

ASX ANNOUNCEMENT

09 November 2022

# Additional significant lithium targets identified at Roe Hills Project, Eastern Goldfields, WA

Targets are near Kairos' 2.6km-long Black Cat lithium anomaly, where preparations for drilling are underway, and adjacent to Global Lithium's Manna deposit

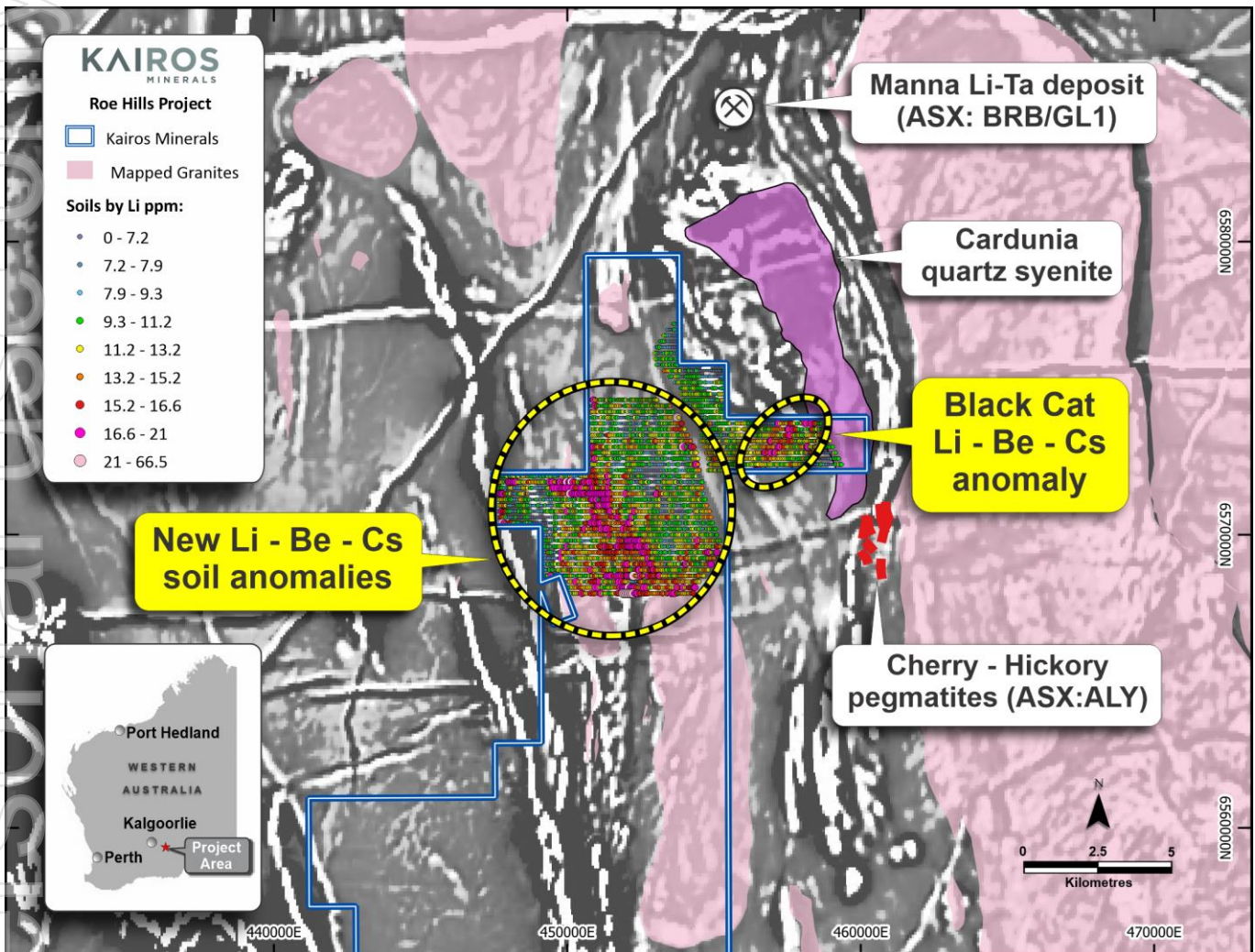
## Highlights

- New highly prospective lithium anomalies identified from 3,541 soil samples collected at the 100%-owned Roe Hills Project
- The new lithium soil anomalies are coincident with mapped granites and require immediate field verification and follow-up mapping and sampling prior to drilling
- The targets are adjacent to Kairos' 2,600m-long Black Cat lithium anomaly which occurs in the same geological sequence as Manna and has the same orientation
- Black Cat has been cleared in preparation for drilling
- Kairos holds 353sqkm of contiguous tenure in the Roe Hills area, adjacent to Alchemy Resources (ASX:ALY) and Breaker Resources (ASX:BRB)
- Kairos targeting spodumene-bearing pegmatites that occur in close proximity to the Cardunia Syenogranite, like the Manna Li-Ta deposit
- New soil programme planned to extend anomalies both north and south of current samples

Kairos Managing Director, Dr Peter Turner said: **"These quality and exciting soil targets highlight the lithium prospectivity at Lake Roe, where we are targeting buried spodumene-bearing pegmatites.**

**"We know that this area is fertile hunting ground in the shadow of the Manna Lithium deposit, and our 2.6km-long Black Cat soil anomaly, which comprises coincident lithium, caesium, beryllium and tin, shows huge promise to be a Manna lookalike.**

**“We now also have an additional half-a-dozen high-quality, new lithium-beryllium-caesium-gallium-rubidium-thallium soil anomalies associated with mapped and interpreted granites & pegmatites in the area which add to the project pipeline”.**



**Figure 1.** Kairos lithium anomalies at the northern half of the Roe Hills project (see **Figure 2** for more detail) showing the position of Manna Li-Ta deposit and Alchemy Resources' Cherry-Hickory pegmatites. The planned new soil sampling areas are shown on **Figure 3**.

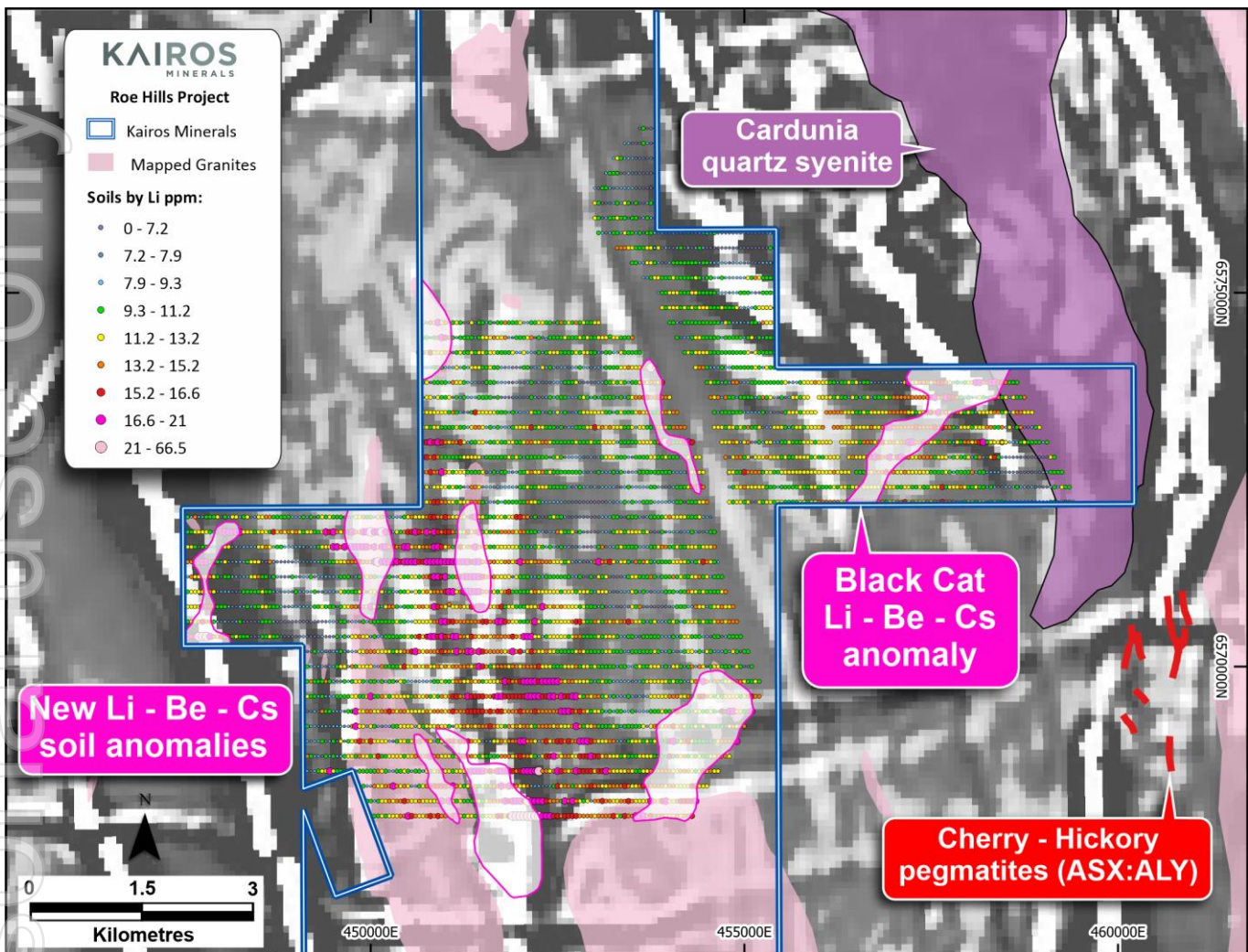
Kairos Minerals Ltd (ASX: KAI "Kairos" or "the Company") is pleased to advise that it has identified at least seven new lithium targets at its large, 100%-owned Roe Hills Project.

Roe Hills is 100km east of Kalgoorlie, WA and is nestled within a new spodumene-bearing pegmatite province hosting the Manna Li-Ta project (**Figure 1**).

More than 3,500 samples were collected from 20cm depths, sieved to -80 mesh and sent to Intertek for aqua regia digest and low-level multi-element and gold analysis by ICP-MS (AR25-MS53).

The lithium anomalies are generally coincident with beryllium, caesium, gallium, rubidium, and tin which are elements associated with fractionated granites and pegmatites, especially highly-fractionated lithium-caesium-tantalum (LCT) pegmatites.



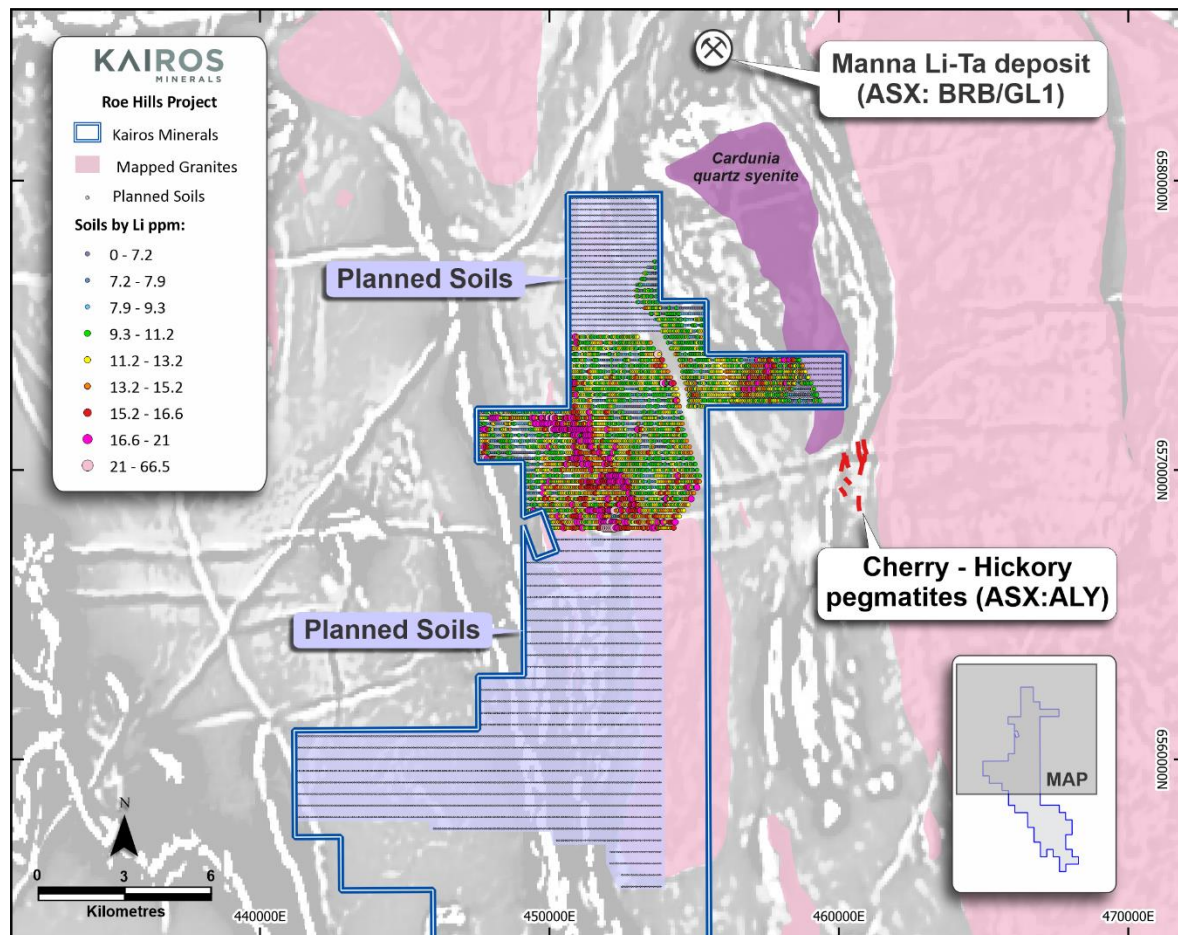


**Figure 2.** Lithium soil anomalies (pink polygons) considered to be *in-situ* soil anomalies associated with the margins of granitoid bodies. The other anomalous Li values are captured in drainage channels and at this stage are thought to be transported. New soil programmes will be completed to the north and south of these results – see **Figure 3**.

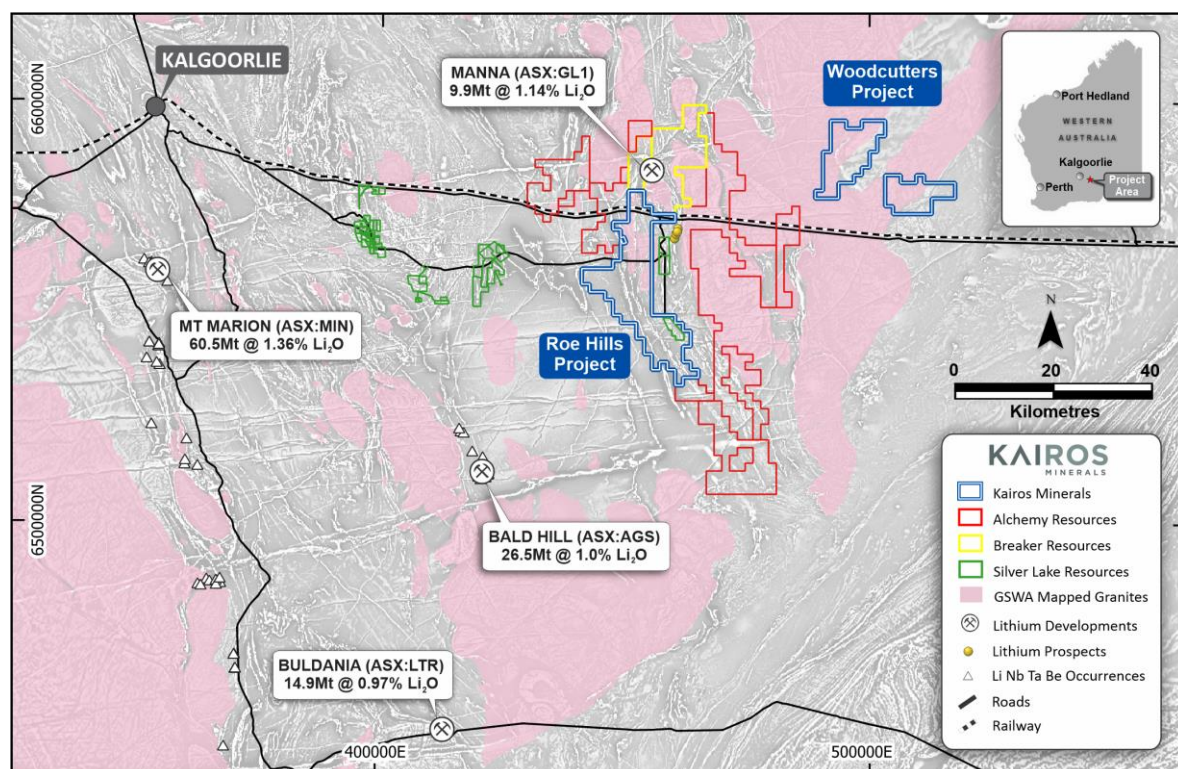
Kairos's **Black Cat Li-Cs-Rb-Be anomaly** (see ASX release dated 15 February 2022) has been cleared for drilling and the southern half of the anomaly will be subject to an initial 1,000m of reconnaissance-level RC drilling, subject to drill rig availability.

An additional soil sampling programme covering the rest of the northern half of the Roe Hills tenements will be undertaken as several high-priority geological targets exist especially around buried granitic rocks close to Manna (**Figure 3**).



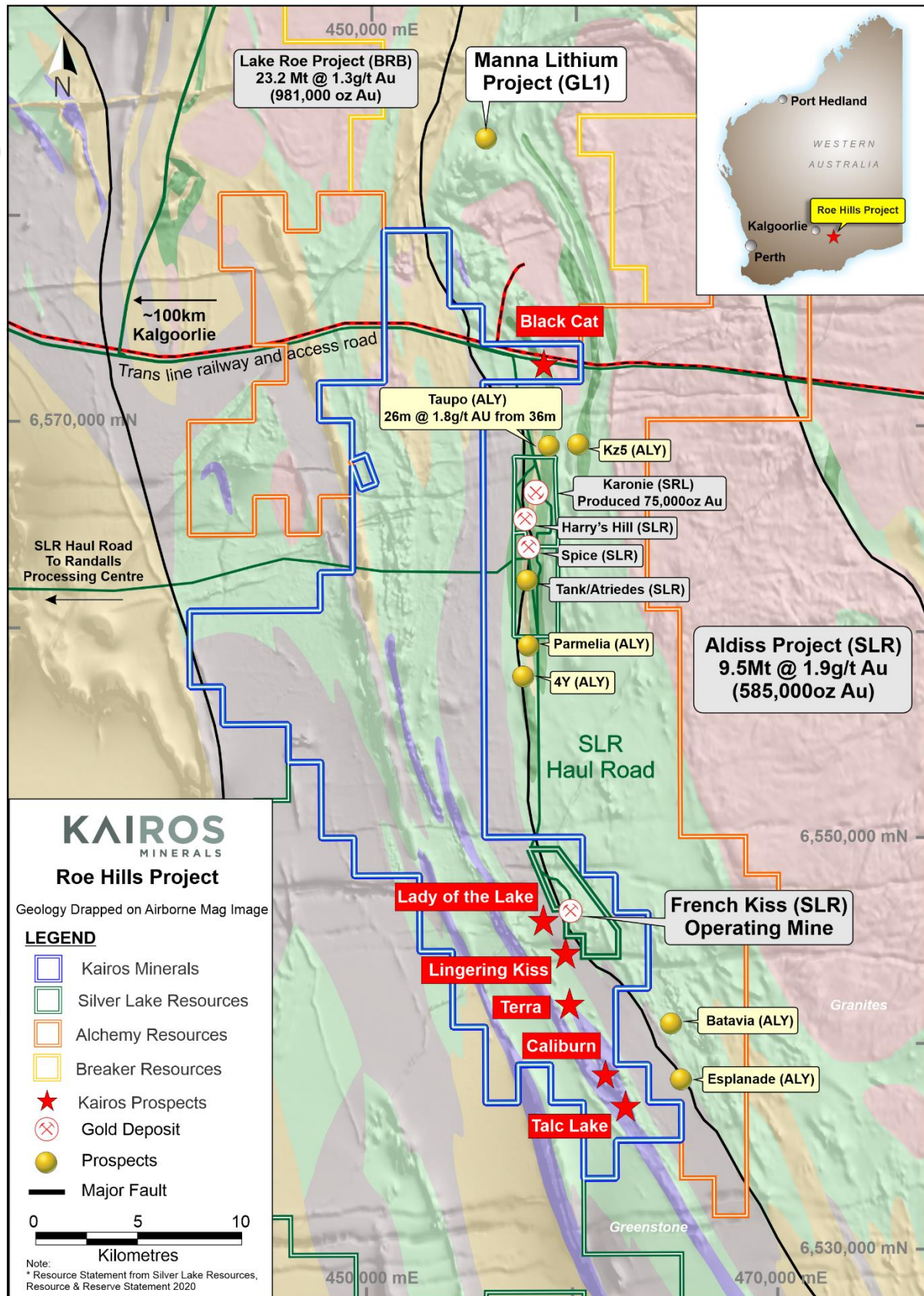


**Figure 3.** Additional planned soil sampling north and south of the existing programme.



**Figure 4.** Kairos' Gold & Lithium Projects over the Roe Hills area overlain on a magnetic image highlighting interpreted granites. Lithium mines and advanced projects with resources are shown.





**Figure 5.** Kairos' Gold & Lithium Projects over the Roe Hills area overlain on a simplified geological-magnetic image highlighting interpreted granites. Lithium mines and advanced projects with resources are shown.

## Next Steps

- Field investigation and mapping of granites/pegmatites at the new Li targets at Roe Hills
- Drill preparation for the Black Cat anomaly
- Further soil sampling north and south of the current programme

## About Kairos Minerals

Kairos Minerals (ASX:KAI) owns 100% of the flagship 1.1 Mozs **Mt York Gold Project** that was partially mined by Lynas Gold NL between 1994 and 1998. Pre-feasibility work is progressing rapidly underpinned by a +20,000m diamond and RC drilling campaign to collect important information for further resource expansion, metallurgical testwork, mining and process engineering to determine viability and optimal pathway to develop a sustainable, long-lived mining project. Current resources at a 0.7 g/t Au cutoff grade are shown in the table below.

Deposit	Indicated			Inferred			Total		
	Tonnes (MT)	Au (g/t)	Ounces (kozs)	Tonnes (MT)	Au (g/t)	Ounces (kozs)	Tonnes (MT)	Au (g/t)	Ounces (kozs)
Main Trend	11.02	1.26	446	12.26	1.15	452	23.27	1.20	899
Iron Stirrup	1.18	1.81	69	0.63	1.66	34	1.81	1.76	102
Old Faithful	1.73	1.19	66	1.19	0.96	38	2.93	1.1	103
<b>Total</b>	<b>13.93</b>	<b>1.30</b>	<b>581</b>	<b>14.08</b>	<b>1.15</b>	<b>523</b>	<b>28.01</b>	<b>1.23</b>	<b>1,104</b>

Kairos has recently discovered spodumene-bearing pegmatites adjacent to the Mt York Gold Project and is evaluating their potential to become part of a value-adding lithium project into the future.

Kairos's 100%-owned Roe Hills Project, located 120km east of Kalgoorlie in WA's Eastern Goldfields, comprises an extensive tenement portfolio where the Company's exploration work has confirmed the potential for significant discoveries of high-grade gold, nickel and cobalt mineralization. Kairos has also discovered a 2,400m long Li-Cs-Rb soil anomaly in an exciting and emerging lithium province that will be drill-tested.

This announcement has been authorised for release by the Board.

**Peter Turner**  
Managing Director

**Zane Lewis**  
Non Executive Director

## For Investor Information please contact:

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## **COMPETENT PERSON STATEMENT:**

The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled and reviewed by Mr Eduardo Ruaro, who is a consultant to Kairos Minerals Ltd and who is also a Member of the Australian Institute of Geoscientists (AIG). Mr Ruaro has sufficient experience that is relevant to the style of mineralisation and type of deposits 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 Reporting of Exploration Results, Mineral Resources and Ore Reserves.' (the JORC Code 2012). Mr Ruaro has consented to the inclusion in the report of the matters based on their information in the form and context in which it appears.

## Appendix A - JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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.</li> <li>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>A total of 3,541 individual soil samples were collected as ~200grams, from soil horizons at between 5-20cm depth.</li> <li>The samples were collected on east-west sample lines (perpendicular to the geological strike) that are spaced 200m apart; samples were collected at 50m spaces between samples on each line.</li> <li>The samples were sieved -80 mesh in the field and submitted to Intertek Laboratory in Perth.</li> <li>Sample points were selected to try to avoid areas of transported alluvium</li> <li>All sieves and sample collection tools were cleaned thoroughly between sample sites</li> <li>Samples were collected by senior field technicians from a contracting geological services company</li> <li>All samples underwent aqua regia digest for low-level gold and multi-element analysis by laboratory codes AR25 and MS53r (ICPMS finish)</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 is reported</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 is reported</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</li> </ul>	<ul style="list-style-type: none"> <li>Basic nature of soil description and site information was collected routinely</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p>metallurgical studies.</p> <ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <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>The soil samples were prepared and analysed by the independent certified laboratory Intertek Laboratory in Perth.</li> <li>The sample size was appropriated to analyse multi-element Aqua Regia at Intertek.</li> <li>At Intertek, soil samples are dried and pulverised to 95% passing 75um, prior to gold and multi-element analysis by AR25/MS53r</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>Certified Reference Material (CRM) 'standards' were used for gold and lithium in this programme at a frequency of 1 CRM to every 50 soil samples and duplicate samples at a frequency of 1 in every 30 samples.</li> <li>Quality Assurance-Quality Control (QAQC) measures were also adopted by the laboratory using internal standards</li> <li>The soil samples were submitted to independent certified laboratory Intertek in Perth for sample preparation and analysis for gold and multi-element analysis by method AR25-MS53r</li> <li>AR_25 refers to Aqua-Regia digest of a 25g sample charge. Aqua Regia is considered a partial digestion for elements like lithium and associated pathfinder elements. Any lithium anomalies using this digestion are likely to be lower tenor than using a digestion method such as 4-acid digest (partial digest) or Na-peroxide fusion (considered to be a total digest). As the samples are reconnaissance surface samples, aqua regia digest is considered appropriate as a cheaper, first-pass method for anomaly detection</li> <li>Elemental analysis was completed by Inductively Coupled Plasma Mass Spectrometry for 53 elements to a low-level (Intertek website outlines the detection limits to parts per million level which are adequate for the sample type and procedure.</li> <li>Due to the early stage of exploration and type of work completed to date, no external, additional standards, blanks or duplicates have been used.</li> </ul>



Criteria	JORC Code explanation	Commentary
		QAQC relies on the supplied laboratory report
<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>All data is received and stored securely in digital format in the Company's database.</li> <li>Final data is rigorously interpreted by Kairos' geoscientific personnel and consultants</li> <li>Due to the early stage of exploration and type of work completed to date, no independent verification has been undertaken to date</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>Kairos' soil samples were surveyed by handheld GPS with an accuracy of +/- 5m.</li> <li>All location data are in MGA94 Zone 51 (GDA94).</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 applied.</li> </ul>	<ul style="list-style-type: none"> <li>The soil sampling program was conducted on 200m line spacing by 50m sample interval.</li> <li>The sample line &amp; grid geometry was designed to accentuate soil anomalies that may be north-south in extent (as expected) and parallel to the geological strike of the rocks.</li> </ul>
<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>The soil sampling was undertaken across the strike of the known geology and structures within the project areas.</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>The sample chain of custody is managed by Kairos.</li> <li>All samples were collected in the field at the project site in number-coded calico or geochem bags/secure labeled poly weave sacks by Kairos' geological and field personnel.</li> <li>All samples were delivered directly to the responsible laboratory or associated carrier by Kairos personnel before being transported to the laboratory in Perth WA for final analysis.</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>No review or audits have been conducted</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or</li> </ul>	<ul style="list-style-type: none"> <li>The Roe Hills project consists of nineteen granted Exploration Licenses: E28/1935,</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>land tenure status</b>	<p>material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<p>E28/2117, E28/2118, E28/2548, E28/2585, E28/2593-E28/2597, P28/1292-P28/1300 inclusive.</p> <ul style="list-style-type: none"> <li>Kairos is not aware of any existing impediments nor of any potential impediments which may impact ongoing exploration and development activities at the project site.</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>No significant past work has been carried out for lithium exploration in the past</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p><b>Regional Geology</b></p> <ul style="list-style-type: none"> <li>The Roe Hills Project lies across Granite-Greenstones of the Archaean Yilgarn Craton. The Yilgarn Craton is composed of greenstone and sediment units which have been deformed by tight isoclinal folds during the intrusion of diapiric granites.</li> <li>The mineralisation targets are intrusion/shear zone-hosted Au deposits and LCT pegmatite deposits (lithium)</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>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: <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> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling was completed</li> </ul>
<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 (eg 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</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>of metal equivalent values should be clearly stated.</i>	
<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 (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</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>Lithium soil anomaly maps are shown on Figures 1 &amp; 2 of this report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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 to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All exploration results have been reported without grade cuts</li> <li>All results have been imported into ioGAS software and checked for quality control</li> <li>Lithium results have been colour-coded using the 'Tails 8' reporting group which have been modified to include anomalous populations from a Li log probability plot</li> <li>Anomalous Li_ppm values are considered to be <math>\geq 16.7</math> ppm Li with strongly anomalous <math>\geq 21</math> ppm Li</li> <li>All elemental relationships through correlation coefficients, especially lithium and associated pathfinder elements of Be (0.7), Cs (0.54), Ga (0.68), K (0.66), Rb (0.72), Sn (0.65) &amp; Tl (0.75) have been reviewed along with Box &amp; Whisker plots</li> <li>Tantalum results are considered below detection under the current digest and assay method and have been ignored in the current work</li> <li>Anomaly maps for the various elements have been reviewed and compared along with radiometric, magnetic and geological maps to determine likely significance of soil anomalies in relation to subsurface bedrock geology</li> </ul>
<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>Other relevant and meaningful data has been previously reported</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further</li> </ul>	<ul style="list-style-type: none"> <li>Field investigations of the new targets at Roe</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <ul style="list-style-type: none"> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<p>Hills are warranted based on the tenor and scale of the results</p> <ul style="list-style-type: none"> <li>Additional Heritage Surveys are likely to be undertaken</li> </ul>