

ASX ANNOUNCEMENT

30 July 2024

Roe Hills Project, Eastern Goldfields

# Roe Hills' auger sample results provide additional km-scale gold anomalies

Multiple targets for field checking

Highlights

- 990 sample multi-element results returned from auger sampling, testing a further 10 km of geological strike over the Roe Hills Project
- Several new, kilometre-scale gold anomalies identified
- High Nb anomalies point to probable buried granitic pegmatites or intrusions that require follow-up field work
- Future field checking and possible infill sampling required

Kairos Managing Director, Dr Peter Turner said: **“Our field teams have been busy in the field at Roe Hills extending the northern sampling area to the south by a further 10 km targeting new gold, base metal and lithium discoveries over prospective geology that is in the neighbourhood of existing gold mines.**

**“These new reconnaissance results are encouraging, especially for gold, considering the scale and the relevance to the underlying geology.**

**“Future field activities will include ground truthing and possible infill auger sampling”.**

Kairos Minerals Ltd (ASX:KAI) is pleased to report the results of 990 auger samples collected over the southern extension of the Roe Hills tenements and analysed at ALS Laboratory facility in Perth for gold, base metals and lithium-suite elements. The sampling programme was designed on a reconnaissance 400m x 100m grid to collect information from areas of shallow cover deemed geologically prospective for shear-hosted gold and lithium pegmatite mineralisation.

Broad, low-level gold anomalies (>15ppb Au) were identified trending south and south-southwest of the **Greyhound Prospect** which will require field-based investigations for

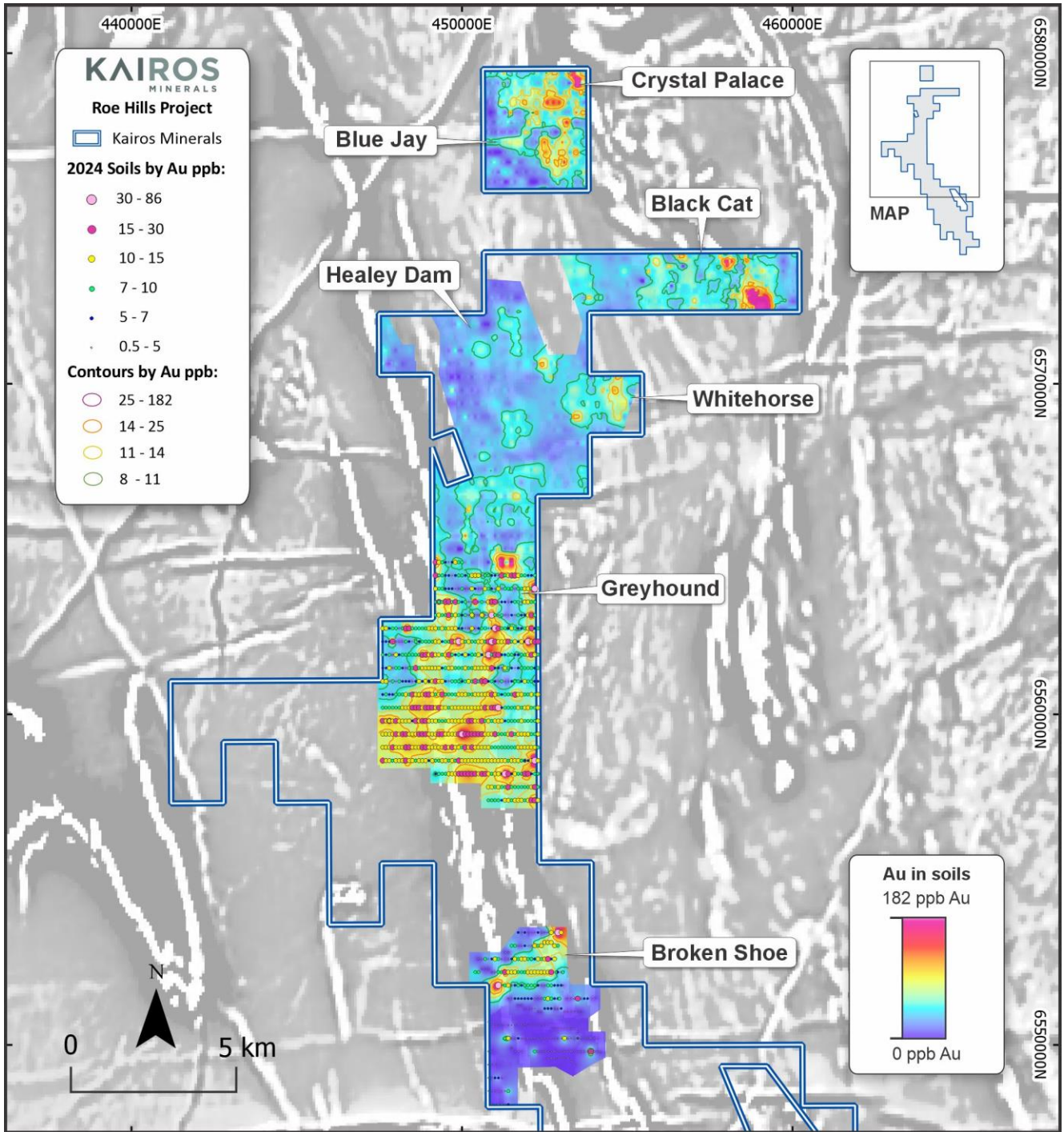
buried gold mineralisation. The main anomaly has a higher-grade core of >30 ppb Au and can be traced over at least 4 auger lines spaced 400m apart (>1,200m strike length) (**Figures 1, 3**).

A distinct northeast trending >10ppb gold anomaly was identified at the **Broken Shoe Prospect**. This orientation is coincident with interpreted cross-cutting fault structures which may be prospective for gold mineralisation (**Figures 1, 3**).

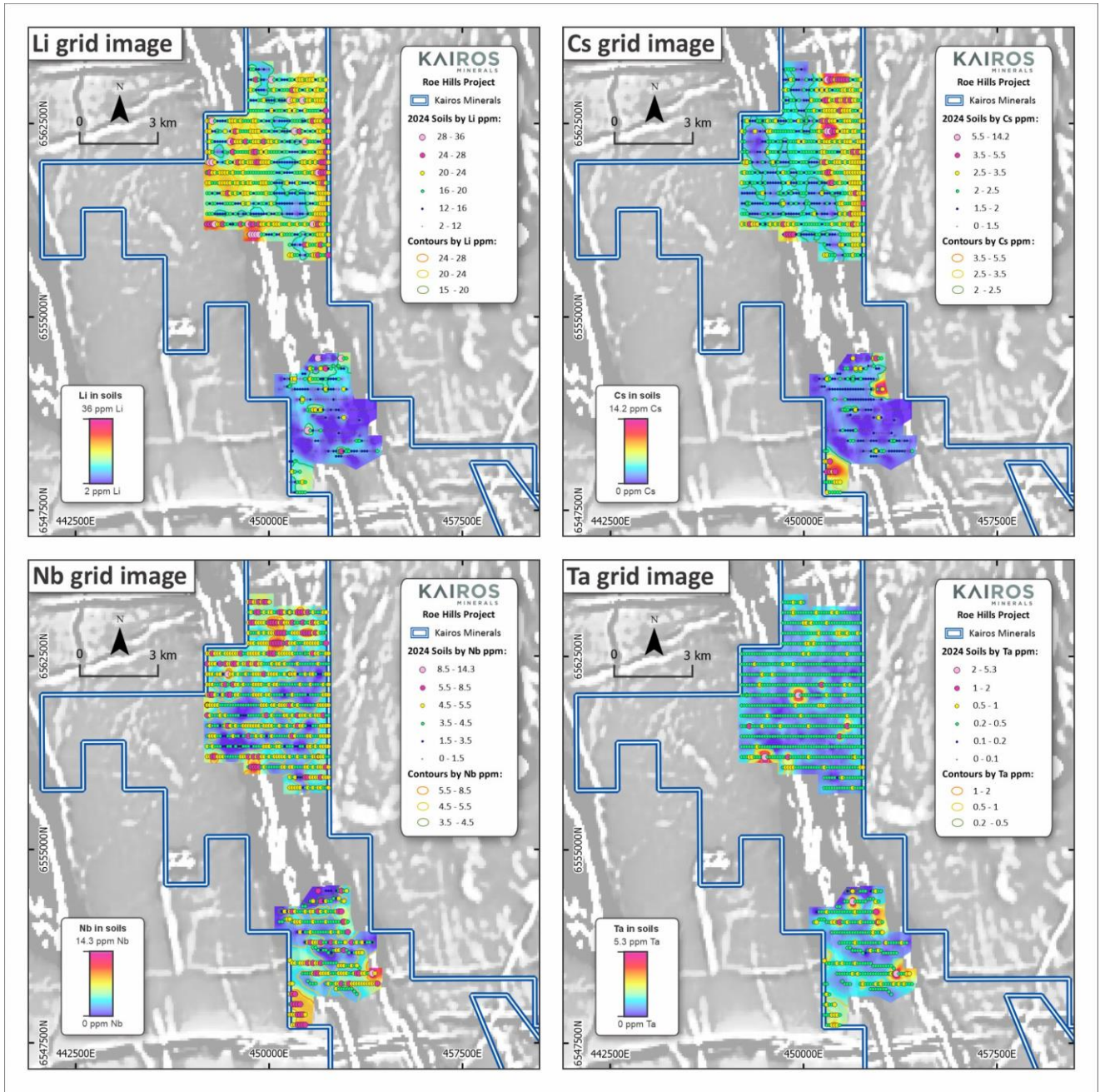
Minor lithium pathfinder anomalism was also identified at **Broken Shoe** with coincident caesium (Cs > 3.5ppm) and tantalum (Ta > 1ppm) anomalism (**Figure 2**). No corresponding lithium anomalism was identified but the area will be investigated further for potential lithium pegmatites.

### **Next Steps**

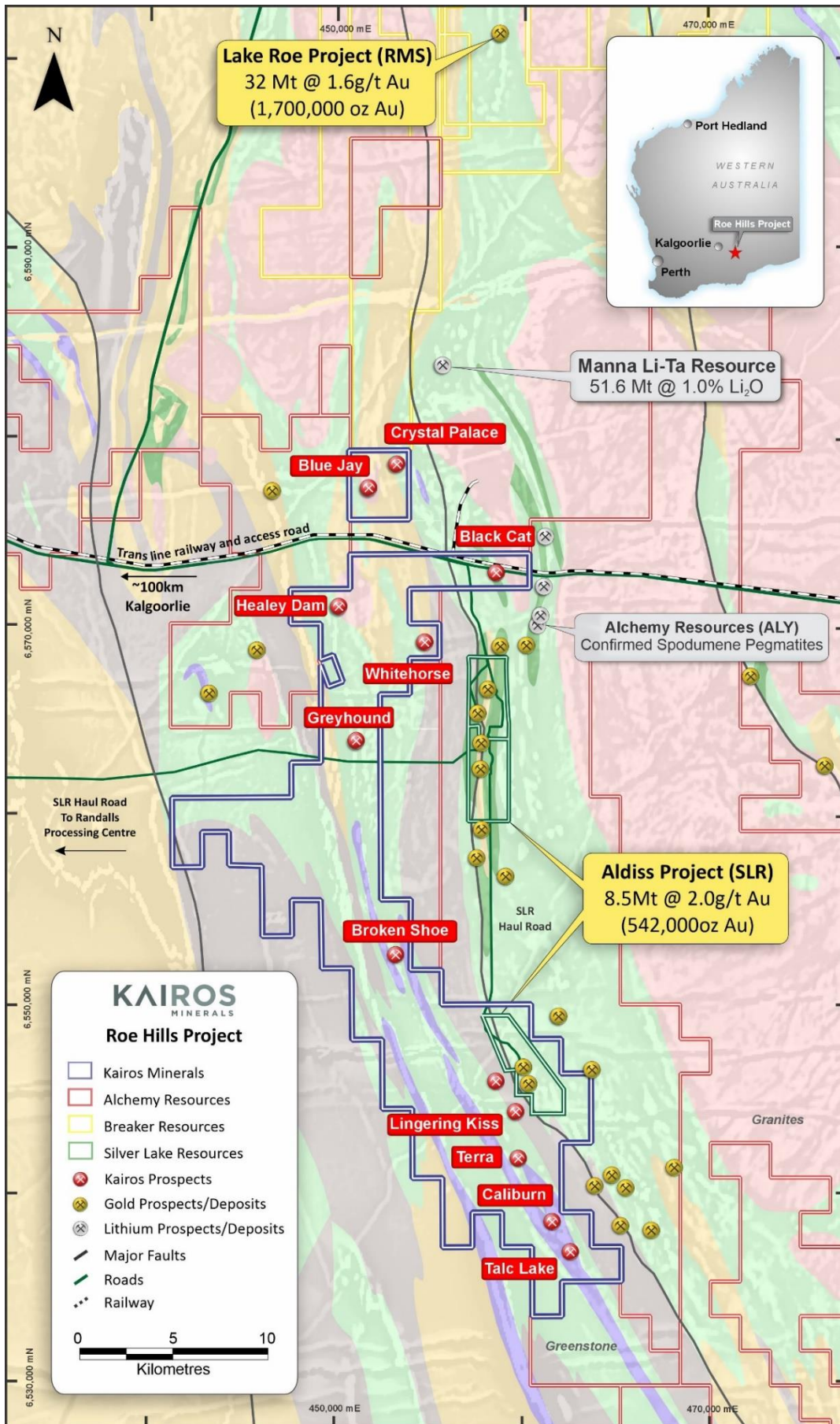
- Field checks on Roe Hills South auger targets for gold & lithium
- Assess Stage II Roe Hills REE metallurgical flow-sheet and progress with test work
- Provide support to GR Engineering in the completion of the Mt York Scoping Study
- Continuation of negotiations with interested parties with respect to advancing the Mt York Gold Project
- Receive, collate and review Lalla Rookh soil sample results
- Continuation of staged field mapping at the Pilbara regional projects following up on satellite imagery targets thought to be pegmatite swarms
- Continue to review new projects that are value-accretive for shareholders



**Figure 1.** Gold anomalism map for the new sample programme (the new sample sites can be differentiated from previous programmes by the coloured circles sized by gold grade). Several north and northeast trending anomalies can be seen. Line spacing on the new programme is 400m with sample spacing at 100m.



**Figure 2.** Roe Hills South sampling results for lithium (top left), caesium (top right), niobium (bottom left) and tantalum (bottom right).



**Figure 3.** Roe Hills Project showing prospects and mines.

## About Kairos Minerals

Kairos Minerals (ASX:KAI) owns 100% of the flagship 1.62 Mozs **Mt York Gold Project** that was partially mined by Lynas Gold NL between 1994 and 1998. Kairos has recognised that the resource has significant potential to grow further from its current 1.62 Moz base with significant exploration potential existing within the Mt York project area. Pre-feasibility work will progress rapidly underpinned by the resource expansion work that will collect important information for metallurgical testwork, mining and process engineering to determine viability and optimal pathway to develop a sustainable, long-lived mining project. Current resources at a 0.5 g/t Au cutoff grade above 325m depth 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	20.25	1.06	690	22.83	0.95	697	43.08	1.00	1385
Iron Stirrup	1.28	1.72	70	0.71	1.54	35	1.99	1.66	106
Old Faithful	2.17	1.07	75	2	0.81	52	4.17	0.95	127
<b>Total</b>	<b>23.7</b>	<b>1.10</b>	<b>835</b>	<b>25.54</b>	<b>0.95</b>	<b>784</b>	<b>49.24</b>	<b>1.02</b>	<b>1618</b>

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 Rare Earth Elements (REEs), lithium, gold, nickel and cobalt mineralization.

### **Competent Person Statement:**

The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled and reviewed by Dr Peter Turner, who is the Managing Director of Kairos Minerals Ltd and who is also a Member of the Australian Institute of Geoscientists (AIG). Dr Turner 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). Dr Turner has consented to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The Mineral Resources were first reported on 15 May 2023 (Announcement). The Company confirms that it is not aware of any new information or data that materially affects the information included in the Announcement and, in the case of estimates of mineral resources, that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially change.

This announcement has been authorised for release by the Board.

**Peter Turner**  
**Managing Director**

**Zane Lewis**  
**Non Executive Chairman**

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## 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 990 individual soil samples were collected from soil horizons at between 0.5 to 1.0m depth using a mechanical auger.</li> <li>The samples were collected on east-west sample lines (perpendicular to the geological strike) that are spaced 400m apart. Samples along each line were collected at 100m spacing</li> <li>Samples were collected by a contract field auger soil sampling crew with supervision by Kairos staff.</li> <li>All sieves and sample collection tools were cleaned thoroughly between sample sites.</li> <li>All samples were sieved to -80 mesh in the field and submitted to Intertek Laboratory in Kalgoorlie by Kairos personnel for delivery to Perth.</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>Soil samples were collected by UTV mounted auger drilling.</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>Soil sample recovery was routinely &gt; 90% based on visual inspections.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• Basic nature of soil sample depth and geological information of coarse fraction was collected routinely.</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 sieved in the field to - 80 mesh (180 micron) and collected in individual, uniquely identified paper packets and sent to Intertek Laboratory in Perth for analysis via Intertek in Kalgoorlie.</li> <li>• The sample size was appropriate for the selected methods of gold and multi-element analysis at Intertek.</li> <li>• The samples were dried and pulverised to 95% passing 75um, prior to gold and multi-element analysis.</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>• Samples were analysed by Intertek Genalysis in Perth.</li> <li>• All samples underwent four acid digest for multi-element analysis by laboratory codes 4A-Li/MS48 (ICPMS finish)</li> <li>• All samples were analysed for gold by fire assay using a 25g charge with ICP-OES finish (FA25/OE04).</li> <li>• The analysis methods are considered appropriate for the nature of the material.</li> <li>• Certified standards were regularly inserted into the sample sequence at a rate of 1:100 samples to assess the accuracy of the analysis methods.</li> <li>• The laboratory performed regular performance checks through analysis of internal standards, repeats and control blanks.</li> <li>• QAQC performance was monitored by Kairos staff with action taken with the laboratory if required.</li> <li>• Acceptable levels of accuracy and precision have been established through monitoring</li> </ul>

Criteria	JORC Code explanation	Commentary
		and assessment of QAQC performance.
<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>Primary laboratory data is emailed directly from the laboratory to the company's database consultant for upload directly into the company's digital database.</li> <li>Data is routinely imported into GIS and ioGAS software and processed to check the data and identify significant anomalies.</li> <li>Data anomalies are recognised and reviewed in relation to all other factors including geology and sample type.</li> <li>No adjustments have been made to the assay data.</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 east-west lines spaced 400m apart, with a sample spacing of 100m along the lines.</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> <li>No sample compositing has been applied.</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 unique number-coded paper geochemistry sample bags by Kairos' geological and field personnel.</li> <li>All samples were boxed and delivered directly to Intertek Kalgoorlie for delivery to Intertek Perth</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 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 licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Roe Hills project consists of nineteen granted Exploration Licenses: E28/1935, E28/2117, E28/2118, E28/2548, E28/2585, E28/2593-E28/2597, P28/1292-P28/1300 inclusive.</li> <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 or Rare Earth minerals exploration in the past at Roe Hills North by other parties</li> <li>Broad reconnaissance exploration for gold has been conducted in the past by Poseidon Exploration (1990), Normandy Exploration (1995) and Integra Mining (2009) in the form of shallow RAB/Aircore drilling.</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>The Roe Hills project lies across granite-greenstones of the Archean Yilgarn Craton, with the local geology at Roe Hills consisting of a north-south trending mafic-ultramafic-sedimentary sequences which have later been intruded by granites and subjected to regional deformation.</li> <li>The mineralisation targets are shear zone-hosted Au deposits and spodumene-bearing 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</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
	case.	
<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 of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</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 (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>Refer to Figures provided in the body of this announcement.</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 results have been presented for lithium and gold. No samples have been excluded from the presented data.</li> <li>Results presented are considered representative for both lithium and gold.</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>All meaningful and material exploration data has been included in the body of this document.</li> <li>Other relevant and meaningful data has been previously reported to the ASX: <ul style="list-style-type: none"> <li>9 November 2022 - 'Additional significant lithium targets identified at Roe Hills Project, Eastern Goldfields, WA'</li> <li>25 January 2023 - 'Highly promising lithium anomaly with mapped pegmatites'</li> <li>4 April 2023 - 'Infill soil sampling confirms compelling 2.8km lithium anomaly'</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>14 June 2023 – ‘New lithium prospects defined along-strike of highly promising Black Cat target’</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg 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>Geological field investigations will be undertaken on significant Au and Li pathfinder anomalies</li> </ul>