

## **COPPER-GOLD MINERALISATION DEFINED OVER THE OLDER ARCHAEAN BASEMENT AT CROYDON PROJECT, WA**

### **Highlights**

- **Follow-up exploration of the previously announced copper-gold discovery (ASX: 28 August 2019) has defined a 2.5km long corridor of anomalous soils and rock chips over the older Archaean basement.**
- **Extensive mapping, rock chips and soils sampling programs have identified a copper-gold anomalous corridor with associated high-tenor barium and molybdenum anomalies.**
- **High-tenor barium anomaly, up to a peak of 3.7% in soils, is consistent over this corridor within the Quartz-Muscovite Schist unit of the Archaean basement.**
- **The copper-gold rock chip anomaly occurs in veins near the contact between Ultramafic-Schist unit and the Quartz-Muscovite-Schist.**
- **This represents a significant greenfields exploration opportunity to be pursued next year in parallel with upcoming exploration programs at the Mt York gold deposit.**

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Kairos' Executive Chairman, Terry Topping, said: *"The delineation of an extensive corridor of anomalous soils and rock-chips along strike from the high-grade copper and gold mineralisation discovered earlier this year represents a fantastic conclusion to our exploration field season at the Croydon Project. We have confirmed the presence of high-grade copper-gold vein-style mineralisation over a 2.5km strike length within the Archaean basement with associated high-tenor barium and molybdenum anomalies.*

*"This means we now have a large conventional gold exploration target and strong copper-gold target within the same part of the Croydon Project. The scale, tenor and strength of the anomalism identified in this area combined with the presence of extensive nugget patches suggests that several mineralising events may have occurred in the area, further enhancing its exploration potential. We plan to return in the New Year to progress this exciting project alongside ongoing activities aimed at expanding our significant Resource base at Mt York."*

Kairos Minerals Ltd (ASX: KAI; Kairos or the Company) is pleased to announce that it has delineated a 2.5km long corridor of highly anomalous soils and rock chips including outstanding surface copper and gold grades from rock chip sampling during recently completed field exploration programs at its Croydon Project, located within its 100%-owned **Pilbara Gold Project** in WA (Figure 1).

The latest exploration success builds on the extensive gold-in-soils anomaly reported in the announcements of 28 August and 24 September 2019, and further upgrades the exploration potential of the project for structurally hosted gold and copper mineralisation.

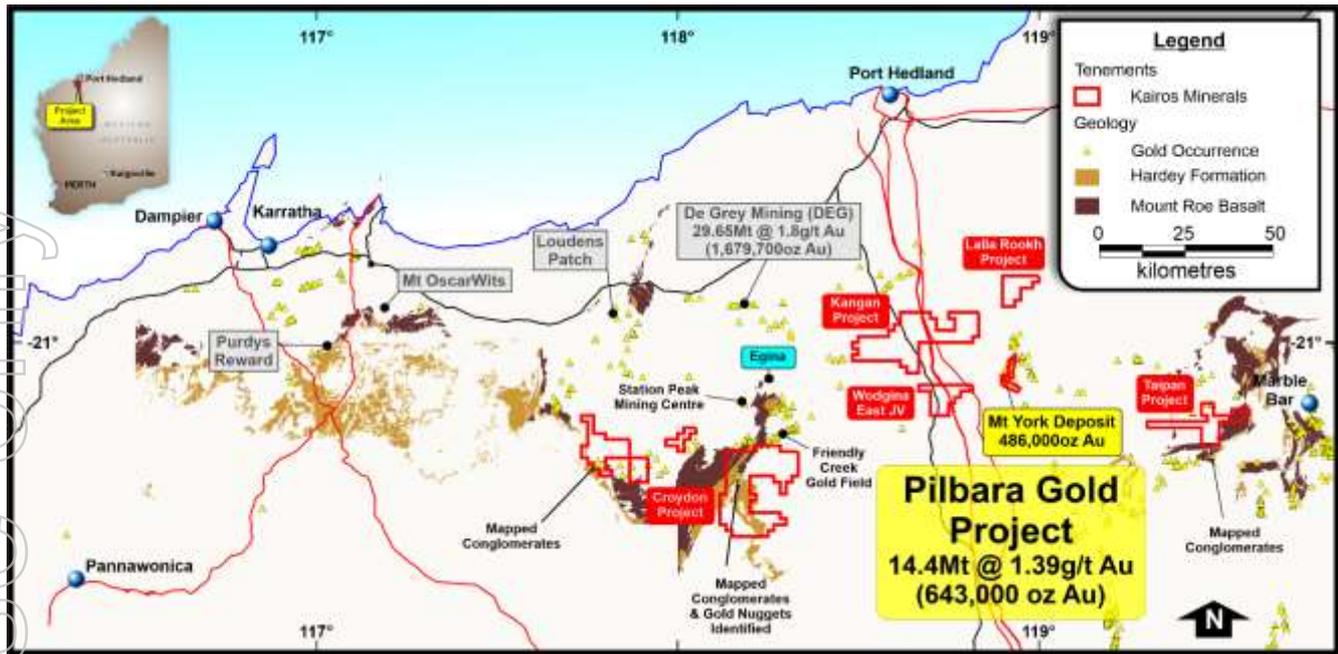


Figure 1: Croydon Project With Regional Geology.

### High-Grade Copper-Gold Results from Rock Chip Samples

Kairos has conducted a detailed mapping and rock chip sampling program along with the in-fill soils sampling program to follow-up on the previous significant results of the older Archaean basement.



Figure 2: Rock chips samples of the high copper-gold vein in the older Archaean basement.



Figure 3: Historical trench and the high topographic older Archaean basement in the background where sample CYR170 was collected.

Two rock chips collected 50m apart returned high copper-gold results, CYR170 (16.8% Cu - 4.3 g/t Au) and CYR455 (16.3% Cu - 1.3 g/t Au). These samples were collected from veins of approximately 0.5m width where Malachite-Sulphides-Quartz Vein is the dominant mineralogy (Figure 2 and 3). These anomalous rocks outcrop at the footwall of an Ultramafic unit of the older Archaean basement.

### 1.5km Gold-in-Soil Anomaly

An in-fill soils sampling program was conducted to follow-up on the significant results of the first-pass soils program, which had returned a peak soil result of 1,029 ppb gold. A high gold-in-soil anomaly has returned from this in-fill program over a strike length of 1.5 Km (Figure 4).

Nine samples from the older Archaean basement returned elevated gold results above 200ppb gold (0.2 g/t Au), up to a peak of 1,029 ppb gold (1.03 g/t Au), see Figure 4.

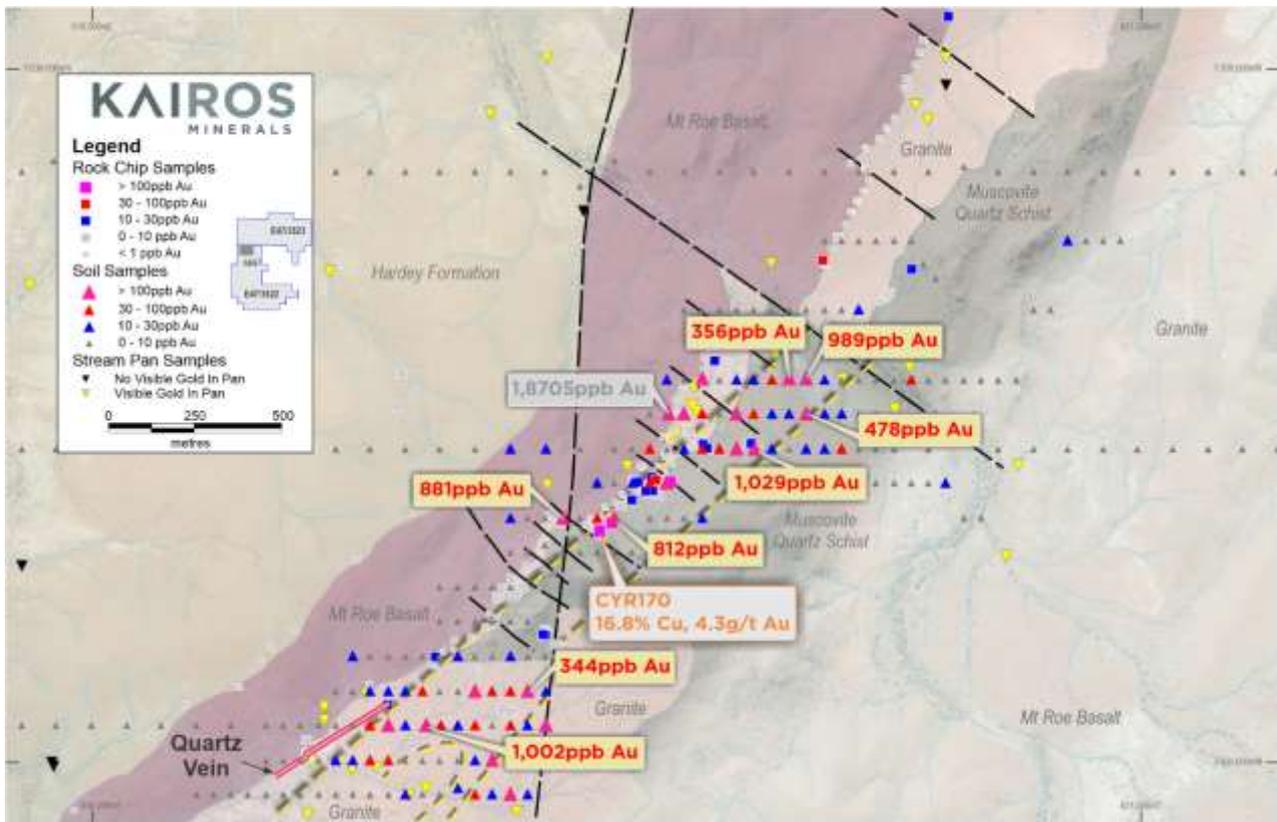


Figure 4: Gold results from soil and rock chip samples over the Kairos' Geological Map.

### Pathfinder Elements in Soils and Rock chips

All of the 52 elements of the Aqua Regia assays were carefully analysed to identify patterns of mineralisation. Barium (Ba) and Molybdenum (Mo) returned significant anomalies, both from soils and rock chips. Tellurium (Te) and Tungsten (W) also presented patterns of anomaly befitting with the other elements anomalies. The general strike for these anomalies extends for over 2.5km.

Along the same strike of the high copper-gold rock samples, several rock chips returned high barium values. Sample CYR444, collected from a mafic-schist unit outcropping approximately 600m south-southwest of the sample CYR170, returned 3,880 ppb Ba. Sample CYR147, collected from a ferruginous granitic outcrop approximately 400m north-northeast of the sample CYR170, returned 3,125 ppb Ba.

## Next steps

- A soils and rock chips sampling program is being designed to infill and also to test extensions of the mineralisation (This is due to start next field season as company will now shift focus to the Mt York Project).
- Geophysical methods are being discussed to follow-up on the geochemical anomalies.

## About Kairos Minerals

Kairos Minerals (ASX: KAI) is a diversified West Australian-based exploration company which is focused on the exploration and development of two key project hubs located in WA's premier mining districts.

The Company's 100%-owned Pilbara Gold-Project has its central "hub" located ~100km south of Port Hedland in the world-class Pilgangoora district immediately adjacent to the major lithium-tantalum projects owned by Pilbara Minerals and Altura Mining which are both currently in production.

Since acquiring the project in early 2016, Kairos has rapidly established a JORC Indicated 6.84Mt at 1.3 g/t for 285,000oz and Inferred 7.53Mt at 1.47 g/t for 358,000oz for a Total Mineral Resource of 14.4Mt @ 1.39g/t Au for 643,000oz (ASX announcement, 23 April 2018) by re-evaluating the previously known resources from the historical Lynas Find gold project, which produced over 125,000oz of gold between 1994 and 1998 and by executing highly focussed, cost effective exploration in its own right.

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 recent exploration work has confirmed the potential for significant discoveries of high-grade gold, nickel and cobalt mineralisation. Kairos' tenure adjoins the emerging Lake Roe gold discovery, owned by Breaker Resources (ASX: BRB).

In the Pilbara, Kairos also holds 1,158 square kilometres of tenure which is highly prospective for conglomerate-hosted gold discoveries. The Company's portfolio includes ~100 strike kilometres of prospective lower Fortescue Group rocks including both the base of the Hardey Formation and the basal sequence of the Mount Roe Basalt. Major exploration programs are underway targeting these highly prospective stratigraphic horizons, which have been associated with a number of recent high-profile gold discoveries in the Pilbara.

Kairos has been well recognised for its industry leading technical team that includes its Chairman Terry Topping (Taipan Resources NL, Cauldron Energy Ltd), Technical Director Neil Hutchison (Poseidon Nickel, Jubilee Mines) and consulting specialists.

### For further information, please contact:

**Investors:**

Mr Terry Topping  
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Kairos Minerals Limited

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### **COMPETENT PERSON STATEMENT:**

*Competent Person: The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled and reviewed by Mr Terry Topping, who is a Director of Kairos Minerals Ltd and who is also a Member of AusIMM. Mr Topping 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 Topping 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 Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.*

**Appendix 1 – Kairos Minerals – Croyden Project**  
**JORC Code, 2012 Edition – Table 1**  
**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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>Gold nuggets collected via metal detecting.</li> <li>The gold nugget samples remain to be tested for purity.</li> <li>Individual soil samples are collected as ~2 Kg, -2mm sieved samples, from insitu soil horizons at between 20-30cm depth. Sample points are selected to avoid areas of transported alluvium and colluvium.</li> <li>Rock chip samples are collected as &gt;1kg samples from outcrop and areas of interest</li> </ul>
Drilling techniques	<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 has been undertaken.</li> </ul>
Drill sample recovery	<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 has been undertaken.</li> </ul>
Logging	<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>The gold found is only qualitative and must be interpreted in combination with geological mapping of the target area based on a prospective geological unit being mapped in the vicinity.</li> <li>The information collected about soil and rock samples includes general geological observations, location and rock type.</li> </ul>

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Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The gold is not considered to be representative as it was found in loose soil and colluvium near the prospective geological units. The geological units remain to be sampled in detail.</li> <li>• The proximity of the gold near the prospective geological units is a positive indication the prospective units is the source of the gold.</li> <li>• Soil and rock chip samples are prepared and analysed by independent certified laboratory, Intertek Genalysis laboratories in Perth. Soils samples are dried and milled to 95% passing 75um, prior to gold and multi-element analysis by AR25/MS and CN2000/MS methods. Rock chip samples are dried, crushed and pulverised to 95% passing 75um prior to gold and multi-element analysis by AR25/MS, LW400/MS and LW1000/MS methods.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The soil and rock chip samples are submitted to independent certified laboratory, Intertek Genalysis in Perth for sample preparation and analysis for gold and multi-element analysis by AR25/MS and CN2000/MS methods for the soils and AR25/MS, LW400/MS and LW1000/MS methods for the rock chip samples.</li> <li>• Au_CN2000_MS: Twenty four hour Bulk Cyanide Leach (2kg sample). Analysed by Inductively Coupled Plasma Mass Spectrometry.</li> <li>• AR_25: Aqua-Regia digest. Analysed by Inductively Coupled Plasma Mass Spectrometry.</li> <li>• Repeats - LW400/MS and LW1000/MS: LeachWell for rockchips, 400g and 1000g.</li> <li>• Repeats - Au_CN2000_MS: Twenty four hour Bulk Cyanide Leach (2kg sample). Analysed by Inductively Coupled Plasma Mass Spectrometry.</li> <li>• For this stage stage of exploration Standards and Duplicates were added in the field to the samples batches. Approximately one standards sample for every 50 collected samples and one duplicate for every 30 collected samples. Additional standards, blanks and duplicates have been used by the laboratory for QAQC.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Due to the early stage of exploration and type of work completed to date, no verification nor assaying has been undertaken to date.</li> <li>• Sampling data is collected and collated by Kairos Geologists and entered into an electronic database</li> </ul>

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Criteria	JORC Code explanation	Commentary
Location of data points	<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>Sample collected were surveyed by GPS with an accuracy of +/- 5m.</li> <li>All samples are in MGA94 Zone 50 (GDA94).</li> <li>There are no historic workings or drill hole in the area.</li> </ul>
Data spacing and distribution	<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>Due to the early stage of exploration and type of work completed to date, the sampling is non-systematic nor representative for any future resource estimate.</li> <li>Soil sampling is conducted on east – west oriented lines at 800m line spacings. Samples are collected at 50m spacings along lines. Infill sampling is conducted on 100m, 200m and 400m spaced lines over areas of interest.</li> </ul>
Orientation of data in relation to geological structure	<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 is undertaken across the strike of the known geology and structures within the project area..</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were collected in the field at the project site by Kairos personnel.</li> </ul>
Audits or reviews	<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 audits have been completed</li> </ul>

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## 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>Kairos Minerals owns the Tenements 100%</li> <li>The Croyden Project has 5 Exploration Licences 47/3519 to 47/3523</li> <li>The Tenements have been granted</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 by other parties.</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 target is conglomerate and sediment hosted gold mineralisation.</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>

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Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Due to the early stage of exploration and type of work completed to date, no data aggregation has been undertaken.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling was completed.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Suitable summary plans have been included in the body of the report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>All relevant results have been reported</li> </ul>
<b>Other substantive</b>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including</i></li> </ul>	<ul style="list-style-type: none"> <li>All relevant and meaningful data has been reported.</li> </ul>

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Criteria	JORC Code explanation	Commentary
<b>exploration data</b>	<i>(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.</i>	
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <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>	<ul style="list-style-type: none"> <li>Further mapping, panning, metal detecting, geochemistry and rock chip sampling is planned</li> <li>Refer to diagrams in the body of the release</li> </ul>