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HYPROMAG GMBH TO PARTICIPATE IN GROUNDBREAKING €8 MILLION GRANT FUNDED PROJECT: RE-ENGINEERING PERMANENT MAGNETS FOR THE GREEN TRANSITION (GREENE)

Highlights

- **HyProMag GmbH is participating in the €8 million GREENE project (the “Project”), funded by the European Commission’s Horizon Europe Programme, with 15 partners across industry and academia (<https://cordis.europa.eu/project/id/101129888>)**
- **GREENE aims to push the boundaries of material science by re-engineering rare earth permanent magnets to become more resource-efficient, whilst offering significant improvements to magnetic performance**
- **As part of the Project, HyProMag GmbH will receive €350,125 to advance its proprietary NeoLeach technology, which is an environmentally friendly and energy efficient chemical process to further upgrade products from the Hydrogen Processing of Magnet Scrap (“HPMS”) process being commercialised by HyProMag in Germany, UK and United States**

London / Vancouver: August 29, 2024 – Mkango Resources Ltd. (AIM/TSX-V: MKA) (the “Company” or “Mkango”) is pleased to announce that HyProMag GmbH is participating in the €8 million grant funded GREENE project, of which HyProMag GmbH will receive €350,125. HyProMag GmbH is 80% owned by HyProMag Limited, a 100% owned subsidiary of Maginito Limited (“Maginito”). Maginito is 79.4% owned by Mkango and 20.6% owned by CoTec Holdings (“CoTec”).

The GREENE Project

Rare-earth element (REE) permanent magnets based on Neodymium Iron Boron (Nd-Fe-B) are vital components of high-tech products enabling a green energy future. They are highly valued due to their outstanding properties. They are complex materials consisting of multiple phases and their overall performance is determined by a high remanence, reflected in magnet strength, and a high intrinsic coercivity, making them resistant to demagnetization. Their maximum energy product is thus composed of both remanence and coercivity.

The need to operate at temperatures over 100 °C in applications such as traction motors in electric vehicles means that a high coercivity is usually prioritised over a high remanence, which negatively affects power output linked to remanence. In conventionally sintered magnets, NdFeB grains are microscopic and the regions between the grains are called grain boundaries. When exposed to a demagnetizing force, demagnetization begins at the grain interfaces with the grain-boundary phase before rapidly spreading, influencing the magnet’s coercivity.

GREENE partners aim to push the boundaries of material science by developing Single-Grain Re-Engineered Nd-Fe-B permanent magnets with a new grain-boundary interface, thus allowing for a reduction of REE content. The

new GREENE magnets are expected to be more resource-efficient, offering a roughly 20% increase in coercivity, 10% in remanence, and 20% in overall maximum energy product.

As a first step, novel grain boundaries and interfaces will be created using micromagnetic simulations and computational thermodynamics. Following an initial testing phase, the technology will then be applied to isolated grains from recycled and fresh streams with the intention of developing a new form of Nd-Fe-B magnet. By the end of the project, the magnet manufacturing system is intended to be set up in an actual operational setting.

To achieve this ambitious undertaking, 15 European partners with outstanding expertise in their respective fields have joined forces, including leading material scientists, magnet manufacturers and recyclers, lifecycle analysis experts as well as end user representatives. Several of them have already cooperated in predecessor projects like SUSMAGPRO, INSPIRES and REEsilience. The project is coordinated by the Slovenian Jožef Stefan Institute.

About Mkango Resources Ltd.

Mkango is listed on the AIM and the TSX-V. Mkango's corporate strategy is to become a market leader in the production of recycled rare earth magnets, alloys and oxides, through its interest in Maginito Limited, which is owned 79.4 per cent by Mkango and 20.6 per cent by CoTec, and to develop new sustainable sources of neodymium, praseodymium, dysprosium and terbium to supply accelerating demand from electric vehicles, wind turbines and other clean energy technologies.

Maginito holds a 100 per cent interest in HyProMag and a 90 per cent direct and indirect interest (assuming conversion of Maginito's convertible loan) in HyProMag GmbH, focused on short loop rare earth magnet recycling in the UK and Germany, respectively, and a 100 per cent interest in Mkango Rare Earths UK Ltd ("Mkango UK"), focused on long loop rare earth magnet recycling in the UK via a chemical route.

Maginito and CoTec are also rolling out HyProMag's recycling technology into the United States via the 50/50 owned HyProMag USA LLC joint venture company. HyProMag is also evaluating other jurisdictions, and recently launched a collaboration with Envipro on rare earth magnet recycling in Japan.

Mkango also owns the advanced stage Songwe Hill rare earths project and an extensive rare earths, uranium, tantalum, niobium, rutile, nickel and cobalt exploration portfolio in Malawi, and the Pulawy rare earths separation project in Poland.

Cautionary Note Regarding Forward-Looking Statements

This news release contains forward-looking statements (within the meaning of that term under applicable securities laws) with respect to Mkango. Generally, forward looking statements can be identified by the use of words such as "targeted", "plans", "expects" or "is expected to", "scheduled", "estimates" "intends", "anticipates", "believes", or variations of such words and phrases, or statements that certain actions, events or results "can", "may", "could", "would", "should", "might" or "will", occur or be achieved, or the negative connotations thereof. Readers are cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are based will occur. By their nature, forward-looking statements involve numerous assumptions, known and unknown risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and other forward-looking statements will not occur, which may cause actual performance and results in future periods to differ materially from any estimates or projections of future performance or results expressed or implied by such forward-looking statements. Such factors and risks include, without limiting the foregoing, the success of the Project to achieve its aims and the commercial application of the results, the availability of (or delays in obtaining) financing to develop the various recycling plants in the UK, Germany, governmental action and other market effects on global demand and pricing for the metals and associated downstream products for which Mkango is researching and developing, the ability to scale the HPMS and chemical recycling technologies to commercial scale, competitors having greater financial capability and effective competing technologies in the recycling business of Maginito and separation business of Mkango, availability of

scrap supplies for recycling activities, government regulation (including the impact of environmental and other regulations) on and the economics in relation to recycling and the development of the various recycling plants of Maginito and future investments in the United States pursuant to the cooperation agreement between Maginito and CoTec, the outcome and timing of the completion of the feasibility studies, cost overruns, complexities in building and operating the plants, and the positive results of feasibility studies on the various proposed aspects of Maginito's activities. The forward-looking statements contained in this news release are made as of the date of this news release. Except as required by law, the Company disclaims any intention and assume no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. Additionally, the Company undertakes no obligation to comment on the expectations of, or statements made by, third parties in respect of the matters discussed above.

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