

ASX ANNOUNCEMENT

20 JUNE 2016

THICK ZONES OF HIGH-GRADE GOLD IDENTIFIED BENEATH IRON STIRRUP OPEN PIT AT MT YORK LITHIUM-GOLD PROJECT, EAST PILBARA, WA

JORC 2012 resource estimate to be calculated in coming weeks, to be followed by drilling to evaluate priority targets and extensions of known gold mineralisation

Key Points:

- Geological review of historical data has identified **significant depth extensions of the highgrade gold lodes** beneath the historical Iron Stirrup Open Pit Mine, part of Kairos' 100%-owned **Mt York Lithium-Gold Project** near Port Hedland in WA.
- Significant historical intersections directly below the existing open pit include:
 - o 30m @ 3 g/t gold (ISP081)
 - o 25m @ 3.3 g/t gold (ISE11)
 - 9m @ 3.9 g/t gold (ISP53)
 - o 8m @ 4.2 g/t gold (ISP82)
 - o 2m @ 10.0 g/t gold (ISP80)
 - 13m @ 2.5 g/t gold (ISE13)
 - 14m @ 3.1 g/t gold (DIS5)
 - o 29m @ 4.1 g/t gold (ISP63)
 - 22m @ 3.1 g/t gold (ISP41)
 - 16m @ 3.5 g/t gold (ISE12)
- The mineralisation **occurs over a minimum strike extent of 300m**, and remains open along strike and at depth. It occurs within the *Lynas Shear Zone (LSZ)*, a proven host to significant gold mineralisation within the East Strelley (Pilgangoora) Greenstone Belt (*ESGB*).
- The *LSZ* remains poorly tested beyond the current deposit limits and represents a **high priority target horizon for immediate follow up and resource expansion**.
- Data from this review will form the basis of a **JORC 2012 Mineral Resource Estimate**, planned for completion in coming weeks.
- **A 2,000 sample soil programme is currently in progress** to evaluate both the lithium and gold potential of the broader project area.
- Initial Program of Works (POW's) lodged with planning underway to **commence drill testing of key target areas next quarter**, once statutory approvals are received.
- **Continuing strong news flow in coming weeks** as additional studies are completed on the Main Hill, Breccia Hill, Zakanaka, Old Faithful Gold Deposits at Mt York.



Kairos Minerals Ltd ("Kairos" or "the Company") is pleased to advise that it has identified a near-term opportunity to establish high-grade gold resources within its 100%-owned Mt York Lithium-Gold Project, located 120km south-east of Port Hedland in WA's East Pilbara region, following the completion of a major and highly successful geological review and reinterpretation of one of the key gold prospects on its tenements.



Figure 1. Project location and tenement plan



Recent work has focused on the potential of the Iron Stirrup Gold prospect, the first of a series of evaluations currently being undertaken aimed at assessing the global gold potential of the Mt York Project. This work is proceeding in parallel with the ongoing assessment of the lithium potential at Mt. York, given its location immediately adjacent to the world-class Pilgangoora Lithium-Tantalum Project.

Results from each of these assessments will form the basis of a JORC 2012 compliant Mineral Resource Estimate planned for completion in July 2016.

The Iron Stirrup gold deposit was discovered by Lynas Gold NL in the early 1990's following drill testing of regional soil, stream and rock chip geochemical anomalies. The deposit was mined by open pit methods from 1994-1998. Mining at Iron Stirrup accounted for the bulk of production for the Lynas Find Project which, at the time of closure in April 1998, totaled, 125,493 ounces of gold from the treatment of 2,113,908 tonnes of ore for an average recovered grade of 1.85 grams per tonne gold (Lynas Gold NL Quarterly Report 29 July 1998).



Figure 2. Project location and tenement plan



Mining ceased at a time when the gold price was at an historical low of around US\$250 per ounce.

The host sequence at Iron Stirrup is a boudinaged talc-chlorite-carbonate schist which defines the *LSZ* in this area and which is situated between a massive serpentinite unit to the immediate west and a mafic sedimentary sequence to the east. The sequence strikes NNW and dips steeply west.

Previous studies (Neumayr et al 1993, Kinny 2000, Baker 2003) report the timing of gold mineralisation in the ESGB to be synchronous with that of the rare metal (Sn-Ta-Li) – bearing granitic pegmatite intrusions, and it is probable that both have exploited dilational structural positions during fault development/reactivation late in the deformation history of the belt.

Consequently, the potential to encounter pegmatite intrusives within and in close proximity to the gold lodes at Mt. York is considered to be high (refer Kairos ASX Announcement dated 07/06/2016).

There are 34 known historical drill-holes that intersected the ore-hosting structure beneath the limit of the open pit between the vertical depths of 120m and 250m. The majority have encountered substantial widths of high-grade gold mineralisation which appears coherent both along strike and down-dip/plunge and contiguous with the orebody exploited by Lynas within the Iron Stirrup Pit.

Significant historical drill results are summarised in Table 1.

Next Steps

Kairos plans to commence an initial 10-hole, 3000m RC/diamond drill program once statutory approvals are received.

Key targets will include:

- depth and strike extensions to known mineralisation in close proximity to the current base of the Iron Stirrup Pit in order to assess the potential for near term pit expansion opportunities;
- depth and strike extensions representing potential future undergound mining opportunities; and
- open pit potential to the north and south along strike within the *LSZ*.

Kairos's Managing Director Mr Joshua Wellisch said "the Company was in the enviable position of having both significant lithium and gold targets at Mt York, giving it the opportunity to rapidly progress exploration targeting two of the strongest performing commodities of the past year."

"Our technical team is working closely with our key consultants, Newexco, Terra Resources and Geochemical Services in undertaking an aggressive, multi-disciplinary program to evaluate both the lithium and gold potential of the project and rapidly unlock the full multi-commodity value of this highly prospective area."

"The presence of significant high-grade gold intersections below the previously mined pit at Iron Stirrup, where mining ceased in a much lower gold price environment, is a tremendous asset for the Company and gives us a great head start in terms of unlocking the gold potential of the region."



Figure 3. Iron Stirrup Vertical Longitudinal Projection



Figure 4 & 5. Iron Stirrup Schematic Cross sections 3875mN & 3850mN



Figure 6 & 7. Iron Stirrup Schematic Cross sections 3950mN & 3725mN

ENDS

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 N Hutchison, who is a Non-Exec Director for Mining Projects Group and who is a Member of The Australian Institute of Geoscientists. Mr Hutchison has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person 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 Hutchison has consented to the inclusion in the report of the matters based on his 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.



Table 1: Summary of Significant Intercepts below Iron Stirrup Open Pit (>0.5g/t Gold) June 2016

HoleID	Local IS_East	Local IS_N	EOH Depth	From	То	Width	Grade
	(m)	(m)	(m)	(m)	(m)	(m)	g/t Au
ISP42	786.24	3696.96	149	106	115	9	1.8
ISE6	804.27	3699.79	115	79	95	16	1.5
			including	79	90	11	2.1
ISP63	780.3	3721.6	131	87	116	29	4.1
			including	<u>99</u>	102	3	15.5
			and	110	111	1	20.0
				118	119	1	1.4
ISE7	792.05	3724.91	143	82	94	12	2.8
ISP38	761.04	3746.48	146	103	104	1	1.5
				108	132	24	1.6
ISRC19	815	3765	80	23	31	8	1.5
				66	75	9	0.8
			including	71	74	3	1.2
ISP100	700	3750	250	182	191	9	1.3
ISP70	751.8	3774	160	123	139	16	1.6
ISP34	795.77	3797	148	101	106	5	1.7
ISRC20	815	3775	90	20	23	3	1.5
				32	40	8	2.1
				50	54	4	0.7
ISE9	764.51	3775.05	160	119	120	1	2.1
				126	128	2	1.0
ISP34	795.77	3797	148	101	106	5	1.7
ISE10	760.62	3800.28	150	123	131	8	1.3
ISRC16	750.85	3804.39	190	110	116	6	1.6
ISRC18	749.6	3805	178	121	122	1	1.4
ISP73	760.92	3822.51	170	122	151	29	1.3
			including	127	139	12	2.1
ISP39	800.6	3846.18	167	107	108	1	1.7
ISE11	754.92	3854.01	180	147	175	28	3.1
ISP099	725	3850	250	167	187	20	1.7
			including	181	187	6	2.0
ISP81	787.06	3845.43	160	109	139	30	3.0
DIS5			155	112	126	14	3.1
ISP41	796.16	3892.45	154	120	142	22	3.1
ISE12	765.51	3870.12	160	144	160	16	3.5

HoleID	Local IS_East	Local IS_N	EOH Depth	From	То	Width	Grade
	(m)	(m)	(m)	(m)	(m)	(m)	g/t Au
ISRC17	617.62	3861.07	405	325	329	4	0.5
							not
			note	327	328	1	assayed
ISE13	779.83	3899.97	180	126	139	13	2.5
ISRC15	750.17	3906.96	184	145	161	16	0.2
ISP89	799.15	3905.02	129	107	123	16	3.2
			including	107	108	1	23.2
ISP80	790.41	3918.92	165	115	146	31	1.8
			including	138	140	2	10.2
ISE14	785.35	3912.95	150	126	130	4	0.9
			including	126	127	1	1.4
ISP82	801.21	3940.01	150	108	131	23	1.9
			including	114	122	8	4.2
			and	116	117	1	17.4
ISP79	850.57	3967.65	100	66	81	15	0.4
				69	72	3	0.8
ISP53	889.86	3995.69	75	29	31	2	0.6
				31	40	9	3.9
			including	32	34	2	12.4
				47	48	1	5.6
ISP74	907.7	3996.78	75	29	40	11	1.1
			including	35	36	1	1.7
			and	37	40	3	1.3
ISP76	855.6	3996.41	100	69	71	2	0.9

Note: Surface RL is approximately 250m. Collar RL's significantly below the surface RL of 250m indicate holes drilled at various positions from within the pit. Intercept depths as stated are distances downhole from the collar for all holes.

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

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. 	 All drilling results presented by Kairos are summarised from historical work completed by Lynas Gold NL during exploration and mining activities for the period 1994 to 1998. The results were achieved via a combination of RC and diamond drilling. Holes were generally angled towards grid east to provide optimum intersections through the targeted sequence. Industry standard sampling practices appear to have been adhered to. RC samples were collected typically as 1m intervals using riffle splitters Diamond drill core was geologically logged to identify intervals for sampling. Sample intervals are generally 1m and reflect geological/lithological contacts. Samples were submitted to a contract laboratory for crushing, pulverizing and analysis by industry accepted methods.
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). 	 Reverse circulation percussion (RC) RC pre-collars NQ2 diamond drilling
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. 	 Recoveries from historical drilling are unknown
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. 	 All holes have been logged in full as per industry accepted practice Detail is expected to support future resource estimation to the appropriate levels of confidence.

Criteria	JORC Code explanation	Commentary		
	 The total length and percentage of the relevant intersections logged. 			
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 	 Core was cut in half to 1m samples or geological/lithological contacts RC samples were riffle split at the rig and generally sampled as single metre intervals Sample sizes appear to be appropriate for the style of mineralization 		
	 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 in situ 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 			
Quality of assay data and laboratory tests	 sampled. 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. 	Detailed information on QA/QC programs relative to historical work is not available		
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. 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. 	 Unknown at this stage for historical data Assume verification procedures were robust due to the operation of an effective mine 		
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. 	 Historic drill hole collars were surveyed presumably by mine-site surveyors. Collars were tied to a local grid with subsequent conversion to MGA GDA94 Zone 50 Down hole surveys were carried out using Eastman Single Shot cameras. Mine workings support the locations of historic drilling Topographic surface has been prepared from detailed ground and mine surveys. The pit outline shown in the sectional interpretations presented in this announcement reflect the planned pit 		

Criteria	JORC Code explanation	Commentary		
		design. Mining ceased prior to reaching final pit design depths.Final pit survey is yet to be confirmed.		
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 drilling subject to this announcement has not been used to prepare a Mineral Resource Estimate at this stage 		
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 majority of drill holes relevant to this study are angled to grid east and approximately orthogonal to the strike of the targeted sequence. No significant sampling bias is apparent. True widths are approximately 80% of the reported intercept widths in most holes 		
Sample security	The measures taken to ensure sample security.	Unknown for historical samples.		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Unknown for historical samples		

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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. 	 The Iron Stirrup Deposit is located within granted Prospecting Licence P45/2992, which is wholly owned by Kairos Minerals Pty Ltd. The tenement is in good standing with no known encumbrances that might impede future granting of a Mining Lease.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 The Iron Stirrup Deposit was discovered by Lynas Gold NL in the early 1990's and mined as a successful open pit operation by that company between 1994 and 1998. Other companies to have explored the area include Austamax, Carpentaria and MIM.
Geology	• Deposit type, geological setting and style of mineralisation.	The Iron Stirrup Deposit is an Archaean orogenic gold deposit hosted within ultramafic schist associated with the Lynas Shear Zone and located within the East Pilbara Granite Greenstone Terrane

Criteria	JORC Code explanation	Commentary
		(EPGGT) of the Pilbara Craton of WA.
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. 	 A summary of all details relevant to the drilling presented in this announcement is presented in Table 1 and included in the body of the report.
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. 	 Exploration results are reported as length weighted averages of the individual sample intervals and based upon a specified cut-off grade (>0.5 grams per tonne gold in this report). In rare instances where historical data is absent or sampling has not been undertaken within a broader intercept, then that zone has been given the arbitrary grade of zero for weight averaging purposes.
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'). 	 All historical drilling has been oriented to intersect the targeted sequence at an optimum angle, ie orthogonal to strike and dip. The intercept summaries presented reflect down hole intersection lengths. True widths have not been presented but are estimated to be approximately 80% of the intersection length for most holes.
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 figures, plans and sections are presented within the body of the announcement.
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 	 All known exploration results have been reported.

Criteria	JORC Code explanation	Commentary
	practiced to avoid misleading reporting of Exploration Results.	
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 meaningful data relevant to the announcement 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. 	 At Iron Stirrup exploration RC and diamond drilling is planned to test for extensions and repetitions of the ore body both at depth and along strike to the north and south of the existing open pit.
Security and integrity	 Accredited process audit. Whether samples were sealed after excavation. Valuer location, escort, delivery, cleaning losses, reconciliation with recorded sample carats and number of stones. Core samples washed prior to treatment for micro diamonds. Audit samples treated at alternative facility. Results of tailings checks. Recovery of tracer monitors used in sampling and treatment. Geophysical (logged) density and particle density. Cross validation of sample weights, wet and dry, with hole volume and density, moisture factor. 	•
Classification	 In addition to general requirements to assess volume and density there is a need to relate stone frequency (stones per cubic metre or tonne) to stone size (carats per stone) to derive grade (carats per tonne). The elements of uncertainty in these estimates should be considered, and classification developed accordingly. 	•