

1 May 2023

# Drilling to start at Leliyn Graphite Project in the Northern Territory

**Drilling will test a portion of a large, well-established graphitic schist as part of strategy to calculate a maiden JORC Resource**

## Highlights

- **Approvals received for maiden drilling program at the Leliyn Graphite Project**
- **Strong results from ground geophysical survey highlight the immense potential scale of the Leliyn prospect**
- **Drill core will be used for metallurgical tests; Results will form part of a maiden JORC Resource**
- **Drill rigs mobilising to site.**

Kingsland Minerals Ltd (ASX:KNG) is pleased to announce that it has received government approvals for a program of Reverse Circulation (RC) and Diamond Core (DC) drilling at its Leliyn Graphite Project in the Northern Territory.

Rigs are being mobilised to site with drilling set to commence in the next two to three weeks.

An initial program of 2,000m of Reverse Circulation (RC) drilling and 1,200m of HQ size diamond core drilling will target graphitic schists which extend for 20km within the Kingsland tenement holding. The initial program will target a small strike length of the total extent of graphitic schist. The diamond core will provide material for metallurgical test-work.

Kingsland Minerals Managing Director, Richard Maddocks said: *"We believe Leliyn has the potential to be a very large graphite deposit. The initial results of the EM program support our view of the potential and the upcoming drilling program marks the start of our strategy to establish a JORC resource. The outlook for graphite is very strong due to growing demand from the lithium battery industry and a large Australian deposit would be particularly valuable as the western world looks to source graphite from outside China"*.

A ground Electro-Magnetic (EM) survey recently commenced and has provided extremely positive results. The graphitic schist unit is easily defined by its EM response and this has been used to finalise drilling collar locations. Additional lines will be surveyed in coming weeks to provide an accurate location of the prospective graphitic schist unit along several kilometres of strike length. Initial results of the EM survey are presented in Figure 1. Magenta and red on the surveyed lines represent zones of high electrical conductivity and indicate the presence of graphite, a known conductor of electricity. Ground truthing of the lines shows that graphitic schist outcrops where the high EM signatures are recorded.

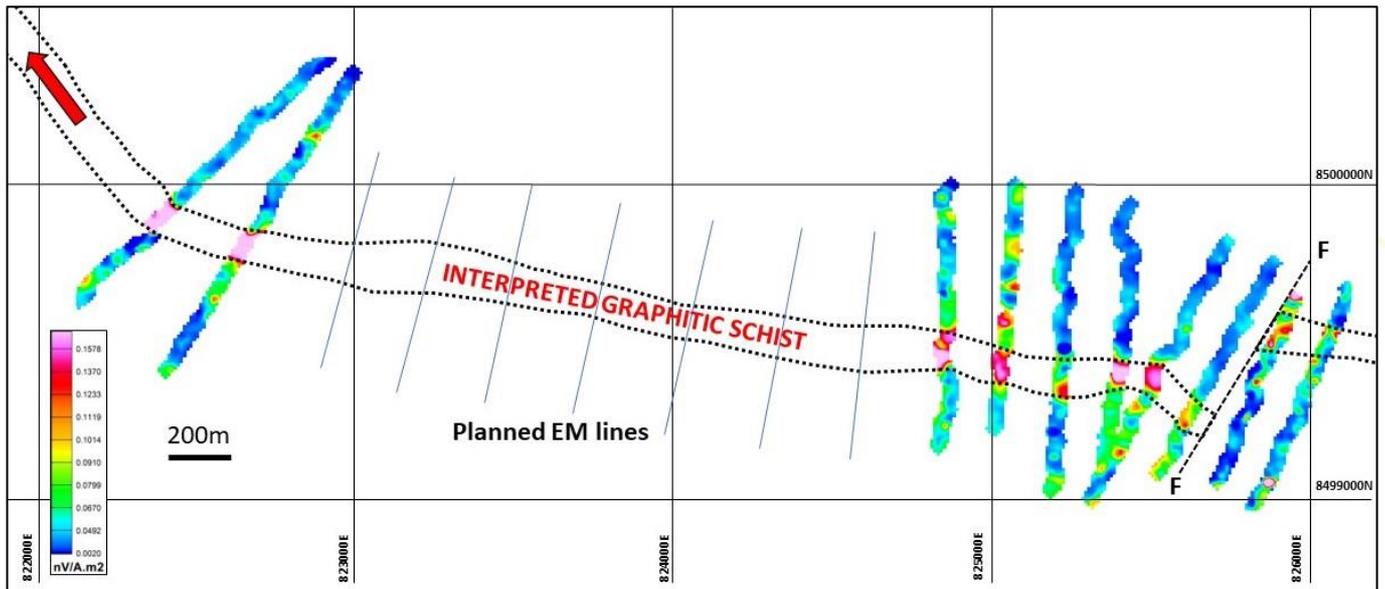
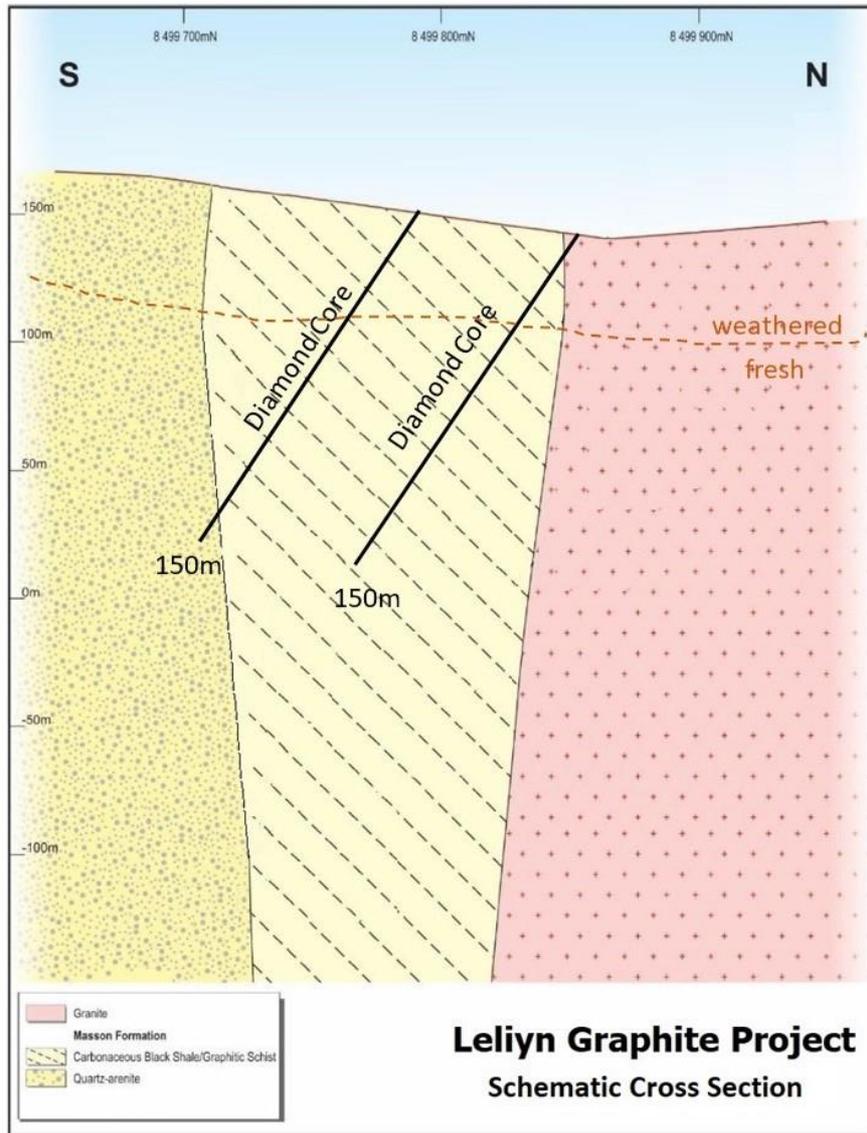


Figure 1: Ground EM survey lines completed to date

A schematic cross-section is presented in Figure 2. The proposed drilling is designed to test the width of the schist and to provide representative samples for metallurgical test-work from different weathering zones.



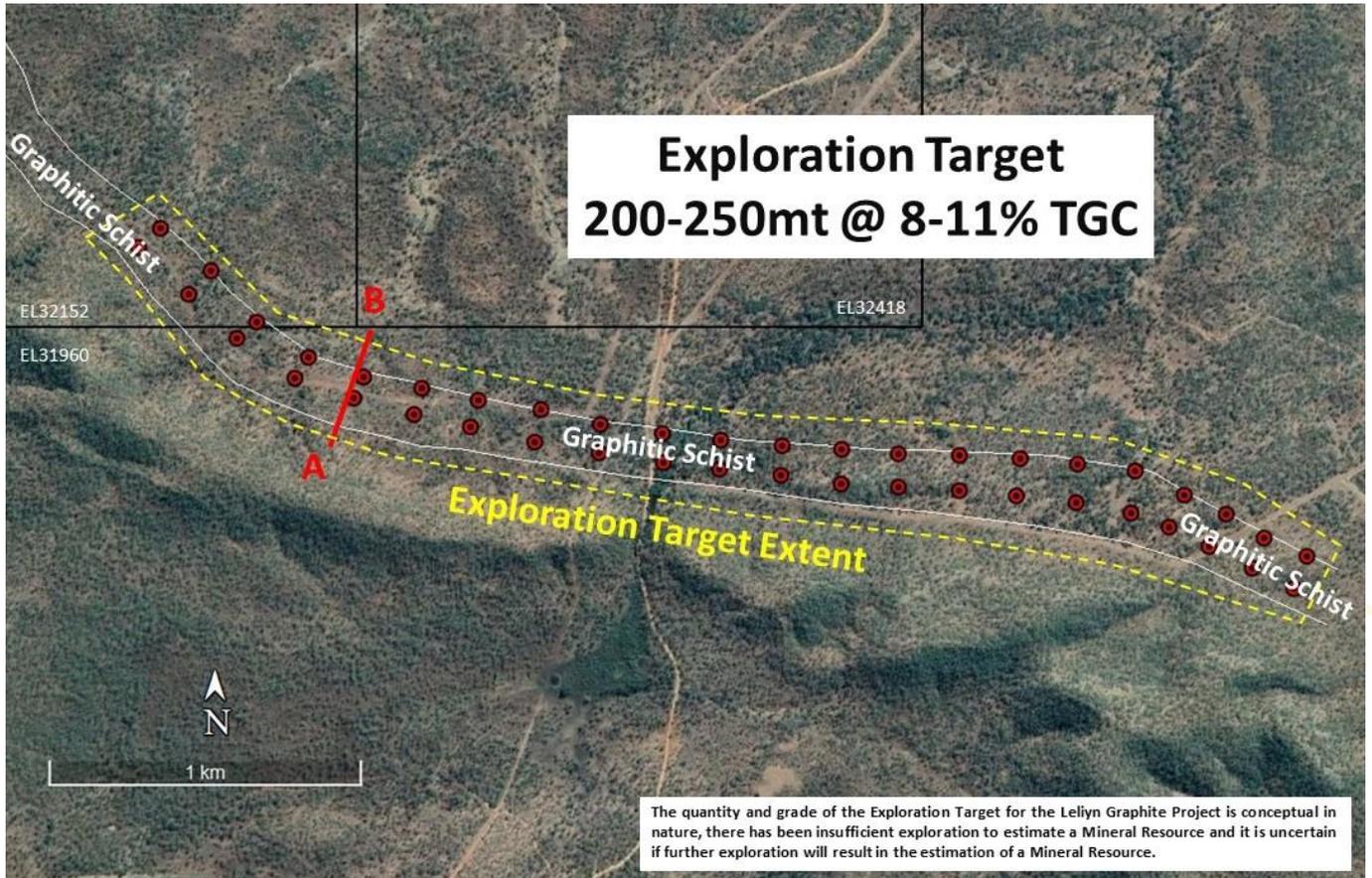
**Figure 2: Schematic proposed drill cross section**

The drilling program is also designed to upgrade the recently released Exploration Target, shown in Table 1.<sup>1</sup>

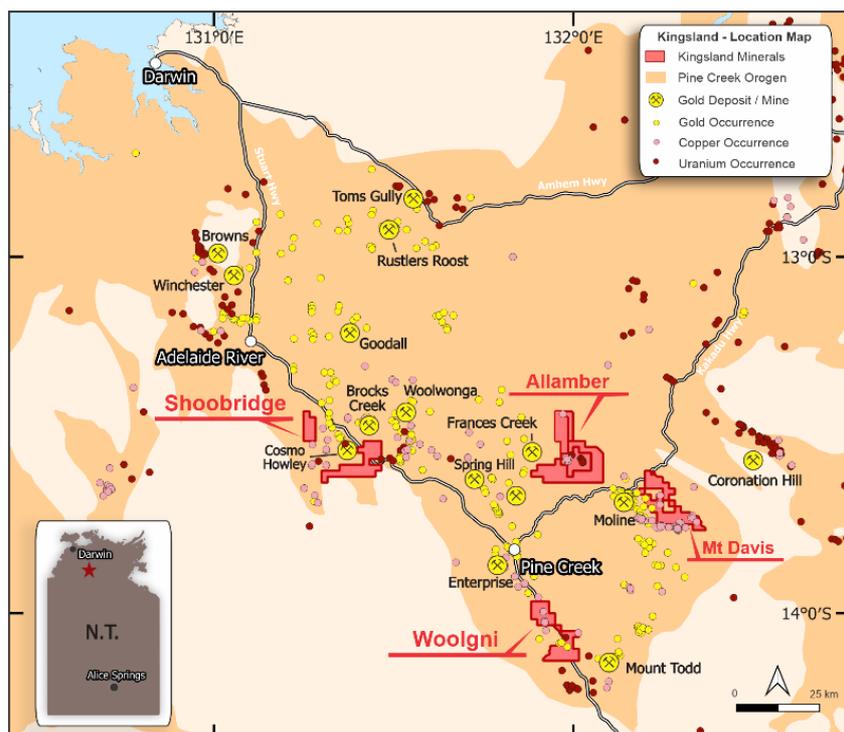
<b>Tonnes (Mt)</b>	<b>Grade (% TGC)</b>	<b>Contained Graphite (Mt)</b>
<b>200 -250</b>	<b>8-11</b>	<b>16 -27</b>

**The quantity and grade of the Exploration Target for the Leliyn Graphite Project is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.**

<sup>1</sup> Refer to Kingsland Minerals ASX announcement 21 March 2023



**Figure 3: Leliyn Graphite Project Exploration Target**



**Figure 4: Kingsland Minerals Northern Territory Exploration Projects**

THIS ANNOUNCEMENT HAS BEEN AUTHORISED FOR RELEASE ON THE ASX BY THE COMPANY'S BOARD OF DIRECTORS

### About Kingsland Minerals Ltd

Kingsland Minerals Ltd is an exploration company with assets in the Northern Territory and Western Australia. There are four project areas in the NT: Allamber, Woolgni, Shoobridge and Mt Davis. In addition Kingsland Minerals owns a nickel project at Lake Johnston in Western Australia. Kingsland's focus is on exploration and development of prospective graphite and uranium prospects at Allamber in the Northern Territory. Following a successful listing on the ASX in June 2022 company details are as follows:

### FOLLOW US ON TWITTER:

<https://twitter.com/KingslandLtd>

### CAPITAL STRUCTURE

Shares on issue (KNG): 45,019,842  
Options on issue (KNGO): 18,694,920

### COMPANY SECRETARY

Bruno Seneque

### MEDIA

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### BOARD OF DIRECTORS

Mal Randall: Non-Executive Chairman  
Richard Maddocks: Managing Director  
Bruno Seneque: Non-Executive Director  
Nicholas Revell: Non-Executive Director



# ASX ANNOUNCEMENT

ASX: **KNG**  
kingslandminerals.com.au

## Competent Persons Statement

*The information in this report that relates to Exploration Results is based on information compiled by Mr Richard Maddocks, a Competent Person who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Maddocks is an employee of Kingsland Minerals and holds securities in the company. Mr Maddocks has sufficient experience that 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'. Mr Maddocks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information regarding the Leliyn Graphite Project Exploration Target is extracted from the report entitled 'Graphite Exploration Target Estimate' created on 21 March 2023 and is available to view on [www.kingslandminerals.com.au](http://www.kingslandminerals.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 estimates of Mineral Resources or Ore Reserves, 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.'*

## JORC Tables

### Section 1: Sampling Techniques and Data Leliyn Graphite Project

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No samples were collected</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>No drilling was conducted</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling was conducted</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean,</li> </ul>	<ul style="list-style-type: none"> <li>No drilling or logging was conducted</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>channel, etc) photography.</p> <ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>No samples were taken.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The preliminary EM acquisition program consists of 22 individual lines oriented across strike and spaced at ~200m intervals.</li> <li>A Loupe system was used to acquire EM data.</li> <li>Production rates for the Loupe system were estimated to be 5-10 line-km per day with a team of 2 technicians.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>No assays were conducted</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Geophysical survey lines were located with an in-built GPS with +/- 5m accuracy.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been</li> </ul>	<ul style="list-style-type: none"> <li>Spacing of survey lines was designed to correspond with proposed drilling lines. Spacing of lines is 200-300m depending on topography.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>applied.</i>	
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Survey lines were taken to be perpendicular to the strike of the graphitic unit.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>No samples were taken</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Ground truthing indicated that the EM highs obtained during the survey correspond to observed outcrop of graphitic schist..</li> </ul>

## Section 2: Reporting of Leliyn Graphite Project Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Leliyn Graphite Project is located on tenements EL 31960 and EL 32152. These tenements are 100% owned by Kingsland Minerals Ltd. There are no known encumbrances to conducting exploration on these tenements.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>There has been an extensive history of exploration for uranium and copper over the past 40 years. There has however been only limited work done focussed on graphite. Thundelarra Exploration (now Ora Gold Ltd) sampled some holes in 2012 for graphite at their Hatrick copper prospect and Cleo uranium prospect. These samples indicated the presence of significant grade and thickness of graphite mineralisation measured as total graphitic carbon (TGC). In 2017 one diamond drill hole TALD001 was drilled into the graphitic schist and sampled for TGC. Significant grades and widths of graphite mineralisation were encountered. Samples from TALD001 were submitted to Pathfinder Exploration Pty Ltd for thin section petrographical analysis.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Carbonaceous sediments of the Masson Formation have been contact metamorphosed by the Cullen Granites. This has metamorphosed carbon to graphite and converted shales to schists .</li> <li>This contact extends for about 20 km within Kingsland's tenement package.</li> </ul>
<b>Drill hole information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the under-standing of the exploration results including a tabulation of the</li> </ul>	<ul style="list-style-type: none"> <li>No drilling was conducted</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>following information for all Material drill holes:</p> <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 metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length</li> </ul> <p>• 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>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting 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.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• No compositing or aggregation has been used when reporting geophysical results</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	<ul style="list-style-type: none"> <li>• No drilling was conducted. The EM survey indicates the outcrop width of the more conductive graphitic schist units.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant diagrams have been included within the main body of text.</li> </ul>
<b>Balanced Reporting</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>• The competent person deems the reporting of these results to be balanced.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>There is no other substantive data to report. Exploration at Leliyn is at an early stage with only limited historical exploration data relevant to graphite mineralisation.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling is expected to commence within three weeks of the report. The aim of this drilling is to enable the estimation of a Mineral Resource Estimate for the Leliyn Graphite Project.</li> <li>The planned drilling will also provide material for further metallurgical test-work.</li> </ul>