

Drilling identifies prospective water supply for Mt York Gold Project

Identification of the extensive palaeochannel reflects Kairos' strategy to continue de-risking the project in parallel with growing the 1.4Moz inventory

Highlights

- Drilling has identified a palaeochannel system >5km in length at Kairos' Kangan licence E45/4740, ~25km from Mt York
- Water quality is very high and suitable for process plant useage with extremely low measured Total Dissolved Solids (TDS) values around 1000mg/L
- 24 aircore holes drilled with water measured in every hole
- Initial monitoring well test results show a "very promising aquifer system" which could provide a significant proportion of the requirements for Mt York
- On-going data collection of the monitoring wells is underway to provide detailed information of aquifer recharge over time
- Mt York Gold Project Scoping Study shows potential for long-life, robust gold mine using proven CIL process facility¹

Kairos Managing Director, Dr Peter Turner said: **"These outstanding results show that the palaeochannel has the potential to supply most, if not all, of Mt York's water needs.**

"This is an important step forward in Mt York's development and further derisks the project.

"We will continue to de-risk Mt York in parallel with our strategy to grow the 1.4Moz Resource. This twin-pronged approach will give us maximum flexibility and scope to create value".

¹ See Press Announcement dated 2 December 2024 entitled 'Strong Scoping Study forecasts robust financial returns'

Kairos Minerals Limited (**ASX:KAI**) is pleased to announce the successful completion of a 24-hole, 1,085m aircore drill program designed to identify water at its 100 per cent-owned Kangan project in WA's Pilbara.

The drilling has identified groundwater at the Kangan paleochannel which has strong potential to support the future water requirements of the Mt York Gold Project (**Figure 1**).

The Company engaged drilling company Wallis Drilling and hydrological consultants Aquifer Resources to complete the drillholes to assess the Kangan channel for aquifer thickness and the presence of significant groundwater, and to then construct monitoring wells at the sites of the most prospective parts of the aquifer to assess the groundwater volume yields and aquifer permeability.

Drill holes were drilled vertical, geological logged and sampled at the end of the hole for a multi-element and gold analysis. Drill holes are referenced in **Table 1, Figure 2**.

Drilling successfully intersecting groundwater contained within a non-artesian aquifer of alluvial sand and gravel overlying weathered and fractured basement granite and mafic rocks. Groundwater inflows were observed from the sand and gravel and fractured basement. Monitoring bores were constructed at the most prospective aircore exploration holes on the basis of volume of water produced from airlifting (**Figure 2**) and consideration to the distance between them and geology encountered.

Seven monitoring bores were installed and cased and data on water yields and aquifer hydraulic conductivity taken. An eighth hole was abandoned at site **24KNWAC002** (see **Figure 2**) due to an inability to drill through running sand and coarse gravel with the methods used and was abandoned. This however is thought to be the best part of the aquifer and will be redrilled by mud rotary drilling techniques in 2025.

Results from testing of the seven monitoring wells (by removing a known quantity of water and measuring the water level response) show values for hydraulic conductivity (defined simply as the volume of water that moves through a porous medium) of 1.5 to values as high as 17.0 m/d and transmissivity (the rate at which water is transmitted through a unit width of an aquifer under a unit hydraulic gradient) of 20-144 m²/d with outliers of 12 and 408 at bore sites **24KNWMB07** and **24KNWMB06** respectively (see **Figure 2**).

The next phase of the investigation is to install 8" test production bores to stress the aquifer under controlled test pumping conditions and model the potential aquifer yield and complete impact assessments so that a groundwater abstraction licence can be submitted.

Hole ID	Monitor Bore ID	Easting	Northing	RL	Azi	Dip	Drilled Depth (m)	Monitor Bore Depth (m)
24KNWAC001		664198	7676399	114	0	-90	36	
24KNWAC002		663402	7676803	113	0	-90	48	
24KNWAC003		662407	7677401	110	0	-90	69	
24KNWAC004	24KNWMB02	662401	7677007	112	0	-90	57	54
24KNWAC005		662465	7676597	112	0	-90	48	
24KNWAC006		662806	7678399	111	0	-90	45	
24KNWAC007		664205	7678401	113	0	-90	43	
24KNWAC008	24KNWMB03	664205	7677997	114	0	-90	57	54
24KNWAC009	24KNWMB04	663200	7677592	111	0	-90	64	63
24KNWAC010		663409	7676222	113	0	-90	63	
24KNWAC011	24KNWMB07	664400	7676000	115	0	-90	66	53
24KNWAC012		664811	7675998	115	0	-90	42	
24KNWAC013		665196	7676009	116	0	-90	33	
24KNWAC014	24KNWMB01	665610	7676001	117	0	-90	51	33
24KNWAC015		666402	7676801	118	0	-90	35	
24KNWAC016		667000	7675996	120	0	-90	38	
24KNWAC017		667603	7675791	121	0	-90	22	
24KNWAC018	24KNWMB05	666997	7675590	120	0	-90	42	36
24KNWAC019	24KNWMB08	666200	7675596	118	0	-90	29	29
24KNWAC020	24KNWMB06	667608	7675192	122	0	-90	39	36
24KNWAC021		668005	7674799	123	0	-90	23	
24KNWAC022		668832	7671171	131	0	-90	36	
24KNWAC023		669009	7671057	131	0	-90	46	
24KNWAC024		670799	7670605	133	0	-90	60	

Table 1. Aircore drilling programme for water at Kangan. See **Figure 2** for location.

Monitor Bore ID	Aquifer	Hydraulic Conductivity (m/d)	Transmissivity (m ² /d)
24KNWMB01	CHANNEL	4.8	115
24KNWMB02	FRACTURED GRANITE	4.0	144
24KNWMB03	CHANNEL	1.5	64
24KNWMB04	FRACTURED GRANITE + CHANNEL	0.5	20
24KNWMB05	CHANNEL	5.2	125
24KNWMB06	CHANNEL	17.0	408
24KNWMB07	Granite	0.5	12

Table 2. Monitoring Bore details, aquifer descriptions and preliminary test results (estimated). Location of the monitor bores is contained in **Table 1** and shown on **Figure 2**.

The Kangan paleochannel is part of a large regional paleochannel system that extends from south of Kangan to the northern Pilbara coastline approximately 75km to the north of the Kangan project. It is interpreted to be part of the same paleochannel system that

occurs at De Grey Mining's Hemi project 20km to the northwest of Kangan (Figure 1). The channel has been identified and interpreted using historic aircore drill logs and airborne electromagnetic (AEM) data, both of which map out the approximate sub-surface channel position (Figures 1 & 2).

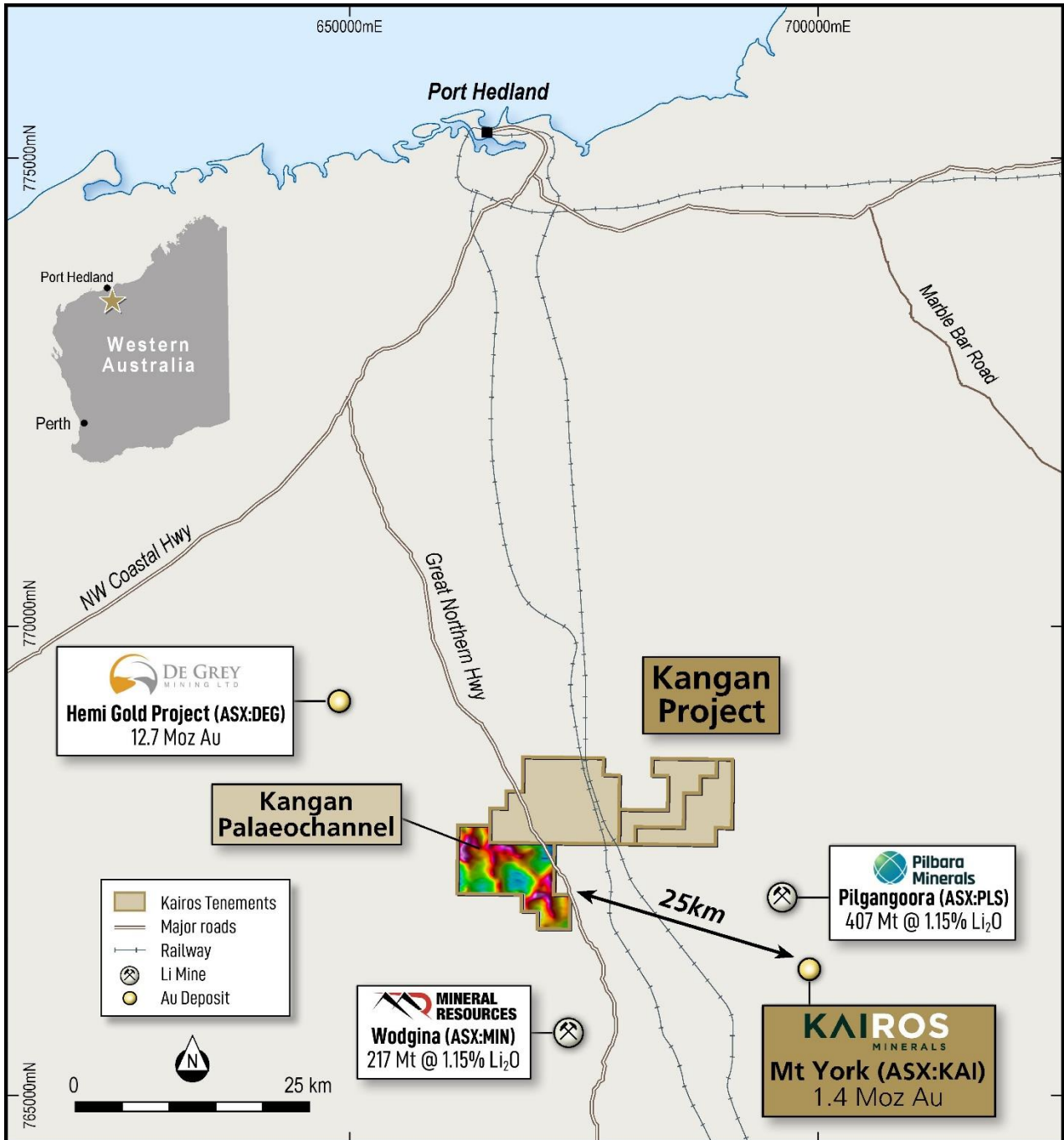


Figure 1: Location map of the Kangan project

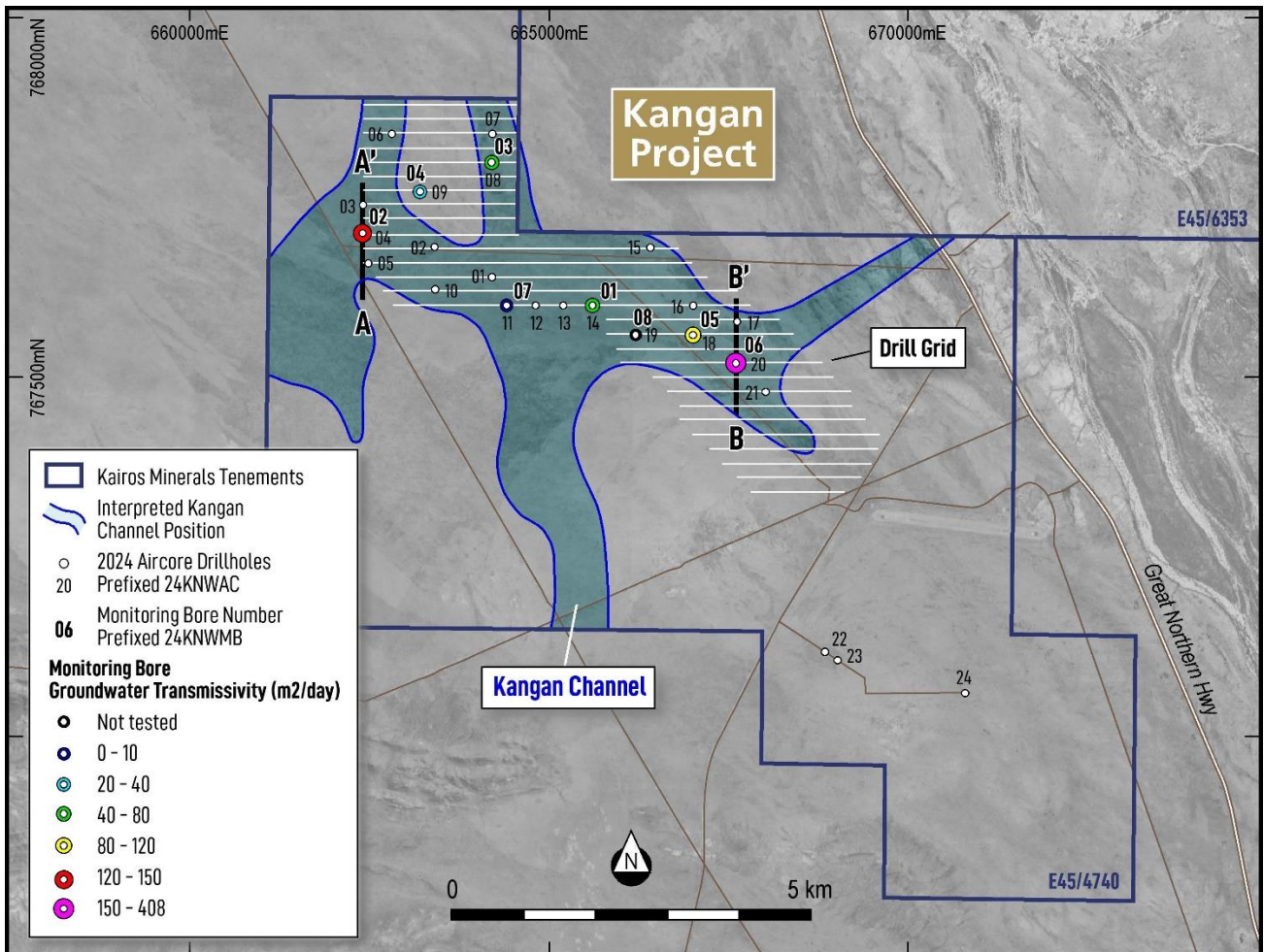


Figure 2: Airborne Electromagnetics showing the interpreted position of the Kangan channel, the drilled aircore drillholes and the ones chosen for monitoring bores.



Figure 3: Aircore drilling confirms significant groundwater in hole 24KNAC004. 'Bucket test' methodology used to measure water quantities in early stages of aquifer testing.

Figure 4 shows a schematic cross-section highlighting the porous sand-gravel layer that has consistently been intersected at 30-35m depth across at least 10km of the channel's strike.

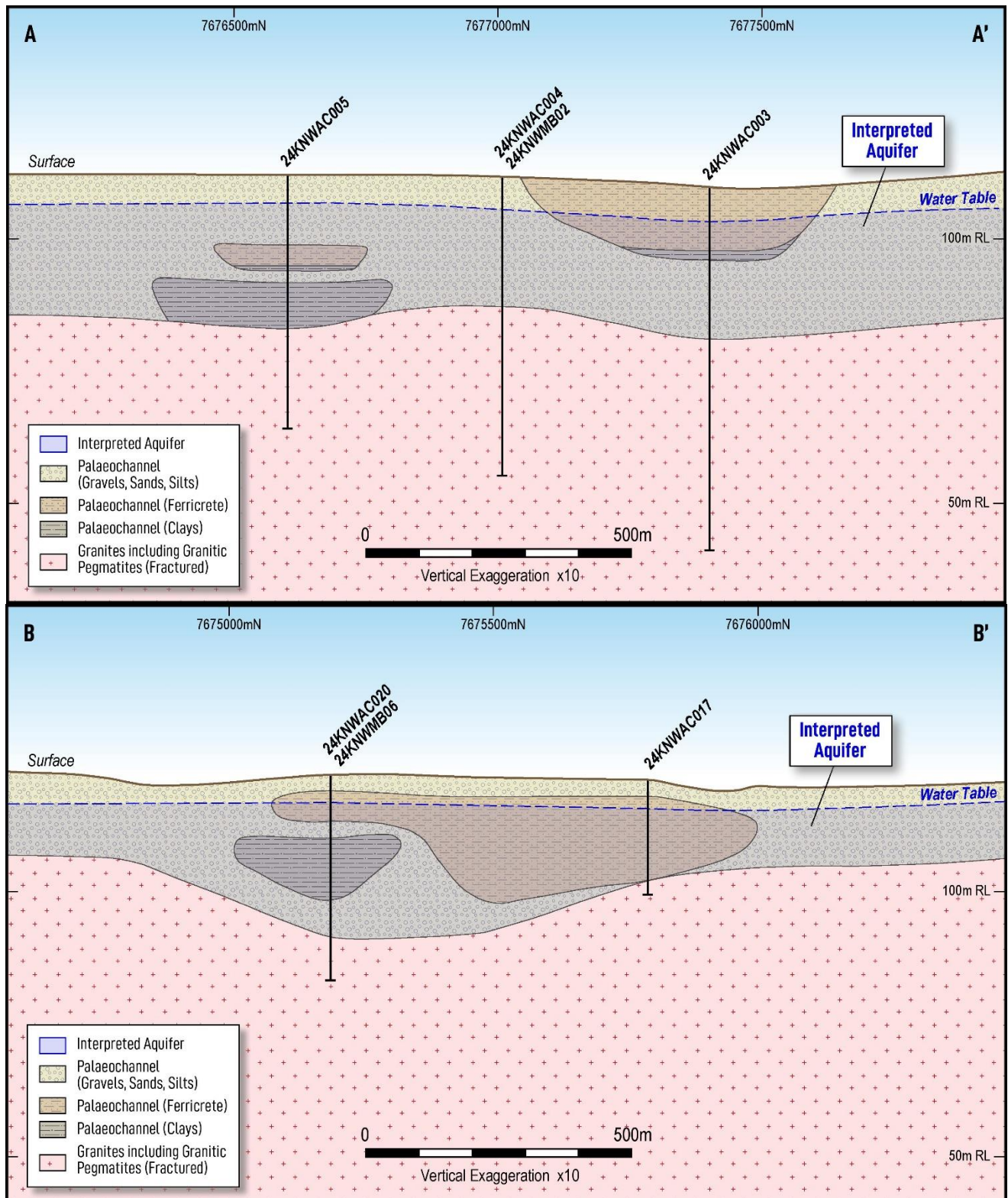


Figure 4. Cross-sections of the Kangan Palaeochannel system from the far northwest (top) and the far southeast (bottom) areas (see **Figure 3** for location of the north-south sections). Vertical exaggeration of x10 applied.

About Kairos Minerals

Kairos Minerals (ASX:KAI) owns 100% of the flagship 1.4 Mozs **Mt York Gold Project** that was partially mined by Lynas Gold NL between 1994 and 1998. Kairos has recognised that the resource has significant potential to grow further from its current 1.4 Moz base with significant exploration potential existing within the Mt York '**Main Trend**' and its extension towards the northwest where Kairos owns the mineral rights for gold. **Scoping study** results point to a robust, open-cut mining operation processing **4 Mtpa** of free-milling mineralisation over a current **8 years** costing **A\$276M** in pre-production capital that is estimated to deliver **\$574M** in free cashflows over current life-of-mine. Project NPV_{5%} is estimated at **\$410M** at a conservative gold price of **A\$3,500 per ounce**, has an **IRR of 35.7%** and payback after **2.7 years**. The next steps are to drill the extensions of Main Trend and nearby gold prospects for resource increases whilst targeting near-surface, high-grade shoots to further improve the project economics to support a prefeasibility study in 2025.

Current resources at a 0.5 g/t Au cutoff grade above 325m depth are shown in the table below.

Deposit	Indicated			Inferred			Total		
	Tonnes (MT)	Au (g/t)	Ounces (kcozs)	Tonnes (MT)	Au (g/t)	Ounces (kcozs)	Tonnes (MT)	Au (g/t)	Ounces (kcozs)
Main Trend	20.25	1.06	690	22.83	0.95	697	43.08	1.00	1,385
Total	20.25	1.06	690	22.83	0.95	697	43.08	1.00	1,385

Kairos's 100%-owned Roe Hills Project, located 120km east of Kalgoorlie in WA's Eastern Goldfields, comprises an extensive tenement portfolio where the Company's exploration work has confirmed the potential for significant discoveries of high-grade gold, nickel, cobalt, lithium and rare earth mineralisation. Kairos's 2023 drilling programme at Black Cat intercepted significant, clay-hosted REE mineralisation.

This announcement has been authorised for release by the Board.

Peter Turner
Managing Director

Zane Lewis
Non-Executive Chairman

For Investor Information please contact:

Paul Armstrong – Read Corporate
0421 619 084