

OVERVIEW / FLAGSHIP PROJECT

Ionic Rare Earths Limited (ASX: IXR): is a mineral resource company currently focused on the exploration and development of the Makuutu Rare Earths Project (earning up to 60% interest) in Uganda. The Makuutu project is similar to the Southern China Ionic Adsorption Clays (IAC) mines from where most of the Heavy Rare Earths Elements (HREE) are produced on a global scale and already has a large mineral resource of 78.6 Mt at 840ppm TREO.

KEY ELEMENTS OF STRATEGY

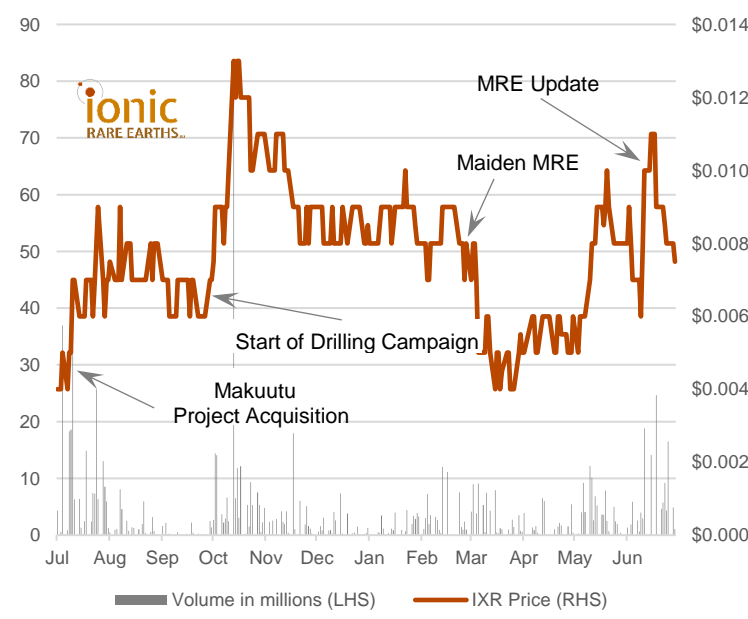
- The key elements of IXR strategy are as follows:
1. Extend (and increase the confidence) of mineral resources at Makuutu.
 2. Progress development studies aiming at demonstrating superior economics warranting development

KEY OUTCOMES IF SUCCESSFUL

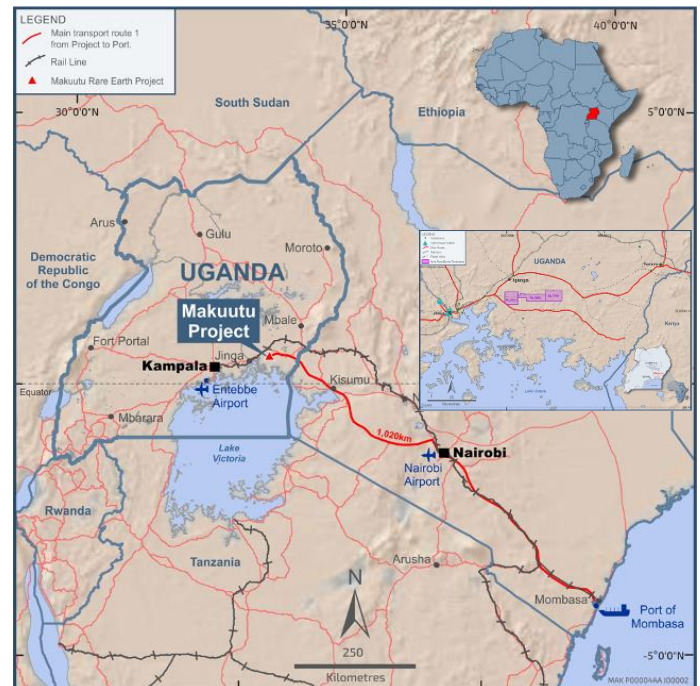
1. One of the largest ionic adsorption clay deposits outside China
2. A REE project with a simple beneficiation process, low up-front capital, low capital intensity and high margins
3. As the other IAC projects are privately held, IXR offers a unique exposure to the superior economics of such deposits

CORPORATE OVERVIEW (AUD)

Shares	2,474 million ordinary fully paid shares
Unquoted Options and Performance Rights	30 Nov 2020: 22m @ \$0.013 (IXRAA) 31 Jul 2021: 340m @ 0.0075 31 Jul 2021: 50m @ \$0.005 20 Nov 2022: 60m @ \$0.018 (IXRAE) 100 million performance rights (IXRAF)
Share Price	\$0.007
Market Capitalisation	\$17.8 million
Cash	\$2.9 million as at 3 July 2020 plus potential \$0.5m from Share Purchase Plan ⇒ Fully funded drilling program & scoping study

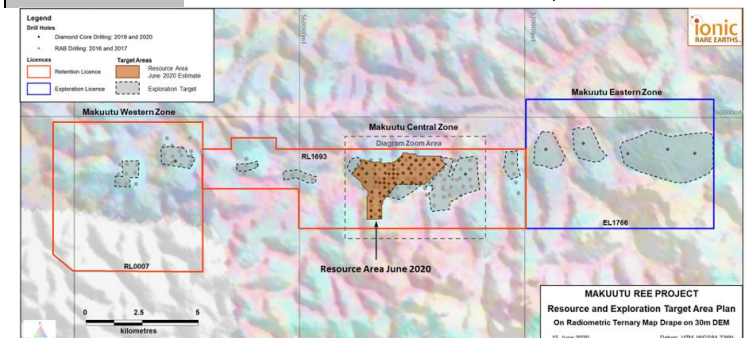


- ⇒ IXR share price shows a strong response to the start of the drilling campaign, which has been interrupted by COVID-19 with only 10% of drilling completed
- ⇒ The drilling campaign is scheduled to resume by the end of July with 3,700m of drilling planned



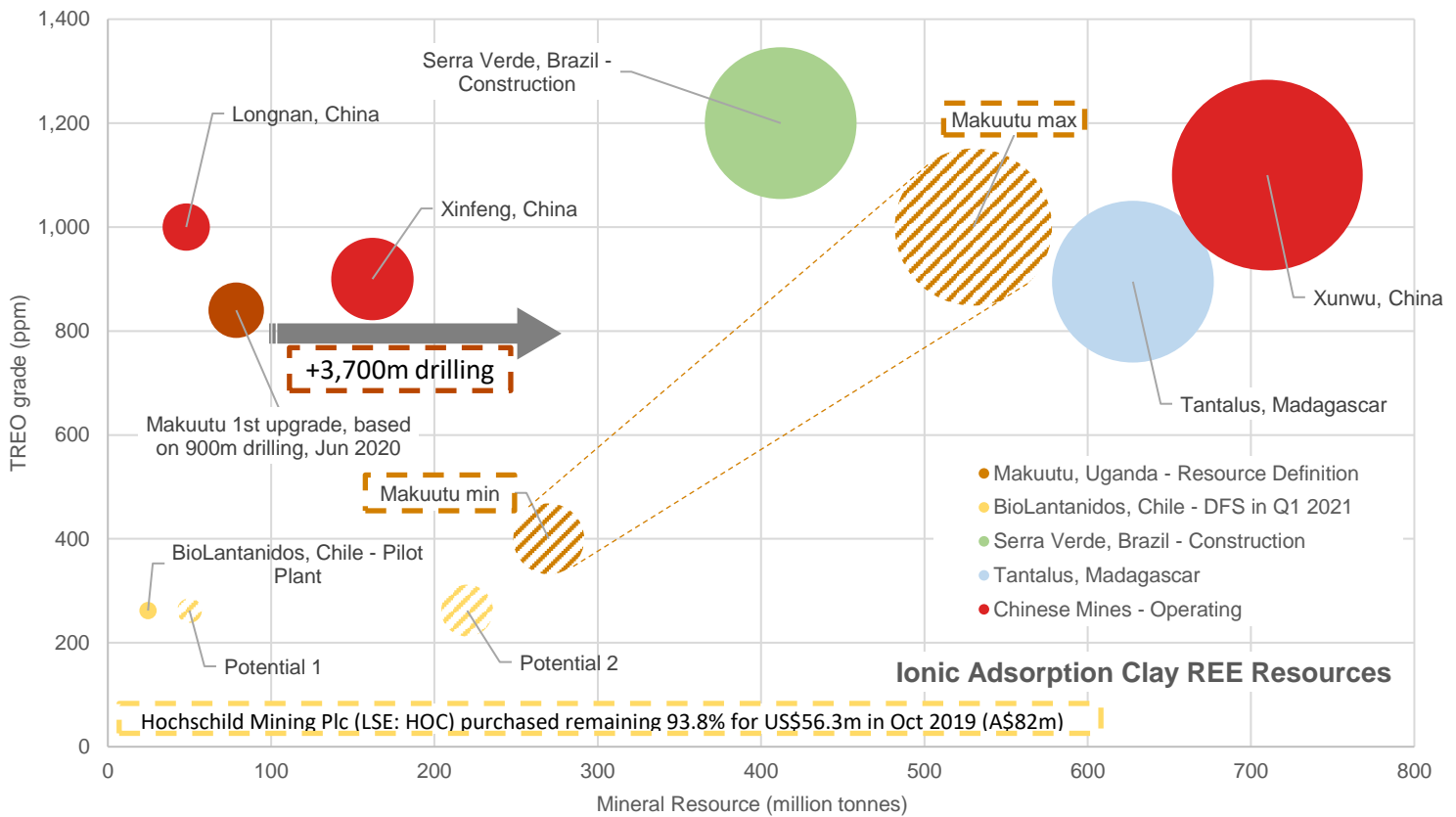
MAKUUTU INVESTMENT HIGHLIGHTS

Mineral Resource and Exploration Target	<ul style="list-style-type: none"> • 78.6 Mt at 840ppm TREO at a cut-off of 300 ppm TREO less Ce₂O₃ representing ~20% of mineralised corridor • Exploration target of 270-530 Mt at 400-1,000 ppm TREO <p>⇒ Significant mineral resource upside to be on par with other similar projects and mines</p>
Deposit Type	<ul style="list-style-type: none"> • Ionic Adsorption Clays (IAC) • Low grade, but excellent geological and mineralisation continuity • IAC mines from Southern China are responsible for the majority of the high value HREE production globally <p>⇒ Opportunity to replicate the proven development path of the Chinese mines, applying improved environmental standards</p>
Drilling Program	<ul style="list-style-type: none"> • 2020 drilling program to resume in July 2020 with 3,700m (or in excess of 200 holes) • Shallow (17m average depth) drill holes • Part of the drilling involves duplicating previous positive results from non-JORC RAB drilling <p>⇒ Minimal cost and highly effective drilling</p> <p>⇒ High degree of confidence to increase the mineral resource substantially</p>



Logistics and infrastructure	<ul style="list-style-type: none"> • 10km from sealed highway • 20km from rail line • Access to water • Grid power near project site • 80km from 184 MW hydroelectric power
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MINERAL RESOURCE BENCHMARKING OF IAC MINES AND PROJECTS



Source: Company reports, Terra Studio. All mineral resources are JORC or NI43-101 compliant except those for the Chinese mines

IAC REE vs. HARD ROCK REE PROJECTS

	IAC-hosted REE	Hard Rock-hosted REE
Host Rock	Soft clay	Hard rock
Mineralisation	Elevated HREO and CREO product content	Bastnaesite + Monazite (LREO dominant); Xenotime (HREO dominant)
Mining	Open pit (0-20m) Minimal strip ratio Negligible blasting	Strip ratio can be high Blasting required
Processing	No crushing or milling Atmospheric leaching, purification, precipitation Scalable	Crushing and milling Flotation High throughput required to get economies of scale
Costs	Typically low capital expenditure and low operating costs	Typically high capital expenditure and high operating costs
Product	Oxide or carbonate precipitate (+90% TREO) Low La + Ce content	Concentrate (20-40% TREO) High La + Ce content
Payability	70%	40%
Margin	Typically high margin	Typically low margin
Environmental	Non-radioactive tailings	Often radioactive tailings requiring monitoring beyond life of mine
Refining	Simple acid solubilisation followed by conventional REE separation Complex recycling of reagents and water	High temperature "cracking" and strong reagents to solubilise refractory REE minerals
HREE = Sm + Eu + Gd + Tb + Dy + Ho + Er + Tm + Yb + Lu + Y; LREE = La + Ce + Pr + Nd; CREE = Nd + Eu + Tb + Dy + Y.		

INVESTMENT HIGHLIGHTS (continued)

Mining Scenario	<ul style="list-style-type: none"> Open pit mining with negligible strip ratio, and negligible blasting (if any) Opportunity to use mined areas for rehabilitation ⇒ Low-cost and low environmental impact mining
Metallurgy	<ul style="list-style-type: none"> Preliminary test work achieved up to 75% TREE-Ce using simple extraction techniques HREE achieving higher recovery than LREE ⇒ High value quality product
Community	<ul style="list-style-type: none"> Strong local community engagement Uganda government support

UPCOMING NEWS FLOW

Q3 2020	<ul style="list-style-type: none"> Re-start of drilling campaign (~mid-July) Drilling results Metallurgical test work results Project interest increasing to 51%
Q4 2020	<ul style="list-style-type: none"> Mineral resource upgrade Scoping Study / Preliminary Economic Assessment

KEY RISKS AND MITIGANTS

Geological	<ul style="list-style-type: none"> The risky nature of exploration/drilling activities is mitigated by the excellent geological continuity of IAC deposits, the drilling success and the preliminary metallurgical results recorded so far
Processing	<ul style="list-style-type: none"> Technical risks are significantly mitigated by the nature of the deposit, a relatively simple processing route and a strategy limited to the production of a precipitate. ⇒ High probability of project development