ASX ANNOUNCEMENT 17 January 2019

## WIDESPREAD GOLD ANOMALISM CONFIRMED OVER +10km STRIKE LENGTH AT CROYDON PROJECT WA

Latest assays from reconnaissance stream sediment sampling confirm widespread distribution of gold and provide a clear focus for follow-up exploration in 2019

#### **Highlights**

- Highly encouraging assay results received for an additional 46 stream sediment samples (18WCST0133-182) collected in late 2018 over E47/3522 and E47/3523, within Kairos' 100%-owned Croydon Gold Project in the Pilbara Region of WA.
- The results, which include a peak gold value of 1,533ppb Au (1.5g/t Au), confirm widespread distribution of gold anomalism across the Project. Excellent correlation achieved with panned samples with gold ("colours") in the pan correlating to samples of >50ppb Au.
- While the previous focus of exploration at Croydon and across much of the Pilbara has been on the Mount Roe Basalt Basal Unconformity, most of the new anomalous gold values on E47/3522 (including the peak result of 1.5g/t Au) are associated with the Lower Hardey Formation and are distributed within sandstone and deflated conglomerate.
- This is the same stratigraphic horizon which hosts Nugget Patch #3 (refer ASX release, 20 November 2018), discovered late last year, which yielded 9 nuggets for 7.4g of gold. This horizon is widely distributed across the Croydon Project.
- A 3 oz nugget has been recovered ~500m south of Nugget Patch #1 (see Plate 1).
- Follow-up exploration programs will be planned once assay results are received for the outstanding 53 stream sediment samples. The mapped stream drainages provide a clear vector for follow-up exploration to pursue the potential source of the extensive gold found to date.



Plate 1: Large 3 oz nugget from the Croydon Project (Top Left)



Kairos' Executive Chairman, Terry Topping, said: "These are very exciting results for this stage of exploration at the Croydon Project, providing us with a great platform and significant exploration momentum moving into 2019. In addition to the three nugget patches discovered late last year, we now have clear evidence from stream sediment sampling that gold is widely distributed across the project area – and importantly are associated with several different stratigraphic horizons.

"The new sampling results have confirmed the validity of our exploration methodology, with excellent correlation between the panned samples of visible gold reported last year (up to 20 pieces of gold in the pan) and sample results in excess of 50ppb Au. Based on the sampling results received to date, we have now expanded the prospective basal unconformity target horizon at Croydon to over 10km, defining a corridor of strong gold distribution spanning both E47/3522 and E47/3523.

"While the focus of much of the work completed last year in the Pilbara was on the Mount Roe Basalt contact, these latest results have shifted our attention towards the Lower Hardey Formation. The best of the new crop of sampling results – including the peak gold assay result of 1.5g/t Au – come from within white quartz deflated conglomerate and sandstone within the Lower Hardey Formation – the same stratigraphic horizon which hosts the third nugget patch we discovered late last year.

"This was the first time we recovered gold from the Hardey Formation area – and we now have strong evidence from the recent sampling to suggest that widespread gold anomalism is associated with this same horizon further to the north-west. This is an important conclusion, given that gold within the Hardey Formation elsewhere in the Pilbara such as the Beatons Creek deposit is typically fine grained, evenly distributed, and measurable via standard drilling techniques.

"This means we have now discovered a significant amount of gold associated with multiple stratigraphic horizons at Croydon. Notably, the most widely distributed gold has been located within the Hardey Formation – a horizon which regionally is associated with fine-grained and evenly distributed gold. This is an exciting result and provides us with a significant exploration target for 2019.

"We will be updating the market in due course as we receive the balance of the stream sampling results, fully evaluate and review the results of our recent work, develop a clearer understanding of the potential of the Croydon Project and determine our next steps in terms of exploration planning for the year ahead."

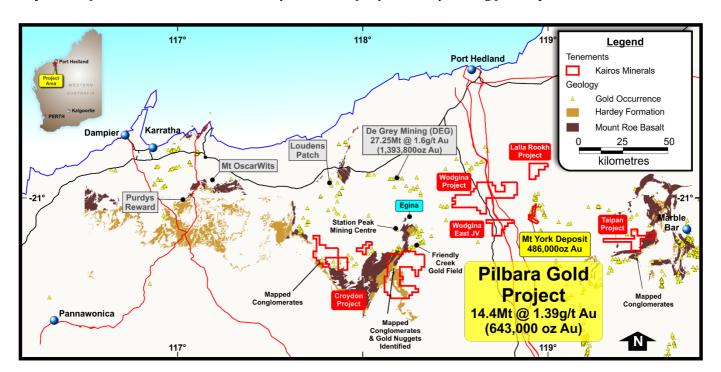


Figure 1: Pilbara Gold Project, showing the location of the Croydon Project and Mt York Deposit.



Kairos Minerals Ltd (ASX: KAI; "Kairos" or "the Company") is pleased to advise that it has received highly encouraging assay results for an additional 46 stream sediment samples (18WCST0133-182) completed late last year over E47/3522 and E47/3523 within its 100%-owned Croydon Gold Project in the Pilbara Region of WA.

The Croydon Project is located within the central part of Kairos' 100%-owned Pilbara Gold Project (Figure 1), ~100km to the west of the Mt York Gold Project.

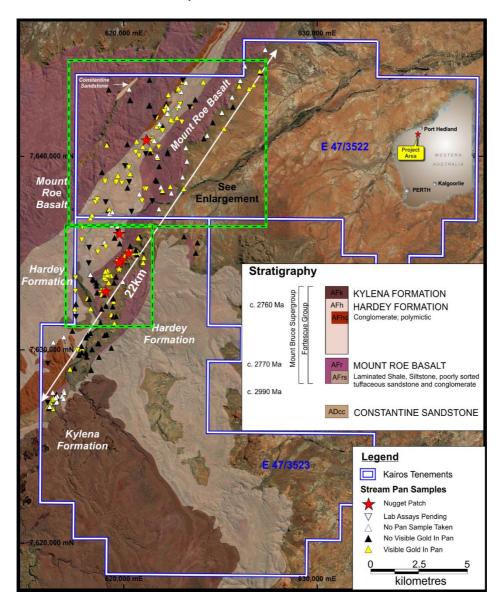


Figure 2: Croydon Project - Priority target areas on E47/3522 and E47/3523

The latest stream sediment sampling results are predominantly from within E47/3522 in the north-western portion of the Project with some additional results also received from E47/3523 (Figure 2).

The results were generated during a helicopter-supported exploration program completed late last year under the supervision of consulting geologist, highly experienced Pilbara conglomerate geologist George Merhi (ex-Novo Resources and Creasy Group).

The program, which included mapping, sampling and limited metal detecting, resulted in the discovery of three significant nugget patches, as reported in the ASX announcement of 20 November 2018.



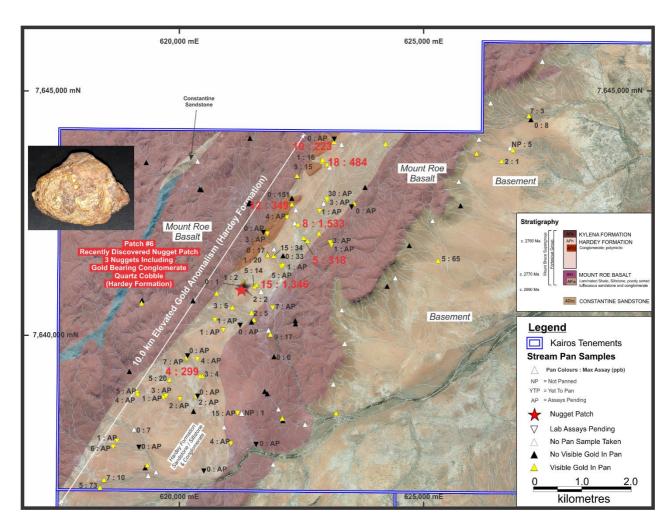


Figure 3: Croydon Project - Priority target areas on E47/3522

#### STREAM SAMPLING RESULTS

Highly encouraging assay results have been received for an additional 46 stream sediment samples (18WCST0133-182) collected over E47/3522 and E47/3523.

The latest results, which include a peak gold value of 1,533ppb Au (1.5g/t Au), confirm widespread distribution of gold anomalism across the Project and build on the significant nugget discoveries announced towards the end of last year (Figures 2 and 3).

The results confirm the widespread distribution of gold anomalism across the Project, with excellent correlation achieved between panned samples containing visible gold (up to 20 pieces of gold) and assays of >50ppb Au.

While the previous focus of exploration at Croydon and across much of the Pilbara has been on the Mount Roe Basalt – Basal Unconformity, most of the new anomalous gold values on E47/3522 (including the peak result of 1.5g/t Au) are associated with the Lower Hardey Formation and are distributed within sandstone and deflated conglomerate.

This is the same stratigraphic horizon which hosts Nugget Patch #3 (refer ASX release, 20 November 2018), discovered late last year, which yielded 9 nuggets for 7.4g of gold. This horizon is widely distributed across the Croydon Project.



The additional results from the stream sediment program are summarised in Table 1 below and follow the initial results reported in the ASX announcement of 20 November 2018.

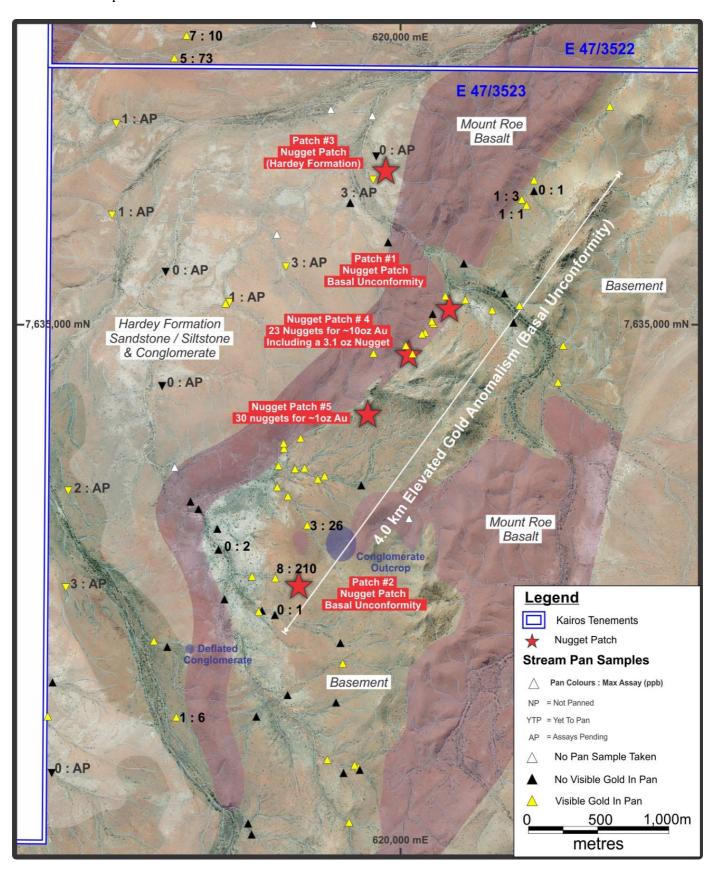


Figure 4: Croydon Project - Priority target areas on E47/3523



#### ADDITIONAL NUGGETS

56 gold nuggets for over 11 ounces of gold has been recovered from three newly discovered "patches" (Patch #4, 5 and 6)

Patch #4 (23 nuggets for 10 ounces of gold) & Patch #5 (30 nuggets for 1 ounce of gold) are located at the basal unconformity of the Mount Roe Basalt mid-way between Kairos' earlier discoveries (Patch#1 & Patch #2), some 0.5 km's and 1km south of Kairos' Patch #1 respectively. They were discovered via follow-up metal detecting. The results confirm exceptional gold mineralisation over at least 2.5km's of strike with strong gold anomalism extending for olver 4km's of strike within this stratigraphic corridor.

Patch #6 totalling 3 gold nuggets, and a gold bearing conglomerate quartz cobble, for 7.7 grams of gold was discovered during limited follow-up metal detecting of stream sediment sample which returned 18 gold "colours" in the pan. Significantly these nuggets were found within conglomerates and sandstones of the Lower Hardey Formation approximately 6 km's WNW of Nugget Patch #3 (refer ASX release, 20 November 2018), discovered late last year, which yielded 9 nuggets for 7.4g of gold also within sediments of the Lower Hardey Formation.

#### **NEXT STEPS**

- Compile and evaluate assay results from previous regional exploration and from the final 53 assays due in late January (January-February 2019).
- Planning for next phase of exploration (February/March 2019).
- Resumption of field exploration activities (March/April 2019).



**Table 1. Regional stream sediment samples** 

Sample_No	Easting	Northing	Tenement	Pan Colour	Au_CN200 0/MS_F (ppb) (-2mm)	Au_AR/ MS_F (ppb) (-2mm)	Au_CN2000 /MS_C (ppb) (-5mm +2mm)	Max_Au (ppb)
18WCST0133	622303	7642799	E 47/3522	0	150.51	71	49	150
18WCST0134	622304	7642679	E 47/3522	12	321.27	22	36	321
18WCST0135	618701	7633404	E 47/3523	0	1.37	2	1	2
18WCST0136	619103	7633200	E 47/3523	8	210.28	4	24	210
18WCST0137	622920	7643555	E 47/3522	9	10.17	12	15	15
18WCST0138	622929	7643592	E 47/3522	1	15.95	4	3	15
18WCST0139	623021	7643493	E 47/3522	18	484.08	8	8	484
18WCST0140	618384	7630957	E 47/3523	0	2.08	5	6	6
18WCST0141	618308	7630917	E 47/3523	1	1.03	2	3	3
18WCST0142	618254	7630869	E 47/3523	0	0.89	2	0	2
18WCST0143	618146	7630726	E 47/3523	0	1.8	18	2	18
18WCST0144	618399	7632211	E 47/3523	1	5.66	2	0	5
18WCST0145	623162	7643955	E 47/3522	10	223.14	5	10	223
18WCST0146	622545	7641991	E 47/3522	5	318.3	5	8	318
18WCST0147	622126	7641629	E 47/3522	0	1.54	33	2	33
18WCST0148	621933	7641628	E 47/3522	15	33.75	18	6	33
18WCST0149	620477	7639176	E 47/3522	3	4.16	1	4	4
18WCST0151	620429	7639179	E 47/3522	4	299.12	2	4	299
18WCST0152	619809	7639103	E 47/3522	5	19.68	27	5	27
18WCST0153	621942	7639568	E 47/3522	0	5.37	4	2	5
18WCST0154	621863	7640022	E 47/3522	9	17.23	6	0	17
18WCST0155	620889	7635853	E 47/3523	1	1.25	1	0	1
18WCST0156	620855	7635896	E 47/3523	1	0.69	3	0	3
18WCST0157	622428	7642264	E 47/3522	8	36.58	1533	8	1533
18WCST0158	621583	7641033	E 47/3522	5	14.09	4	4	14
18WCST0159	621536	7641006	E 47/3522	15	1346	2	0	1346
18WCST0160	621478	7640473	E 47/3522	2	3.85	5	0	5
18WCST0161	621092	7640576	E 47/3522	3	4.72	3	0	4
18WCST0162	620941	7635953	E 47/3523	0	0.54	0	0	0.5
18WCST0163	621333	7640978	E 47/3522	2	1.31	2	2	2
18WCST0164	621323	7641031	E 47/3522	0	0.73	0	0	0.7
18WCST0165	621314	7641093	E 47/3522	1	0.6	0	2	2
18WCST0166	621809	7641656	E 47/3522	0	6.42	17	15	17
18WCST0168	617809	7629885	E 47/3523	0	2.04	2	1	2
18WCST0169	621810	7641642	E 47/3522	1	8.11	9	20	20
18WCST0170	617803	7629823	E 47/3523	0	3.85	0	0	3
18WCST0171	619330	7633576	E 47/3523	3	25.74	2	4	25
18WCST0172	618385	7636902	E 47/3522	5	57.27	3	2	57
18WCST0173	618473	7637062	E 47/3522	7	5.41	4	10	10
18WCST0174	619086	7638089	E 47/3522	YTP	7.33	3	3	7



18WCST0176	619101	7632937	E 47/3523	0	0.69	0	0	0.6
18WCST0177	627179	7644402	E 47/3522	0	4.86	8	4	8
18WCST0179	627137	7644482	E 47/3522	7	2.61	2	2	2
18WCST0180	626755	7643822	E 47/3522	YTP	3.4	5	3	5
18WCST0181	626576	7643566	E 47/3522	2	1.03	0	0	1
18WCST0182	625287	7641533	E 47/3522	5	53.32	0	5	53

#### **ENDS**

#### **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 advanced stages of construction and development.

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  $\sim \! 100$  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 and Accelerate Resources Ltd), Technical Director Neil Hutchison (Poseidon Nickel, Jubilee Mines), Technical Manager Steve Vallance (WMC, ACM, Jubilee Mines, Xstrata, Kagara, LionOre), and consulting specialists

#### For further information, please contact:

**Investors:** 

Mr Terry Topping Executive Chairman Kairos Minerals Limited Media:

Nicholas Read/Paul Armstrong Read Corporate Ph: 08 9388 1474

#### **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 Steve Vallance, who is the Technical Manager for Kairos Minerals Ltd and who is a Member of The Australian Institute of Geoscientists. The information was also reviewed by Mr Terry Topping, who is a Director of Kairos Minerals Ltd and who is also a Member of AusIMM. Both Mr Vallance and Mr Topping have 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 Vallance and Mr Topping have 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> <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> <li>Gold collected via metal detecting and panning.</li> <li>The gold samples remain to be tested for purity.</li> <li>Stream samples were sieved on site to two distinct fractions: -2mm and -5 to +2mm. Samples of about 2 Kg from each fraction were sent to the lab for gold and multi-element analysis.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, openhole 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>	No drilling has been undertaken.
Drill sample recovery	<ul> <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>	No drilling has been undertaken.
Logging	<ul> <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> <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> </ul>



Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <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> <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> </ul>
Quality of assay data and laboratory tests	<ul> <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</li> </ul>	<ul> <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 were conducted using the -Au_CN2000_MS and AR_25 Aqua Regia digest. Standards, duplicate and blank</li> </ul>
Verification of sampling and assaying	<ul> <li>laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> <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> </ul>	<ul> <li>samples were added to each batch, one for approximately every 30 to 40 samples.</li> <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> </ul>
Location of data points	<ul> <li>Discuss any adjustment to assay data.</li> <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> <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> <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>	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



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <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>	The sampling concentrated on areas below the mapped and interpreted. conglomerates to test if the conglomerate horizons were mineralised.
Sample security	<ul> <li>The measures taken to ensure sample security.</li> </ul>	<ul> <li>All samples were collected in the field at the project site by Kairos personnel.</li> </ul>
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**

Cuitouio	IODC Code analysis	Commontory
Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <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> <li>Kairos Minerals owns the Tenements 100%</li> <li>The Croydon Project has 5 Exploration Licences 47/3519 to 47/3523</li> <li>The Tenements have been granted</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	No significant past work has been carried out by other parties.
Geology	Deposit type, geological setting and style of mineralisation.	The target is conglomerate hosted gold mineralisation.
Drill hole Information	<ul> <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> <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>	No drilling was completed.



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <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>	Due to the early stage of exploration and type of work completed to date, the sampling is non-systematic nor representative.
Relationship between mineralisation widths and intercept lengths	<ul> <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>	No drilling was completed.
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.	Suitable summary plans have been included in the body of the report.
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 have been reported
Other substanive	Other exploration data, if meaningful and material,	All relevant and meaningful data has been reported.



Criteria	JORC Code explanation	Commentary
exploration data	(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.	
Further work	<ul> <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> <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>