

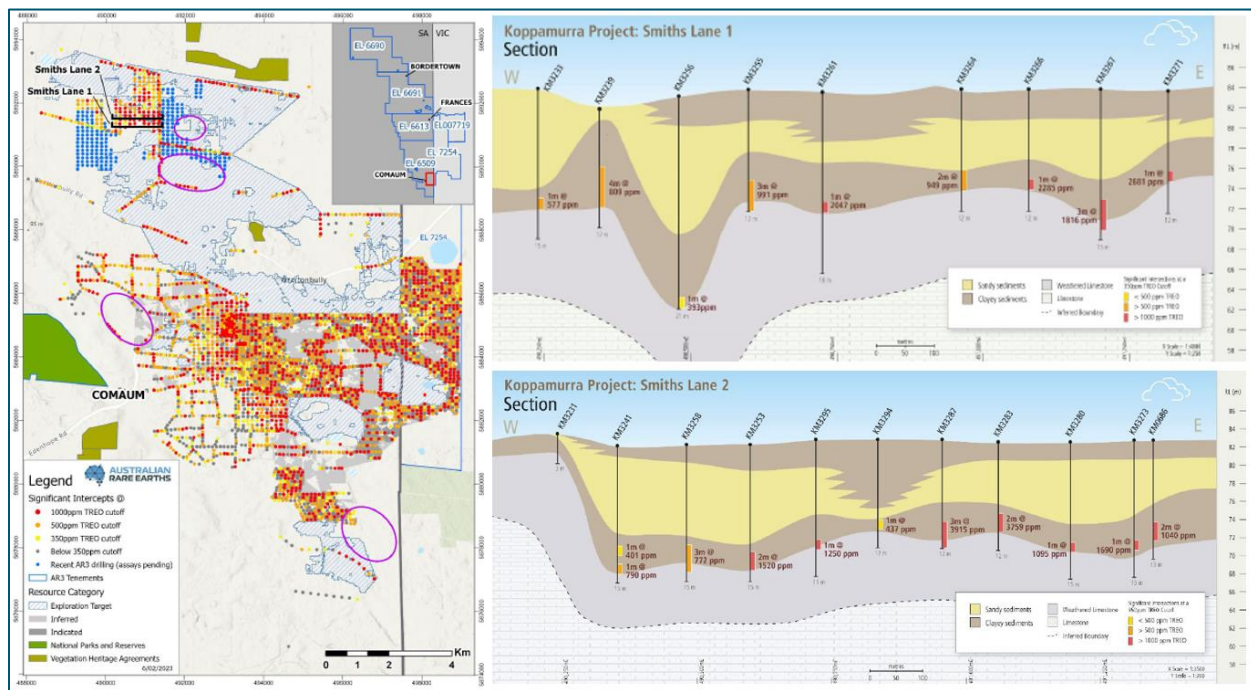
Ticker: AR3 AU **Cash:** A\$9m **Project:** Koppamurra
Market cap: A\$39m **Price:** A\$0.31/sh **Country:** Australia
REC. (unc): BUY **TARGET (unc):** A\$1.45/sh **RISK RATING (unc):** HIGH

Already the largest and most advanced Australian ionic clay REE project, Koppamurra continues to grow. Today's drilling adds another SCPe ~10Mt in drilled inventory, focused on the new Smith's Lane target in to the NE of the existing resource. Our prior expectation for the upcoming MRE was i) conversion of the majority of the 81Mt MRE to indicated (currently 56% of tonnes in indicated), and add 8-15Mt of drilled inventory with potential for 20-30Mt; post today we add 10Mt to those numbers and see ~20Mt drilled and potential for 30-40Mt including un-assayed results depending on grade/continuity. Qualitatively, the sections from Smiths Lane are very high grade at 1,000-3,000ppm but with 5-10m compared to shallower mineralization in the existing mineralized areas. Depending on met results, our preliminary view is the higher grades should carry the strip ratio, although met tests will be important. For now, **we maintain our modelled 70Mt mine inventory, our BUY rating and A\$1.45/sh price target based on 0.75x NAV7%.** Stepping back the next year should be catalyst rich including i) updated MRE in March, ii) further met test studies (of particular importance for ionic clays) and iii) maiden economic studies. We think AR3 remains the best ionic clay project in Australia and pairs this with an experienced/well-connected management team (evidenced by the cooperation agreement with Neo) needed to integrate into the Western rare earth supply chain. We think this space will continue to heat up and AR3 is a name to own.

Updated Koppamurra drilling finds new high-grade zone to the NE, adds SCPe ~10Mt

Australian Rare Earths (AR3) announced results from 2023 drilling at Koppamurra. Of 484 intersections >350ppm TREO, the average intercept was 2.1m @ 767ppm TREO including 27% NdPr, 3.2% Dy and 0.6% Tb. Drilling added to the mineralized footprint, including the ~2x2km Smith's Lane area where additional results are pending. A 10,000m aircore program is ongoing and will continue until May 2023. The updated MRE is guided for the end of March 2023.

Figure 1. (A) Koppamurra plan map of drilling and (B/C) Smith's Lane sections 1 and 2



Source: Australian Rare Earths

Why we like Australian Rare Earths

1. Domestic Australian source of HREEs
2. Can enter production by 2025/2026 due to low capex, quick build and no permitting red flags
3. Exploration upside on huge 4,000km² tenements that were first drilled in December 2020

Catalysts

1. 1Q23: metallurgical testing results
2. 1Q23: MRE update
3. 1Q23: follow-up sampling at Massie Creek prospect
4. 2023: resource extension and regional drilling at Koppamurra
5. 2023: SCPe PEA and FS
6. 2024: SCPe permitting, finance and production decision
7. 2H24-1H25: SCPe construction
8. 2H25: SCPe production ramp up

Research

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Ticker: AR3 AU	Price / mkt cap: A\$0.31/sh, A\$39m	Market P/NAV: 0.11x	Assets: Koppamurra
Author: J Chan / E Magdzinski / K Kormpis	Rec / PT: BUY / A\$ 1.45	1xNAV FD: A\$2.13/sh	Country: Australia

Group-level SOTP valuation	4Q22	1Q23E		Resource / Reserve		Mt	ppm	TREO	000t REO	\$m insitu	EV/Insitu	
		A\$m	O/ship	NAVx	A\$/sh							
Koppamurra NPV 1Q23E		190	100%	0.75x	1.40	Measured, ind. & inf.	40	725	29	1,877	1.13x	
SCPe 50Mt MRE growth - 3% insitu value		82	100%	0.75x	0.61	SCPe Mine Inventory	70	750	53	2,469	0.86%	
Exploration incl other Aussie projects		25	100%	0.75x	0.18	Commodity price	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26	
Central SG&A & fin costs 1Q23E		(19)	-	0.75x	(0.14)	NdPr price (US\$/t)	143	113	154	154	154	
Cash and restr. cash 4Q22		9	-	0.75x	0.07	Share data						
Cash from options		1	-	0.75x	0.01	Basic shares (m): 129.5	FD + options (m):	135.5	FD/FF	174.6		
Debt 4Q22		-	-	0.75x	-	Ratio analysis	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26	
1xNAV7% spot fully diluted, pre-funded		289			2.13	FD shares out (m)	135	175	169	169	169	
Assumed equity raised		50		0.75x	0.29	EPS (US\$/sh)	(0.04)	(0.01)	(0.03)	(0.06)	0.12	
1xNAV7% spot fully funded		339			1.94	CFPS before w/c (US\$/sh)	(0.01)	(0.01)	0.06	(0.18)	0.14	
1x fully funded NAVPS sensitivity to gold price and discount / NAV multiple						FCFPS pre growth (US\$/sh)	(0.02)	(0.02)	0.16	(0.09)	0.12	
Valuation (A\$/sh)	Dy:	\$100/kg	\$125/kg	\$150/kg	\$175/kg	\$200/kg	FCF/sh (US\$/sh)	(0.04)	(0.04)	(0.25)	(0.48)	0.12
0.50xNAV		0.45	0.70	0.95	1.20	1.45	FCF yield pre growth (US\$/sh)	(5%)	(5%)	52%	(29%)	41%
0.60xNAV		0.55	0.85	1.15	1.45	1.75	FCF yield (%)	(14%)	(13%)	(81%)	(158%)	41%
0.75xNAV		0.70	1.10	1.45	1.85	2.20	EBITDA margin (%)	-	-	-	(6%)	47%
1.00xNAV		0.95	1.45	1.95	2.45	2.95	FCF margin (%)	--	--	--	(413%)	23%
Valuation (A\$/sh)	Dy:	\$350/kg	\$425/kg	\$500/kg	\$575/kg	\$650/kg	ROA (%)	(29%)	(16%)	(4%)	(7%)	12%
0.50xNAV		0.80	0.90	0.95	1.05	1.15	ROE (%)	(31%)	(17%)	(8%)	(18%)	27%
0.60xNAV		0.95	1.05	1.15	1.25	1.35	ROCE (%)	(31%)	(18%)	(4%)	(3%)	24%
0.75xNAV		1.20	1.30	1.45	1.60	1.70	PER (x)	(6x)	(19x)	(10x)	(6x)	3x
1.00xNAV		1.60	1.75	1.95	2.10	2.30	P/CF (x)	(28x)	(21x)	(10x)	(8x)	2x
Koppamurra NPV7% (US\$m)							EV/EBITDA (x)	(5x)	(18x)	(9x)	(100x)	2x
10% discount		38	84	129	175	221	Income statement	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
8% discount		61	114	167	221	274	Revenue (US\$m)	--	--	--	20	92
7% discount		74	132	190	248	305	COGS (US\$m)	--	--	--	(17)	(44)
6% discount		90	152	215	278	341	Gross profit (US\$m)	--	--	--	3	49
5% discount		107	175	244	312	380	Expenses (US\$m)	(3)	(4)	(0)	(1)	(5)
Koppamurra 1xNAV sensitivity to recovery and payability							Impairment & other (US\$m)	--	--	--	--	--
Koppamurra NPV7% (US\$m)	Recov:	50.0%	55.0%	60.0%	65.0%	70.0%	Net finance costs (US\$m)	--	0	(1)	(5)	(4)
Payability: 60%		82	94	107	119	132	Tax (US\$m)	--	--	--	--	(12)
Payability: 70%		165	177	190	202	215	Minority interest (US\$m)	--	--	--	--	--
Payability: 80%		248	260	273	286	298	Net income attr. (US\$m)	(3)	(4)	(1)	(3)	27
Payability: 90%		331	344	356	369	381	EBITDA (US\$m)	(5)	(3)	(4)	(1)	44
Payability: 100%		414	427	439	452	464	Cash flow	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
Valuation over time		Jun '22	Jun '23	Jun '24	Jun '25	Jun '26	Profit/(loss) after tax (US\$m)	(5)	(3)	(5)	(9)	20
Koppamurra NPV (US\$m)		107.6	117.7	159.3	198.7	191.0	Add non-cash items (US\$m)	4	--	--	3	8
Downstream		152.3	163.0	174.4	186.6	271.0	Less wkg cap / other (US\$m)	(0)	0	16	(24)	(4)
Exploration and in-situ tonnes		82.4	82.4	82.4	82.4	82.4	Cash flow ops (US\$m)	(2)	(2)	11	(30)	24
Cntrl G&A & fin costs (US\$m)		(19.5)	(18.9)	(28.9)	(6.3)	1.8	PP&E (US\$m)	--	(0)	(50)	(51)	(3)
Net cash at 1Q (A\$m)		9.0	5.9	16.3	(65.2)	(44.3)	Other (US\$m)	(0)	--	--	--	--
1xNAV (A\$m)		332	350	403	396	502	Cash flow inv. (US\$m)	(4)	(4)	(52)	(51)	(3)
P/NAV (x):		0.10x	0.14x	0.13x	0.13x	0.10x	Debt draw (repayment) (US\$m)	(0)	--	40	40	--
Shares O/S(m)							Equity issuance (US\$m)	8	--	52	--	--
1xNAV share px FD (A\$/sh)		2.96	2.26	2.35	2.35	2.98	Other (US\$m)	(1)	--	--	--	--
ROI to equity holder (% pa)		872%	172%	98%	67%	58%	Cash flow fin. (US\$m)	7	--	92	40	--
Sources and uses of cash							Net change post forex (US\$m)	1	(7)	50	(41)	21
SCPe evaluation costs	A\$10m						FCF (US\$m)	(6)	(7)	(41)	(81)	21
SCPe capex (A\$100m)	A\$100m						Balance sheet	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
SCPe contingency	A\$17m						Cash (US\$m)	13	6	56	15	36
SCPe G&A + fin. cost to prodn	A\$7m						Accounts receivable (US\$m)	0	0	0	7	11
SCPe working capital	A\$8m						Inventories (US\$m)	0	0	--	9	5
Total uses	A\$141m						PPE & exploration (US\$m)	5	10	62	110	105
Total proceeds	A\$140m						Other (US\$m)	0	0	0	0	0
Production (100%)		Jun '24	Jun '25	Jun '26	Jun '27	Jun '28	Total assets (US\$m)	18	16	118	141	157
Koppamurra (t REE)		--	420	1,500	1,350	1,103	Debt (US\$m)	--	--	40	80	80
Koppamurra (t Nd+Pr)		--	89	317	286	233	Other liabilities (US\$m)	1	1	17	9	6
Koppamurra (t Dy)		--	11	39	35	29	Shareholders equity (US\$m)	23	23	75	75	75
Koppamurra (t Tb)		--	2	7	6	5	Retained earnings (US\$m)	(6)	(8)	(13)	(23)	(3)
Koppamurra revenue (US\$/kg REE)		--	62	62	62	62	Minority int. & other (US\$m)	--	--	--	--	--
Koppamurra cash cost (US\$/kg REE)		--	38	27	30	37	Liabilities+equity (US\$m)	18	16	118	141	157
Koppamurra AISC (US\$/REE)		--	56	43	47	54	Net cash (US\$m)	13	6	16	(65)	(44)
							Net debt to NTM EBITDA (x)	4.8x	1.5x	14.0x	1.5x	1.3x

Source: SCP estimates

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Summary of Recommendations as of February 2023	
BUY:	53
HOLD:	1
SELL:	0
UNDER REVIEW:	1
TENDER:	0
NOT RATED:	0
TOTAL	55

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