

# ASX ANNOUNCEMENT

3<sup>rd</sup> July 2024

## Gallium, Germanium and REE identified at Khartoum Project

### Highlights:

- Gallium and Germanium mineralisation with grades ranging to over 70 g/t (ppm) Ga have been identified at Khartoum
- The New Economy Minerals Initiative of the Queensland Government and leading Universities identifies highly prospective ground for critical mineral exploration in the region in which EVR's tenements are located
- Multiple geological styles for mineralisation exist, increasing the potential of the project
- EVR's rock chip database confirms prospectivity with anomalous Gallium and Germanium samples
- Targets are being developed for further exploration and drilling
- \$0.5 million to be raised through a placement and additional funds through a proposed rights issue

**EV Resources Limited** (ASX:EVR) ("**EVR**", or the "**Company**"), is pleased to advise shareholders that the directors' portfolio review of assets outside of Peru has resulted in the decision to resume exploration on its highly prospective Khartoum Project in northern Queensland.

Located approximately 100km southwest of Cairns, the Khartoum tenement package consists of five exploration permits covering a total area of 198km<sup>2</sup>. EVR's focus had initially been on the project's prospectivity for tin, however, exploration work and drilling undertaken by EVR at the Khartoum Project in 2022-23<sup>1</sup> identified tungsten, rare earths and other critical minerals in addition to several zones of tin.

The Queensland government's *New Economy Minerals Initiative*<sup>2</sup> also identified the wider Herberton-Mt Garnet Mineral Field, in which the Khartoum Project is located, as a significant

<sup>1</sup> ASX:EVR, Significant Rare Earth Results from Drilling and Rock Chip Sampling at Khartoum Project, 5 May, 2023.

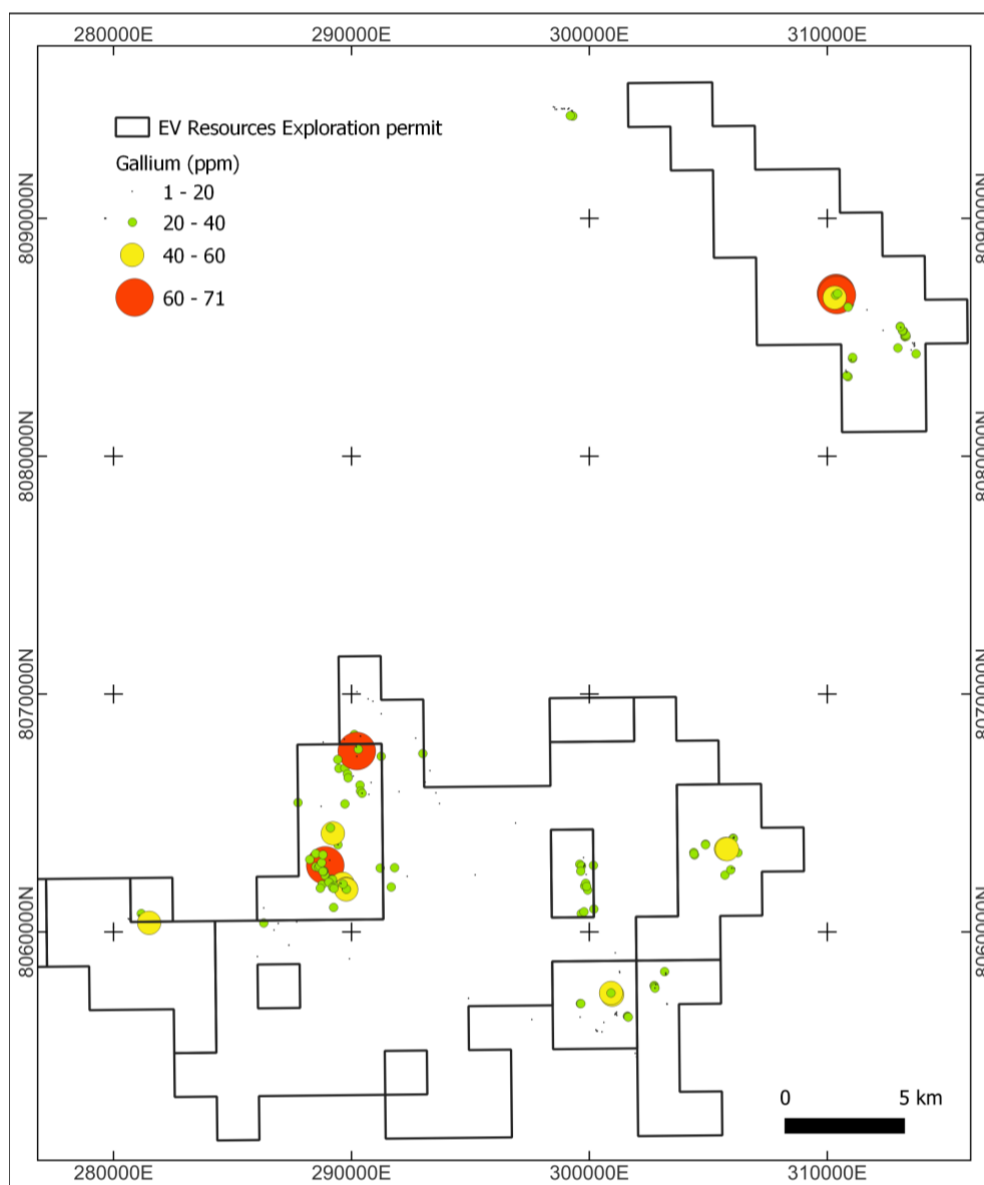
<sup>2</sup> <https://geoscience.data.qld.gov.au/data/dataset/ds000077>

area holding mineralisation styles that may host critical minerals as identified by the Australian Government.

On consideration of this information, directors have decided to undertake further exploration at the project.

### Refocusing on Khartoum's Gallium-Germanium targets

A first-pass assessment of EVR's rock and drill sample database was announced in 2023<sup>3</sup>. A total of 357 rock grab (surface) samples have been assayed for Ga and Ge. A number of these assayed above the crustal abundance for Ga of 19ppm with a maximum 71.4ppm being recorded (**Figure 1**).

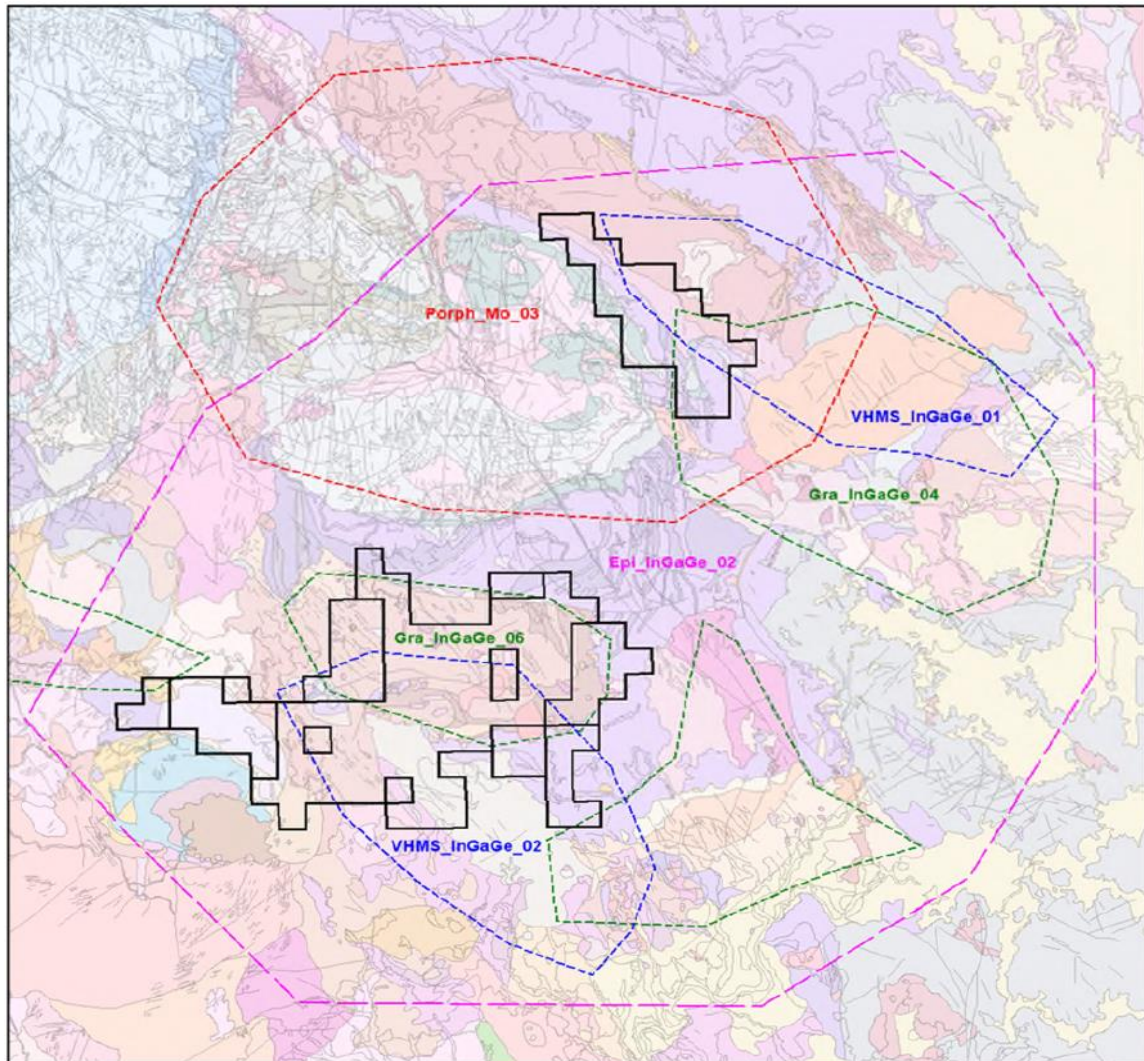


**Figure 1 Gallium assays from surface rock sampling on the Khartoum Project. EVR considers values over 40ppm Ga to be significant. Projection is GDA94, MGA Zone 55.**

<sup>3</sup> ASX:EVR, Significant Rare Earth Results from Drilling and Rock Chip Sampling at Khartoum Project, 5 May, 2023.

These areas have been shown to be rich in Rare Earth Elements. Rock and drill chip samples to 6,993 and 3,093 Total Rare Earth Oxides (TREO), with a high ratio of the economically significant heavy and magnetic REO dominating have been announced<sup>3</sup>.

Recent work by the Queensland Department of Resources, University of Queensland and James Cook University, under the *New Economy Minerals Initiative*, also identified the Khartoum Project as being located in a significant area holding mineralisation styles that may host critical minerals as identified by the Australian Government<sup>4</sup> (**Figure 2**).



**Figure 2 New Economy Minerals Prospectivity Study target areas for Porphyry Mo (red), In-Ga-Ge VHMS (blue), In-Ga-Ge Epithermal (purple), In-Ga-Ge, Granite-related (green). EVR Khartoum Project tenements are shown in black.**

These mineralisation styles include:

- Volcanic-hosted massive sulphide deposits (VHMS) shallow intrusive felsic to intermediate units within volcanic sequence; on eastern portion of EPM19114 and southern portions Khartoum South.

<sup>4</sup> <https://geoscience.data.qld.gov.au/data/dataset/cr136077/resource/geo-doc1356824-cr136077>

- Epithermal deposits: Porphyritic textured shallow intrusive felsic to intermediate units covering the entire Khartoum Project area
- Granite-related deposits: large volume batholiths covering the southeast portion of Stannary Hills tenement and northern portion of Khartoum South.

Adrian Paul, Executive Director, EV Resources said *“Our geological assessment of the Mossman Orogen, in which our Khartoum Project occurs, is endorsed by the New Economy Minerals Initiative study. EVR is in an excellent position to capitalise on the findings of the study. Prospective targets are being defined for Gallium, Germanium, and Rare Earth Elements, all critical minerals being sought by industry.”*

### **Proposed work going forward at Khartoum**

EVR will take a staged approach to Gallium and Germanium exploration:

1. Systematic surface sampling, where possible, as follow-up to the results obtained in the reconnaissance geochemistry work
2. Identification of geological and geophysical features that are associated with anomalous geochemistry entailing both geological field mapping and geophysical interpretation
3. Fast track to wildcat drilling based on initial geochemical, geological, and geophysical indications.

Where EVR had commenced discussions regarding the potential sale of the asset, these discussions will now be deferred until directors have reviewed the results of the above.

### **Gallium-Germanium demand is expected to rise steeply**

The accelerating demand for Gallium and Germanium has been highlighted by recent industry announcements that will see the use of these metals enormously expanded.

Gallium is an integral part of the advanced technologies that underpin the infrastructure of modern data centres. The efficiency improvements and performance enhancements provided by gallium-based technologies contribute significantly to the operational capabilities of data centres.

The global gallium market has grown exponentially in recent years. It is estimated to grow from \$1.85 billion in 2023 to \$2.32 billion in 2024 at a compound annual growth rate (CAGR) of 25.5%. The growth in the historic period can be attributed to electronics industry, medical applications, solar energy, aerospace and defense. The global gallium market is expected to see exponential growth in the next few years. It is estimated to grow to \$5.38 billion in 2028 at a compound annual growth rate (CAGR) of 23.4%.<sup>5</sup>

CSIRO predicts an increase in global Gallium demand of about 70% by 2030. The current price of Gallium is US\$816.40/kg. This represents a 197.55% increase from the price of US\$274.37/kg on 1<sup>st</sup> January 2018.<sup>6</sup>

<sup>5</sup> Gallium Global Market Report 2024 [www.researchandmarkets.com](http://www.researchandmarkets.com)

<sup>6</sup> Strategic Metals Invest.com

Driving this demand are the recent announcements of major IT companies. Apple has publicised multibillion expansions in this space<sup>7</sup>. Recently, Microsoft announced it is committing to an A\$5B investment in Australian AI capability<sup>8</sup>, while Meta anticipates spending US\$37B to cater for increasing AI demand<sup>9</sup>.



**Figure 3 Critical minerals commodity supply risk assessment (after Funaiole, Hart, A. and Powers-Riggs (2023)<sup>10</sup>. Gallium has a very high potential due to China's dominance in its production.**

The Centre for Strategic and International Studies recently highlighted the risks associated with the monopolisation of critical minerals by China<sup>10</sup> (Figure 3). They observed that Gallium represents a clear-cut area in which (the USA) and its allies can take concrete steps to protect their supply chains by reducing their reliance on China.

<sup>7</sup> Apple commits \$430 billion in US investments over five years, <https://www.apple.com/newsroom>.

<sup>8</sup> Microsoft announces A\$5 billion investment in computing capacity and capability to help Australia seize the AI era, <https://news.microsoft.com/en-au/features/>

<sup>9</sup> Meta plans \$37bn digital infrastructure investment in 2024, <https://www.datacenterdynamics.com/en>

<sup>10</sup> De-risking Gallium Supply Chains, August 2023. M.P. Funaiole, B. Hart, A. Powers-Riggs. <https://www.csis.org/analysis/de-risking-gallium-supply-chains-national-security-case-eroding-chinas-critical-mineral>



## Other EVR Projects

Directors will continue to review EVR's other assets with a view to maximising shareholder value, including the company's lithium projects in Austria and Western Australia.

In Austria, EV Resources holds an 80% interest in the Weinebene and Eastern Alps Lithium Projects. These projects are located immediately adjacent to European Lithium's (ASX EUR) Wolfsberg deposit, hosting a JORC compliant 10.98MT @ 1.00% Li<sub>2</sub>O resource.

In Australia, EV Resources owns the Shaw River Project, located 220km from Port Hedland, and is strategically located within 80km radius of three major lithium developments Wodgina Mine, Pilgangoora Mine and Marble Bar Lithium Project.

## EVR's Flagship Projects in Peru

EVR is undertaking a significant reappraisal of the geological model and the potential scale of the Parag project following the success of its recent drill programme at the high-grade copper-molybdenum project in Peru (EVR holds a 70% interest). A Geophysics campaign commences in the first half of July 2024, with magnetometry and induced Polarisation Studies expected to assist in confirming drill targets for the large copper-molybdenum porphyry system.

Concurrently, at the Don Enrique (EVR holds a 50% interest) EVR has prepared a drilling programme for later in 2024. This will involve an initial 2,000 metre diamond drilling programme to test a chargeability anomaly that is up to 1500 metres in length, averages approximately 300 metres in width, and is open at the 500-metre depth level which was the extent of the survey.

## Fundraise

EVR will seek to raise \$0.5m through the issue of 100 million new shares priced at \$0.005 (Placement) using the Company's placement capacity under LR 7.1A and raise additional funds through a proposed Rights Issue to enable shareholder participation in the capital raise, for the purpose of further work on the Khartoum project and working capital.

## ENDS

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*This ASX announcement was authorised for release by the Board of EV Resources Limited.*

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### **Forward Looking Statement**

Forward Looking Statements regarding EVR's plans with respect to its mineral properties and programs are forward-looking statements. There can be no assurance that EVR's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that EVR will be able to confirm the presence of additional mineral resources, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of EVR's mineral properties. The performance of EVR may be influenced by a number of factors which are outside the control of the Company and its Directors, staff, and contractors. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

### **Competent Person's Statement**

The details contained in this report that pertain to exploration target generation based upon information compiled by EV Resources and Mr Marcus Flis, an independent consultant to EV Resources. Mr Flis is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience in the activity which he is undertaking to qualify as a Competent Person as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Flis consents to the inclusion in the report of the matters based upon his information in the form and context in which it appears.

### **Compliance Statement**

This announcement contains information on the Khartoum Project extracted from an ASX market announcement dated 5 May 2023, "Significant Rare Earth Results from Drilling and Rock Chip Sampling at Khartoum Project" and reported in accordance with the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" ("2012 JORC Code"). EVR confirms that it is not aware of any new information or data that materially affects the information included in the original ASX market announcement.

## JORC Code, 2012 Edition – Table 1 report

### Section 1 Sampling Techniques and Data

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

Criteria	Commentary
<i>Sampling techniques</i>	<p>Rock chip samples of selected zones of outcrop or mullock from workings were collected based on geological determination.</p> <p>All samples were between 2-3kg and were individually labelled and geologically documented.</p>
<i>Drilling techniques</i>	N/A
<i>Drill sample recovery</i>	N/A
<i>Logging</i>	Sample sites were described and lithologies identified in the field.
<i>Sub-sampling techniques and sample preparation</i>	<p>At the laboratory, samples were dried crushed and pulverised to 85% passing 75µm. This is considered to appropriately homogenise the sample to allow subsampling for the various assay techniques.</p> <p>Certified Reference Material was inserted at regular intervals to monitor sample preparation and assaying accuracy.</p> <p>Sample sizes are industry standard and considered appropriate.</p>
<i>Quality of assay data and laboratory tests</i>	<p>Rock chip analysis was undertaken by ALS Laboratories in Brisbane, Australia. Samples were sorted, weighed, dried, crushed, and pulverised to 80% passing -75µm.</p> <p>Sn, W and In and a standard suite of RRE's plus Ga and Ge were analysed by Lithium Borate Fusion with ICP-MS finish (code ME-MS81). Over limit Sn values were analysed by Sn-XRF15b. Ag, As, Cd, Co, Cu, Li, Mo, Ni, Pb, Sc, Tl and Zn were analysed by 4 acid digest and ACP-AES finish (code ME-aACD81)</p> <p>Laboratory QA/QC was undertaken.</p>
<i>Verification of sampling and assaying</i>	<p>Rock chip data was collected and documented by EV staff geologists in the field and transferred to an electronic database.</p> <p>Assay data was not adjusted.</p>
<i>Location of data points</i>	<p>Rock chip locations were surveyed using handheld GPS to an accuracy of approximately ±5m.</p> <p>The grid used was MGA Zone 55, datum GDA94.</p>
<i>Data spacing and distribution</i>	<p>Samples were not collected on a regular grid, but opportunistically as outcrop presented itself.</p> <p>No sample compositing was applied</p>
<i>Orientation of data in relation to geological structure</i>	Rock samples were taken opportunistically without significant consideration to geological directions. As this is a reconnaissance survey this is not considered an issue.
<i>Sample security</i>	Sample chain of custody was managed by the employees of EV resources. All samples were bagged and tied in numbered calico bags, grouped into larger tied polyweave bags in the field. Samples collected in the field were transported by geological staff to the Company's Mt Garnet field base where they were collected by courier and transported directly to the laboratory. All sample submissions were documented via ALS tracking system and all assays reported via email.
<i>Audits or reviews</i>	No audits or reviews were deemed necessary as this work is purely qualitative assaying for first-pass exploration purposes.



## Section 2 Reporting of Exploration Results

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

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<p>The Khartoum Project comprises EPMs 14797, 19112, 19113, 19114, 19203 and 27892 held by EV Resources Silver Pty Ltd, a 100% subsidiary of EV Resources Limited.</p> <p>All tenements are held 100% by EV Resources Silver Pty Ltd.</p> <p>There are no identified issues with the security of the tenure.</p>
<i>Exploration done by other parties</i>	All exploration sampling and reporting was conducted by EV Resources technical staff.
<i>Geology</i>	<p>EV Resources is targeting tin, tungsten, base metal, and REE mineralisation within the Khartoum Project. The Project covers O'Brian Supersuite granites of the early-middle Palaeozoic Hodgkinson Province. The O'Briens Creek Supersuite in the region consists of highly fractionated characteristically pale pink to white, alkali-feldspar-rich biotite granites, leucogranites and microgranites, some of which are porphyritic and some of which are miarolitic. O'Briens Supersuite has intruded Early Devonian-Late Devonian Hodgkinson Formation, comprising rhythmically interbedded fine to medium-grained arenite and mudstone (locally phyllitic), minor conglomerate, minor chert and metabasalt, and rare limestone. Style of mineralisation being tested by sampling is greisen and vein-style tin-tungsten mineralisation in granites and fissure vein-style tin, tungsten and base metal mineralisation within sediments.</p>
<i>Drill hole Information</i>	N/A
<i>Data aggregation methods</i>	<p>No averaging or aggregating of results was undertaken. Individual results have been reported.</p> <p>Multi-element results (REE) are converted to oxide (REO) using element-to-oxide stoichiometric conversion factors as follows: La x 1.1728 → La<sub>2</sub>O<sub>3</sub>; Ce x 1.2284 → Ce<sub>2</sub>O<sub>3</sub>; Pr x 1.1703 → Pr<sub>6</sub>O<sub>11</sub>; Sm x 1.1596 → Sm<sub>2</sub>O<sub>3</sub>; Eu x 1.1579 → Eu<sub>2</sub>O<sub>3</sub>; Gd x 1.1526 → Gd<sub>2</sub>O<sub>3</sub>; Tb x 1.1762 → Tb<sub>4</sub>O<sub>7</sub>; Dy x 1.1477 → Dy<sub>2</sub>O<sub>3</sub>; Ho x 1.1455 → Ho<sub>2</sub>O<sub>3</sub>; Er x 1.1435 → Er<sub>2</sub>O<sub>3</sub>; Tm x 1.1421 → Tm<sub>2</sub>O<sub>3</sub>; Yb x 1.1387 → Yb<sub>2</sub>O<sub>3</sub>; Lu x 1.1371 → Lu<sub>2</sub>O<sub>3</sub>; Sc x 1.5338 → Sc<sub>2</sub>O<sub>3</sub>; Y x 1.2699 → Y<sub>2</sub>O<sub>3</sub>.</p> <p>TREO values are aggregated as follows: Ce<sub>2</sub>O<sub>3</sub> + Dy<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + La<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Nd<sub>2</sub>O<sub>3</sub> + Pr<sub>6</sub>O<sub>11</sub> + Sm<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Tm<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub>.</p> <p>No metal equivalents have been used.</p>
<i>Relationship between mineralisation widths and intercept lengths</i>	N/A
<i>Diagrams</i>	Refer to the body of the announcement for all diagrams.
<i>Balanced reporting</i>	Ga and Ge results are reported in total, with no cutoff grade applied.
<i>Other substantive exploration data</i>	All meaningful & material exploration data has been reported.
<i>Further work</i>	<p>Exploration within the Khartoum Project tenements is at an early stage. EV intends to undertake more systematic, detailed exploration work over higher-priority targets, including mapping and channel sampling along the extent of outcrop that has previously returned elevated results.</p> <p>If the results of rock chip values is of sufficient grade and extent of outcropping target is deemed significant, further appraisal of prospects will be by drilling.</p>