

ASX ANNOUNCEMENT

24 September 2021

New gold targets identified at Mt York Project

Soil and rock chip sampling identifies several new high-priority greenfields targets with assays of up to 5.3g/t Au; Drilling to commence next month

Highlights

- Highly encouraging assay results received from 2,541 soil samples and 114 rock chip samples collected at the 100%-owned Mt York Project in WA.
- New target defined approximately 500m south-east of the Old Faithful deposit, with anomalous rock chip samples of up to 1.1g/t Au coincident with an arsenic-in-soils anomaly trend – minimal historical exploration undertaken in this area.
- High-tenor gold anomaly, up to a peak of 5,389ppb (5.3g/t) in soils, defined approximately 1km south of the Iron Stirrup deposit.
- Coherent and robust gold-arsenic anomalies returned from soil and rock chip samples collected south of the Gilt Dragon prospect.
- Drill program to test key targets identified by this first-stage geochemistry program will commence next month.
- Heritage survey scheduled for early October over priority target areas.

Kairos' Executive Chairman, Terry Topping, said: *"This is a very positive start to our geochemical sampling program at Mt York, with a number of new, high-quality greenfields drill targets defined that provide further evidence of the considerable exploration upside we have been uncovering."*

"As announced recently, assays from recent drilling have revealed significant new areas of mineralisation outside of the existing 873,500oz Resource base at Mt York, and now geochemical sampling has identified a completely new generation of targets."

"We're preparing to resume drilling next month to test several of the key targets to provide a clearer insight into the potential for new discoveries that could add significantly to the scale and potential of the Mt York Project."

"We are still awaiting a large number of assays from the recently completed initial phase of RC drilling and, with drilling set to resume shortly and assays expected to continue to flow in in the coming weeks, we are looking forward to a really active news-flow schedule through to the end of the year."

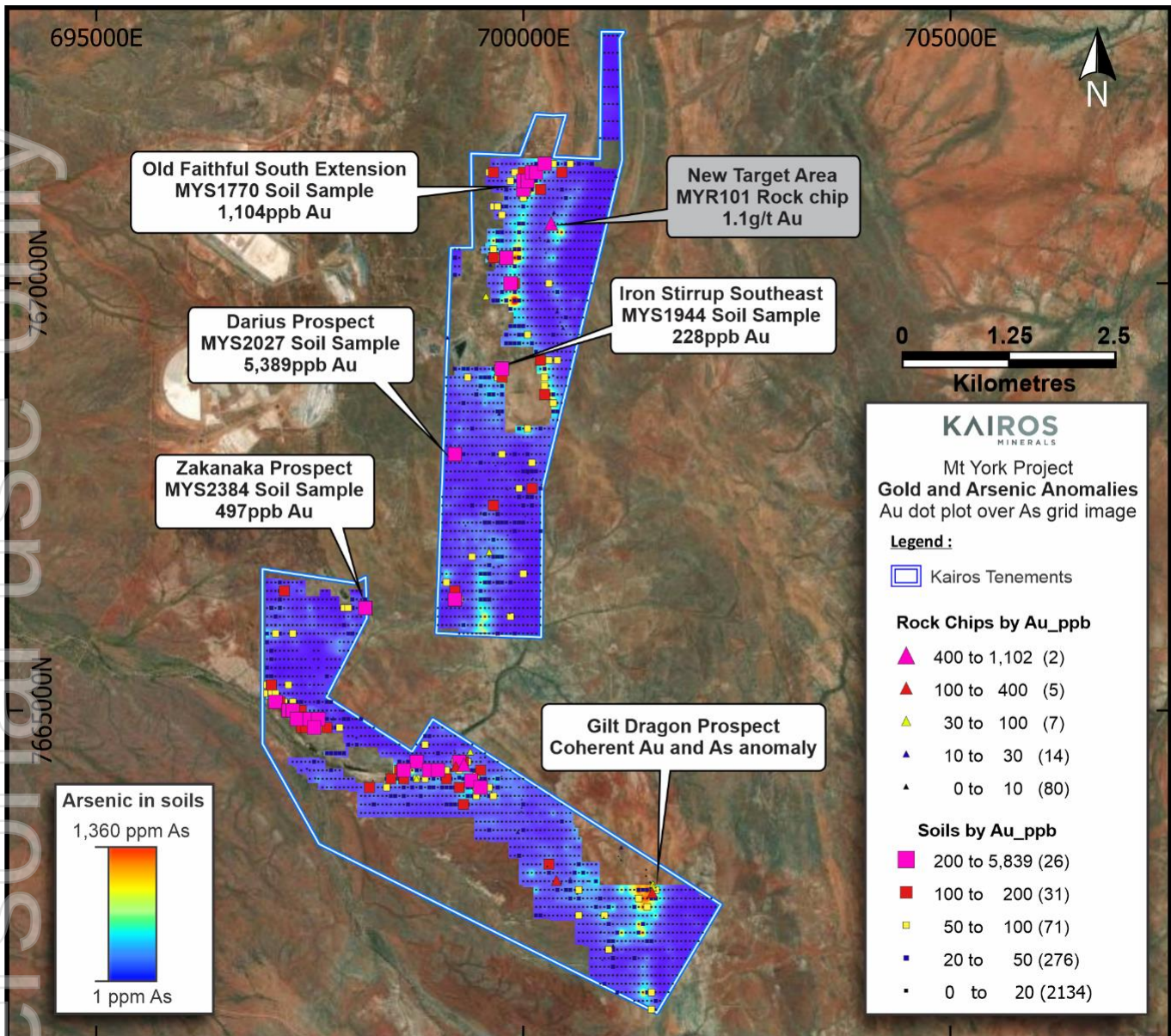


Figure 1: Geochemical sampling results at Mt York Project.

Kairos Minerals Ltd (ASX: KAI; “Kairos” or “the Company”) is pleased to advise that the recently completed first-stage geochemistry sampling program at its 100%-owned **Mt York Project in WA** has returned positive results, identifying several new high-priority targets for drill testing.

A total of 2,541 soil samples were collected at 100m x 50m spacing and submitted to Intertek Laboratories in Perth for gold and multi-element analysis, with all assay results now received. A further 175 rock chip samples were also collected and submitted to Intertek Laboratories for gold and multi-element analysis, with results received for 114 rock chip samples to date. The rock chip sampling program is ongoing, with additional samples being collected to follow-up on previous results and to continue the geological mapping program.

This first-stage geochemistry sampling program has generated several new targets, with drill testing of priority targets scheduled to commence next month.

Geochemistry

Old Faithful Southeast – New Target Area

Approximately 500m south-east of the Old Faithful deposit, rock chip sample MYR101 returned an assay of **1.1g/t of gold** within a broader area with elevated arsenic in soils. Elevated arsenic in soils is correlated to gold mineralisation confirmed by drilling at both the Old Faithful and Mt York deposits.

There has been no historical drilling within Kairos' tenure in this area, however historical exploration approximately 1.5km to the north recorded 2m @ 1.91g/t Au from RC hole LFRC2 and 4.1g/t Au from a channel sample located outside the Mt York Project area, but within the same geological unit.

Darius Prospect

Approximately 1km south of the Iron Stirrup deposit, soil sample MYS2027 returned **5,389ppb of gold**, the highest gold result returned from the current geochemistry program at the Mt York project to date. Within this area, historical RC drill hole DSRC77 recorded 17m @ 0.63g/t Au from 36m, including 2m @ 1.31g/t Au from 49m.

Kairos has prepared three drill pads at the Darius Prospect for the next phase RC drilling.

Other significant results

Zakanaka Prospect: Soil samples collected 38m east of the current drilling program area returned 497ppb Au and 222ppm As. A follow up in-fill soil sampling program is planned.

Gilt Dragon Prospect: Coherent and robust gold-arsenic anomalies returned from soil and rock chip samples from an area to the south of the Gilt Dragon prospect. Approximately 250m west of the previously drilled area, rock chip sample MYR056 returned 1,598ppm arsenic. Follow-up exploration is planned for this prospect area, including an in-fill and extension soil sampling program, rock chip sampling and mapping. In addition, Kairos has surveyed and cleared five pads for RC drilling to be conducted in the next phase of the drilling program.

Old Faithful South Extension: ~1km long anomaly associated with elevated arsenic-in-soils was defined to the south of the Old Faithful deposit, with peaks of 992ppm arsenic and 1,104ppb gold. Three drill holes are planned to test these anomalies in the next phase of the drilling program.

Green Creek Prospect: Gold-in-soils anomaly returned approximately 400m north of the previous drilling area, where a historical hole recorded 3m @ 11.7g/t Au from 13m. The anomaly was identified by samples collected at the end of a sampling line, with further sampling planned. There is one remaining RC hole to be drilled in the current drilling program, with additional drilling to be designed.

Iron Stirrup South-east: Soil anomaly up to 228ppb gold and 732ppm arsenic returned from a target area previously named "The Kink", which is interpreted as a possible extension of the Iron Stirrup mineralisation. Two RC holes are planned to test this anomaly with a further geochemical sampling program to be conducted over the target area.

Next Steps

- Geochemistry sampling results from Mt York, Wodgina, Kangan, Skywell and Croydon Projects.
- Additional heritage surveys at Mt York, Kangan and Skywell Projects.
- Assay results from the Mt York RC drilling.
- Assay results from the Kangan AC drilling.

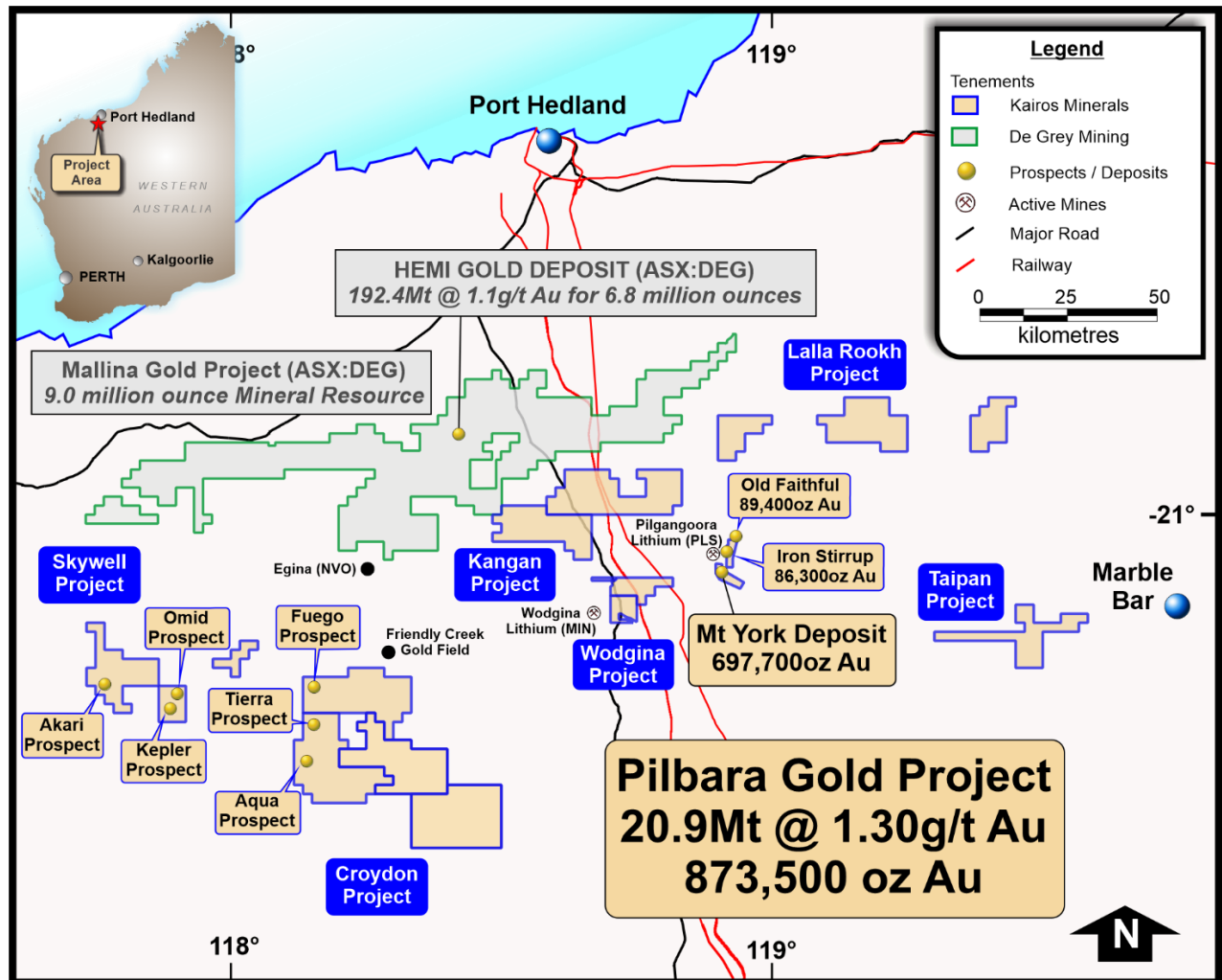


Figure 2: Pilbara Gold Project, WA.

With the authority of the Board.

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, which is currently in production.

Since acquiring the Project in early 2016, Kairos has established a JORC Indicated 8.56Mt at 1.3 g/t for 366,000oz and Inferred 12.36Mt at 1.28 g/t for 507,000oz for a Total Mineral Resource of 20.93Mt @ 1.3g/t Au for 873,500oz (ASX announcement, 4 March 2020). The Project encompasses the historical Lynas Find gold project, which produced over 125,000oz of gold between 1994 and 1998.

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 1,547 square kilometres of tenure (granted and applications) which is highly prospective for gold discoveries.

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:

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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 – Roe Hills Project

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	- 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. - Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. - 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.	- A total of 2,541 individual soil samples were collected as ~150grams, from <i>in situ</i> soil horizons at between 5-20cm depth. - The samples were sieved #80 mesh in the field and submitted to Intertek laboratory in Perth. - All samples were delivered by Kairos personnel to RGR Road Haulage in Port Hedland for transport to Intertek Minerals Laboratory in Perth WA for final analysis. - The rock chip and soil samples are submitted for Aqua Regia (AR25/MS) for gold and multi-elements analysis. - Rock chip samples are collected from outcrop and areas of interest
Drilling techniques	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).	No drilling results from Kairos Minerals are reported in this announcement.
Drill sample recovery	- Method of recording and assessing core and chip sample recoveries and results assessed. - Measures taken to maximise sample recovery and ensure representative nature of the samples. - 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.	No drilling results from Kairos Minerals are reported in this announcement.
Logging	- 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. - Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. - The total length and percentage of the relevant intersections logged.	- The basic 'nature of soil and site' information were registered. - The information collected about soil and rock samples includes general geological observations, location and rock type.
Sub-sampling techniques and sample preparation	- If core, whether cut or sawn and whether quarter, half or all core taken. - If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. - For all sample types, the nature, quality and appropriateness of the sample preparation technique. - Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. - Measures taken to ensure that the sampling is representative of the <i>in situ</i> material collected, including for instance results for field duplicate/second-half sampling. - Whether sample sizes are appropriate to the grain size of the material being sampled.	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 method. Rock chip samples are dried, crushed and pulverised to 95% passing 75um prior to gold and multi=element analysis by AR25/MS method.
Quality of assay data and laboratory tests	- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. - 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. - 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.	- 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 method for the soils and for the rock chip samples. - AR_25: Aqua-Regia digest. Analysed by Inductively Coupled Plasma Mass Spectrometry. - Standards, blanks and duplicates have been used by the laboratory for QAQC.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All data is received and stored securely in digital format in the Company's database.

	- The use of twinned holes. - Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. - Discuss any adjustment to assay data.	Final data is rigorously interpreted by Kairos' geoscientific personnel.
Location of data points	- 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. - Specification of the grid system used. - Quality and adequacy of topographic control.	- Kairos soil samples were surveyed by handheld GPS with an accuracy of +/- 5m. - All location data are in MGA94 Zone 50 (GDA94).
Data spacing and distribution	- Data spacing for reporting of Exploration Results. - 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. - Whether sample compositing has been applied.	The soil sampling program was conducted on a 100m line spacing by 50m sample intervals.
Orientation of data in relation to geological structure	- Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. - 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.	The soil sampling was undertaken across the strike of the known geology and structures within the project area.
Sample security	The measures taken to ensure sample security.	- The sample chain of custody is managed by Kairos. - All samples were collected in the field at the project site in number coded calico bags/secure labelled poly weave sacks by Kairos' geological and field personnel. - All samples were delivered to Intertek laboratory in Perth for final analysis.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been completed.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	- Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. - The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	- Kairos Minerals owns the Tenements 100%. - The Mount York Project has eleven granted Prospecting Licenses 45/2987 to 2989 and 45/2991 to 45/2998. - 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.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	In Mount York Project significant historical gold exploration including surface geochemical sampling, airborne and ground electromagnetic surveys, RAB, AC, RC, and DD drilling was already acknowledged in previous ASX announcements.
Geology	Deposit type, geological setting, and style of mineralisation.	Mount York Project is in the Strelley greenstone belt of Pilbara Craton. The local style indicates that the gold mineralisation is hosted mainly by the banded iron formation associated with quartz-veins and breccias.
Drill hole Information	- 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: - easting and northing of the drill hole collar - elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar - dip and azimuth of the hole - down hole length and interception depth - hole length. - 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.	No drilling results from Kairos Minerals are reported in this announcement.

Data aggregation methods	- 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. - 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. - The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable.
Relationship between mineralisation widths and intercept lengths	- These relationships are particularly important in the reporting of Exploration Results. - If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. - 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').	Not applicable.
Diagrams	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.	Relevant diagrams have been reported in this document.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All relevant results at this stage have been reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All relevant and meaningful data has been reported.
Further work	- The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). - Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	- Second-stage geochemical sampling program. - Continue the Mt York Project RC drilling program. - Mining studies for the Mt York Project. - Results from the geochemistry sampling program at Mt York Project. - Results from soil sampling program at the Wodgina Project. - Results from air-core drilling at the Kangan Project. - Geochemistry sampling program and mapping at the Skywell and Croydon projects. - Heritage survey at Mt York, Kangan and Skywell projects.