

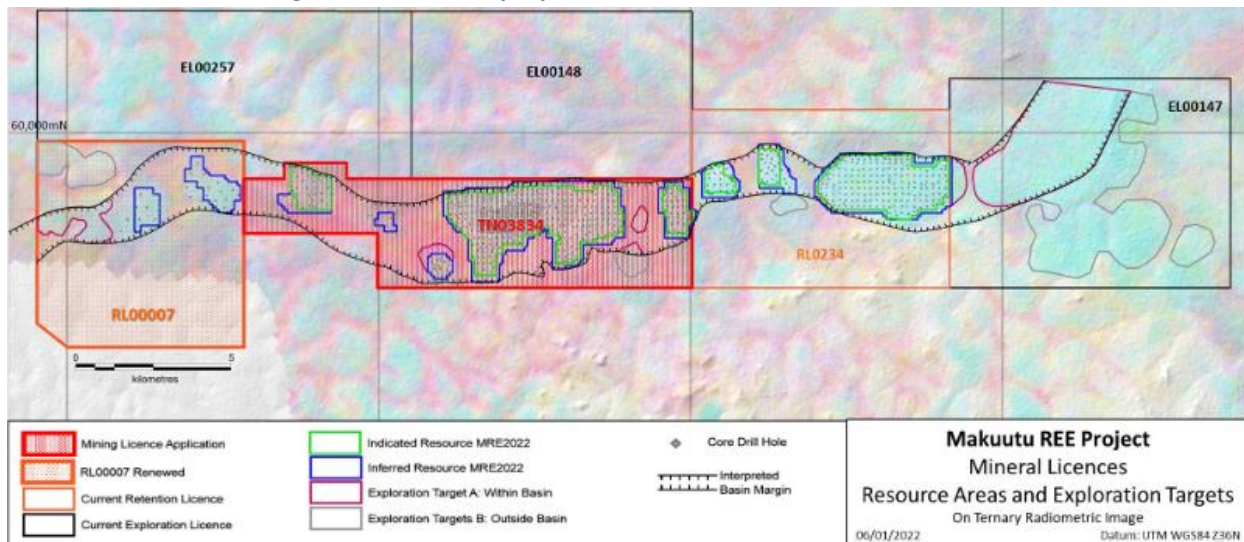
**Ticker:** IXR AU      **Cash:** A\$11m      **Project:** Makuutu  
**Market cap:** A\$103m      **Price:** A\$0.03/sh      **Country:** Uganda  
**REC. (unc):** BUY      **TARGET (unc):** A\$0.05/sh      **RISK RATING (unc):** HIGH

Friday's mine licence approval is a major achievement for Ionic, which had to do major heavy lifting as the first large scale mining project in Uganda. We think the important implication, beyond being permitted to commence development, is that being fully permitted is very important in commercial negotiations, both for offtake and export / development finance. We think with the permits, plus progress in completing the Makuutu demonstration plant and recent partnership agreement with Ford and LCM on a European recycled magnet supply chain, Ionic has maintained its early mover status despite the REE price downturn. While we think Makuutu is more price sensitive than higher grade peers, we also struggle to see how the World ex-China can develop an alternative supply chain for 2-4ktpa of Tb and Ty without projects like Makuutu, thus we think incentive prices, price bifurcation or regulatory quotas are all possibilities **We reiterate our Buy rating and A\$0.05/sh fully funded/fully diluted price target based on 1% of in-situ value at our LT price estimates of US\$120-400-1500/kg NdPr-Dy-Tb.** The key next steps in our view for Ionic are ideally consolidating the remaining 40% of Makuutu ownership and putting a fiscal stability agreement in place on the corporate side, while completing and running the demonstration plant to finalize flowsheet details at the project.

### Mine licence approved by Ugandan Government; demonstration plant due for Nov completion

**Mine Licence Granted:** Ionic announced that it received advice from the Ugandan Directorate of Geological Survey and Mines (DGSM) that the Large-Scale Mining License for Makuutu's RL 1693 has been approved. This covers the 44km<sup>2</sup> area that was the focus of the feasibility study. The mining license application has been signed and gazette, and the license is to be granted once annual fees have been paid and land access has been verified by the Ugandan department.

**Figure 1: Makuutu project with MLA TN03834 in red border**



Source: Ionic Rare Earths

**Demonstration plant and drilling update:** On 17 October, Ionic updated the market on its Makuutu phase I demonstration plant. Civils have been completed. The steel frame for the technical facility is also completed, with concrete slabs poured for the agglomerator and heap desorption crib areas. Completion is revised to November 2023 targeting heap desorption column test work by the end of 2023. On 16 October, Ionic noted completion on the A and B deposits on RL00007 with 128 holes drilled for 2,501m targeting an updated MRE in 1Q24. The two deposits had a combined inferred MRE of 39Mt at 467ppm TREO.

**Why we like Ionic**

1. Large ionic clay resource with enriched Dy and Tb content to directly supply HREEs to Western end users
2. Able to get into production by SCPe 2025
3. Excellent infrastructure including highway, hydropower and reagents
4. Opportunity to become an integrated upstream and midstream supplier

**Catalysts**

- 2023: SCPe pilot plant, trial mining
- 2024: SCPe first production and ramp up
- 2025: SCPe steady state production

**Research**

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Ticker:	IXR AU	Price / mkt cap:	A\$0.03/sh, A\$103m	Market P/NAV:	0.28x	Assets:	Makuutu
Author:	J Chan / E Magdzinski / K KorRec / PT:	BUY / A\$0.05		1xNAV FD:	A\$0.07/sh	Country:	Uganda
<b>Group-level SOTP valuation</b>				<b>Resource / Reserve</b>			
	2Q23	3Q23		Mt	µm	TRE000: REO \$m	insitu EV/insitu
		US\$m	O/ship	NAVx	A\$/sh		
Makuutu (60%) NPV 3Q23	-	60%	0.75x	-		Measured, ind. & inf.	532 640 340 21,656 0.28%
Makuutu (1.0% insitu value at SCPe LT prices)	196	60%	0.75x	0.05		SCPe Mine Inventory	173 856 148 6,024 0.99%
<b>Makuutu valuation (1% insitu value)</b>	<b>196</b>	<b>60%</b>	<b>0.75x</b>	<b>0.05</b>		<b>Commodity price</b>	<b>Jun '22 Jun '23 Jun '24 Jun '25 Jun '26</b>
Downstream	69	100%	0.75x	0.02		NdPr price (US\$/kg)	115 91 96 96 96
Central SG&A & fin costs 3Q23	(90)	-	0.75x	(0.02)		<b>Share data</b>	
Cash and restr. cash 2Q23	8	-	0.75x	0.00		Basic shares (m): 3946.1	FD + options (m): 4,119.8
Cash from options	6	-	0.75x	0.00			FD/FF 5,577.7
Debt 2Q23	-	-	0.75x	-		<b>Ratio analysis</b>	<b>Jun '22 Jun '23 Jun '24 Jun '25 Jun '26</b>
<b>1xNAV5% spot fully diluted, pre-funded</b>	<b>190</b>			<b>0.05</b>		FD shares out (m)	3,873 5,331 5,331 5,331 5,331
Assumed equity raised	60		0.75x	0.01		EPS (US\$/sh)	(0.00) (0.00) (0.00) (0.00) (0.00)
<b>1xNAV5% spot fully funded</b>	<b>250</b>			<b>0.05</b>		CFPS before w/c (US\$/sh)	(0.00) (0.00) 0.00 (0.01) (0.00)
<b>1x fully funded NAVPS sensitivity to Dy price and discount / NAV multiple</b>							
<b>Valuation (A\$/sh)</b>	<b>Dy: \$300/kg</b>	<b>\$400/kg</b>	<b>\$500/kg</b>	<b>\$600/kg</b>	<b>\$700/kg</b>		
0.50xNAV	0.03	0.03	0.03	0.04	0.04		
0.60xNAV	0.03	0.04	0.04	0.05	0.05		
0.75xNAV	0.04	<b>0.05</b>	0.05	0.06	0.06		
1.00xNAV	0.06	0.06	0.07	0.08	0.08		
<b>Makuutu NPV8% (US\$m)</b>	<b>Dy: \$300/kg</b>	<b>\$400/kg</b>	<b>\$500/kg</b>	<b>\$600/kg</b>	<b>\$700/kg</b>		
12% discount	-	-	-	5	15		
10% discount	-	-	-	12	25		
8% discount	-	-	7	22	37		
5% discount	-	-	22	43	64		
<b>Makuutu 1xNAV sensitivity to recovery and payability</b>							
<b>Makuutu NPV8% (US\$m)</b>	<b>Recov: 20%</b>	<b>25%</b>	<b>27%</b>	<b>30%</b>	<b>35%</b>		
<b>Payability: 60%</b>	-	-	-	-	-		
<b>Payability: 70%</b>	-	-	-	-	-		
<b>Payability: 80%</b>	55	41	39	37	38		
<b>Payability: 90%</b>	105	89	86	84	84		
<b>Payability: 100%</b>	154	136	133	130	131		
<b>Valuation over time</b>	<b>44,742</b>	<b>45,107</b>	<b>45,473</b>	<b>45,838</b>	<b>46,203</b>		
Makuutu NPV (US\$m)	(65.3)	(68.0)	(32.6)	5.7	3.3		
Downstream	57.5	62.1	67.1	72.4	78.2		
Exploration and in-situ tonnes	196.3	196.3	196.3	196.3	196.3		
Cntrl G&A & fin costs (US\$m)	(84.3)	(87.3)	(94.4)	(77.8)	(77.1)		
Net cash at 1Q (A\$m)	7.9	105.2	90.7	5.5	0.4		
1xNAV (US\$m)	157	255	276	255	259		
P/NAV (x):	0.37x	0.30x	0.32x	0.34x	0.34x		
1xNAV share px FD (A\$/sh)	0.07	0.09	0.08	0.08	0.08		
ROI to equity holder (% pa)	174%	83%	47%	31%	24%		
<b>Sources and uses of cash</b>							
SCPe evaluation costs	A\$10m	SCPe current cash + options	A\$20m				
SCPe capex (US\$121m @ 60%)	A\$103m	Debt package	A\$102m				
SCPe contingency	A\$63m	Equity Raised	A\$73m				
SCPe G&A + fin. cost to prodn	A\$16m						
SCPe working capital	A\$3m						
Total uses	A\$195m	Total proceeds	A\$195m				
<b>Production (100%)</b>	<b>Jun '24</b>	<b>Jun '25</b>	<b>Jun '26</b>	<b>Jun '27</b>	<b>Jun '28</b>		
Makuutu (t REE)	--	281	1,244	1,635	1,547		
Makuutu (t Nd+Pr)	--	50	196	437	414		
Makuutu (t Dy)	--	5	31	65	64		
Makuutu (t Tb)	--	1	5	10	10		
Makuutu revenue (US\$/kg REE)	--	51	52	54	55		
Makuutu cash cost (US\$/kg REE)	--	59	45	38	40		
Makuutu AISC (US\$/REE)	--	78	66	51	53		
Refinery (TREO produced)	--	--	--	--	--		
Refinery (t Nd+Pr)	--	--	--	--	--		
Refinery (t Dy)	--	--	--	--	--		
Refinery (t Tb)	--	--	--	--	--		
Refinery share of Makuutu feed (%)	--	--	--	--	--		
Refinery EBITDA margin (%)	--	--	--	--	--		
Refinery revenue (US\$/kg REO)	--	--	--	--	--		
<b>Balance sheet</b>							
Cash (US\$m)	27	105	163	78	72		
Accounts receivable (US\$m)	1	1	1	5	7		
Inventories (US\$m)	--	--	--	5	6		
PPE & exploration (US\$m)	13	14	66	117	114		
Other (US\$m)	9	9	9	9	9		
<b>Total assets (US\$m)</b>	<b>49</b>	<b>129</b>	<b>239</b>	<b>213</b>	<b>208</b>		
Debt (US\$m)	--	--	102	102	102		
Other liabilities (US\$m)	1	1	13	4	6		
Shareholders equity (US\$m)	77	162	170	170	170		
Retained earnings (US\$m)	(29)	(34)	(46)	(62)	(69)		
Minority int. & other (US\$m)	--	--	--	--	--		
<b>Liabilities+equity (US\$m)</b>	<b>49</b>	<b>129</b>	<b>239</b>	<b>213</b>	<b>208</b>		
Net cash (US\$m)	27	105	61	(24)	(29)		
Net debt to NTM EBITDA (x)	5.4x	21.0x	8.1x	(41.1x)	2.3x		

Source: SCP estimates

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Summary of Recommendations as of October 2023	
BUY:	54
HOLD:	0
SELL:	0
UNDER REVIEW:	0
TENDER:	0
NOT RATED:	0
TOTAL	54

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