OD6 METALS LIMITED
(ASX: OD6)

Building a large scale rare earths project

19 September 2023

PRICE	**A$0.17/share**
PRICE TARGET	**A$0.90/share**

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www.breakawayresearch.com

Company Information

ASX Code	**OD6**
Share Price (29 June 2021)	A$0.17
Ord Shares	102.5m
Market Cap	**A$m**
Options/Performance Rights	21.5
Market Cap (fully diluted)	**A$17.4m**
Cash (30 June 2023)	A$3.5m
Total Book Debt (31 Dec 2022)	na
Enterprise Value	**A$13.9m**

Directors and Senior Management

Non-Exec Chairman	Darren Holden
MD & CEO	Brett Hazelden
Director (Non-Exec)	Piers Lewis
Director (Non-Exec)	Dr Mitch Loan
Joint Co. Secretary	Joel Ives
Joint Co. Secretary	Troy Cavanagh

Company Details

Address	Level 1, 50 Kings Park Road West Perth, WA 6005
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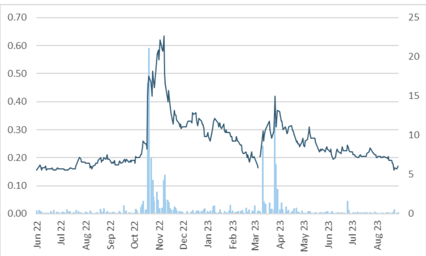
Price Chart



Price to 19 September 2023

Recommendation: BUY

KEY POINTS

- OD6 Metals is one of a number of Australian companies exploring for clay hosted rare earths deposits in the Ravensthorpe region of Western Australia.
- With 344Mt grading at 1,308ppm TREO from 5% of the 250km^2 of clay basin interpreted from geophysical survey at Splinter Rock, OD6 could see the Resource increase dramatically, which means the OD6 will have a larger Resource than most or all its peers and provides scale and the potential opportunity to focus on parts of the resource with the best metallurgy.
- Scale matters for this category of low grade rare earth project. At 5mtpa, the OD6 Resource grade of 1,308ppm TREO and recovery of 60%, a project would produce 3,900tpa rare earth oxide equivalent. Ionic Rare Earths' (IXR) Makutu project feasibility study is based on 5mtpa producing 1300tpa rare earth oxide.
- Clay can host rare earths in several forms, and each form has very different extractive metallurgical performance which is discussed in some detail in this report. Having a large Resource will allow OD6 to chase the best metallurgy rather than being forced to chase tonnage. Metallurgy appears to vary from drill hole to drill hole and within a drill hole from horizon to horizon, potentially providing the option to select preferred zones.
- The rare earths that are used to make high intensity permanent magnets are Neodymium, Praseodymium, Dysprosium and Terbium and are vital in the manufacture of components of the low carbon economy including wind turbines and electric vehicles. Supply has to double in the next decade.
- Drivers of share price appreciation are expected to be:
    - Exploration drilling reports expanding area of Resource due shortly
    - Metallurgical reports adding clarity to process route Q4 2023.
    - Infill drilling for Indicated Resource early 2024.
    - Increasing market understanding of clay hosted rare earths and increasing confidence that projects will prove to be viable.

Peer comparison with other rare earths juniors suggest that OD6 should be priced at between A$0.82/sh and A$0.94/sh, and our price target of A$0.90/sh is a blend of this range. At A$0.90/sh, OD6 would have a market capitalization of A$92M, which is larger than any Australian peer in the clay rare earth sector apart from the South American located Meteoric Resources (A$445M) and reflects its larger and higher grade Resource. Peer company Ionic Rare Earths (IXR) which owns 60% of the Makutu project has a market capitalization of A$111M with a contained TREO resource of 342kt TREO at 640ppm TREO grade (OD6 450kt TREO at 1308ppm) and has published a feasibility study. While OD6 has yet to do the work, it has the building blocks to make a superior project.

Hence, Breakaway Research has a BUY recommendation on OD6 Metals with a price target of A$0.90/share.

Company Overview & Investment Case

Definitions of common terms

In this report the following terms are used which may not be familiar to the investor:

- TREO Total Rare Earth Oxides is the standard measure of a mine's rare earth grades.
- TREO-CeO2 TREO less Cerium Oxide. Cerium is the most common rare earth and is in significant oversupply to the extent that recovery is generally not economic. TREO – CeO2 is a more useful measure of the economic rare earths in a deposit.
- MREO – Magnet Rare Earth Oxides means Neodymium, Praseodymium, Terbium and Dysprosium which are the components of rare earth magnets and essential for the electric motors and generators where high performance and low weight are required.

OD6 Metals worth between 82cps and 94cps on comparison with peers

For now, OD6 Metals should be priced at between A$110/t and A$180/t of contained Total Rare Earth Oxide, and this could rise to A$320/t in the next 12 to 24 months.

TABLE 1 OD6 METALS VALUATION SUMMARY BASED ON 450KT OF TREO RESOURCE AT 1000PPM TREO CUTOFF

Enterprise Value A$/t TREO in Resource	110	180	320
Resource kt TREO	450	450	450
Enterprise Value A$M	49.5	81.0	144.0
Cash A$M	3.5	3.5	3.5
Valuation A$M	53.0	**84.5**	147.5
Valuation A$/sh (102.45M shares on issue)	0.52	**0.82**	1.44

Source: Breakaway estimates based on Table xx and Figure XX

OD6 has used a higher cutoff grade than most of its peers. The rest of the projects are using a cutoff grade of between 400 ppm and 600ppm. At 600ppm cutoff, the OD6 Splinter Rock Resource contains 843kt of TREO. Pricing those tonnes at A$110/t generates a OD6 share price of 94cps and a market capitalisation of A$96M.

TABLE 2 OD6 METALS VALUATION SUMMARY BASED ON 843KT TREO RESOURCE AT 600 PPM TREO CUTOFF

	110	180	320
Resource kt TREO	843	843	843
Enterprise Value A$M	92.7	151.7	269.8
Cash A$M	3.5	3.5	3.5
Valuation A$M	**96.3**	155.3	273.3
Valuation A$/sh (102.45M shares on issue)	**0.94**	1.52	2.67

Source: Breakaway estimates based on Table xx and Figure XX

OD6 should be priced at either:

- 94cps being A$110/t on 843kt of rare earth oxides at the same cut off grade as its peers, or
- 82cps being A$180/t on the smaller higher grade Resource of 450kt of TREO.

Our price target of 90cps has been chosen as a blend of these two. This generates a market capitalisation of A$92M which would make OD6 the largest market capitalisation of the peers with an Australian project. This makes sense for the following reasons:

- The Resource is based on 5% of the 250km^2 of identified clay basin so could multiply. The peers are likely to expand also, but OD6 appears to have more potential.
- The large Resource creates the potential for a commercial project to be based on a part of the deposit that is higher grade and better metallurgy, creating better economics than would be available to a smaller deposit.

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- IXR has a market capitalisation of A$79M with a contained TREO resource of 341kt TREO at 640ppm TREO grade (OD6 450kt TREO at 1308ppm) and has published a feasibility study. While OD6 has yet to do the work, it has the building blocks to make a superior project.

Strong news flow from OD6 and its peers

Delivering on exploration process

OD6 has a well mapped out exploration plan to deliver solid project progression, including:

- initial drilling (completed in December 2022 quarter)
- clay mapping using AEM survey technology (Completed December 2022)
- metallurgical testing (Q4 2022 to Q4 2023)
- Maiden Resource for Splinter Rock (18 July 2023)
- Splinter Rock infilling and extension drilling (Q2 2023 to Q2 2024)
- Splinter Rock Scoping Study by July 2024

All this will create plenty of news flow and to date the news from the initial drilling has been very supportive of the project.

The large cohort of clay hosted rare earth peers is generating news flow relevant to OD6 Metals

The centre of the investment proposition for clay hosted rare earth deposits is the metallurgy, and all OD6 Metals' peers are reporting metallurgical results. These announcements are educating the market and corroborating the results reported by OD6.

- Ionic Rare Earths (IXR) will complete construction of its demonstration plant in Uganda in Q3 2023 providing a large scale test of rare earth extraction and precipitation into Mixed Rare Earth Carbonates at high acidity (pH 2). Information from this plant will be informative for OD6 but not decisive, because OD6 is going down a different processing pathway.
- Toronto listed Aclara has produced Mixed Rare Earth Carbonate which it calls HREE concentrate at its demonstration plant in Chile which will feed into a Definitive Feasibility Study due in September 2023.
- A number of Australian companies are likely to report the results of precipitation tests over the next six months giving the market more information on Mixed Rare Earth Carbonate recovery and grade.

Strong demand for magnet rare earth elements

All rare earth producers are focused on the elements used to make rare earth magnets, which are significantly more powerful per unit of weight than ferrite or other materials and are essential in the manufacture of lightweight but powerful electric motors and wind turbines.

Investors will be very familiar with the growth profile and future prospects for electric vehicle and wind turbine uptake, and rare earth motors are finding their way into all sort of products, including vacuum cleaners, car window controls, e-mobility products and weapons systems. Magnet rare earth elements are critical to those applications.

Supply is dominated by China in mining, and particularly upgrading and magnet manufacture. The rest of the world is seeking diversity of supply as well as expansion of output. Australian companies are well placed to satisfy both goals.

Clay hosted rare earth projects are part of the supply story

The Australian exploration industry is turning its attention to exploring for rare earths in near surface clays. The drivers of this strategy are:

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- The ionic clay hosted deposits in China and Myanmar are seen as a low cost source of the Magnet Rare Earth Oxides (Neodymium, Praseodymium Terbium and Dysprosium Nd,Pr,Tb,Dy), and this form of production may be achievable elsewhere.
- Diversification from dependence on Chinese supply.
- Potential closure of Chinese and Myanmar operations due to environmental damage caused by the production process, resulting on a reduction in global output.
- Clay hosted deposits tend to be richer in heavy rare earths like Terbium and Dysprosium.

Ionic clay producers in China and Myanmar are the lowest cost sources of rare earths. The Chinese level of costs will not be matched by any project in Australia because the Chinese use in situ leaching and leaching at low levels of acidity (pH over 4) with relatively low reagent consumption. In situ leaching involves the injection of an acidic salt solution into the ground, allowing it to flow through the clays to a collection point. The process is destructive to vegetation and subsequent land use is problematic. The destruction caused is fuelling protests in China and Myanmar and the trend is to phase out this source of supply.

While the timing and impact of the wind down of Chinese and Myanmar supply is uncertain, it will certainly add considerable pressure on the rare earth supply chain, creating an opportunity for clay hosted deposits in Australia and elsewhere.

What makes clay hosted rare earth deposits special?

To extract rare earth oxides from hard rock deposits like Lynas' Mt Weld carbonatite deposit or from Iluka's monazite sand stockpile, the minerals containing the rare earths are typically very inert stable structures that must be "cracked". This requires the use of highly concentrated acid or alkaline reagents and considerable heat (250-300°C) to get the rare earths and everything else into solution in an ionic form that then allows the rare earth elements to be removed as carbonates, then heated to produce oxides.

In clay hosted deposits, time and chemical degradation of the rare earth containing minerals has resulted in the release of rare earths from their original highly refractory minerals into ionic or colloidal forms to the point where the rare earths can be removed from the clay into solution without the expensive cracking process.

Australian clay hosted rare earth deposits discovered so far appear to have most of the rare earths contained in colloidal form rather in the ionic form. In this report, we use the term "clay hosted rare earth" instead of "ionic" to avoid confusion. The metallurgy is discussed from page 13.

The new generation clay deposits in Australia and elsewhere are likely to build their own place in the supply chain using different chemistry and at higher but still competitive operating costs.

It is early days in the clay processing story

A number of the Australian clay hosted rare earth projects are likely to require more aggressive leaching chemistry to achieve recovery rates sufficient for commerciality, which will mean higher operating and capital costs than the Chinese, but as mentioned, the days of the Chinese conducting in situ leaching are probably numbered.

While the market is keen to embrace the clay projects with rare earths that are largely in the ionic phase, the deposits where colloidal rare earths are the dominant phase are legitimate exploration targets. The next twelve months are likely to deliver a lot of information to the market from the dozen or more companies working in this space.

The journey to discover the lowest cost processing routes is in its infancy in many respects but builds on a significant pool of expertise at ANSTO in particular and the Australian mineral processing industry in general.

The major processing questions include:

- Is a particular horizon within the deposit more amenable to lower cost processing? The answer is very likely to be affirmative, in which case, for relatively thick deposits, should mining focus of a specific horizon?

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- Can the clays be upgraded by cheap gravity separation to reduce the mass but retain most of the leachable rare earths. The initial conclusions of a number of project developers appears to be that significant upgrading can occur.
- Selection of the lixiviant that best extracts rare earths from the clay with the lowest recovery of impurities, and the most economical way of maximising recovery into Mixed Rare Earth Carbonate (MREC). At this stage, most project developers are reporting extraction rates, and only OD6, Ionic Rare Earths (IXR) and Australian Rare Earths (AR3) are talking about the carbonate stage. While the leaching characteristics of each deposit will vary, the fact there are so many companies participating in the investigation means that the knowledge base should grow very quickly.

RISKS

All equities face general market risks. There are some specific risks of importance to mining operations in general and rare earth miners in particular:

Rare Earth Prices – All projects are leveraged to the prices of the commodities they produce, and explorers' share prices appear to be leveraged in the short term to the direction of the prices of their particular commodities. Rare earth projects are no different. We have not attempted to forecast rare earth oxide prices in this report. However, we note that there is general consensus that demand for the magnet rare earths is likely to very rapid at high single digit or low double digit annual growth rates of the next decade or two, and such rapid growth rates tend to result in more commodity price upside surprise than downside surprise.

Project costs – Of the peers in this report, only Ionic Rare Earths (IXR) has produced a Definitive Feasibility Study with any costs. Vancouver listed Aclara has the equivalent of a preliminary feasibility study in the public domain which has also been a source of information, so cost information in this report is based on a general assessment of costs rather than specific costings for OD6 Metals project. Also, the sector in general is at risk with respect to project construction costs. In Australia, the increase in labour costs appears to be peaking, and construction costs are likely to become more predictable over the next couple of years, reducing this risk somewhat.

Operating costs – Rare earth projects generally have a far greater sensitivity to recoveries and reagent costs than most other commodity projects. The closest comparable would be HPAL lateritic nickel operations like Murrin Murrin near Laverton, which is a large consumer of sulphur and fresh high-quality water.

Approvals – All mining projects need to earn a licence to operate. In the case of clay hosted rare earth deposits, they are likely to be high tonnage (5Mtpa+). To produce this rate of production from a clay band typically 10-30m thick lying parallel to the surface, the mine will have to disturb between one and three square kilometres of land each year. This will require sensitive management of local communities.

Peer comparison: OD6 clay hosted rare earth project undervalued

OD6 has nine peer companies that are exploring for clay hosted rare earth deposits and have reported a Resource so far, there are over a dozen additional companies that have a clay hosted rare earth prospect but no Resource. We do not consider companies with no Resource to be useful peers.

Within the chosen peer group, OD6 has an Enterprise Value of A$13.9M vs A$503M for Meteoric (MEI), A$100M for Ionic Rare Earths (IXR owns 60% of its project), and the rest at between A$5M and A$23M.

OD6 has a substantially larger Resource and potential to increase that Resource than the all the peers apart from Meteoric. OD6 has also a better grade than any except Meteoric (Figure 1).

Enterprise Value in A$/tonne Total Rare Earth Oxide has been used as an appropriate way to compare these companies. Higher grade should result in higher Enterprise Value in A$/tonne TREO.

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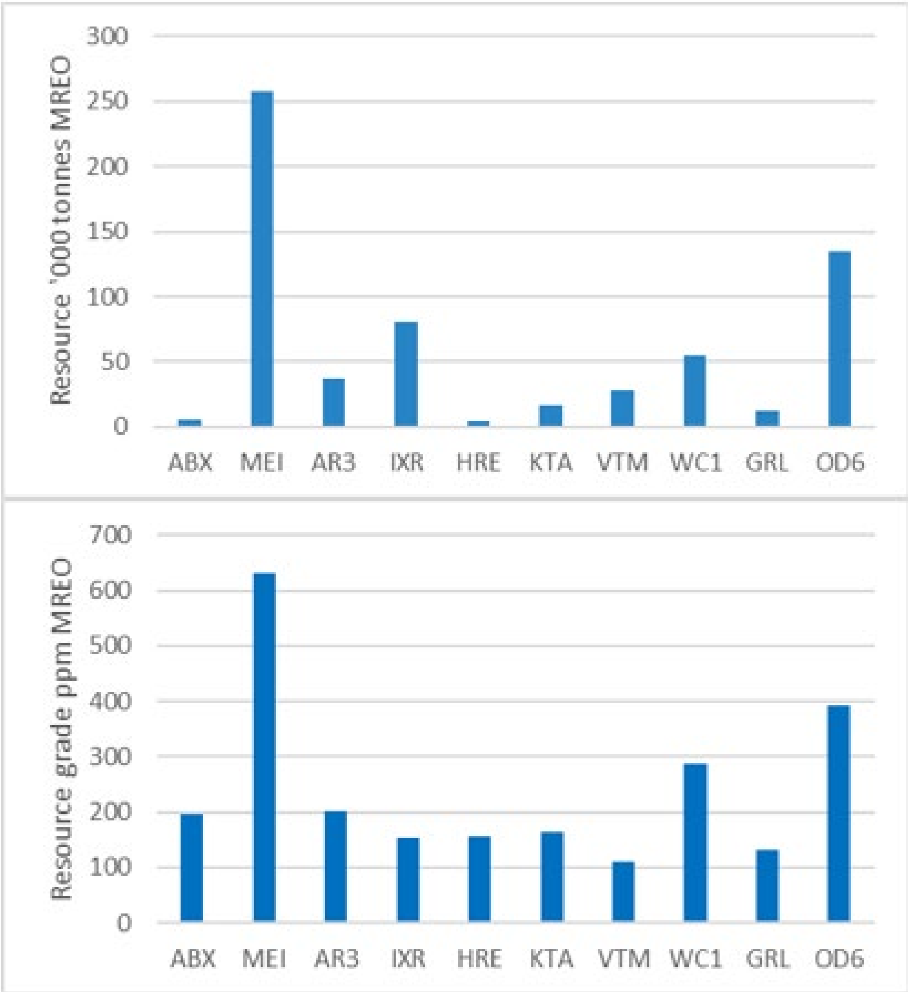
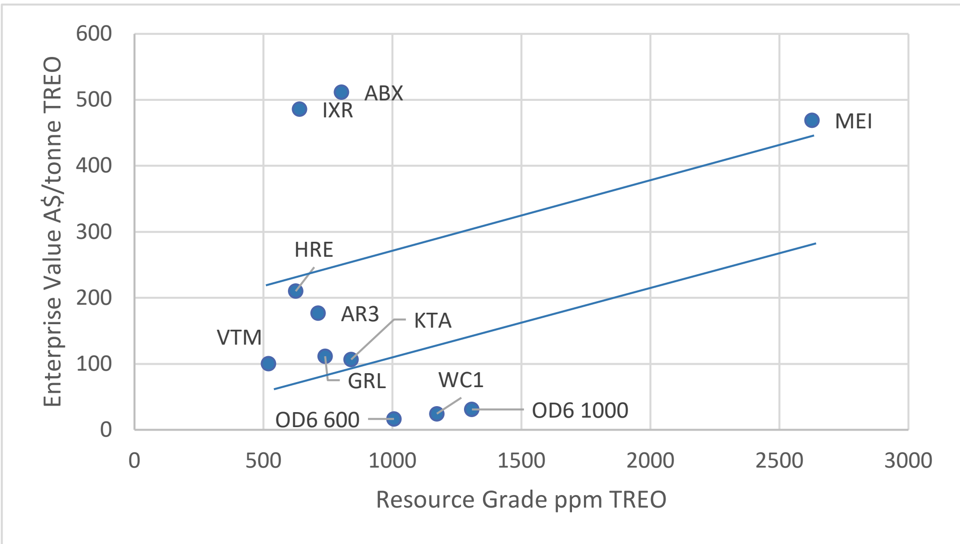
FIGURE 1 OD6 METALS VS PEERS IN TERMS OF TOTAL TONNES AND GRADE OF MAGNET RARE EARTHS



Source: Tables3 and 4

OD6 Metals is the cheapest on the basis of Enterprise Value per tonne of contained TREO in a reported Resource at A$31/t based on its Resource at 1000ppm TREO cut off, or A$16/t on its Resource at 600ppm TREO cutoff.

FIGURE 2 ENTERPRISE VALUE IN A$/T OF TREO IN RESOURCE VS TREO GRADE IN PPM



Source: Tables 3 and 4 (OD6 1000 = based on Resource at 1000ppm cut off, OD6 600 based in 600ppm cut off)

OD6 Metals is climbing a valuation ladder as it builds its Resource and works up a Feasibility Study

TABLE 3 MARKET CAPITALISATION, ENTERPRISE VALUE AND RESOURCE SUMMARY TO CALCULATE EVA$/TONNE TREO

ASX Code Location	ABX Tasmania	MEI Brazil	AR3 SA Vic	IXR Uganda	HRE WA
Share Price A cps	7.6	26.0	25.0	2.8	9.2
Issued Shares M	224	1940	154	3956	68
Options Etc M	2	241	38	147	14
Market Cap A$M	**17.0**	**504.4**	**38.5**	**110.8**	**6.3**
Cash A$M	5.90	17.29	15.13	11.12	2.61
Debt A$M	0.00	16.42	0.00	0.00	0.00
Enterprise Value A$M	**11.09**	**503.53**	**23.41**	**99.65**	**3.68**
EV A$/t TREO	512	469	177	486	210
Resource Mt	27	409	186	534	28
Cut-off TREO-Ce ppm	250	0	325	200	300
Cutoff TREO	0	1000	0	0	0
Grade TREO ppm	803	2626	712	640	625
MREO ppm	196	631	200.8	152	156.25
TREO kt	21.7	1074.0	132.4	341.8	17.5
MREO kt	5.3	258.1	37.3	81.2	4.4
Date	18-Jul-23	1-May-23	19-Sep-23	3-May-22	22-Aug-22
Magnet Rare Earths					
Pr	4.1%	5.9%	4.5%	4.7%	4.6%
Nd	15.9%	17.0%	17.0%	17.2%	17.4%
Tb	0.6%	0.2%	0.5%	0.3%	0.5%
Dy	3.7%	1.0%	2.6%	1.6%	2.7%

Source: Cash a 30 June 2023 per quarterly 5B, issued shares as at 19 September 2023, Resource information from company releases on dates on line 18 of table

TABLE 4 MARKET CAPITALISATION, ENTERPRISE VALUE AND RESOURCE SUMMARY TO CALCULATE EVA$/TONNE TREO

ASX Code Location	KTA WA NSW	VTM WA	WC1 WA	GRL WA	OD6 WA
Share Price A cps	2.2	20.0	8.0	4.2	17.0
Issued Shares M	454	81	97	169	102
Options Etc M	36	23	21	31	33
Market Cap A$M	**10.0**	**16.2**	**7.8**	**7.1**	**17.4**
Cash A$M	0.95	3.12	2.33	1.24	3.52
Debt A$M	0.00	0.00	0.00	0.00	0.00
Enterprise Value A$M	**9.04**	**13.06**	**5.44**	**5.87**	**13.90**
EV A$/t TREO	107	100	24	112	31
Resource Mt	101	250	190	94.9	344
Cut-off TREO-Ce ppm	300	0	0	300	0
Cutoff TREO	0	400	500	0	1000
Grade TREO ppm	840	520	1172	739	1308
MREO ppm	164	110	287.10067	130.79	392.4
TREO kt	84.8	130.0	222.7	70.1	450.0
MREO kt	16.6	27.5	54.5	12.4	135.0
Date	21-Nov-22	15-May-23	9-Aug-23	16-Apr-23	18-Jul-23
Pr			4.2%		4.8%
Nd			16.8%		16.8%
Tb			0.5%		0.2%
Dy			3.0%		1.1%

Source: Cash a 30 June 2023 per quarterly 5B, issued shares as at 19 September 2023, Resource information from company releases on dates on line 18 of table

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Base case valuation at A$110/t with upside to A$180/t to A$320/t

There are three companies at around A$100/t to A$112/t and a median value on A$107/t including KTA, VTM, and GRL Because it is such a tight range, we have rounded up to A$110/t. These are all companies that are at roughly the same stage as OD6 in terms of Resource and metallurgical test work reported so far. OD6 should be priced today on a similar basis to these companies at a minimum.

Because of its superior grade, it could be argued that OD6 should trade at a premium and that Heavy Rare Earths (HRE) and Meteoric (MEI) should be included in this group because they are at a similar stage of development. The group of companies including Meteoric may be grouped in a valuation band shown in Figure 2, with KTA, VTM, and GRL in the lower side of the band and MEI and HRE defining the upper side of the band, in which case OD6 should be valued at between A$180/t to A$320/t.

The next level comprises ABX at A$512 and IXR at A$486/t. These companies may well above the upper valuation line in Figure 2 and in lime with the higher grade MEI. IXR has published a definitive feasibility study and is constructing a demonstration plant on site, while AR3 has completed much of its infill drilling to indicated Resource stage (vs inferred for the previous group), as well as having completed a bulk sample and is close to producing a Mixed Rare Earth Carbonate product for marketing tests. OD6 is likely to be at a stage comparable to where AR3 is now within the next 12 months.

AR3 is in the middle at A$177/t post its Resource increase of 19 September 2023 and the market may not have digested the increase at the time of completion of this report.

The large number of clay hosted projects will educate the investor quickly

- The market is typically quick to value gold discoveries because the economics of gold mining and processing is well understood by investors. Investors need a lot more assistance from rare earth project developers to understand the economics specific to individual rare earths projects because each is relatively unique.
- However, given the number of clay hosted rare earth projects being promoted by Australian companies, the amount of information hitting the market will expand the investors knowledge base far greater than if there were only one or two companies.
- There is likely to be strength in numbers. As investors become more familiar with the economics of the sector, the market is likely to recognise value in project developers earlier. We see this as likely to favourably impact OD6 over the next twelve months.

Maiden Resource significantly understates potential

Maiden Resource is just a starting point for something much bigger

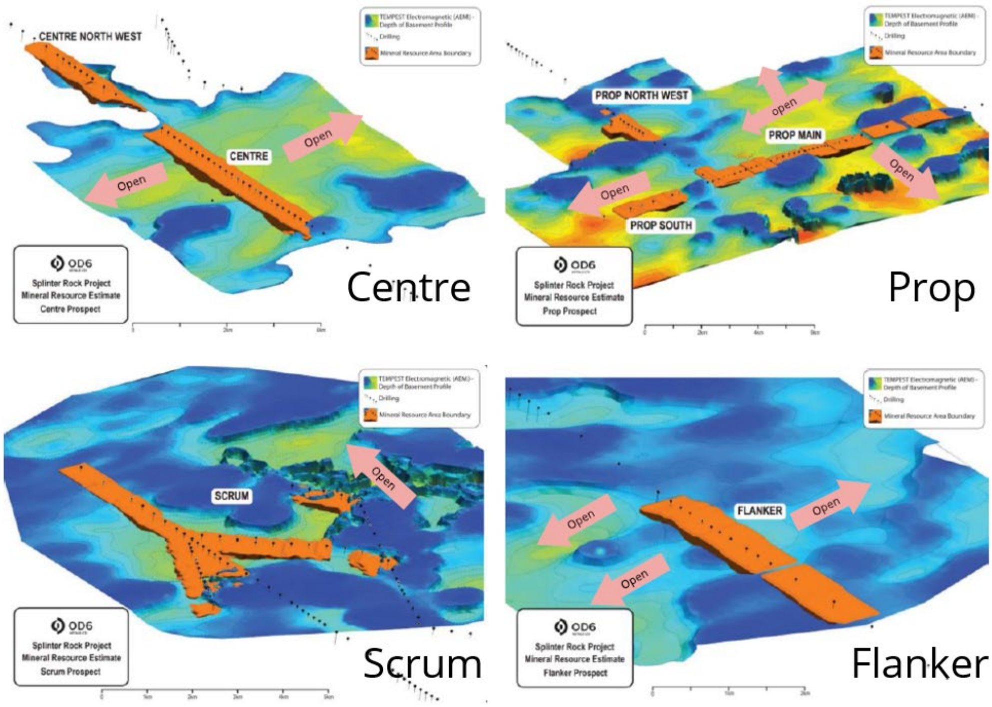
The Resource reported on 18 July 2023 is based on the drilling to date along existing vehicle tracks (black dots in Figure 3) and includes 200m either side of the drill track (ie 400m width in total). Because this was the initial drilling program it included drilling in both the unproductive granite margins and in the ancient clay lakes which now form the major exploration target. The clay basins outlined in purple in Figure 3 have been identified using Airborne Electromagnetic Survey data.

The next round of drilling has recently been completed comprising a 145 hole 7,435m program (OD6 release 15 August 2023) at locations marked in yellow in Figure 3.

The fact that OD6 is drilling initially along existing tracks is a common first step to provide easy access to exploration targets. Such programs have lower access costs and minimise the disturbance of flora and fauna. The drilling is very cheap (all up cost with assays is around A$100/m), and the holes are very short (average 50m depth to date).

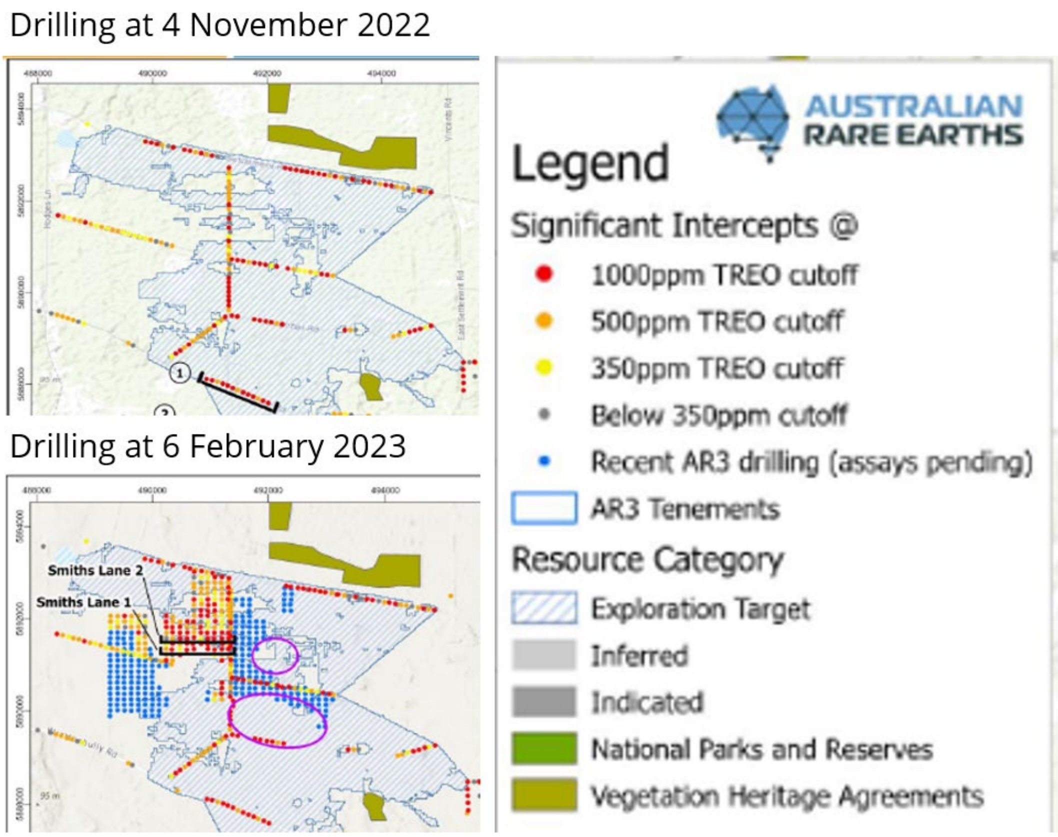
The use of roadside drilling identifies the areas where follow-up drilling can be targeted as shown by the Australian Rare Earths' (ASX:AR3) drilling along roads at 4 November 2022, and followed up by pattern drilling in 6 February 2023 (Figure 4).

FIGURE 3 MAIDEN RESOURCE SAMPLES LESS THAN 5% OF THE CLAY BASINS IN TENEMENTS



Source: OD6 release 19 July 2023

FIGURE 4 AUSTRALIAN RARE EARTHS INITIAL DRILLING WAS ALONG EXISTING ROADS BEFORE PATERN DRILLING



Source: AR3 releases 4 November 2022 and 6 February 2023

The Maiden Resource for Splinter Rock

TABLE 5 MAIDEN RESOURCE

Prospect	Mt	TREO ppm	MREO ppm
At 1000ppm TREO cutoff			
Centre	149	1423	329
Scrum	120	1222	283
Flanker	42	1246	288
Prop	33	1180	244
Total	344	1308	300
Totals at lower Cutoffs			
800ppm	583	1140	262
600ppm	838	1006	230
400ppm	1141	869	198

Source: OD6 release 19 July 2023

Peer companies report a variety of cutoff grades generally between 200-300ppm TREO-Ce, which is Total Rare Earth Oxide less Cerium Oxide. The Cerium cutoff of not disclosed, but for the companies using that cutoff grade, a cerium grade of 200ppm is a useful guide, and means that the cutoff grades used are around 400-500ppm TREO. OD6 Metals base case 1000ppm TREO cutoff is substantially higher and is the same as used by Meteoric Resources.

When the peer comparisons are presented, the 600ppm cutoff Resource on 848Mt could be used for OD6 so that it is comparable to the Resources announced by other clay rare earth project promoters.

The new drill program is better targeted and could double or triple the Resource

The Centre Resource of 149Mt (1000ppm TREO cutoff) is based on 37 holes or 4.0Mt/hole. The current program appears to include over 100 new holes in the Centre prospect and if they deliver the same incremental tonnage per hole, Centre could grow to over 500Mt.

Most of the remaining drilling is in the Prop prospect and could also result in a material increase because the existing drilling was largely on the margins of the clay basin, whereas the new program is testing the clay basin proper.

Quality of Resource will be more important that size

As OD6 expands its Resource, it can start to focus on where the best metallurgy might be. Recoveries into solution appear to be better away from the basin edges (ie away from granites and carbonaceous shales) and there may be a specific horizon which has more rare earths with easier recovery metallurgy.

The metallurgical section makes this point clearer, but the rare earth grade announced by any of the clay hosted project companies includes rare earths in various chemical forms including truly ionic, colloidal and refractory. It is the grades of the ionic and colloidal phases that are relevant to project economics, as is the split between the ionic and colloidal phases.

How companies assay their drill samples also matters

OD6 used a 4 Acid technique rather than the Lithium Borate method. Lithium recovers into grade the rare earths in the refractory phase, whereas this is minimised in the 4 Acid technique. Where the Lithium Borate technique is used, the risk is that the Resource grade is overstated, and this should show up in the metallurgical test work.

Stripping ratio also matters

Clay hosted rare earth deposits must have mining and processing costs as low as possible, given the low grades typical of such deposits, and the stripping ratio (amount of waste than must be mined vs the amount of ore recovered) is a key determinant of mining cost.

The figure below shows the Centre prospect cross section and highlights to low stripping ratio, even if only the higher grade (purple) zone is mined. The barren transported cover is typically 5-15m thick

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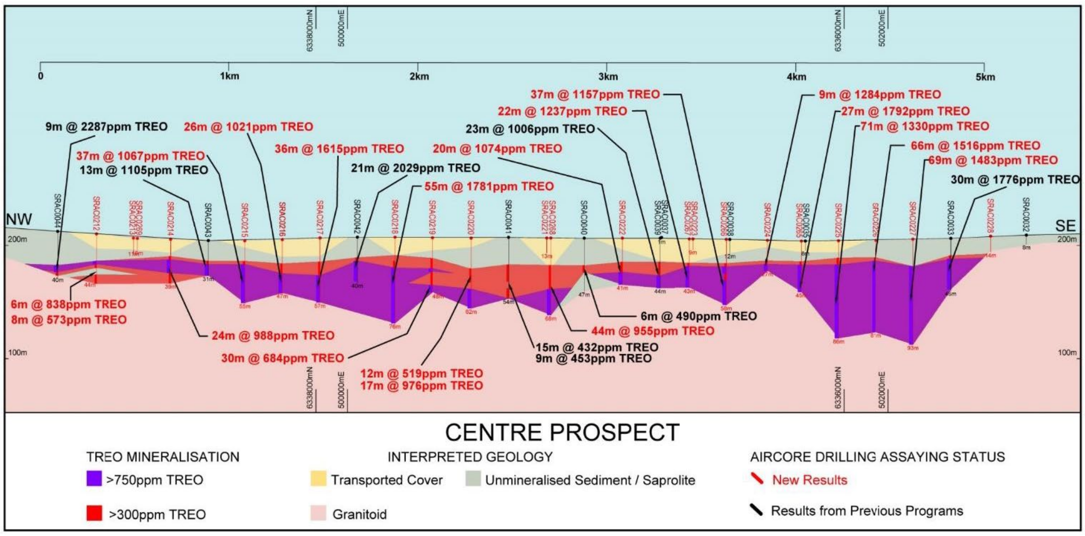
and the mineralised clay averages 10 to 50m. Overall, we estimate a stripping ratio of under 1t waste to 1 tonne of ore.

FIGURE 5 CROSS SECTION OF CENTRAL RESOURCE SHOWING THE THICKNESS OF OVERBURDEN AND MINERALISATION



Source: OD6 release 18 July 2023

Upside Case: How big could Splinter Rock be?

The Aerial Electro-Magnetic survey has identified the area, thickness and depth of the clay that hosts the rare earths, and while we do not have the detailed data, we can use the data provided to estimate the upside potential at Splinter Rock. Note this does not include the potential of the Grass Patch tenements.

TABLE 6 BREAKAWAY ESTIMATE OF POTENTIAL TOTAL TONNAGE OF RARE EARTH BEARING MATERIAL AT SPLINTER ROCK

Splinter Rock	Area sq km	Min Thichness m	Max Thickness n	Depth m	SG	Potential Minimum Mt	Potential Maximum Mt
Scrum	26.5	12	48	15-35	1.8	572	2290
Centre	136	20	30	5-15	1.8	4896	7344
Flanker	42	10	30	3-15	1.8	756	2268
Prop	49	10	80	3-24	1.8	882	7056
Total	253					7106	18958

Source: OD6 release 15 December 2022

Our estimated upside target of 7,106Mt to 18,958Mt is many times the maiden Resource of 344Mt and we have not estimated the grade.

Rare Earth Metallurgy – A Quick look at Rare Earth Clays

While the mining of these deposits will be a very simple low cost, free dig operation, the heart of the business, and most of the challenges will revolve around metallurgical recoveries.

In this context it is important to understand that metallurgical test work to determine recovery is a more complex business for clay hosted rare earths than for other metals, and there are three key areas the investor must understand that differs from general mining and industry norms.

- The grade of a rare earth clay deposit is not particularly meaningful of itself. What matters is the grade of the rare earth phases that can be extracted.
- Recovery into solution is not overall recovery. Most clay rare earth project promoters are reporting recovery into solution. However, there can be losses when the rare earths are precipitated out of solution. Overall recovery is the rare earths recovered into the final mixed rare earth carbonate (MREC).

- The grade of the final MREC product is a balance between maximising the carbonate grade and maximising recovery. There are only one or two companies currently trading MREC worldwide at present. Based on its feasibility studies, Aclara is aiming for a MREC grade of 91.9% RE oxide equivalent (15 September 2021 43-101 Section 22.5.1). A MREC that is 91.9% carbonate contains 51.4% rare earth elements (Aclara 43-101 15 September 2021 Table 17-2). IXR is targeting a rare earth element grade of over 40% for its MREC, or 71.5% carbonate. Aclara is assuming it will be charged a refining fee of US$5/kg of MREC. Ionic Rare Earths is assuming a payability of 70%, meaning the refineries will charge 30% or US$23/kg REO which would be approximately US$16/kg of MREC.

Rare earths can exist in clays in various forms

- **Aqueous soluble phase** – rare earths not absorbed by clay minerals (Ionic – less common)
- **Ion exchangeable phase** - where rare earths are absorbed into clays (Ionic – more common)
- **Colloidal sediment phase** - rare earths where the rare earth exists as a rare earth oxide or hydroxyl bonding with an oxide material (Colloidal or acid soluble)
- **Mineral phase** - rare earths in the original hard rock source mineral (Refractory).

Different commentators may use different names. OD6 refers a combination of ionically adsorbed, acid soluble and refractory rare earth elements (REEs). Acid soluble refers to the colloidal sediment phase, refractory refers to mineral phase and ionically absorbed refers to the remaining two phases.

Ionic rare earth elements will enter solution at room temperature, at an acidity of pH 3-4, using sulphuric acid to manage pH and ammonium sulphate as lixiviant and achieve a 50 to 90% recovery. These phases are mined by the Chinese.

The colloidal REE sediment, formed during the weathering process, exists as an undissolved oxide or hydroxide phase in the ore, that when contacted with acidic conditions, solubilises and releases the rare earth elements into the liquor phase. Colloidal rare earths require pH levels around 1 in order to be recovered generally between 40-70% recovery. A large proportion of the rare earths in the Australian clay hosted rare earth deposits are likely to be in this form.

The refractory rare earth minerals require the same processing as hard rock rare earth deposits and require corresponding high grades to be economic. This phase is not recovered from clay deposits.

Implications of the rare earths being present in different phases

The leaching tests conducted by IXR in Figure 6 were conducted using ammonium sulphate as the lixiviant at an acidity of pH 3.5 to extract the ionic phase rare earths then spiked with further sulphuric acid to increase the acidity to pH 1 targeting the colloidal phase rare earths.

Contrast the performance of sample HY9133 which recovered almost the same rare earths under either condition with that of HY9135 which recovered almost nothing at pH 3.5. The implication is that in sample HY9133, 40-50% of the contained rare earths are refractory and not recoverable and the balance is almost entirely ionic. In sample HY9135, 50% of the contained rare earths are refractory and the balance is almost entirely colloidal, with the other samples falling between these extremes.

The clear implication is that within a clay hosted rare earth deposit, the phases in which the rare earth elements are held can vary significantly.

Note that cerium recovery is poor under all conditions. Cerium is a very low value rare earth its low recovery means that the resulting Mixed Rare Earths Carbonate is enriched in higher value rare earths.

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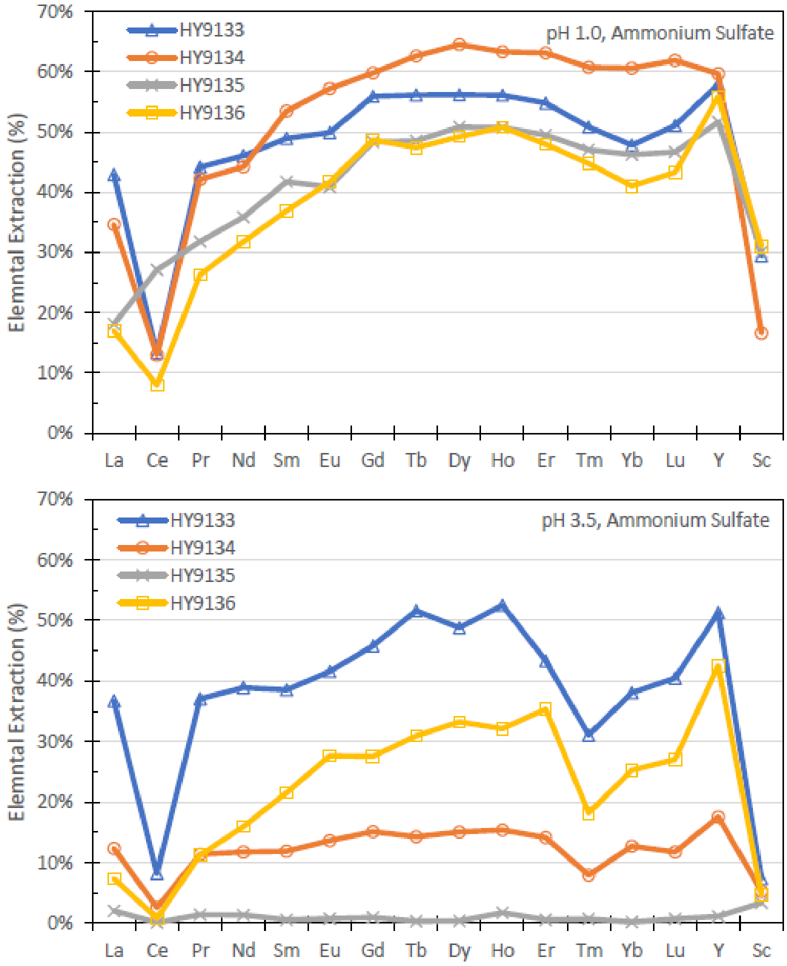
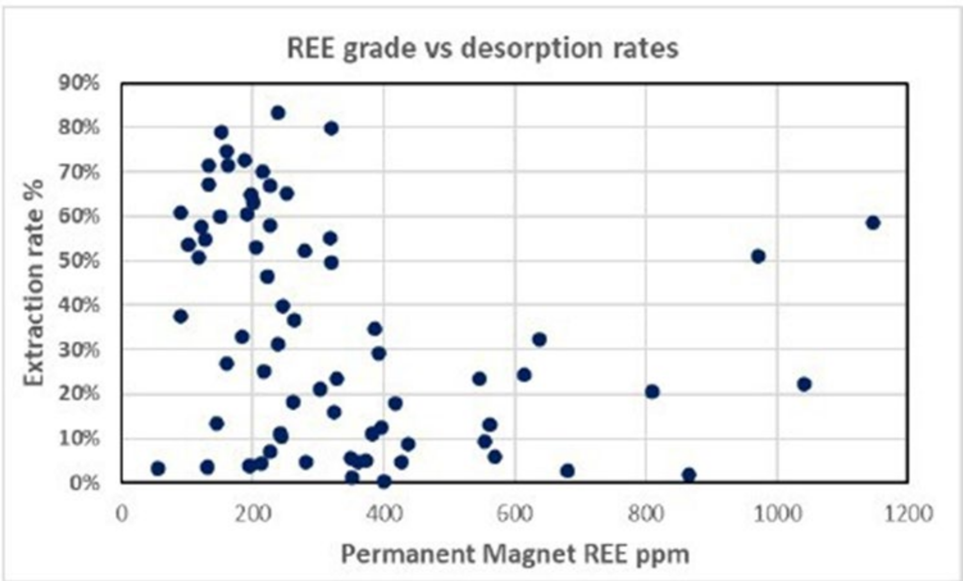
FIGURE 6 LEACHING TESTS FOR IONIC RARE EARTHS MAKUUTU PROJECT



Source: IXR release 2 August 2020

FIGURE 7 ABX GROUP RECOVERY RANGE HIGHLIGHTS THE VARIETY OF RARE EARTH COMPOUNDS IN A DEPOSIT



Source: ABX release 2 February 2023- ABx used ammonium sulphate as lixiviant at pH 4

The figure above shows excellent recovery of rare earths from some samples and almost zero from others even though the grade is the same. That reflects the impact of the different phases of rare

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earth minerals in clay hosted deposits. Where the grade comes from the presence of refractory minerals, the recovery will be zero.

For ABx the best recoveries were from samples with some of the lowest reported grades. ABx uses ammonium sulphate at a pH of 4 to produce these results which would only recover the ionic phases (aqueous soluble and ion exchangeable phases), so the percentage recoveries can be seen as a measure of the rare earths held in those phases vs held in other phases, with a large percentage of the deposit grading around 200ppm and 50-80% of that in the ionic phases.

Recovery into solution is not total project recovery

Overall recovery = recovery into leach solution plus recovery into MREC at a saleable grade

Most of the recovery data reported by ionic clay project developers is referring to recovery of rare earths from the clay into solution. This is the Leaching or Extraction Stage.

In a processing facility, the rare earths would have to be precipitated out of solution and into a Mixed Rare Earth Carbonate (MERC) with minimal impurities. A number of project developers are aiming for 96% MERC or better which we assume is rare earth carbonate grade. Aclara is aiming for 91.9%.

The amount of non-rare earth elements absorbed into the leach solution is very sensitive to the acidity of the solution which is measured in terms of pH. A pH of 7 is neutral, i.e., neither acid nor alkaline. At a highly acidic pH of 1 or less, a portion of all metals will be pulled into solution including aluminium and iron. At a pH of 4, the ionic rare earths will go into solution but very little aluminium and iron will leave the ore.

High acidity in the leaching or extraction stage can create issues in the carbonate precipitation stage by capturing too big a volume of aluminium and iron elements in the leaching solution.

Aclara's process aims to drop the aluminium, iron and thorium out of solution as hydroxides at a pH of between 5.5 and 6. The management of this tight pH window is critical because the rare earth carbonates precipitate out at a pH of between 7 and 7.5.

If the pH is not controlled within those tight margins, there can be losses of rare earths during the Precipitation Step, or a lowering of the MREC grade.

However, the recovery of rare earths is also related to the pH, and for most of the Australian deposits, the rare earth recovery at pH4 may be too low to be commercial.

TABLE 7 EXTRACTS FROM FEASIBILITY STUDIES BY TWO CLAY HOSTED RARE EARTH PROJECT DEVELOPERS.

	Head Grade TREO ppm	Lixiviant	pH	Recovery into Solution	Recovery into MREC	Overall Recovery	MREC Grade % Carbonate	MREC Grade % Rare Earth Elements
Ionic Rare Earths Ltd	848	(NH4)2 SO4	2	33.0%	92%	27.0%	>71%	>40%
Aclara	378	(NH4)2 SO4	3-4	18.5%	98.1%	18.1%	91.9%	51.4%

Source: Aclara 15 Sept 2021 43-101 Section 22.5.1 and Table 17.2, Resource grade 13 Sept 2022, IXR DFS release 20 March 2023 p13,Lixiviant refers to the chemical used to desorb the rare earths from the ore into the leach solution and this these cases is $(NH_4)_2SO_4$ = Ammonium Sulphate, Recoveries refer the weighted average recoveries of the magnet rare earths Pr Nd Tb and Dy.

These recoveries reflect the final recovery into Mixed Rare Earth Carbonate, including recovery into solution and losses during the precipitation stage. While the IXR metallurgy release of 20 August 2020 focussed on a recovery into solution of 40% at pH 1, the Feasibility Study of 20 March 2023 reported that the pH for the final project was change to pH2 to reduce the dissolution of aluminium which reduced the recovery overall to 33%.

In this context it is worth quoting from the IXR Definitive Feasibility Study release of 20 March 2023 pages 17 and 46. Note that the Mixed Rare Earth Carbonate (MREC) grade targeted by IXR is >40% rare earth elements which translates into greater than 71% rare earth carbonate.

Subsequent to the work defining metallurgical extraction parameters applied to desorb REE from the clay mineralisation, additional test work has been completed to quantify the downstream (Breakaway note: ie precipitation into MREC) *impacts, most notably the impact of more aggressive leach*

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conditions at lower pH (higher acidity), resulting in excessive dissolution of impurity elements, notably aluminium (Al) and iron (Fe).

As a result, pH conditions applied in the heap desorption was targeted at pH 2 (Breakaway note: vs pH 1 in Scoping Study)*, reducing REE extractions, but importantly substantially reducing the dissolution of Al and Fe, and thereby reducing the reagent consumption required to precipitate out impurity elements to reach the target MREC composition (> 40% REE content). Elevated Al presence in the desorption liquor also results in increased potential for REE precipitation losses in the impurity precipitation circuit. As a result of this, test work has defined that operating the heap desorption at pH 2 provides a fair trade off to maximise REE extraction while managing the impurity load reporting the pregnant leach solution (PLS).*

Deleterious elements for the Makuutu Project are present in the form of semi-soluble gangue minerals that cannot be easily separated, or constitute, the minerals of interest. These deleterious elements include aluminium, calcium, iron, silicon, thorium, uranium, and zinc, all of which are present in the pregnant liquor solution to some extent. These deleterious minerals are rejected using membrane solution purification and staged carbonate precipitation, which allow production of a marketable mixed rare earth carbonate product.

IXR has chosen to use a more acidic environment than Aclara (pH 2 vs 3-4), where it achieves a 33% recovery into solution compared to Aclara's 18%, but at the cost of a lower Mixed Rare Earth Carbonate grade (71% vs 91.9%), lower recovery in the precipitation stage (92% vs 98%) and expects the be charged a higher refining fee (30% of revenue or A$16/kg MREC vs US$5/kg MREC).

IXR is now building a demonstration plant on site to demonstrate the processing economics at commercial recoveries and Mixed Rare Earth Carbonate grades.

Survey of Recovery data for Australian based projects

Referring to Table 8, ABx and Meteoric have deposits that can achieve commercial rates of recovery at a pH of 4 and room temperature using ammonium sulphate salt. A number of companies have used ammonium sulphate as the lixiviant but have needed to add acid as well to reduce the pH. The rest have used acid (sulphuric or hydrochloric acid) as the lixiviant and do not report the pH which would probably be below pH 1.

TABLE 8 RECOVERY INTO LEACH SOLUTION ANNOUNCED BY AUSTRALIAN PROECTS

Code	Lixiviant	Acid pH	Residence time	Temp °C	Strength	MREO Extraction	Source
ABX	$(NH_4)_2SO_4$	4	30min	22	0.5M 2wt%	39%	2-Feb-23
AR3	$MgSO_4$	1	2hr	22	0.3M	60%	16-May-23
DM1	HCl (32%)	0.3	48hr	40	23.8g/L	79%	23-Jun-23
GRL	$(NH_4)_2SO_4$	2	24hr	50	0.5M	92%	5-Apr-23
HRE	HCl			50	18.1kg 32%/t fines[1]	82.9%	12-Jul-23
IXR	$(NH_4)_2SO_4$	1	96hr	22		40%	4-Aug-20
KTA	$(NH_4)_2SO_4$	1	6hr		0.5M	51%	23-Jan-23
MEI	$(NH_4)_2SO_4$	4-4.5			2-4%	60%	20-Dec-22
MEK	H_2SO_4		6hr	50	0.1M	82%	25-Jul-22
OD6	HCl		6hr	Ambient	25g/L	54%	2-Apr-23
OD6	HCl		6hr	Ambient	100g/L	62%	2-Apr-23
TAR	H_2SO_4		6hr	50	50g/L	52%	15-Dec-22
VTM	$(NH_4)_2SO_4$	0.7	4hr	50	0.5M	24%	1-May-23
WC1	HCl		8hr		25g/L	68%	24-Jul-23
WC1	HCl		8hr		100g/L	78%	24-Jul-23

Sources: Company releases at the date recorded in the last column of the table. There are 36.45grams of HCl in a Mole so 0.1M means 3.645gram of HCl per litre of solution. There are 98.06grams of H_2SO_4 in a Mole so 0.1M is 9.8g/L. There are 132.08g of $(NH_4)_2SO_4$ in a Mole so 0.5M is 66.0g/L [1] HRE has reported acid consumption instead of acid concentration. Hydrochloric acid is typically supplied at a strength of 32% HCl in water, and HRE uses 18.1kg of this solution per tonne of ore treated. Any test that doesn't show a temperature was probably conducted at room temperature (22 degrees C).

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The results are not strictly comparable given the variety of lixiviants, strengths, leach duration, temperature, and pH. In general, strongly acidic conditions extract more rare earths into solution. The variability in recovery is partly a function of the leaching conditions and partly a function of how much of the rare earths in the head grade are refractory monazite grains from which the rare earths cannot be separated by a simple leach.

OD6 Metals leaching results

TABLE 9 OD6 METALS LEACH RESULTS FOR SAMPLES CHARACTERISED AS CLAY

Sample	Composite Depth (m)	Prospect	% MagREE Recovery			
			25 g/L HCl		100 g/L HCl	
			3-hr liquor	6-hr Solid	3-hr liquor	6-hr Solid
SR033B	27-45	Centre	22	46	63	78
SR042A	21-39	Centre	29	47	44	55
SR043A	21-31	Centre	37	54	44	54
SR021A	6-39	Flanker	32	62	65	76
SR056B	33-45	Scrum	38	56	51	64
SR056A	21-35	Scrum	14	20	25	30
SR056A	21-35	Scrum	14	20	25	30
SR150A	24-36	Prop	32	46	40	44
SR150D	60-95	Prop	39	76	79	85
SR149A	18-33	Prop	67	91	72	96
SR150B	36-42	Prop	46	52	55	51
SR150C	42-60	Prop	49	77	69	78
Averages		Centre	29	49	50	62
		Flanker	32	62	65	76
		Scrum	22	32	34	41
		Prop	47	68	63	71
		Overall	35	**54**	53	**62**

Source: OD6 release 3 April 2023

The leaching or extraction recoveries noted in Table 9 for OD6 are the averages of the results from 12 samples reported as clay. The lower recoveries from sampled reported as carbonaceous or granitoid, which are likely to be at the margins of the deposits and unlikely to be prioritised for mining in any future project.

The extraction recovery appears to be dependent on residence time, and there is potential for higher recoveries if the residence time is increased.

Choosing the acid

Acid is added to manage the level of acidity and sometimes to act as the lixiviant that extracts the rare earths. Generally, at acidity levels of over pH 2, a salt is used as the lixiviant and is usually ammonium sulphate but can be magnesium sulphate. Salts are generally cheaper to purchase and transport than acids.

Where higher levels of acidity are required (i.e. below pH 2) the acid used to manage the pH is also the lixiviant.

AR3 reported that hydrochloric acid (HCl) extracted 5-10% more rare earths than sulphuric acid (H_2SO_4) (AR3 release 19 September 2022). However, hydrochloric acid can be significantly more expensive by a factor of as much as 3x. The choice of acid will come down to economics.

In OD6 Metals case, the plan is to manufacture hydrochloric acid on site which would make it around one third the cost of third party hydrochloric acid from an operating cost perspective, but would add to the project up front capital cost. Notably manufacturing it on site would also produce a Sodium Hydroxide base byproduct which is needed in the process for impurity removal, MREC production and neutralisation of clay material which in effect is provided for free. Other companies have not stated which base they will utilise or consumption requirements.

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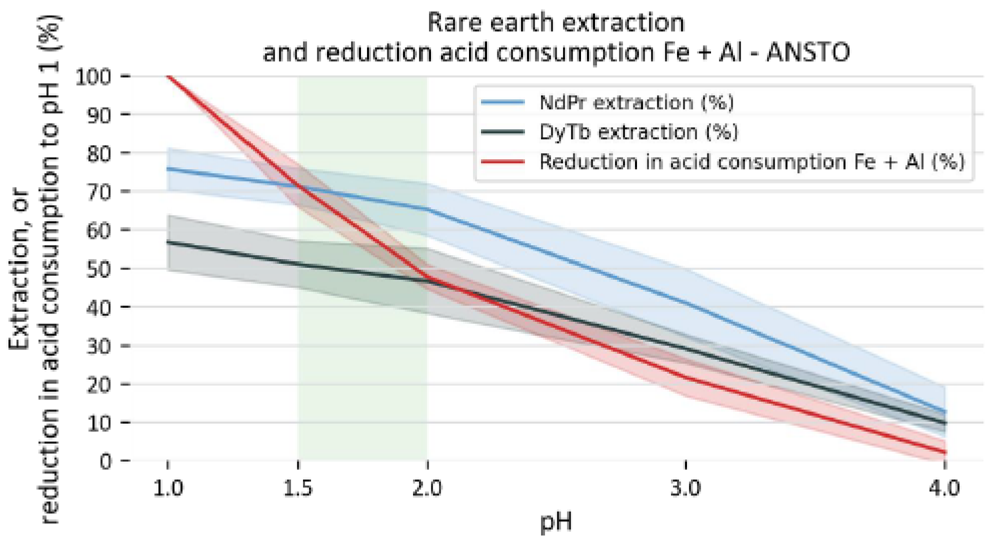
Choosing the level of acidity (pH)

Once the level of acidity falls below pH 2, the aluminium and iron in the clays start to react with the acid and come into the leach solution with the rare earths. The clays that contain rare earths contain a lot more aluminium and iron and so acid consumption increases dramatically as the acidity rises (pH falls) as shown in the figure below.

The reactivity of iron and aluminium to the acid can be impacted by the minerals in which the metals occur, so the processing decisions will be guided by detailed test work.

FIGURE 8 EXTRACTION OF RARE EARTHS (ND PR TB AND DY) INCREASE AS ACIDITY INCREASES (IE AS PH FALLS) BUT ACID CONSUMPTION INCREASES DRAMATICALLY AS THE PH FALLS BELOW 2



Source: AR3 release 19 September 2022

One example of impurity extraction depending on acidity levels

Victory Metals (ASX:VTM) has published data on the recovery of iron and aluminium into the leach solution. On the graph in the figure below, for the mineralisation that comprises the samples from Victory's prospect, it is interesting to note that only a small part of the iron and aluminium is extracted.

The first takeaway is that the mineralogy of a deposit's iron and aluminium matters. Much of the iron and aluminium contained in a deposit can be locked up in minerals that are acid resistant and the metals will not go into leach solution and therefore not cause a problem during precipitation.

The other observation is that this figure does not show the iron + aluminium load in the leach solution. Given the rare earths grade of these sort of deposits is 1000-2000ppm, and the iron and aluminium grades are of the order of 3% and 6% respectively, the recoveries in the figure below still point to aluminium and iron making up 80% of the metal in the leach solution, and therefore presenting a problem during the precipitation stage.

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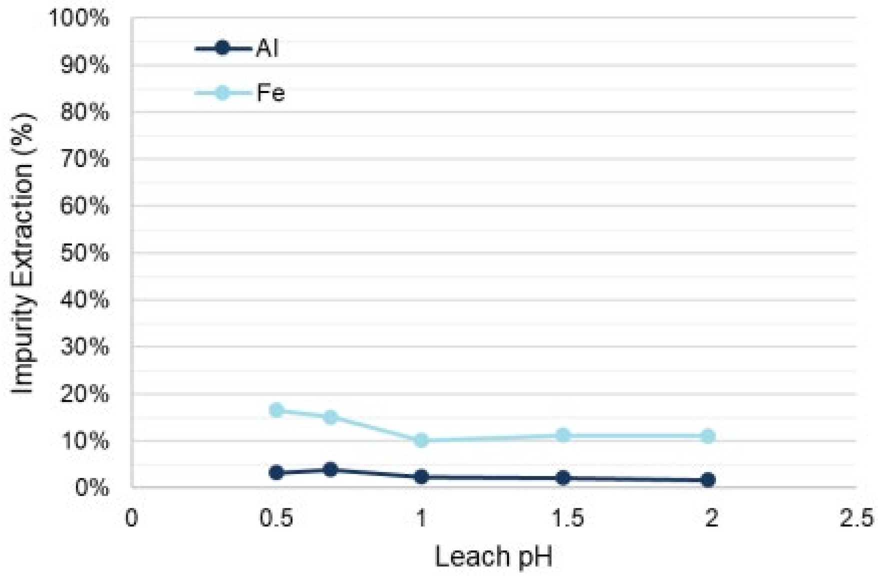
FIGURE 9 EXTRACTION OF IMPURITY IRON AND ALUMINIUM VS ACIDITY (PH)



Source: VTM release 1 May 2023 (4 hour residence, ambient temperature H_2SO_4 + $(NH_4)_2SO_4$)

Potential to upgrade before leaching

A number of companies (OD6, IXR, ABX, HRE) have indicated that they are looking to separate out a fines fraction with the separation point at 75 microns in size for some and 38 or 25 microns for others. Early test work appears to suggest the fines account for 40-60% of the Resource mass and contain 60-90% of the rare earths.

TABLE 10 SUMMARY OF ORE SORTING TESTS BY A NUMBER OF COMPANIES

	Split microns	Mass Pull	RE Recovery	Source
OD6 Metals	<75	56%	83%	3-Apr-23
Heavy Rare Earths	<25	37%	79%	12-Jul-23
Australian Rare Earths	<75	64%	90%	16-May-23
Australian Rare Earths	<38	60%	82%	16-May-23
Desert Metals	<75	53%	61%	23-Jun-23
Mt Ridley	<75	53%	74%	6-Jul-23

Sources: Company releases on the dates indicated in the last column

A grade uplift could represent a significant improvement in economics, given the mining costs are very low relative to processing costs.

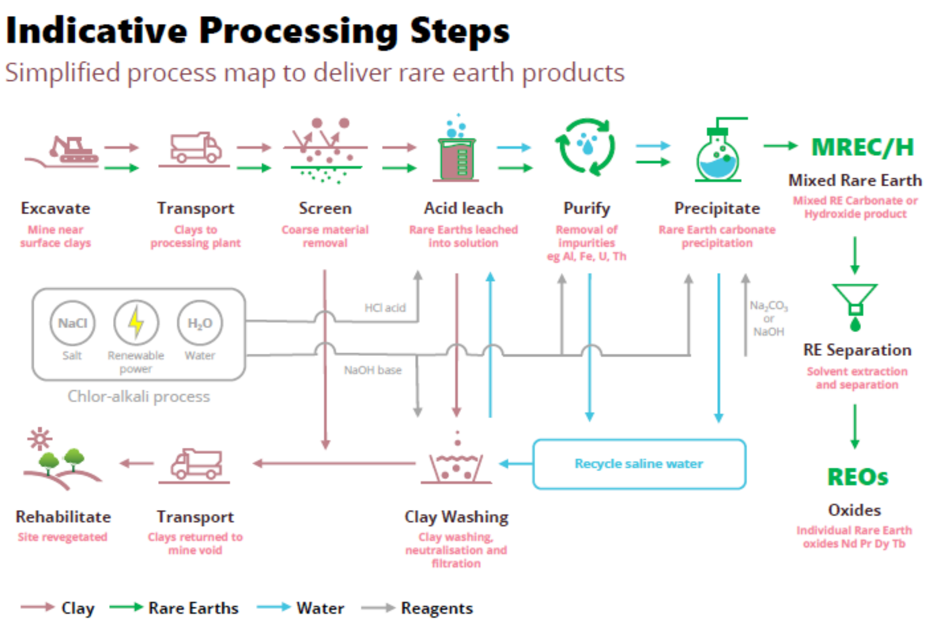
Processing pathway and costings

Process pathway

The figure below shows OD6 Metals' planned process steps. Initially it will sell a Mixed Rare Earth Carbonate or Hydroxide. Mining will be very low cost with a low stripping ratio, shallow pits, no drill and blast, limited grade control requirements and large annual volumes. The deposits are flat lying and extensive, which means transport back to the processing centre will be a separate activity.

The ore would be screened the eliminate the larger fractions and achieve the grade uplift as discussed above before going through the stages of leaching, purifying, and precipitating into a Mixed Rare Earth Carbonate or Hydroxide.

FIGURE 10 OD6 PROCESSING FLOWSHEET



Source: OD6 presentation 18 July 2023

A criticism of projects that plan to use hydrochloric acid is that the acid is very expensive relative to sulphuric acid or ammonium sulphate. OD6 is taking this criticism head on and is planning to have a chlor-alkali plant on site to produce both the hydrochloric acid required for the leaching and the caustic soda (NaOH or alkali) required to neutralise the acid during the precipitation step. While such a plant would add to the project capital cost, the hydrochloric acid cost would be reduced from around A$650/t 32% grade to around A$110-140/t plus the alkali benefit at no extra cost providing a significant operating cost saving.

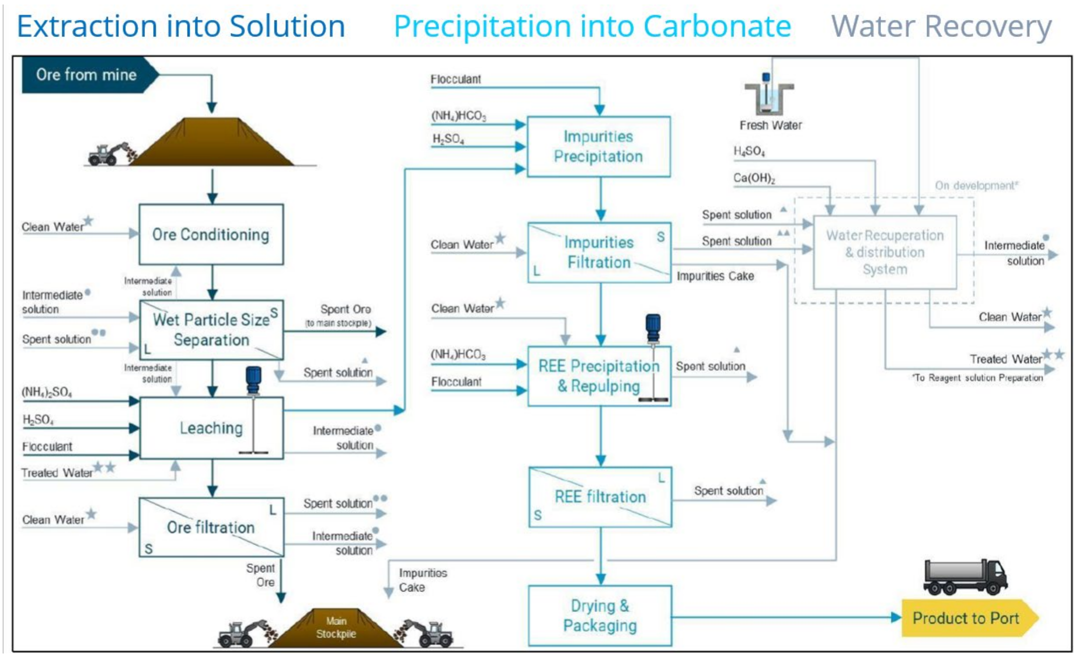
Case Study Aclara's Penco Module project

TABLE 11 OPERATING AND CAPITAL COSTS FOR ACLARA'S PENCO MODULE

	Pre-Prodn Capital Cost US$M	Sustaining US$M LOM	Opex US$/t ore
Mine	4.43	22.59	4.03
Process Plant (refer Table xx)	64.91		7.28
General & Administrative	21.06		2.08
Commissioning	0.67		
First Fill	0.15		
Camp	0.00		
Contingency 30%	27.37		
Total	118.59	22.59	13.39
	Mtpa	LOM Mt	Grade ppm TREO
Capacity Mtpa	1.765	17.27	378

Source: Aclara 43-101 15 September 2021. This study is to the equivalent of a pre feasibility study standard. The company has yet to report reserves.

FIGURE 11 ACLARA'S PROPOSED PROCESS FLOW SHEET SHOWING THE COMPONENTS IN THE THREE MAIN STAGES



Source: Aclara 15 September 2021 43-101 report

Aclara intends to use a plant that conducts the leaching process in tanks which is the approach we believe the Australian projects are most likely to adopt. IXR plan to leach to ore in heaps stacked on surface. The Chinese leach in situ which means they pump the lixiviant into the ground.

Aclara plans to use grid power and the reagents can be sourced from a nearby major city, which would reduce its preproduction capital cost compared to the Australians.

TABLE 12 BREAKDOWN OF PROCESSING COSTS

Processing	US$/t	US$Mpa
Reagents (Refer Table 13)	2.47	4.36
Labour	0.81	1.44
Power	1.70	3.00
Spares & Maintenance	0.95	1.68
Laboratory	0.50	0.89
Packing	0.04	0.07
Spent Material Transport Cost	0.81	1.44
Total	7.28	12.87

Source: Aclara 15 September 2021 43-101 report

The processing cost at 1.765Mtpa breaks into US$2.47/t ore for reagents, US$0.81/t for spent material transport and US$4.01/t for the balance of other costs.

TABLE 13 ACLARA REAGENT USAGE AND COSTINGS

	Unit Cost US$/unit	Usage kg/t ore	Usage t/yr	US$M/yr	US$/t ore
Fresh Water (m^3)	0.50	58.19	102772	0.051	0.029
Sulphuric Acid (tonne)	170	1.06	1878	0.319	0.180
Ammonium Sulphate Solid (t)	330	1.14	2013	0.664	0.376
Ammonium Bicarbonate Solid (t)	450	1.95	3442	1.549	0.880
Calcium Hydroxide Solid (t)	180	0.43	767	0.138	0.078
Flocculant (t)	2650	0.12	213	0.564	0.320
Reverse Osmosis Water (m^3)	0.65	930	1642828	1.068	0.600
Potable Water (m^3)	0.50	4.96	8760	0.004	0.003
Total				4.359	2.466

Source: Aclara 15 September 2021 43-101 report

Costing OD6 Metals' Splinter Rock project

Any project that OD6 Metals builds at Splinter Rock is likely to be bigger capacity than Aclara's 1.7Mtpa of feed and is also likely to be a higher grade. The table below is a back of the envelope study of the potential operating costs based in the assumptions shown.

The first assumption is a mining rate of 5Mtpa of ore. This will be free digging with no drilling and blasting. The Resource grade of 1300ppm TREO is assumed however it is expected that this figure would be higher given that most miners target the high grade areas in their mine plans. This ore is sorted using screens and hydrocyclones to remove the over 75 micron material. OD6 test work has indicated that 56% of the mass is retained, containing 83% of the TREO (Table 10).

The 2.8Mtpa output from screening is processed in the leaching and precipitation plant which produces 5.9ktpa or 5.9 million kgs of Mixed Rare Earth Carbonate by recovering 54% of the contained rare earths into a carbonate that contains 50% rare earth oxide equivalent. A pure Mixed Rare Earth Carbonate would contain 71% rare earth oxide equivalent, so 71% is the best REO grade possible.

The mining cost is assumed to be A$2/t of material mined, and the stripping ratio is assumed to be one tonne of waste for one tonne ore, hence the A$4/t of ore mined cost. Sorting is estimated at A$1/t of ore and processing at A$9.61/t of fines (or $5.38/t ore), giving a total cost of A$10.38/t ore or A$17.80/kg TREO.

TABLE 14 ESTIMATED OPERATING COST OF OD6 METALS

Output From:	Mining	Sorting	Processing	Total
Output ktpa	5000	2800	5.9	
Grade ppm TREO	1300	1927	1300	
Grade ppm MREO	300	445	300	
Contained TREO t	6500	5395	2913	
Contained MREO kt	1500	1245	672	
Mass Pull		56%		
Recovery		83%	54%	
MREC Grade TREO equiv			50%	
Costs				
Unit cost A$/t input	A$4.00/t ore	A$1.00/t ore	A$9.61/t fines	A$10.38/t ore
Unit cost A$/kg TREO				A$17.80/kg
Operating Cost A$Mpa	20.00	5.00	26.92	A$51.92Mpa
Processing Cost	Usage kg/t leached	Cost A$/t acid	Cost A$/t processed	
Acid Cost 32% HCl	30	120	3.60	
Other Reagent Cost			1.34	
Rest of Processing Cost			5.97	
Spent Material Disposal			0.50	
Total Processing Costs			11.41	

Source: Acid usage see discussion in text below. Ore sorting mass pull and recovery from Table 10, overall recovery from Table 9, Aclara 43-101 15 September 2021 for Other reagent and Rest of Processing, Breakaway estimate for Spent Material Disposal, and Table 15 for Acid Costs.

One of the key assumptions is acid consumption which has been assumed to be 30kg 32% HCl per tonne of material processed. In this case, the leach material is after screening and comprises 56% of the run of mine production. The 30kg/t usage comes from P39 of the Sahara Expert Report which was included in the OD6 prospectus dated 20 June 2022.

Heavy Rare Earths (HRE) on 12 July 2023 reported recoveries of 8.4% to 77.5% with consumption of 3.8kg/t to 37.8kg/t, with the best recovery at the lowest acid usage. However, there does not appear to be a clear relationship between acid consumption and recovery, suggesting the higher acid

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consumption is driven more by the presence and mineralogy of waste elements like aluminium and iron.

Desert Metals reported on 23 June 2023 recoveries of ~20% at pH 1 consuming 11.6kg/t and ~80% at pH 0.3 consuming 37.8kg/t. Going to the higher acidity/lower pH requires more acid to reach the lower pH and then the lower pH triggers the release of aluminium and iron which consumes additional acid.

The cost of production in Table 14 is A$8.86/kg MREC assuming acid consumption of 15kg 32% HCl/t. At 30kg/t the cost increases to A$9.72/kg MREC and at 5kg/t it reduces to A$8.28/kg MREC.

The rest of the processing cost are based on Aclara's costs for other reagents, and rest of processing, The cosy of disposing of spent material is a Breakaway estimate.

Acid costing

The Breakaway acid and alkali acquisition costs are worked up in Table 15. In that table, the acid at 32% concentration costs A$112/t and in Table 14 above that has been rounded up to A$120/t. Importantly, the caustic soda (NaOH) which is used later in the process as an acid neutralizing agent is a byproduct of the HCl and so has no additional cost.

Most of the cost of producing hydrochloric acid and related caustic soda is related to the cost of purchasing common salt (NaCl) and the energy required to split the salt into hydrochloric acid (HCl) and caustic soda (NaOH).

Salt costing

The salt is produced by a number of projects in the Pilbara region of Western Australia and is also a byproduct of potash production from brines. Because we are using current rare earth prices in our analysis, we have also used the current salt price of US$49/tonne cif Asia from Figure 12 less an estimated US$11/t of sea freight to Asia. However, the average export price for salt from Australia in 2022 was around US$23/t fob (Source: UNCTAD Comtrade), so we could be overstating the salt cost. Our cost assumption of A$115/t assumes salt cost ex Pilbara of A$54/t and transport by truck and or ship to the project of A$61/t.

TABLE 15 BREAKDOWN OF ESTIMATION OF ACID COST

	Volume kWh/t HCl	Renewable Cost A c/kWh	Cost A$/t HCl
Inputs			
Power Required per tonne HCl	2413	5	120.65
	Volumes tonnes	**Delivered Cost A$/t salt**	**Cost A$/t HCl**
NaCl required per tonne HCl	1.603	115	185.01
Labour and Other			45.85
Outputs			
HCl produced	1.000		351.50
32% HCl acid produced	3.125		112.48
NaOH produced	1.097		zero
Notes			
Salt (NaCl) A$/t ex Works	US$38/t ex Pilbara, AUDUSD 0.7		
Salt Transport A$/t	A9c/tonne/km x 677km		

Source: Salt costs from BCI presentation 20 June 2023, power consumption https://www.jcm.go.jp/sa-jp/methodologies/63/attached_document1 , renewable power cost www.arena.gov.au,

Power costing

The power cost is assumed to be at renewable levels of 5c/kWh for operating costs only. Third party contract power is generally available at 30 to 40c/kWh which would reduce upfront capital cost to OD6 as the capital is recovered in the power charge. Our choice of power cost is highly favourable to

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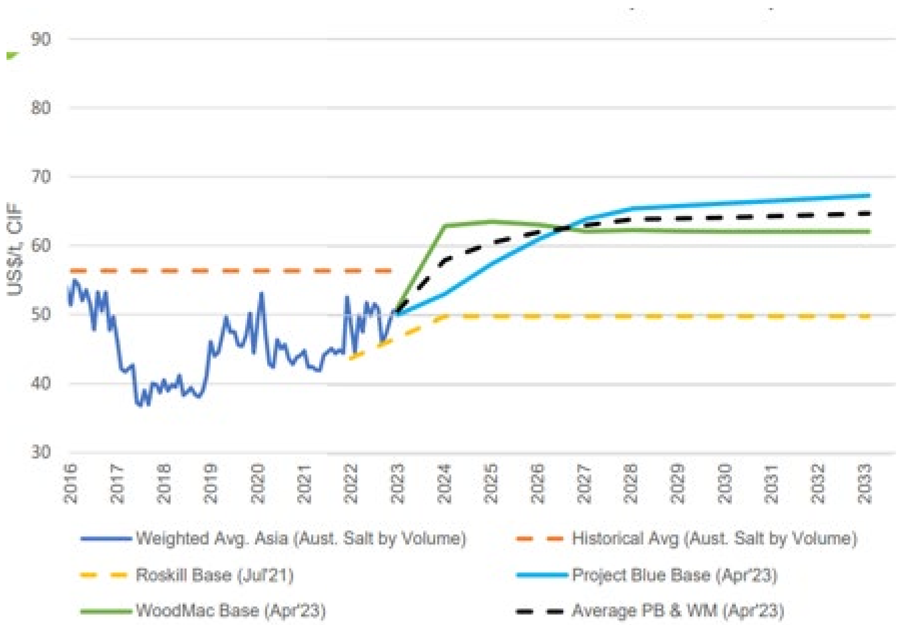
the project, but use of renewable power is consistent with the overall need for the ore processing to be "Green".

FIGURE 12 AUSTRALIAN HISTORICAL AND FORECAST SALT PRICE DELIVERED INTO ASIA



Source: BCI Minerals presentation 20 June 2023

Estimating revenue and operating margin

TABLE 16 ESTIMATION OF MREC SELLING PRICE AND MARGIN

Revenue	Ore Basket	Ore Grade ppm	Recoved	Recovered ppm	Price US$/kg	Value US$/t MREC
La_2O_3	21.2%	277	30%	20.2%	3.8	0.77
CeO_2	44.3%	579	10%	14.1%	0.975	0.14
Pr_5O_{11}	4.8%	63	60%	9.1%	67.8	6.20
Nd_2O_3	16.8%	220	60%	32.0%	67.8	21.70
Sm_2O_3	2.4%	31	60%	4.6%	2.25	0.10
Eu_2O_3	0.4%	5	60%	0.8%	27	0.21
Gd_2O_3	1.5%	20	60%	2.9%	45.5	1.30
Tb_4O_7	0.2%	3	60%	0.4%	1010	3.85
Dy_2O_3	1.1%	14	60%	2.1%	323.2	6.77
Ho_2O_3	0.2%	3	60%	0.4%	76.5	0.29
Er_2O_3	0.5%	7	60%	1.0%	260	2.48
Tm_2O_3	0.1%	1	60%	0.2%		0.00
Yb_2O_3	0.5%	7	60%	1.0%	12.8	0.12
Lu_2O_3	0.1%	1	60%	0.2%	837.5	1.60
Y_2O_3	5.9%	77	60%	11.2%	7.55	0.85
Total Rare Earth Oxide	100.0%	1308		100.0%		46.38
Total A$	@ AUDUSD =			0.67		A$69.22
Refining Charge	@ % of Gross Revenue =			30.0%		A$-20.77
Net Revenue A$/kg REO						A$48.45
Operating Costs A$/kg TREO						A$-19.43
EBITDA A$/kg TREO						A$29.02

Sources: Ore basket rare earth split by oxide and grade from OD6 presentation of 18 July 2023, Recovery Table 9, Prices from Argus at 4/8/23, MREC Total content is a Breakaway estimate based on Table 17 and assuming 70% of the MREC is carbonate which translates to 50% being rare earth oxide equivalent. The refining charge is the same as assumed by Ionic Rare Earths in its DFS of 20 March 2023 p13 and we believe it is consistent with the assumed MREC concentrate grade of 70%.

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In Table 16, the Resource grade in TREO from the Resource statement has been separated into the constituent rare earth oxides to which we have applied an arbitrary recovery approximating OD6 test results to get the estimated content of Rare Earth Oxides reporting to the Mixed Rare Earth Carbonate product (MREC).

The individual oxides are priced at the Chinese export prices (including duty) on 4 August 2023 as reported by Argus to get the value of a kilogram of mixed rare earth oxides. The refiner is assumed to charge 30% of the value in line with the IXR Preliminary Feasibility Study estimates, leaving a net revenue of A$48.45/kg TREO.

From this is deducted the A$19.43/kg operating cost estimated bt Breakaway, leaving a margin of A$29.02/kg. if 2.9 million kgs of TREO equivalent in MREC is sold per year, the pre tax cash flow would be A$84Mpa in this hypothetical example.

The Mixed Rare Earth Carbonate in this example contains 30% carbonates of aluminium and iron and 70% rare earth carbonates. It contains no rare earth oxide, but for valuation purposes, the MREC is priced on the weight of rare earth oxide it could theoretically be converted to.

This underlines a major issue for investors seeking to understand this industry. When referring to prices and costs per unit of product, it is essential to have a very clear understanding of exactly the chemistry of the units being discussed. The cost per unit of rare earth oxide is very different from the cost per unit of MREC.

TABLE 17 COMPARISON OF RARE EARTH CONTENT OF PURE ELEMENT, OXIDE AND CARBONATE

	Rare Earth Element	Rare Earth Oxide	Rare Earth Carbonate
Lanthanum Content of	100.0%	85.3%	60.7%
RE Carbonate in MREC Concentrate			
90%		64.0%	90%
80%		56.9%	80%
70%		49.8%	70%
Aclara Data			
91.9% RE Carbonate in MREC contains:	51.4%	60.3%	91.6%

Source: Aclara 43-101 15 September 2021, Breakaway calculations

Sensitivities

These estimates of costs and revenues are very preliminary and very approximate and shouldn't be used to value OD6 Metals. However, this analysis has significant usefulness in the risk assessment of the project by providing a framework about which inputs can be varied and the changes observed.

TABLE 18 IMPACT OF ASSUMPTION CHANGES ON MARGIN IN A$/KG OF MREC SOLD

	Base	Change in assumption and impact on margin						
Ore Grade ppm TREO	1308	+100						
Recovery	54%		+10%					
Power A c/kWh	5			+10				
Salt Cost A$/t delivered	115				+10			
Acid Usage kg 32% HCl/t	15					+10		
Refining Charge % of Revenue	30%						+10%	
Rare Earth Oxide /MREC	50%							+10%
Sensitivity								
Net Revenue A$/kg REO	48.5	48.5	48.5	48.5	48.5	48.5	41.5	48.5
Net Revenue A$/kg MREC	24.2	24.2	24.2	24.2	24.2	24.2	20.8	29.1
Operating Costs A$/kg MREC	-8.9	-8.2	-7.5	-9.4	-8.9	-9.4	-8.9	-10.6
EBITDA A$/kg MREC	15.4	16.0	16.8	14.8	15.3	14.8	11.9	18.4
Annual Production ktpa MREC	5.9	6.3	7.0	5.9	5.9	5.9	5.9	5.9

Source: Breakaway estimates based on data in Tables 14 and 16

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While there is a lot of information in the table above, the most important variables are the cost of acid per kg of product, rare earth oxide/MREC grade and refining charge, and all three are linked. Good metallurgy that produces a very pure carbonate product for minimal acid consumption will enjoy the lowest refining charge.

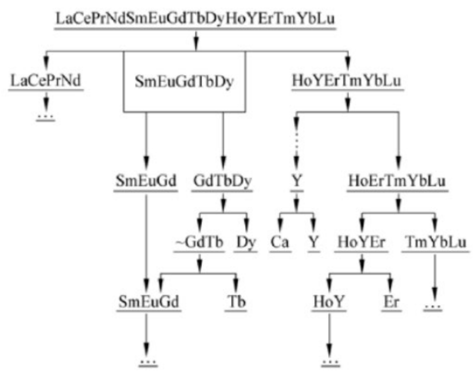
In fact, a lot of recovery can be sacrificed in order to minimise the acid use and refining charge and maximise the carbonate grade as Ionic and Aclara have chosen to do.

Rare earth refining stage

OD6 is proposing to start operations by producing a Mixed Rare Earth Carbonate product. The refining of those products could be at Iluka's Eneabba Rare Earth processing plant, at Lynas Rare earth separation plants either in the US or Malaysia, at Mountain Pass in the US, at Neo Performance Metals in Europe, at a Chinese plant or plants, or some other location. In time OD6 Metals may invest in its own separation capacity

The separation to industrially required levels of purity requires considerable time, involving the rare earths residence time inside the plant for the heavier elements , and therefore is very working capital intensive.

FIGURE 13 FLOWSHEET SHOWING THE SEPARATION PATHWAYS FOR PRODUCING THE INDIVIDUAL RARE EARTH PRODUCTS



Typical optimised separation flowsheet for REE from ion adsorption clay deposits

Source: IXR presentation 17 August 2021

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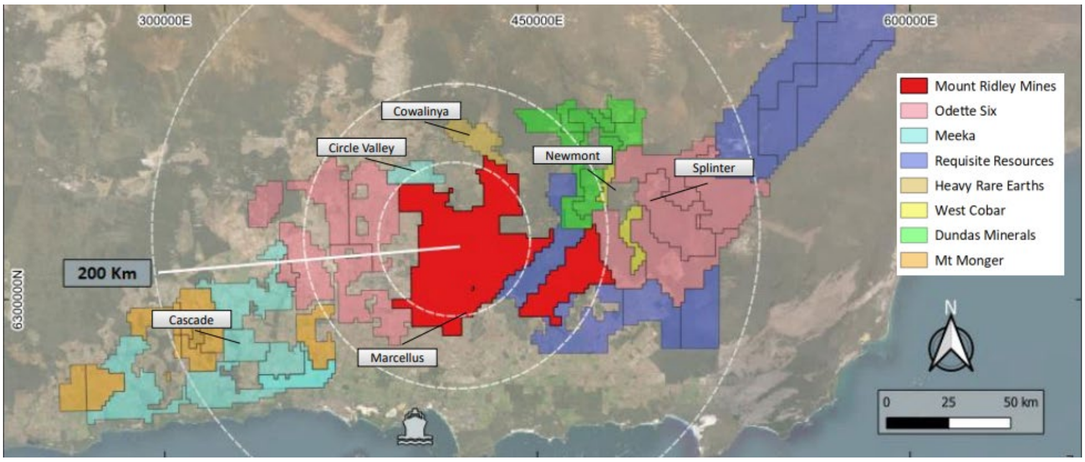
Exploration projects.

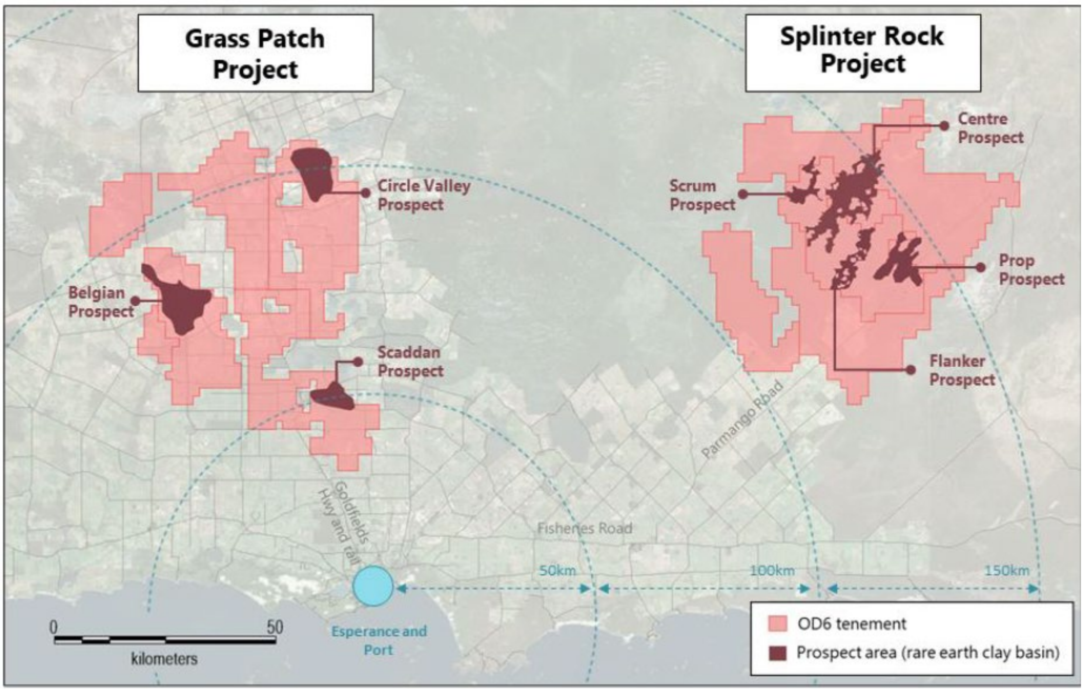
OD6 has two project areas (Splinter Rock and Grass Patch) located alongside a number of other companies which are also exploring for rare earths. In addition to the companies shown in the figure below, Narryer Metals (ASX: NYR) has tenements further to the west around Albany, along with Fortescue Metals Group (ASX:FMG)

FIGURE 14 OD6 (ODETTE 6) HAS A LOT OF NEIGHBOURS



Source: Mount Ridley release 21 December 2022

FIGURE 15 AND A NUMBER OF LARGE SCALE PROSPECTS



Source: OD6 presentation 9 May 2023

Splinter Rock

Splinter Rock is the more advanced exploration project at the time of writing, with comprises a hole aircore drilling program an Aerial Electro-Magnetic survey, and metallurgical testing.

Four main prospects are:

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- **Prop** – Is located at the lowest elevation. It is surrounded by Booanya Granites to the north and south and is also potentially a paleo valley eroded by historic glaciers and then filled up by the clays.
- **Flanker** – sits on top a magnetic high Booanya granite, which is part way up the Ravensthorpe Ramp and is most likely to have some transported clays but is potentially related to a localised weathered granite profile.
- **Centre** – Is a large clay basin that sits within a tableland area at higher elevations. Clays have potentially pooled in this area with Booanya granites to the North
- **Scrum** – sits over a magnetic high and Booanya granite to the north then heads south to a lower point with low magnetic intensity

Drilling

The completed Phase 1 and Phase 2 drill programs comprised:

- 10,167m drilling
- Average depth of 41m
- Drill spacing between 200m, 400m and 800m across 100km of drill lines for Phase 1, with Phase 2 infilling.

Phase 3 drilling is waiting assay results at the time of writing. Phase 3 comprises 145 hole 7,435m program (OD6 release 15 August 2023).

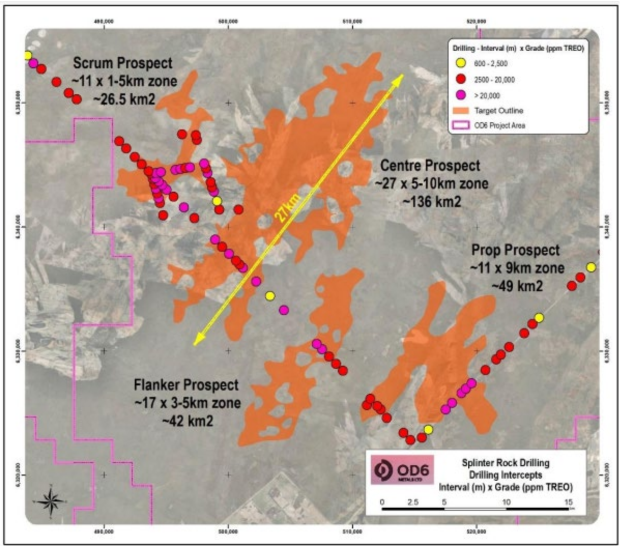
The Phase 2 drilling program was completed in April 2023. The program comprised 83 holes to an average depth of 50m for 4305m (OD6 release 27 February 2023.

The assay results for the Phase 1 program have been reported. Of the 190 holes drilled, 106 reported assay results in excess of 300ppm with 53 assays outstanding, and the weighted average grade of those holes was 855ppm TREO.

Aerial Electro- Magnetic Survey

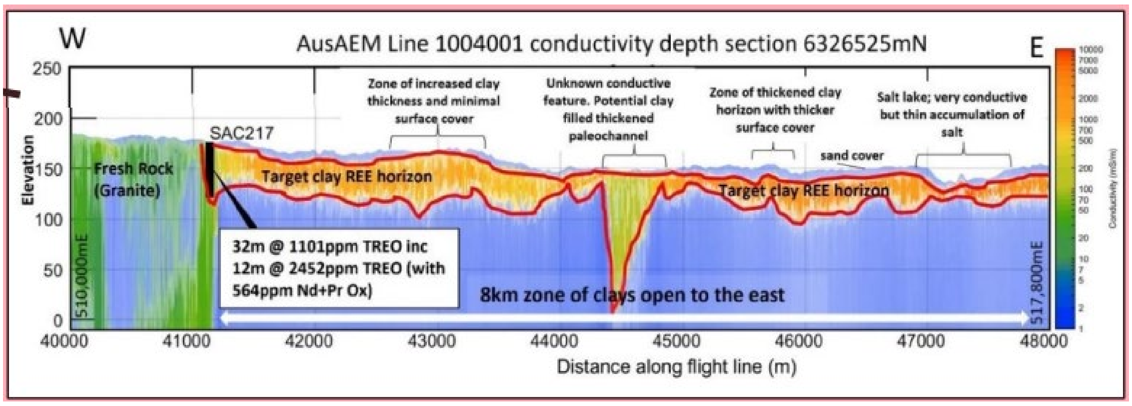
The Aerial Electro-Magnetic survey results were announced on 15 December 2022 and have highlighted the likely distribution and extent of the clay horizons in terms of both area, thickness, and depth. The company has indicated the AEM data is consistent with the clay locations and thicknesses observed in the drilling. This information can be combined with the drilling to generate an exploration target.

FIGURE 16 SURFACE AREAS OF CLAY IDENTIFIED USING AIRBORNE ELECTROMAGNETIC SURVEY WHICH HAVE AUGMENTED THE LIMITED LINES OF DRILLING THAT MAKE UP THE CURRENT RESOURCE



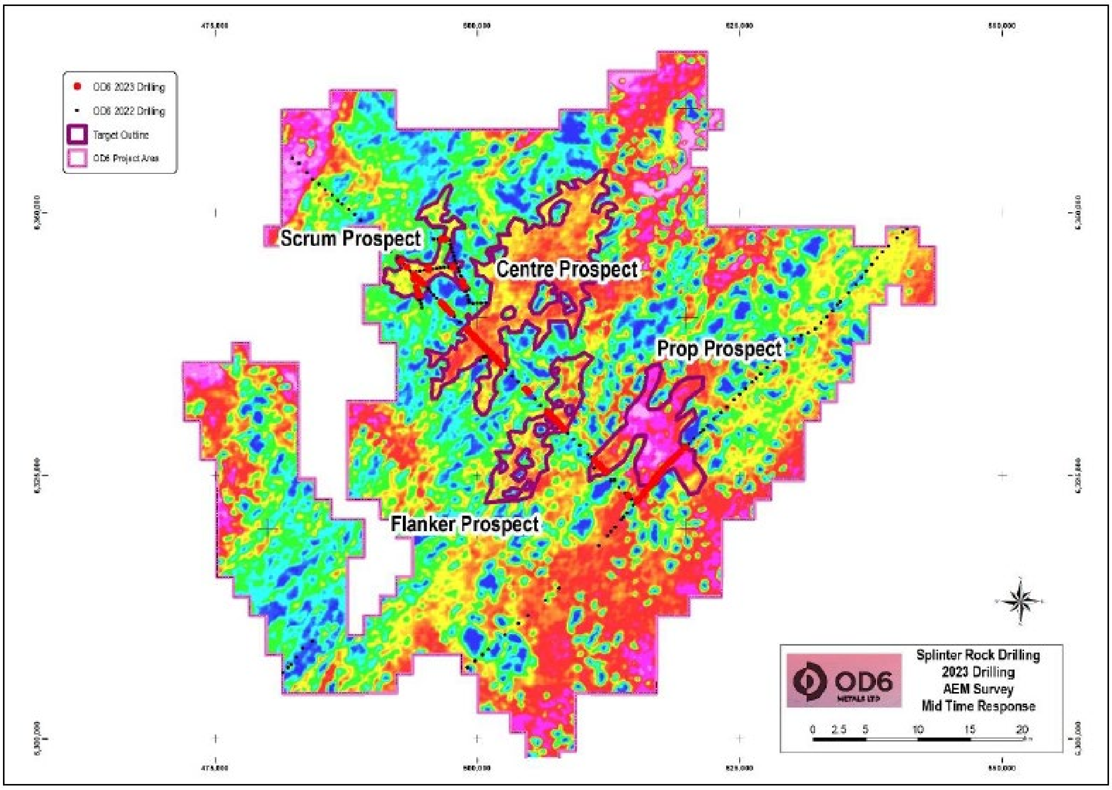
Source: OD6 release 15 December 2023

FIGURE 17 CROSS SECTION SHOWING THE



Source: OD6 release 15 December 2022

FIGURE 18 AEM MID TIME ELECTROMAGNETIC CONDUCTIVITY MODEL HIGHLIGHTING FOUR MAIN PROSPECTS



Source: OD6 release 27 February 2023. Yellow, red, pink areas interpreted to indicated thicker clay zones, with blue areas the granites, black dots are 2022 drill hole locations, red dots are 2023 drill hole locations.

The drilling that comprises the current Resource is highlighted in Figures 16 and 18, and those drill lines are presented in the sections below.

The results of the Electroconductivity model are shown in Figures 17 and 18 and provide a three dimensional picture of the clay basins in which drilling has detected rare earths. The clarity of the geological picture will target current and future drilling and has provided confidence of continuity that has underwritten the current Resource estimate.

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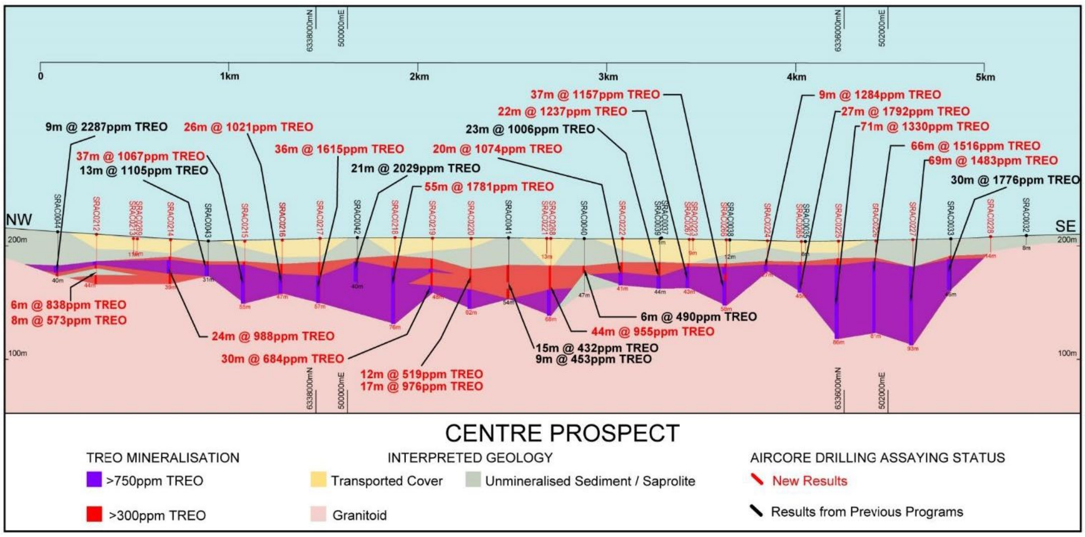
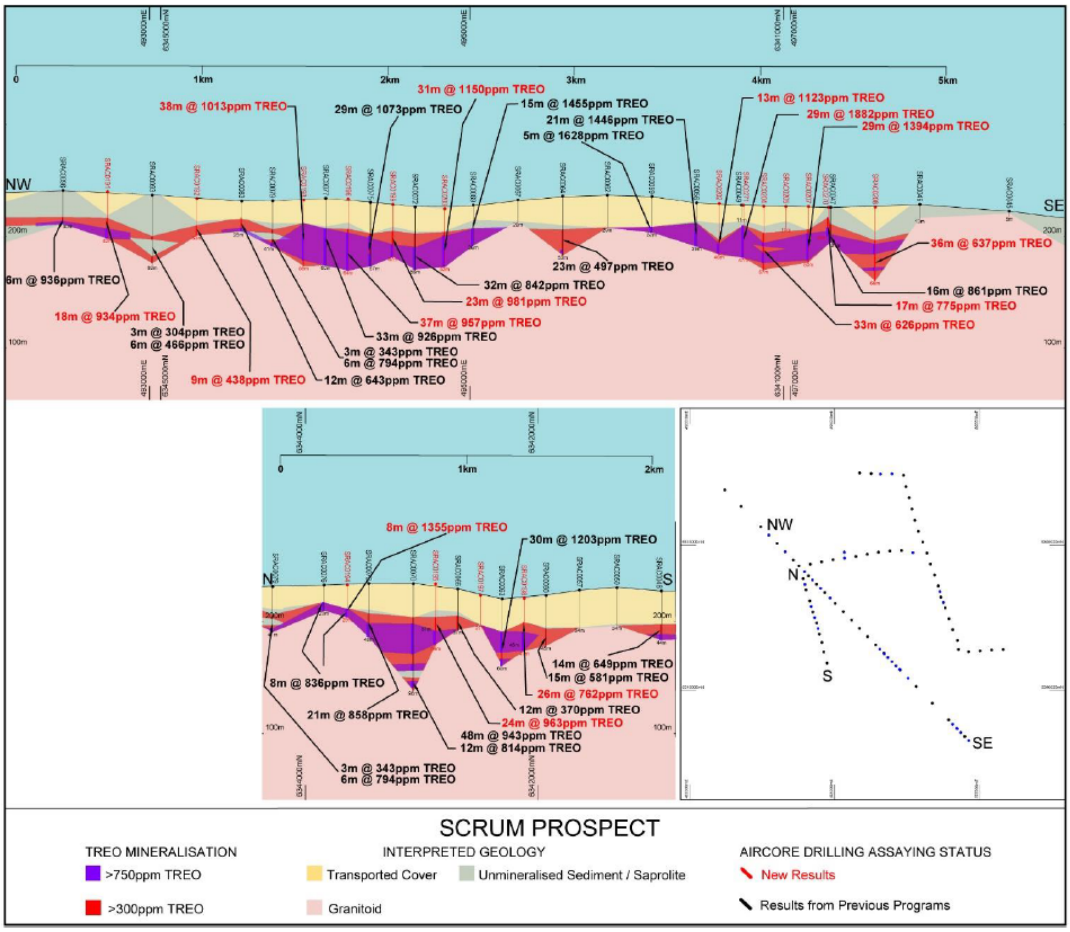
FIGURE 19 SECTION THROUGH THE LINE OF DRILLING THAT MAKES UP THE CENTRE PROSPECT RESOURCE



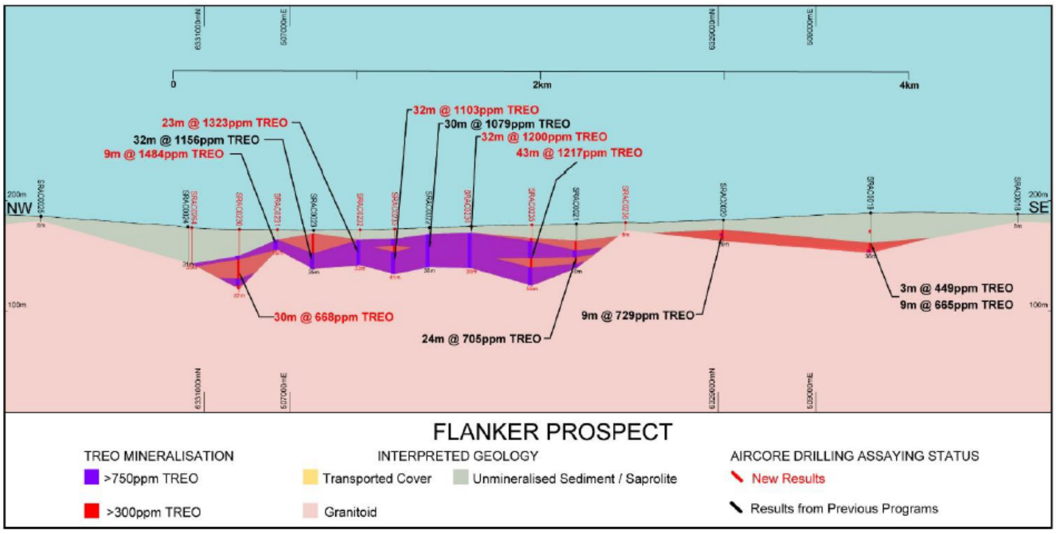
Source: OD6 release 18 July 2023

FIGURE 20 SECTION THROUGH THE LINE OF DRILLING THAT MAKES UP THE SCRUM PROSPECT RESOURCE



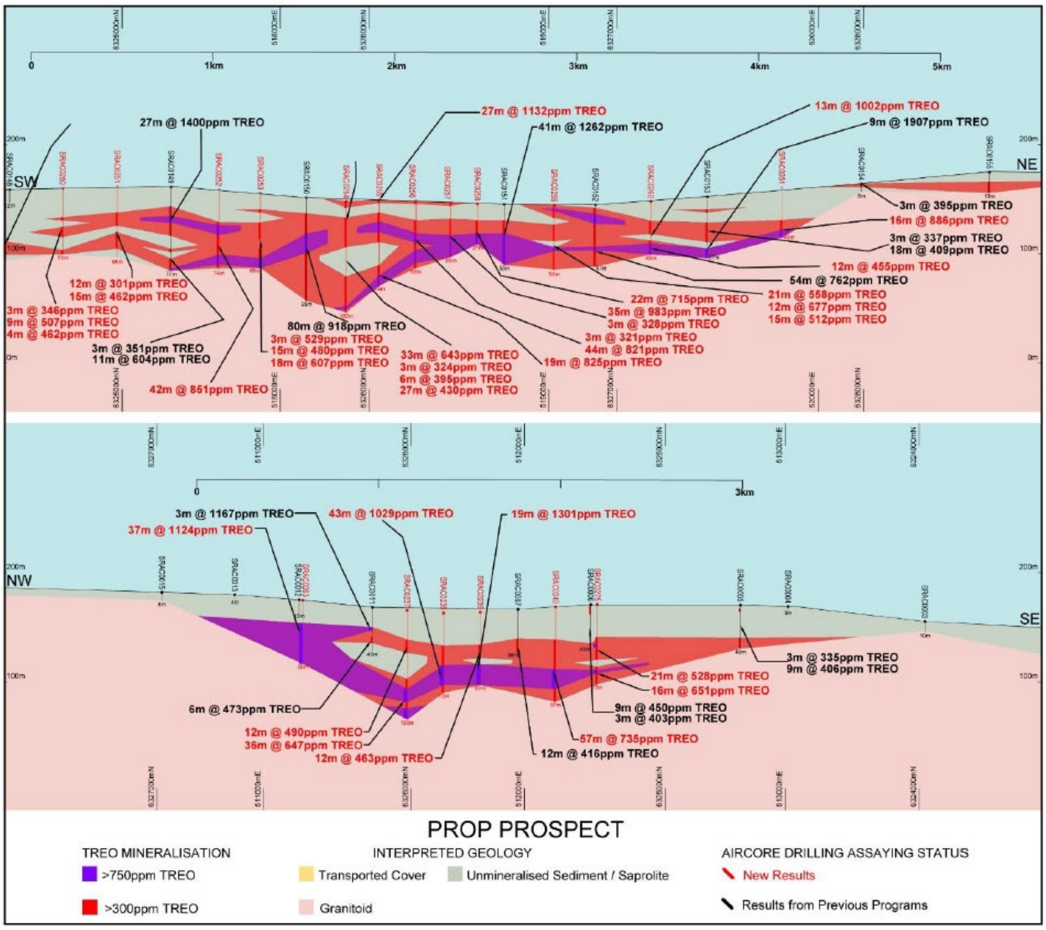
Source: OD6 release 18 July 2023

FIGURE 21 SECTION THROUGH THE LINE OF DRILLING THAT MAKES UP THE FLANKER PROSPECT RESOURCE



Source: OD6 release 18 July 2023

FIGURE 22 SECTION THROUGH THE LINE OF DRILLING THAT MAKES UP THE PROP PROSPECT RESOURCE



Source: OD6 release 18 July 2023

Rare earth commodity outlook

The table below highlights the significant growth in demand for rare earths and particularly the magnet rare earths between now and 2031. It also highlights the current dominance of China, now widely perceived to be a strategic weakness by the US and Europe.

TABLE 19 2022 RARE EARTH SUPPLY BY SOURCE AND FORECASE 2031 DEMAND

Origin	Annual REO			Ratio
	Total	NdPr****	DyTb****	NdPr/DyTb
China – hard rock (2022)*	190,850	42,021	329	**128**
China – Ionic Clays (2022)*	19,150	4,144	1,121	**4**
Myanmar – Ionic Clays (2022)**	12,000	2,597	703	**4**
Controlled by China (2022)	**222,000**	**48,762**	**2,153**	**23**
USA – Mountain Pass (2022)***	43,000	7,009	47	**149**
Australia/Malaysia – Mt. Weld (2022)***	18,000	6,000	69	**87**
Others (2022)**	18,000	3,233	44	**73**
RoW (2022)	**79,000**	**16,242**	**160**	**102**
Total Supply (2022)	**301,000**	**65,004**	**2,313**	**28**
Total Demand (2031)	**-**	**110,791**	**7,388**	**15**
Required by (2031)	**-**	**42,715**	**4,617**	**9**

*Ministry of Industry and Information Technology (MIIT): 2022 announced production quotas for the full year
**USGS Rare Earths 2023 report: Myanmar and others 2022 production
***Annual Report
****Estimation: Based on previous public reports and could potentially suffer variation based on the grade that was mined in 2022

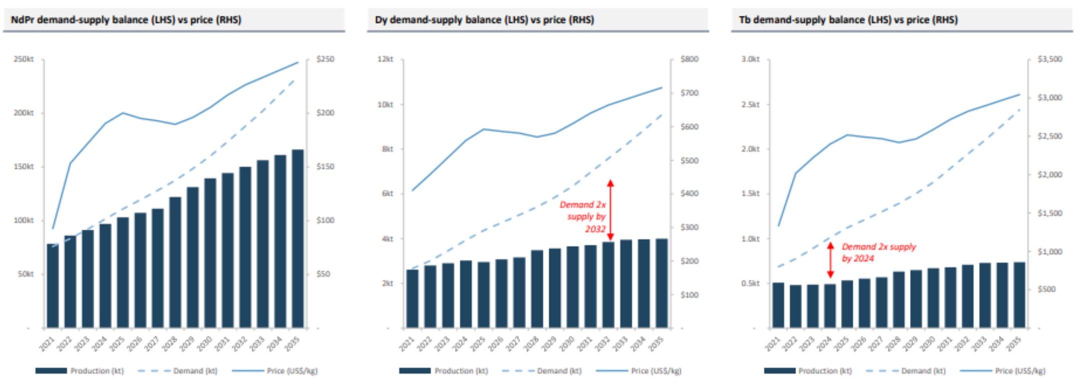
Source: Aclara presentation March 2023 https://uploads-ssl.webflow.com/6267a587be31507747a1c8b6/6419f6071c6fe8e7e56179bb_Aclara%20%20-%20Corporate%20Presentation%20(21-03-2023).pdf

There are a large number of projects seeking to enter the supply chain. However, the history of rare earth supply since the price explosion in 2010 has shown that getting into production is not straight forward. Some of the junior companies may be raising money on the rare earths story while focussing on other commodities so new rare earth supply will only be delivered by companies that are focussed and determined to deliver.

The current environment appears to be the most favourable for the development of non-Chinese supply of any time in the last two decades.

However, the expected pace of demand growth will require a doubling of supply over the next decade, and that will be a challenge, particularly if Chinese ionic clay production is reduced either by exhaustion or curtailment due to tougher environmental regulation.

FIGURE 23 SUPPLU DEMAND OUTLOOK FOR NDPR, TERBIUM AND DYSPROSIUM – THE MAGNET RARE EARTHS



Source: Adamas quoted in ABx presentation 4 April 2023

Capital and Debt Structure

46% of issued shares are escrowed and unable to trade until 22 June 2024

TABLE 20 CAPITAL STRUCTURE

Issued Shares 4 Jan 2023	Million	Exercise Price A$/sh	Funds Raised A$M	Status
Ordinary				
Issued	55.02			Unrestricted
issued	47.44			Restricted to 22 June 2024
	102.45			
Options				
31-Mar-26	2.83	0.30	0.85	Restricted to 22 June 2024
31-Mar-26	1.50	0.50	0.75	Restricted to 22 June 2024
31-Mar-26	0.13	0.30	0.04	
13-Apr-25	0.30	0.25	0.08	Restricted to 22 June 2025
20-Jun-25	2.50	0.30	0.75	Restricted to 22 June 2024
31-Oct-25	22.05	0.30	6.62	Restricted to 22 June 2024
9-Oct-26	0.90	0.30	0.27	
	30.20		9.35	
Performance Rights	2.50			Restricted to 22 June 2024
Fully Diluted	**135.15**			

Source: OD6 ASX Admission and Quotation release 20 June 2022

Of the shareholdings that can trade, there is a broad distribution with no large shareholder blocks. Because the bulk of that group entered the register in the Initial Public Offering of June 2022, and the company has materially progressed its business over the last year, the register is likely to be supportive of the company.

TABLE 21 MAJOR SHAREHOLDERS

Shareholder Group	Interest	Restrictions
Founders excl Directors & Management	40%	Escrowed to 22 June 2024
Directors & Management	13%	~half escrowed to 22 June 2024
Institutions	7%	Unrestricted
Retail & Other	40%	Unrestricted

Source: OD6 presentation 11 November 2022

Board and Management

Dr Darren Holden Non-Executive Chair BSc (Hons), PhD

Dr Holden is a geologist and experienced director of 25 years of worldwide experience in mineral discovery and mineral exploration technologies.

Dr Holden is currently a Non-Executive Director of Aurumin Limited (ASX: AUN). He has previously been a director of ABM Resources NL (ASX:PRX), an alternative director of Todd River Resources Limited (ASX:TRT) and Clancy Exploration Limited (ASX:CLY).

Currently, Dr Holden runs GeoSpy Pty Ltd, a private mineral exploration advisory business with clients in Western Australia New South Wales, British Columbia and Fiji. He is a member in good standing of the Australian Institute of Mining and Metallurgy.

Dr Holden was appointed as a Director on 27 October 2021.

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Dr Holden is not considered to be an independent Director as he is a substantial shareholder of the Company.

Mr Brett Hazelden Managing Director & Chief Executive Officer BSc, MBA, AICD

Mr Hazelden is a Metallurgist who brings over 25 years' experience serving the Australasian resources industry. His experience includes being a Company Director, Managing Director, CEO, Project Manager, Study Manager and originally a Metallurgist in an operating environment.

Mr Hazelden brings a diverse range of capabilities from exploration, project development studies, research and development, project approvals, offtake agreements, equity raising, debt financing plus mergers and acquisitions. He has worked across multiple commodities including potash, gold, copper, zinc, lead, iron ore, tungsten, salt, diamond and now rare earth sectors. Most recently, Brett was the Co-founder and Managing Director/CEO of Kalium Lakes (ASX:KLL).

Mr Hazelden was appointed as a Director on 1 April 2022.

Mr Hazelden is not considered to be an independent Director as he is engaged in an executive capacity.

Mr Piers Lewis Non-Executive Director B.Com, ACA, FAICG

Mr Lewis has over 25 years corporate advisory experience with various ASX companies and Investment Banks. He founded SmallCap Corporate, which provides corporate advisory, IPO management, CFO and company secretary services.

Mr Lewis is currently Non-Executive Director and Company Secretary for a number of ASX listed companies, including Non-Executive Chair of Aurumin Ltd (ASX: AUN), and Non-Executive Director of Noronex Ltd (ASX: NRX), company secretary of Grange Resources Limited (ASX: GRR) and Almonty Industries Inc. (ASX: AII). Mr Lewis has also held senior management roles with Credit Suisse (London), Mizuho International, ABN Amro and NAB Capital.

Mr Lewis was appointed as a Director on 27 October 2021.

Although Mr Lewis holds Securities in the Company and will receive Incentive Options, Mr Lewis is considered to be an independent Director.

Dr Mitch Loan Non-Executive Director BSc (First Class Honours), PhD Curtin University, AAICD

Dr Loan is a mining executive with over 20 years experience. Mitch has diverse experience in operational, commercial, strategy, stakeholder management, governance and technical and corporate development across the minerals industry. Dr Loan is currently the Global Director of Strategy and Business Development for Alcoa, a leading mine to metal Aluminium company.

Dr Loan was appointed as a Director on 12 April 2022.

Although Dr Loan will receive Incentive Options and Performance Options, Dr Loan is considered to be an independent Director.

Mr Joel Ives Joint Company Secretary B.Com, CA

Mr Ives is a Chartered Accountant who has held numerous roles as Chief Financial Officer and Company Secretary of private and public start-up technology and resource exploration companies. He has assisted a number of ASX listing, via both IPOs and RTOs and has ensured ongoing regulatory compliance post-listing.

Mr Ives is currently a Company Secretary of DigitalX Ltd (ASX:DCC), Kuniko Limited (ASX: KNI) and Green Technology Metals Limited (ASX:GT1) and Joint Company Secretary of Harvest Technology Group Limited (ASX:HTG). OliveX Holdings Limited (NSX:OLX).

Mr Troy Cavanagh Joint Company Secretary B.Com, CA

Mr Cavanagh is a Chartered Accountant with 15 years' experience in the accounting and corporate finance industry. He is the founding director of LCP Group, which specialises in accounting, taxation and IPO management and provides CFO and company secretary services to a range of ASX listed and large private entities.

Mr Cavanagh has performed roles as Chief Financial Officer and Company Secretary of various private resource exploration and technology companies, assisting with strategy, governance and dealings with other ASX listed entities.

Mr Tim Jones Exploration Manager BSc MSc

Tim is a professional geologist with over 20 years experience in mineral exploration, project development and production in Australia and Southeast Asia. He has held a variety of roles including Exploration Manager and Site Senior Executive with Liberty Resources, Stanmore Coal, Linc Energy and Exploration Superintendent with Australian Mineral Consultants.

Tim has managed exploration and evaluation of coal, gold, copper and iron deposits and has been involved in several successful exploration and resource development projects. Tim's expertise lies in the geological definition and commercial assessment of mineral exploration and mining projects, and in building and operating project teams. Tim is a full member of the Australian Institute of Geoscientist and Certified Professional.

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Analyst Verification

I, **Michael Harrowell**, as the Research Analyst, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

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We acknowledge that Senior Resource Analyst, **Michael Harrowell**, holds no shares in **OD6 MetalsLimited**.

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