7 April 2021

IONICRE SIGNS MOU WITH CHINALCO FOR POTENTIAL INVESTMENT, OFFTAKE AND MINE DEVELOPMENT

- **Ionic Rare Earths signs milestone non-binding MOU with global rare earth giant Chinalco**
- **Chinalco is the world's largest rare earth miner and separator by market capitalisation**
- **The parties to cooperate to accelerate mine development and production of the Makuutu Rare Earth Project including potential off take agreements and Project funding**
- **Attracting Chinalco is a significant endorsement of the Makuutu Project as a globally strategic long-life supply of critical and heavy rare earths**
- **Scoping Study outlining preliminary economics for Makuutu due for release mid-April**

Ionic Rare Earths Limited ("IonicRE" or "the Company") (ASX: IXR) is very pleased to advise that that the Company has signed a non-binding Memorandum of Understanding ("MOU") with Aluminium Corporation of China subsidiary, China Rare Metals and Rare Earth (Jiangsu) Co., Ltd ("CHINALCO") in relation to the development of the Company's Makuutu Rare Earths Project ("Makuutu") in Uganda.

Highlights of the MOU include:

1. IonicRE and CHINALCO have agreed to use their reasonable endeavours to strategically cooperate to accelerate Makuutu mine development and production for mutual benefit; as well as
2. Potential for future investment in IonicRE, and/or the Makuutu Rare Earths Project directly, and/or off-take agreements, as agreed by the parties, for rare earth product produced by IonicRE.

CHINALCO is the world's largest market capitalised rare earth miner and separator, with numerous dedicated subsidiaries operating in mining and rare earth separation, including the Heavy Rare Earth Element (HREE) rich ionic adsorption clay (IAC) mines in Guangdong and Guangxi Provinces and a

number of REE separation plants in Jiangsu Province. Most of the global Rare Earth Oxides (REO) produced globally are initially processed and separated within China. Therefore, it is of strategic importance to IonicRE, to have successfully negotiated this MOU and welcomes CHINALCO as a potential cornerstone project partner.

CHINALCO have completed an extensive due diligence review over the past twelve (12) months on the Makuutu Rare Earths Project, in conjunction with numerous meetings between the IonicRE executive team and CHINALCO, facilitated by IonicRE's strategic advisor, Airguide. In our view this demonstrates the Makuutu Rare Earth Project is not only a high quality REE project, but a key globally strategic critical and heavy REE resource.

The initial due diligence completed by CHINALCO on key areas relating to the Makuutu Rare Earths Project, included the following:

- Project geology, drilling results and Mineral Resource Estimation;
- Preliminary metallurgical test work review;
- Review of product quality and integration into existing REE separation operations;
- Review of Ugandan Mining Act and Regulations;
- Review of Ugandan Corporate Business Regulations and Taxation Code, pertinent to the Mining Industry;
- Review of Ugandan National Environmental Act;
- Review of local infrastructure; and
- Review of political and country risk.

IonicRE Managing Director Tim Harrison commented:

"We are very pleased to have signed this MOU which, further endorses the quality of the Project and its strategic importance, and will now enable the Makuutu Rare Earths Project to rapidly advance activities in the near term. We welcome the involvement of CHINALCO and their ionic clay and rare earths separation arm China Rare Earths Jiangsu. Their knowledge on ionic adsorption clays is second to none, and their involvement would also greatly enhance and accelerate the planned development of Makuutu."

"From the outset of our discussions, it was clear that there existed a key alignment between IonicRE and CHINALCO on the development of Makuutu. We greatly welcome their expertise in de-risking the technical development and engineering, maximising the strategic value of Makuutu and its importance in the longer-term global rare earths supply chain."

"We see Makuutu rapidly growing into a very large, long life producer of critical and heavy rare earths. Partnering with CHINALCO potentially fast tracks the development process for Makuutu and will greatly assist in value creation for IonicRE."

MOU Terms

The terms of the MOU are non-binding except for the provisions relating to exclusivity, confidentiality, jurisdiction and dispute resolution, interpretation and notices.

IonicRE has granted CHINALCO exclusivity to progress discussions on strategic cooperation to accelerate Makuutu to production, investment within IonicRE or offtake discussions, for the term of

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12 months. The exclusivity may be terminated by either Party by giving 14 business days written notice. During the period of exclusivity, IonicRE undertakes to not solicit new potential counterparties in relation to the objectives of the MOU.

Notwithstanding the exclusivity arrangements with CHINALCO, IonicRE has maintained the right to continue discussions with other potential counterparties that had already commenced.

See further details provided in Schedule 1.

About Makuutu Rare Earths Project

The Makuutu Rare Earths Project is an ionic adsorption clay (IAC) hosted Rare Earth Element (REE) deposit located 120 km east of Kampala in Uganda and is well serviced by existing high quality infrastructure including roads, rail, power infrastructure and cell communications. The installed infrastructure is illustrated in Figure 1.

The current resource is identified over a 20 km length. The potentially mineralised basin is 37km in length and has demonstrated potential for a long life, low-cost capital source of critical and heavy rare earths. These IAC deposits are prevalent in southern China which have been the source of the world's lowest cost critical and heavy REE production, however these deposits are gradually being exhausted and Makuutu represents one of only a handful of such deposits outside of southern China.

The Makuutu deposit is shallow, with less than 3 m of cover over a 9 m average thickness clay and saprolite zone which results in low-cost bulk mining methods with low strip ratio. A maximum thickness of 19.5 m has been identified at Makuutu. Processing is via simple acidified salt desorption heap leaching, breaking the chemical ionic bond which washes the rare earths (in a chemical form) from the ore into a pregnant leach solution (PLS). The PLS is concentrated up using membrane technology, from which the rare earths are precipitated as a mixed rare earth carbonate product; a product which attracts both a higher payability and achieves a high basket price due to the dominant high value critical and heavy rare earths which make up over 70% of the product basket.

The Project has the potential of generating a high margin product with an operation life exceeding 30 years. The Project is also prospective for a low-cost Scandium co-product.

Existing Infrastructure

One of the Makuutu Rare Earths Project's competitive advantages is its proximity to existing infrastructure. The Makuutu site is approximately 10km from Highway 109 which is a sealed bitumen road connecting to Kampala, to Kenya and on to the Port of Mombasa. All weather access roads connecting the site to the adjacent sealed bitumen highway are already existing. A rail line lies within 10 kilometres north of the Makuutu site near the town of Iganga. There are four hydroelectric power plants located within 65 km of the project area, with total installed generating capacity of approximately 810 MW, providing an abundant supply of cheap power to the Project.

Water will be sourced at the project by harvesting water from the Makuutu site, given the Project location in a positive rainfall environment, and a net positive process water balance will require membrane processes to be used to process site discharge water for reagent recovery. Excess water management will be a key focus of the Project the ensure environmental standards are met and reagent consumption is minimised.

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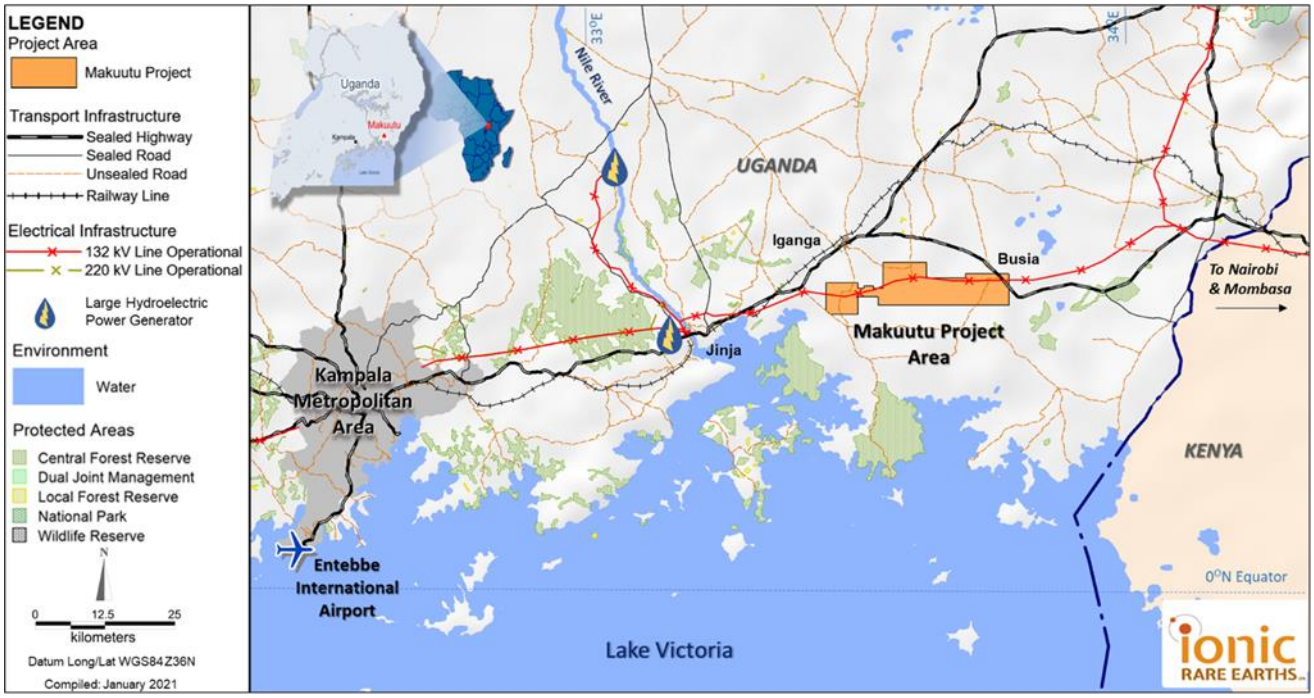

Figure 1: Makuutu Rare Earths Project Location with major existing infrastructure

A workforce of semi-skilled and artisanal workers is available in nearby towns and population centres. The closest major population centre is Iganga, which has a population of 50,000. The town of Mayuge is approximately 10 km from the Project site and the intent is to source local operations staff from the immediate districts and train staff accordingly. The operation is to be staffed by a residential workforce. No fly in – fly out is envisaged, and the number of expatriate staff is intended to be low, and to be phased out over time. Industrial facilities are available in the city of Jinja, approximately 40 km from the Project area. Additional industrial facilities are available on the outskirts of Kampala.

About CHINALCO

Established in 2001, Aluminum Corporation of China ("CHINALCO") is a key state-owned enterprise, and it is China's largest nonferrous metals enterprise principally engaged in mineral resources development, nonferrous metals smelting and processing, related trading as well as engineering and technical services. It is now the world's second largest alumina producer, the third largest primary aluminum provider. It also is one of the key major rare earth companies in the world. It is a pioneer in applications of Aluminium Scandium alloys. CHINALCO's mid- and long-term strategy is to strengthen its aluminum business, optimise the copper segment and improve the sector of rare metals, with ever growing and diverse businesses of engineering, mineral resources and industrial finance.

CHINALCO, as it stands today, has 68 member enterprises. It operates in more than 20 countries and regions. It has been ranked as a Fortune Global 500 company since 2008. The Company's 5 controlled subsidiaries are listed internationally.

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About China Rare Metals and Rare Earth (Jiangsu) Co., Ltd

China Rare Metals and Rare Earth (Jiangsu) Co., Ltd. is the controlled subsidiary of CHINALCO aiming at integrating and developing the rare earth industry in China. CHINALCO has structured its rare earth business to include ionic adsorption clay mining in Guangdong and Guangxi Province as well as rare earth separation units located in Jiangsu Province. It also owns an R&D center at GRIREM Advanced Materials Co., Ltd. CHINALCO's ambition is to become a global leader with Chinese characteristics in the rare earth industry by leveraging its core competencies and developing high-end technologies.

Chinalco Rare Earths (Jiangsu) operates a number of rare earth separation plants in Jiangsu province. Jiangsu province is considered a leader in rare earth separation technology, with a good market reputation in both the Chinese domestic market and export market.

Authorised for release by the Board.

For enquiries, contact: Tim Harrison

Managing Director

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Schedule 1 – MOU Terms

Purpose	The purpose of this MOU is to enable the Parties to identify, discuss and pursue mutually beneficial business opportunities within a framework of confidentiality and collaboration. The Parties enter into this MOU regarding: i. the strategic cooperation between CHINALCO and IonicRE to accelerate the mine development of the Makuutu Project and production for mutual benefit; ii. potential future investment in IonicRE, or the Makuutu Project, or off-take agreements for product as agreed by the parties produced by IonicRE.
Duration	The period of the MOU shall be for 12 calendar months.
Exclusivity	IonicRE has granted CHINALCO exclusivity to progress discussions on the matters stated in Purpose for the MOU Period. Exclusivity may be terminated by either Party by giving 14 business days' written notice. During the period of exclusivity, IonicRE has undertaken not to solicit new potential counter-parties for matters stated in Purpose. IonicRE has the right to continue ongoing discussions already underway with existing potential counter-parties.
Confidentiality	The Recipients acknowledges and agrees that: i. the Confidential Information is secret, confidential and valuable to the Discloser; ii. it owes an obligation of confidence to the Discloser in relation to the Confidential Information, on the terms of the MOU; iii. as between the Parties, all rights and interests (including all intellectual property rights) in Confidential Information belong solely to the Discloser; iv. it has no right or interest in the Confidential Information other than the right to use and disclose it on the terms of the MOU; v. the Discloser's rights concerning Confidential Information are protected by the MOU and by law.
Jurisdiction	The MOU will be governed by and construed according to the laws of Western Australia.
Dispute Resolution	The Parties agree that they will attempt to resolve any disputes between them on an amicable basis. All disputes, of any nature whatsoever, will first be handled by informal negotiation by representatives of each Party. Any dispute arising out of or in connection with this MOU, including any question regarding its existence, validity or termination, shall be referred to

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	and finally resolved by arbitration in China in accordance with the Arbitration Law of the People's Republic of China (2017 Amendment) for the time being in force, which rules are deemed to be incorporated by reference in this clause. The cost of the arbitration proceedings will be allocated between the Parties in whatever proportion the arbitration deems just under the circumstances and will be enforceable.
Interpretation	The MOU may be translated into languages other than English. In the event of inconsistency between the English version of the MOU and a version of any other language, the English version shall prevail.
Notices	All formal notices required to be given under this MOU will be given if sent by registered mail (return receipt requested); facsimile; courier; or hand delivery, to the respective addresses

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