

Mkango and CoTec Provide Update on Roll-Out Of HyProMag's Rare Earth Magnet Recycling Technology Into the United States

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LONDON and VANCOUVER, Oct. 10, 2023 - [Mkango Resources Ltd.](#) (AIM/TSX-V: MKA) ("Mkango") and CoTec Holdings Corp. (TSXV: CTH; OTCQB: CTHCF) ("CoTec") are pleased to provide an update on the roll-out of HyProMag's rare earth magnet recycling technology into the United States. HyProMag Ltd ("HyProMag") is a wholly owned subsidiary of Maginito Ltd ("Maginito"), which is 79.4% owned by Mkango and 20.6% owned by CoTec.

Based on positive scoping studies to date, Maginito and CoTec have commenced planning for the feasibility study for the United States operation ("Feasibility Study"), targeted for completion by mid-2024.

The proposed operating configuration for the United States operations is a modular, hub and spoke model, with the initial deployment of three Hydrogen Processing of Magnet Scrap (HPMS) recycling vessels at the spokes and a central hub comprising of rare earth (NdFeB) alloy and magnet manufacturing, subject to the outcome of the Feasibility Study.

Operating scenarios tested through the scoping studies highlighted:

- A range of production scenarios and product suites are potentially viable, including finished magnets, sintered blocks and alloy products, and incorporating up to 100% recycled NdFeB feed;
- Potential for US\$50 million per year of revenue generation, based on assumed production of 500 tonnes per year of NdFeB magnets and a blended product price of US\$100/kg, which is within the range of current pricing for the different products evaluated during the scoping studies;
- A target EBITDA margin of 35% to 40% would potentially be achievable under a range of scenarios, with a minimum estimated capital expenditure of US\$30 million; and
- Market conditions and rare earth prices are currently subdued, indicating potential upside versus the current pricing scenario as market conditions recover, in parallel with further optimization of the development scope.

The actual results of the United States operations could vary materially depending on future pricing of rare earth elements, final product mix, agreed sales pricing for each product, capacity at which the HPMS vessels and magnet manufacturing will be operated, quality and cost of scrap feed material, primary product ratio and other material inputs. These key inputs will be further explored and optimized during the completion of the Feasibility Study.

The basis of design, product suite and operating parameters for the United States operations will be further confirmed, refined and de-risked as the recycling and magnet manufacturing facilities are commissioned and production commences at Tyseley Energy Park ("Tyseley") in the United Kingdom. First production of rare earth magnets from Tyseley is targeted for this year.

The Tyseley development is being funded by the UK Research and Innovation "Driving the Electric Revolution" challenge. HyProMag is the primary industrial user and operator of the plant, and the principal licensee for the underlying HPMS technology from the University of Birmingham.

The University of Birmingham has approved a sub-license of the HPMS technology to the HyProMag US operations, allowing Maginito and CoTec to proceed with the formation of a joint venture company. The joint venture company, HyProMag US, will be 50% held each by Maginito and CoTec, with CoTec responsible for funding all feasibility and development costs.

Julian Treger, CoTec CEO commented; *"We are very pleased with the progress and the results of the scoping studies. HyProMag US continues to benefit from front-end engineering and development of the plants in the UK and Germany, which significantly de risks the US operations."*

"As the planning for the Feasibility Study commences with our partner Mkango, CoTec is focused on the operational roll-out of the HyProMag technology. HyProMag's exciting recycling technology offers a long-term, sustainable and low carbon solution for the supply of domestic REE magnets. Discussions with the US Government, potential customers and recycling partners have commenced and are ongoing."

Will Dawes, Mkango CEO commented; *"We are very excited about opportunities for growth in the United States and look forward to working with CoTec and HyProMag as we continue to scale-up and roll-out the HPMS rare earth magnet recycling technology. HPMS has potential to unlock the supply chain for rare earth magnet recycling and it's fantastic to see this UK developed, homegrown, innovative technology continuing to gain traction internationally."*

HPMS technology was developed at the University of Birmingham, underpinned by approximately US\$100 million of research and development funding, and has major competitive advantages versus other rare earth magnet recycling technologies, which are largely focused on chemical processes but do not solve the challenges of liberating magnets from end-of-life scrap streams - HPMS provides the solution. HyProMag's company presentation can be viewed via the following link: [HyProMag Corporate Presentation](#)

Maginito

Maginito is a UK based Company owned 79.4 per cent by Mkango and 20.6 per cent by CoTec. It is focused on developing green technology opportunities in the rare earths supply chain, encompassing neodymium (NdFeB) magnet recycling as well as innovative rare earth alloy, magnet, and separation 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, and a 100 per cent interest in Mkango Rare Earths UK Ltd ("Mkango UK"), a company focused on long loop rare earth magnet recycling in the UK via a chemical route.

About Mkango Resources Ltd.

Mkango's corporate strategy is to develop new sustainable primary and secondary sources of neodymium, praseodymium, dysprosium and terbium to supply accelerating demand from electric vehicles, wind turbines and other clean technologies. This integrated Mine, Refine, Recycle strategy differentiates Mkango from its peers, uniquely positioning the Company in the rare earths sector. Mkango is listed on the AIM and the TSX-V.

Mkango is developing its flagship Songwe Hill rare earths project ("Songwe") in Malawi with a Definitive Feasibility Study completed in July 2022 and an Environmental, Social and Health Impact Assessment approved by the Government of Malawi in January 2023.

In parallel, Mkango and Grupa Azoty PULAWY, Poland's leading chemical have agreed to work together towards development of a rare earth separation plant at Pulawy in Poland (the "Pulawy Separation Plant") to process the purified mixed rare earth carbonate produced at Songwe Hill.

Mkango also has an extensive exploration portfolio in Malawi, including the Mchinji rutile exploration project, the Thambani uranium-tantalum-niobium-zircon project and Chimimbe nickel-cobalt project.

For more information, please visit www.mkango.ca

About CoTec Holdings Corp.

CoTec is a publicly traded investment issuer listed on the Toronto Venture Stock Exchange ("TSX- V") and the OTCQB and trades under the symbol CTH and CTHCF respectively. The Company is an environment, social, and governance ("ESG")-focused company investing in innovative technologies that have the potential to fundamentally change the way metals and minerals can be extracted and processed for the purpose of applying those technologies to undervalued operating assets and recycling opportunities, as the Company transitions into a mid-tier mineral resource producer.

CoTec is committed to supporting the transition to a lower carbon future for the extraction industry, a sector on the cusp of a green revolution as it embraces technology and innovation. The Company has made four investments to date and is actively pursuing operating opportunities where current technology investments could be deployed.

For more information, please visit www.cotec.ca.

Market Abuse Regulation (MAR) Disclosure

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 ('MAR') which has been incorporated into UK law by the European Union (Withdrawal) Act 2018. Upon the publication of this announcement via Regulatory Information Service, this inside information is now considered to be in the public domain.

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 and CoTec, including their plans to proceed with the roll-out of HyProMag's rare earth magnet recycling technology into the United States by way of a new joint venture and the anticipated structure, costs and benefits of that joint venture. Generally, forward looking statements can be identified by the use of words such as "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 availability of (or delays in obtaining) financing to develop HyProMag US's operations, Songwe Hill, the Tyseley Recycling Plant, the HyProMag GmbH Recycling Plant, the Mkango UK Pilot Plant, the Pulawy Separation Plant, governmental action and other market effects on global demand and pricing for the metals and associated downstream products for which Mkango is exploring, researching and developing, geological, technical and regulatory matters relating to the development of Songwe Hill, 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 and separation business of Maginito and Mkango, availability of scrap supplies for Maginito's 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 Tyseley Recycling Plant, the HyProMag GmbH Recycling Plant, the Mkango UK Pilot Plant, the Pulawy Separation Plant and future investments in the United States pursuant to the proposed 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 Mkango's, Maginito's and CoTec'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 and CoTec disclaim 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 and CoTec undertake 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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