potential to position the Company to produce metal compounds and other value-added products that are in high demand.

Pan Asia Metals is Exploring A Better Future<sup>®</sup>, we explore with principles, and we intend to mine and process with principles, conducting ourselves in a way that will bring benefit to all stakeholders, knowing that success includes community and environment.

Pan Asia Metals owns two lithium projects and one tungsten project. The projects are located in Thailand, a low cost advanced industrial economy, and fit the Company's strategy of developing downstream value-add opportunities situated in low-cost environments proximal to end market users.

Complementing Pan Asia Metal's existing project portfolio is its target generation program, aiming to identify desirable assets in the region. Pan Asia Metals plans to develop its existing projects while also expanding its portfolio via targeted and value-accretive acquisitions.

To learn more, please visit: [www.panasiametals.com](http://www.panasiametals.com)

Stay up to date with the latest news by connecting with PAM on LinkedIn and [Twitter](#).

### **Investor and Media Enquiries**

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### **Competent Persons Statement**

The information in this report that relates to Mineral Resources is based on information compiled by Ms Millicent Canisius and Mr Anthony Wesson, both full-time employees of CSA Global. Mr Wesson is a Fellow and Chartered Professional of the Australasian Institute of Mining and Metallurgy and Ms Canisius is a Member of the Australasian Institute of Mining and Metallurgy. Mr Wesson and Ms Canisius have sufficient experience, relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking, to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Wesson and Ms Canisius consent to the disclosure of the information in this report in the form and context in which it appears.

The information in this report that relates to Exploration Targets and Exploration Results, is based on information compiled by Mr. David Hobby, is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Hobby is a full time employee, Director and Shareholder of Pan Asia Metals Limited. Mr. Hobby has sufficient experience, relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking 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 (JORC Code). Mr. Hobby consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### **Forward Looking Statements**

Various statements in this document constitute statements relating to intentions, future acts and events which are generally classified as "forward looking statements". These forward looking statements are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties and other important factors (many of which are beyond the Company's control) that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed in this document. For example, future reserves or resources or exploration targets described in this document may be based, in part, on market prices that may vary significantly from current levels. These variations may materially affect the timing or feasibility of particular developments. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates", "potential" and similar expressions are intended to identify forward-looking statements. Pan Asia Metals cautions security holders and prospective security holders to not place undue reliance on these forward-looking statements, which reflect the view of Pan Asia Metals only as of the date of this document. The forward-looking statements made in this document relate only to events as of the date on which the statements are made. Except as required by applicable regulations or by law, Pan Asia Metals does not undertake any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events. Past performance cannot be relied on as a guide to future performance.

**Important**

To the extent permitted by law, PAM and its officers, employees, related bodies corporate and agents (Agents) disclaim all liability, direct, indirect or consequential (and whether or not arising out of the negligence, default or lack of care of PAM and/or any of its Agents) for any loss or damage suffered by a Recipient or other persons arising out of, or in connection with, any use or reliance on this document or information.



## APPENDIX 1 - JORC Code, 2012 Edition - Table 1

# PAM Lithium Projects - Drilling

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p>Nature and quality of sampling (e.g. cut channels, random chips, downhole gamma sondes, handheld XRF instruments, etc).</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>Aspects of determination of mineralisation that are Material to the Report (eg 'RC drilling used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'; or where there is coarse gold that has inherent sampling problems).</p>	<p>Cut drill core samples were selected in order to ascertain the degree of lithium enrichment. The samples are representative of the lithium mineralisation within the samples collected.</p> <p>The mineralisation is contained within alpo-pegmatites. Half HQ3 samples were used with sample weights of 1kg-6kg and average sample interval is 0.87m, ranging from 0.25-1.45m. The whole sample is fine crushed, and then split to obtain a 0.5-1kg sub-sample all of which is pulverised to provide the assay pulp.</p>
Drilling techniques	<p>Drill type (eg core, reverse circulation, etc) and details (eg core diameter, triple tube, depth of diamond tails, face-sampling bit, whether core is oriented; if so, by what method, etc).</p>	<p>Diamond core from surface. HQ triple tube diameters were employed. The core was oriented using the spear method, as directed by the rig geologist.</p>
Drill sample recovery	<p>Method of recording and assessing core and chip sample recoveries and results assessed.</p> <p>Measures taken to maximise sample recovery, ensuring representative nature of samples.</p> <p>Is sample recovery and grade related; has sample bias occurred due to preferential loss/gain of fine/coarse material?</p>	<p>Drill core recovery is recorded for every drill run by measuring recovered solid core length over the actual drilled length for that run.</p> <p>Triple tube drill methods were used to assist with maximising sample recovery especially in the weathered zone.</p> <p>Sample recovery through the mineralised zones averages 99%, so little bias would be anticipated.</p>
Logging	<p>Have core/chip samples been geologically/geotechnically logged to a level of detail to support appropriate resource estimation, mining studies and metallurgical studies.</p> <p>Is logging qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	<p>The drill core was geologically logged at sufficient detail. Geotechnical logging was limited to contact zones and major structures.</p> <p>The logging is mostly qualitative in nature, with some quantitative data recorded. Photographs of each core tray wet and dry, and of wet cut core were taken. The total length of core logged.</p>
Sub-sampling techniques and sample	<p>If core, cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, riffled, tube sampled etc and sampled wet or dry?</p> <p>For all sample types, nature, quality and appropriateness of sample preparation technique.</p> <p>QAQC procedures for all sub-sampling stages to maximise representivity of samples.</p> <p>Measures taken to ensure sampling is representative of the material collected, e.g. results for field duplicate/second-half sampling.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>All core for sampling was cut in half with a diamond saw.</p> <p>The sample preparation technique was stage crushing to 100% less than 3.35mm. A sub-sample of 1-2kg is obtained via rotary splitting. This sample is pulverised to 85% passing 75 microns. The laboratory reports QA/QC particle size analysis for crushed and pulverised samples. The laboratory also reports results for internal standards, duplicates, prep duplicates and blanks. Comparison of results indicate excellent agreement between Li<sub>2</sub>O grades from each ¼ pair.</p> <p>The sample weights are appropriate for the material being sampled.</p>



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<p>Nature, quality and appropriateness of the assaying and laboratory procedures used; whether the technique is considered partial or total.</p> <p>For geophysical tools, spectrometers, handheld XRF instruments etc, parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied, their derivation, etc.</p> <p>Nature of QAQC procedures adopted (eg standards, blanks, duplicates, external laboratory checks); whether acceptable accuracy levels (ie lack of bias) / precision established.</p>	<p>Analysis was performed by Nagrom in Perth which uses a sodium peroxide digestion with ICP finish.-MS. The method is considered a total technique.</p> <p>The laboratory reports results for internal standards, duplicates, prep duplicates and blanks., PAM has only utilised internal Nagrom QA/QC for the assay data. Rb, Cs, Mn, show good correlation with lab reported Li results. Other elements of interest such as Sn. Ta and Nb are also recorded.</p>
Verification of sampling and assaying	<p>Verification of significant intersections by independent / alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>Sample results have been checked by company Chief Geologist and Senior Geologist. Li mineralisation is associated with visual zones of distinctively coloured lepidolite.</p> <p>Assays reported as Excel xls files and secure pdf files.</p> <p>Data entry carried out both manually and digitally by Geologists. To minimize transcription errors field documentation procedures and database validation are conducted to ensure that field and assay data are merged accurately.</p> <p>The adjustments applied to assay data for reporting purposes: Li x 2.153 to convert to Li to Li<sub>2</sub>O. Ta is converted to Ta<sub>2</sub>O<sub>5</sub> by multiplying Ta by 1.221.</p>
Location of data points	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings etc used in estimation.</p> <p>Specification of grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>Drill hole locations up to RKDD050 are derived from DGPS, with approximately 10cm accuracy. RKDD051 and onwards are sited by handheld GPS with accuracy of 2-5m in XY. The Z value is derived from topographic model with 1m accuracy.</p> <p>All locations reported are UTM WGS84 Zone 47N.</p>
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>Is data spacing and distribution sufficient to establish degree of geological and grade continuity appropriate for Resource / Reserve estimation procedure(s) and classifications applied?</p> <p>Whether sample compositing has been applied.</p>	<p>The drilling was conducted on variably spaced sections with holes 50-100m apart on section, with two holes on many sections giving down-dip separations of about 50-100m between holes.</p> <p>Resources or reserves are not being reported.</p> <p>Sample compositing relates to reporting for the four sorted products Grades are then reported by weighted average.</p>
Orientation of data in relation to geological structure	<p>Does the orientation of sampling achieve unbiased sampling of possible structures; extent to which this is known/understood.</p> <p>If relationship between drilling orientation and orientation of mineralised structures has introduced a sampling bias, this should be assessed and reported if material.</p>	<p>The sampling of half core supports the unbiased nature of the sampling.</p> <p>The drill holes reported are drilled normal or very near normal to the strike of the mineralised zone.</p>
Sample security	<p>The measures taken to ensure sample security.</p>	<p>Samples are securely packaged and transported by company personnel or reputable carrier to PAM's office in Bangkok. DHL the collected the sample which was air-freighted to Perth and delivered to Nagrom.</p>



Criteria	JORC Code explanation	Commentary
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The reported assay results show good agreement with PAM's original drill core analysis.

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	Three contiguous Special Prospecting Licences (JSPL1, 2 and 3) covering an area of 48sq km are registered to Thai company Siam Industrial Metals Co. Ltd. (SIM). Pan Asia Metals holds 100% of SIM located 60km north of Phuket in southern Thailand.  The tenure is secure and there are no known impediments to obtaining a licence to operate, aside from normal considerations.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Institute of Geological Sciences, a precursor of the British Geological Survey (BGS) in the late 1960's conducted geological mapping, documenting old workings, surface geochemical sampling, mill concentrates and tailings sampling and metallurgical test work on the pegmatite then being mined at Reung Kiet. This work appears to be of high quality and is in general agreement with Pan Asia's work.  In 2014 ECR Minerals reported Li results for rock samples collected in Reung Kiet project area. The locations and other details of the samples were not reported. But the samples showed elevated Li contents.
Geology	Deposit type, geological setting and style of mineralisation.	The project is located in the Western Province of the South-East Asia Tin Tungsten Belt. The Reung project area sits adjacent and sub-parallel to the regionally extensive NE trending Phangnga fault. The Cretaceous age Khao Po granite intrudes into Palaeozoic age Phuket Group sediments along the fault zone, Tertiary aged LCT pegmatite dyke swarms intrude parallel to the fault zone.
Drillhole Information	A summary of information material to the understanding of the exploration results including a tabulation for all Material drill holes of: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> If exclusion of this information is not Material, the Competent Person should clearly explain why this is the case.	Drillhole information and intersections are reported in tabulated form within the public report.
Data aggregation methods	Weighting averaging techniques, maximum/minimum grade cutting and cut-off grades are Material and should be stated.  Where compositing short lengths of high grade results and longer lengths of low grade results, compositing procedure to be stated; typical examples of such aggregations to be shown in detail.	Li <sub>2</sub> O Intersections are reported at > 0.2% Li <sub>2</sub> O, and allow for up to 2m intervals of internal dilution of < 0.2% Li <sub>2</sub> O. Sn, Ta <sub>2</sub> O <sub>5</sub> , Cs, Rb and K are also reported  All intersections are weighted averages with no top cut being applied.



Criteria	JORC Code explanation	Commentary
	Assumptions for metal equivalent values to be clearly stated.	
Relationship between mineralisation widths and intercept lengths	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If mineralisation geometry with respect to the drillhole angle is known, its nature should be reported.</p> <p>If it is not known and only down hole lengths are reported, a clear statement to this effect is required (eg 'down hole length, true width not known').</p>	The mineralised zones dip around 65-50 degrees southeast. Holes were drilled at -55 to -65 degrees towards the northwest (normal to strike). The true width of the mineralisation reported is around 75-90% of the reported downhole width. This can be measured on Cross Sections in the Public Report.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts to be included for any significant discovery. These to include (not be limited to) plan view of collar locations and appropriate sectional views.	Appropriate plans and sections are provided in the public report.
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.	Results are reported for the drillhole.
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.	The drilling results reported are from holes targeting mineralisation beneath and along strike from an old open cut. Soil, rock-chip and trench sampling by Pan Asia indicate additional mineralisation is present along trend to the south, where drillholes are also reported. Weaker surface Li anomalism is also present immediately north of the pit. The whole mineralised trend at RK are potentially 1km or more. Garson et al 1969 conducted work on concentrates, tailings and met test-work on a sample taken from the mine. This work was positive, no deleterious substances have been identified to date.
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas (if not commercially sensitive).</p>	Planned further work will include drilling especially along strike to the south. Infill drilling is also planned around existing holes that have intersected higher grade mineralisation. This may later lead to deeper/step out drilling should geological controls on higher grade zones be identified.