

Asra Minerals Limited ABN 72 002 261 565 104 Colin Street West Perth WA 6005 Australia Phone +61 8 9420 8208 info@asraminerals.com.au ASX: ASR

asraminerals.com.au

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ASRA DECLARES MAIDEN MRE FOR YTTRIA REE DEPOSIT

Highlights:

- Maiden Mineral Resource Estimate (MRE) of 15Mt at 490ppm TREO for Asra's 100%-owned Yttria Rare Earth Elements (REE) Deposit in the Goldfields of Western Australia
- MRE with uniquely high ratio of 55% Heavy and 22% Magnet Rare Earth Oxides
- More than half of the MRE within the higher confidence 'Indicated' classification
- MRE only represents a very small part of the prospective land area
- Significant REE Exploration Target defined along strike of Yttria, extending over a corridor more than 20km long on Asra's Mt Stirling project near Leonora
- Quality of MRE underpinned by recent positive metallurgical results and Independent resource estimation by Snowden-Optiro Consultants
- High scandium oxide content of 67ppm identified in REE mineralisation domain, as well as additional scandium mineralisation above and below the REE horizon

Asra Minerals Limited (ASX: ASR) is pleased to announce its maiden JORC (2012) Mineral Resource Estimate (MRE) for its 100%-owned Yttria Rare Earth Element (REE) Deposit, located on its Mt Stirling Project near Leonora in the Goldfields region of Western Australia.

The MRE of **15Mt at 490ppm Total Rare Earth Oxide (TREO) with 67ppm scandium oxide (Sc₂O₃)** covers the first 2km of strike at the Yttria REE Deposit, with 55% of the tonnes within the Indicated JORC Category.

The MRE has an exceptionally high ratio of **55% Heavy Rare Earth Oxides (HREO)** incorporating **high value dysprosium (Dy) and terbium (Tb)** Rare Earth Oxides.

A REE Exploration Target* of an additional <u>110-300 Mt at 450-550 ppm TREO</u> at Mt Stirling presents Asra with the opportunity to extend the current Mineral Resource at Yttria.

Importantly, the Yttria Deposit has minimal overburden and presents very favourably to simple open-cut mining, supported by Tier 1 transportation links and other required infrastructure in the world-class Goldfields mining region.

Asra's Managing Director, Rob Longley commented:

"Our maiden MRE for the Yttria REE Deposit is an exciting moment for Asra Minerals and our shareholders, placing us another step closer to delivering the critical minerals needed to charge global electrification.

"This MRE sits neatly within our extensive gold portfolio at Mt Stirling in the world-renowned Goldfields region, where we also hold a current gold JORC Resource of 152,000 oz @ 1.7g/t Au across the project¹.

¹ MS Viserion: Mt Stirling: 391,000t at 2.1 g/t Au for 26,000oz (Indicated) 2,158,000t at 1.6 g/t Au for 111,000oz (Inferred) 198,000t at 2.3 g/t Au for 15,000oz (Inferred)

^{*}The potential quantity and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration completed to estimate Mineral Resources. Furthermore, it is uncertain if further exploration will result in defining additional Mineral Resources.



"Our focus will now turn to progressively expanding and growing the REE resource at Mt Stirling and utilise these learnings for exploration activity at our nearby Kookynie West Project, just south of Leonora.

"I look forward to providing further updates as we venture into this next phase of exploration across our multicommodity portfolio in Western Australia."

Maiden MRE at Yttria REE Deposit

The maiden MRE of 15Mt at 490ppm TREO has been estimated over an initial drilled area spanning 2.1km long x 2.7km wide, just below surface to a maximum depth of 40m below surface (**Figure 1 to 5**).

Of the total MRE, more than half of the tonnage is within the high confidence 'Indicated' JORC Code category, reflecting the detailed drilling and technical work undertaken to date (**Table 1 and Appendix**).

This derisking and uniquely high content of Heavy Rare Earth Oxides sets Yttria apart from most other clay hosted REE deposits in Australia, which are predominately only in the 'Inferred' category or early exploration stages of evaluation.

JORC	Tonnes	TREO	MREO	LREO	HREO	Pr ₆ O ₁₁	Nd ₂ O ₃	Dy ₂ O ₃	Tb ₄ O ₇	Sc ₂ O ₃	U
Classification	Mt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Indicated	7.7	480	100	190	280	13	59	25	3.8	69	0.6
Inferred	7.3	500	110	240	250	16	68	23	3.6	67	0.7
Total	15.0	490	110	220	270	15	64	24	3.7	68	0.6
))			MREO		HREO	Pr-	Nd	Dy	-Tb		
			22.5%		55%	7 9p	pm	27.7	ppm		

Yttria Mineral Resource Estimate in accordance with the JORC (2012) Code

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 Table 1: Yttria REE MRE and Exploration Target

- Rare Earth Mineral Resources reported above a cut-off grade of 200 ppm TREO-Ce
- All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal
- Total Rare Earth Oxides (TREO) defined as La, Ce, Pr, Nd Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y
- Magnet Rare Earth Oxides (MREO) defined as Pr, Nd, Tb, Dy
- Uranium (U) and thorium (Th), not part of the Mineral Resource reported as potentially deleterious elements.
- The mineralisation is truncated by an east-west trending Mafic Dyke (Figures 2 and 3) that has not been drill tested and is currently assumed to be non-mineralised.



Figure 1: Cross section C-C' of the MRE at Yttria showing excellent TREO grade continuity and position close to surface.

Th ppm 0.7 1.3 1.0



The uniquely high ratio of 55% heavy and 22.5% magnet rare earth oxides adds to the attractiveness of Yttria as a well-studied deposit in a Tier 1 mining jurisdiction that will expand as ongoing exploration and metallurgical work provides further detail on the controls on mineralisation and refinement in potential recoveries and methods of extraction.

Phase one metallurgy found two potential pathways to extract REE at Yttria, with exceptional results, including Magnet Rare Earth Elements (MREO) extractions of up to 78% (*refer to ASX announcement 2 April 2024*).

Critical minerals, including REEs, remain high on the agenda of governments and institutions to support, both in Australia and around the world.

Asra looks forward to growing this important resource and finding new and innovative ways to explore and extract highly sought-after magnet and heavy rare earth oxide metals.

These metals will be vital in providing the materials needed for clean and sustainable energy solutions to assist with global decarbonisation and the transition towards greater electrification.



Figure 2: Drillhole and geological plan of the Yttria REE Deposit showing the maiden MRE area.











Figure 4: Additional representative cross-sections (looking northwest) through the Yttria REE block model showing excellent shallow grade continuity and drillhole definition density.

Scandium Mineralisation

Scandium has been estimated at an average high grade of 68 ppm Sc_2O_3 within the MRE of the REE domain (**Table 1**). However, it is important to emphasise that highly enriched levels (>100ppm) of scandium oxide mineralisation exist both above and below the rare earth horizon at Yttria.

Metallurgical test work to date has indicated extraction of over 40% Sc₂O₃ can be achieved with standard rare earth acid leach (*refer to ASX announcement 2 April 2024*).

Asra is undertaking specific scandium extraction metallurgical testwork separate to REE work, given the high concentration, excellent recovery potential and abundant tonnage potential at Yttria.

Any future pre-strip or removal of overburden above the Yttria REE mineral resource horizon (will extract soft clays with highly enriched scandium oxide content. Therefore, it would most likely be treated as 'mineralised waste' and stockpiled discretely for potential future processing, specifically for scandium.



Figure 5: Yttria cross section B-B' showing highly enriched Scandium oxide zone in orange, above the REE zone (red).



REE Exploration Target for Yttria

A REE Exploration Target of **110-300 Mt at 450-550ppm TREO*** has been defined immediately along strike to the north and south of Yttria, presenting a potential opportunity to extend the current Mineral Resource.

For example, there is clear continuity of the same style of regolith-hosted REE mineralisation to the north and west of the Yttria MRE area into the Wishbone REE prospect, which has multiple drillhole intercepts of mineralised REE oxides as high as 1507ppm TREO (*MSAV0854, 12-13m, refer ASX announcement 9 May 2023*).

The REE mineralisation is also completely open to the south and a simple step out drill program can be designed to add to the maiden MRE, which has been limited to areas with sufficient drill coverage to meet JORC Code (2012) requirements.

The approach to estimate an Exploration Target tonnage range over a larger area at Asra's Mt Stirling Project was based on the same initial geochemical technique that led to the discovery of sub-surface mineralised rare earth oxide system at Yttria.

A handheld pXRF machine was used in 2021 to map arsenic soil values for gold targeting over what is now the Yttria REE Deposit area, however elevated values of yttrium (Y) were noted from the data with 15-20ppm Y being established as a separate and distinct anomalous population well above normal background values.



Figure 6: Asra's Exploration Manager at Yttria inspecting drill chips and taking Niton pXRF readings of soil samples.

Yttrium is a well-established pathfinder element for REE mineralisation in the same way arsenic can be used to define potential gold mineralisation target areas.

In addition, geological detail was applied to the Exploration Target area definition by including known areas of well-developed regolith profiles over mafic/ultramafic volcanics and weathered granitic terrain.

Asra compiled a historical drillhole database representing over 70,000m of drilling including RAB, RC, AC and diamond drill holes up to 537m deep, which ensured the geology of the region was well understood.

The areas included are all located in Asra's Mt Stirling project, and within the prospective geological, geochemical and structural setting considered highly prospective for additional subsurface REE oxide mineralisation.

In conjunction with gold exploration and other programs, Asra intends to continue its geochemical surveys and mapping to define specific REE drill targets for subsequent campaigns to test the validity of the Exploration

Target and ultimately expand the MRE at the Yttria REE Deposit.

Based on the above information, Asra believes the Exploration Target^{*} is a reasonable and realistic estimate of the REE exploration potential within a +20km long corridor surrounding the Yttria REE Deposit at the Company's Mt Stirling Project near Leonora in Western Australia.

*The potential quantity and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration completed to estimate Mineral Resources. Furthermore, it is uncertain if further exploration will result in defining additional Mineral Resources.







Figure 7: Inspecting drill core at Mt Stirling.



Figure 8: Exploration Target Areas within the prospective REE corridor that have been geochemically tested.





Figure 9: Exploration Target Areas within the prospective REE corridor that have not yet been geochemically tested.



The parameters and assumption of various parameters for the Exploration Target are detailed below.

Parameter	Definition	Comments
Geological Setting	REE Corridor	A 5km wide north-south trending 'REE-Prospective' corridor has been defined at Mt Stirling (Figure 8). The corridor is based on multiple factors including elevated REE geochemistry, historical drilling, suitable development and structural positioning. While most of the corridor is within Archean greenstone volcanics (mafic and ultramafic) elevated REE indicators from geochemical sampling are evident in the immediately surrounding granitic terrain. As such, Exploration Target ranges have been estimated in both the Volcanics and Granitic terrains. Target grade ranges were derived from the Yttria MRE grade +/- 10% about the average grade (TREO average 500 ppm).
Extrapolation from MRE Area		The JORC MRE at Yttria has been used on a tonnes/per square km basis to extrapolate potential tonnage into 24 defined REE target areas across Asra's tenement holding at Mt Stirling. The surface area footprint of the 15Mt Yttria JORC resource is 2.8km ² . Therefore, a factor of 1km ² = 5.4Mt has been applied when estimating tonnages in the 24 target areas. The area of any cross cutting mafic dykes, (assumed barren), have been removed.
Classification of Areas	Tested/Untested Mafic Volcanics Granitic terrain	The geology and specific location of geological contacts at Mt Stirling is well understood from aerial and ground geophysical surveys and drilling information. Therefore, the targets could be separated into either Mafic or Granitic categories. The 'tested' targets are considered higher confidence and therefore represent the lower tonnage range of the Exploration Target The untested, yet still within REE Corridor Target, are less confident and therefore represent the upper tonnage range. While untested for REE, most of these areas have been drilled for gold and therefore the regolith profiles is understood and still considered prospective for similar REE mineralisation as is evident at Yttria For targets within the granitic terrain, a 50% discount factor was applied to the lower tonnage range estimate to allow for the fact that granite hosted REE mineralisation has not yet been drill tested at Mt Stirling., However, many clay-hosted REE deposits are known in granitic terrain in both WA and Queensland, so it is considered appropriate to include these areas to the Exploration Target given the elayeted geoster the vertice of the stirling.
Drilling		Asra has collated a drillhole database of +2,700 drillholes at its Mt Stirling Project represented by more than 70,000m of drilling, sampling and geological data. Most drilling has targeted gold mineralisation, but drill data has provided a good model of subsurface geology, weathering, regolith development and geochemistry.

Table 2: Exploration Target Parameters.



The table below summarises the potential tonnages within each of the 24 potentially mineralised domains illustrated on Figure 8 and Figure 9 (above).

ID	Location	Geochemically Sampled	Area Km ²	Target REE (Mt)	Based on Yttria 5.4Mt/km ²
1	Mafic Volcanics	Yes	0.6	3	
2	Mafic Volcanics	Yes	1.9	10	
3	Mafic Volcanics	Yes	0.2	2	
4	Mafic Volcanics	Yes	0.3	2	
5	Mafic Volcanics	Yes	2.9	15	
6	Mafic Volcanics	Yes	1.4	8	
7	Mafic Volcanics	Yes	4.1	22	
8	Mafic Volcanics	Yes	0.5	3	
9	Mafic Volcanics	Yes	1.5	8	
				<mark>74Mt</mark>	Lower tonnage range -Volcanics
17	Mafic Volcanics	No	2.5	14	
18	Mafic Volcanics	No	1.7	10	
19	Mafic Volcanics	No	4.3	23	
20	Mafic Volcanics	No	0.4	2	
21	Mafic Volcanics	No	0.6	3	
22	Mafic Volcanics	No	1.3	7	
23	Mafic Volcanics	No	12.4	67	
24	Mafic Volcanics	No	4.4	24	
				150Mt	Add to Upper tonnage range -Volcanics
10	Granites	Yes	4.9	27	
11	Granites	Yes	0.2	2	
12	Granites	Yes	0.5	3	
13	Granites	Yes	0.2	1	
14	Granites	Yes	0.4	3	
15	Granites	Yes	1.4	8	
16	Granites	Yes	4.7	26	
				<mark>35 Mt</mark>	Lower tonnage range: Granites x 50%
				70 Mt	Upper tonnage range: Granites x100%
				109 Mt	110 Mt Lower tonnage Target
				294 Mt	300 Mt Upper tonnage Target

Table 3: Tabulation of exploration tonnage targets at Mt Stirling.

-Ends-



This announcement has been authorised for release by the Board.

INVESTORS:

Rob Longley Managing Director Asra Minerals Ltd info@asraminerals.com.au

MEDIA:

Emily Evans SPOKE. +61 401 337 959 emily@hellospoke.com.au



Figure 10: Location of Asra's projects in Western Australia.



About Asra Minerals

Asra Minerals is a multi-commodity focused exploration company, targeting a growing gold, lithium and rare earth element (REE) portfolio in the premier Goldfields region of Western Australia.

The Company's flagship Mt Stirling Project is located 240km north of Kalgoorlie and hosts 10 gold prospects, and a gold JORC Mineral Resource. The project also shows significant potential for REE and critical minerals including Scandium.

Asra's Kookynie West Project, situated less than 50km south, is a largely underexplored site showing gold, lithium and REE potential.

Asra has two lithium-focused exploration projects in the southern Yilgarn area of WA at Lake Johnston and Lake Cowan, located in highly prospective ground between operating lithium mines at Earl Grey and Bald Hill.

Asra's footprint in the world-class Eastern Goldfields region currently stands at 1,311km².

The Company has joint ventures in the Kalgoorlie-Mt Monger region with Loyal Lithium (ASX: LLI) focusing on gold exploration. Asra also retains an equity holding in Loyal Lithium, a lithium exploration company targeting highly prospective areas in North America.

Led by a strong and experienced team, Asra Minerals is focused on developing these prospective projects, with a view to meet rising global demand for REE and critical minerals.



Figure 11: Location of Asra's Projects in its northern and southern Hubs in Western Australia.



Competent Person Statement

Technical data contained in this report relating to Rare Earth Oxide and scandium results and Exploration Target estimations are based on information compiled and evaluated by Robin Longley, a Geologist and current Managing Director of Asra Minerals. Mr Longley is a Member of the Australian Institute of Geoscientists with sufficient relevant experience in relation to Archaean regolith mineralisation, rare earth element geochemistry and critical metal mineralisation to qualify as a Competent Person as defined in the Australian Code for Reporting of Identified Mineral resources and Ore reserves (JORC Code 2012). Mr Longley consents to the use of this information in this report in the form and context in which it appears.

The information in this document that relates to Mineral Resources is based upon information compiled by Mrs Christine Standing who is a Member of the Australian Institute of Geoscientists. Mrs Standing is an employee of Snowden Optiro (Optiro Pty Ltd) and has sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code 2012 edition). Mrs Standing consents to the inclusion in the report of a summary based upon her information in the form and context in which it appears.

Information on the gold JORC Mineral Resources presented, together with JORC Table 1 information, is contained in the ASX announcement released on 25 February 2019, 29 January 2020 and 5 September 2022. The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant market announcements, and that the form and context in which the Competent Persons findings are presented have not been materially modified from the original announcements.

Where the Company refers to Mineral Resources in this, it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the Mineral Resource estimate with that announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not materially changed from the original announcement.

Cautionary Note Regarding Forward-Looking Statements

This news release contains "forward-looking information" within the meaning of applicable securities laws. Generally, any statements that are not historical facts may contain forward-looking information, and forward looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget" "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or indicates that certain actions, events or results "may", "could", "would", "might" or "will be" taken, "occur" or "be achieved." Forward-looking information is based on certain factors and assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, Gold and other metal prices, the estimation of initial and sustaining capital requirements, the estimation of labour costs, the estimation of mineral reserves and resources, assumptions with respect to currency fluctuations, the timing and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the Project, permitting and such other assumptions and factors as set out herein. apparent inconsistencies in the figures shown in the MRE are due to rounding.

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: risks related to changes in Gold prices; sources and cost of power and water for the Project; the estimation of initial capital requirements; the lack of historical operations; the estimation of labour costs; general global markets and economic conditions; risks associated with exploration of mineral deposits; the estimation of initial targeted mineral resource tonnage and grade for the Project; risks associated with uninsurable risks arising during the course of exploration; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support exploration activities; risks associated with changes in the mining regulatory regime governing the Company and the Project; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalisation and liquidity risks including the risk that the financing necessary to fund continued exploration and development activities at the Project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issuance of additional common shares of the Company; the risk of litigation.

Although the Company has attempted to identify important factors that cause results not to be as anticipated, estimated or intended, there can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. Forward looking information is made as of the date of this announcement and the Company does not undertake to update or revise any forward-looking information this is included herein, except in accordance with applicable securities laws.



References

Information in this announcement relates to exploration results that have been reported in the following announcements:

- 2024
 - 2nd April Metallurgical Results Confirm Ability for High Rare Earth Extraction.
 - 13th February Large Lithium and REE Anomalies Defined at Kookynie West.

2023

- 18th September Asra Secures Highly Prospective Lithium Projects.
- 4th September Yttria Met Testwork Update and Cash Balance Boosted.
- 3rd July Final Assays Confirm High-Value Deposit at Yttria.
- 10th May 2023 Asra Expands Portfolio to Kookynie.
- 9th May 2023 Outstanding Heavy Rare Earth Content and Thick Scandium Zone.
- 14th March Drill Results Confirms Significant High Grade HREE at Yttria.

2022

- 28th September Rare Earth Elements Mt Stirling Project Update.
- 21st July Interim REE Mineralogical Study yields positive results.
- 11th July New Exploration Program to Target REE and Critical Minerals.
- 13th May Critical Minerals discovery at Yttria HREE prospect.
- 9th February HREE Discovery at Yttria Reconfirmed and Upgraded.
- 31st January Mt Stirling Central HREE Discovery Confirmed.
- 14th January Rare Earths Potential Uncovered at Mt Stirling Central.

Definitions

- REE Rare Earth Elements
- REO Rare Earth Oxides
- TREO Total Rare Earth Oxides plus yttrium
- TREO-Ce Total Rare Earth Oxides minus cerium
- MREO Magnet Rare Earth Oxides (dysprosium + terbium + praseodymium + neodymium)
- HREO Heavy Rare Earth Oxides (europium + gadolinium + terbium + dysprosium + holmium + erbium + thulium + ytterbium + lutetium + yttrium)
- LREO Light Rare Earth Oxides (cerium + praseodymium + neodymium + samarium)

Summary of JORC 2012 Table 1

A summary of JORC Table 1 (included as Appendix 1) is provided below for compliance with the Mineral Resource and in-line with requirements of ASX listing rule 5.8.1.

Geology and Mineralisation Interpretation

The Yttria REE deposit, part of Asra's Mt Stirling Project, is located within the Leonora District of the Kalgoorlie terrane, approximately 30 km northwest of Leonora in Western Australia. Geologically, the project sits within the Archean Norseman-Wiluna Greenstone Belt. The Mt Stirling Project areas are within the older (pre-2817 Ma) Leonora stratigraphy which consists of tholeiitic and komatiitic basalts, with minor interbedded sedimentary units. The rocks are affected by amphibolite to upper greenschist metamorphism, with metamorphic grade increasing toward the contact with the Raeside Batholith. The Leonora Inlier is divided by a number of large shear zones including the Ursus and Tarmoola Shear Zones within the main northwest-trending greenstone package, and the Gwalia (Poker) Shear Zone on the eastern margin of the Raeside Batholith.

The REE mineralisation at Yttria is within the weathered regolith profile is within the upper saprolite horizon. The origins of the REE concentrations are still not fully understood and is subjects to ongoing investigation and research by Asra. The REE mineralised horizon is within and is encompassed by a relatively homogeneous horizon with elevated scandium oxide (Sc_2O_3) throughout the entire regolith. Potential economic levels of Scandium are pervasive throughout the entire regolith profile at Yttria. Interpretation of specific chemical ratios within the Yttria regolith assays suggest that the mafic/ultramafic intrusion below Yttria is a comparatively rare plume-generated alkaline intrusion.

Recent RC and vacuum drilling at the Yttria deposit was restricted to investigation of the saprolite horizon and the vertical extent of the REE horizon was controlled by the final depth of the RC drillholes and checking of chip



tray samples. The REE mineralisation remains open along and across strike and interpretation is constrained by the current drilling data. The mineralised horizon is sub-horizontal, and the area used to constrain the Mineral Resource extends for 2.5 km along strike (NE-SE) by 700 m to 1.4 km across strike (NE-SW). The thickness of the interpreted REE mineralised horizon ranges from 1 m to 31 m and has an average thickness of 9 m. The top of this horizon extends from surface to 27 m (Figure 1). The central area has been intruded by a vertical mafic dyke.



Figure 1: 3D view of drillholes coloured by TREO, interpreted REE mineralised horizon (brown and mafic dyke (grey).

Drilling techniques

The drilling database used to define the Mineral Resource comprises 320 reverse circulation (RC) drillholes for a total of 8,922 m, with a total of 2,790 assays, and 56 vacuum drillholes for a total of 831 m, with a total of 243 assays (Table 1). All drillholes are vertical. RC drilling was carried out utilising a face sampling bit with holes generally 155 mm in diameter. Vacuum Drilling was carried out using Strataprobe's tractor-mounted vacuum rig. Drilling was paused at 1 m sampling intervals to reduce any smearing of results and sampling equipment routinely cleaned to avoid any contamination. Analysis of the RC and vacuum samples indicates no bias within comparable volumes.

The drillhole section spacing within the Mineral Resource area is generally at 40 m and 80 m with some sections at a spacing of 160 m. On-section drillhole spacing is generally at 40 m with some peripheral areas drilled at a spacing of 80 m, 120 m or 200 m (Figure 2).

Company	Drill type	Number of drillholes	Metres drilled	Number of REE assays
Aara	RC	320	8,922	2,790
Asia	Vacuum	56	831	243
Total		376	9,753	3,033

Table 1: Drilling history at the Yttria REE deposit (within resource area).





Figure 2: Plan of drillholes (RC = black, vacuum = green), mafic dyke (grey) and outline of resource extent (blue).

Sampling techniques

All drill samples were taken at 1 m intervals. Wherever possible, RC samples were taken dry via a rotary onboard splitter with a resultant RC sample size of 3-5 kg. Vacuum rig sample sizes were smaller at 1-3 kg. Drill samples were dried at 110°C. Samples greater than ~700 g were fine-crushed to less than 2 mm, before being rotary-split to ~500 g. Samples were then pulverised to minus 75 µm.

Sampling Analyses

Samples were sent to LabWest in Perth for sample preparation and analysis by their MMA-04 methodology. This involves coupling of microwave assisted, HF based digestion with Induced Coupled Plasma-Mass Spectrometry (ICP-MS) determination. Analytical techniques are total.

Estimation Methodology

Grade estimation was into parent blocks of 20 mE by 20 mN by 1 mRL. Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. Sub-cells to a minimum dimension of 5 mE by 5mN by 0.5 mRL were used to represent volume. Block grades were estimated using ordinary kriging (OK) and all REOs (La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃ and Y₂O₃) and Sc₂O₃ were estimated independently. Variogram analyses were undertaken to determine the grade continuity and the kriging estimation parameters used for the OK. 3D sectional views of the estimated TREO block grades are included in Figure 4.





Figure 3: 3D view of block model sections coloured by TREO.

Mineral Resource Classification

The Mineral Resource has been classified as Indicated and Inferred on the basis of confidence in geological and grade continuity and by taking into account the quality of the sampling and assay data, and confidence in estimation of REOs, using the grade continuity modelled from variogram analysis. Variogram analysis indicates that the maximum continuity ranges are 162 m to 650 m N to NE and 145 m to 450 m W to NW for the REOs and 82% to 94% of the total block grades were estimated in the first search pass. Indicated Resources are defined in area where the block grades were estimated in the first search pass and the majority of the drillholes are at a spacing of 40 m by 40 m or 40 m by 80 m. There is a gap in the drilling to the south of the mafic dyke, however, Asra is confident in the geological continuity of the REE mineralised horizon within this area. This area is classified as Inferred. Inferred Resources are defined in area where the drill spacing is wider than 40 m by 80 m and in area of grade extrapolation (Figure 4).



Figure 4: Plan of drillholes, mafic dyke (grey) and assigned classification (green = Indicated, blue = Inferred).



Cut-off Grades

The Mineral Resource estimate for the Yttria REE deposit has been reported above a cut-off grade of 200 ppm TREO-Ce (total REO minus CeO₂) and assumes extraction by open pit mining. This cut-off grade was selected by Asra based on the evaluation of other clay hosted rare earth Mineral Resources.

Mining Factors

The mineralisation at Yttria would be largely suitable for open-pit mining. It is anticipated that additional drilling will extend the mineralisation beyond the extents of the current Mineral Resource. The top of the interpreted REE enriched horizon is within the saprolite and extends from surface to 27 m.

Metallurgical Factors

Preliminary metallurgical testwork was undertaken by Strategic Metallurgy Pty Ltd based in Perth Western Australia. Initial testwork was to determine if the detected REE present in the selected drill samples was ammonium sulphate desorbable. Representative portions of each sample as received were subjected to baseline ammonium sulphate desorption. The samples were continuously mixed for 16 hours at 10 % solids in approximately 1.25 moles per litre of ammonium sulphate at pH 3 with sulfuric acid. The desorption products were characterised, with products being assayed by inductively coupled plasma followed by mass spectroscopy. Further testing progressed to dissolution of the rare earths and scandium using a wider variety of leaching methods and conditions. Extensive tests with both 32% HCl and 98% Sulfuric acid were undertaken. Best results were achieved using sulfuric acid in 10% magnesium chloride, dissolved in water at atmospheric pressure and warmed to 50°C.

The extraction/recoverability of rare earths and scandium reported here are indicative only and do not currently account for potential additional losses that may occur during any further downstream processing. Further metallurgy testing is underway to validate these findings.



JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 	 Assay results reported in this document at Asra's Yttria REE and Scandium Deposit are from Reverse Circulation (RC) drilling (MSC series holes) with minor Vacuum Rig drilling (MSAV series holes). Drilling was used to obtain 1m discrete samples for laboratory analysis. 384 RC drillholes for 9,542m have been completed at the Yttria REE Deposit by Asra. Samples were dispatched to LabWest in Perth for analysis by their MMA-04 methodology: LabWest's sample preparation regime (Code PREP-01) has been devised to ensure conformity with accepted statistical sampling approaches. After reception and sorting, RC drill samples are dried at 110°C. Samples greater than ~700g are fine- crushed to less than 2mm, before being rotary-split to ~500g. A coarse duplicate is taken from every 40th sample for analysis. Samples are then pulverised to minus 75μm. Pulveriser bowls are routinely cleaned with a barren charge between samples. Soil, Aircore, RAB, samples <3kg. Sort, dry, split, pulverize to -75μm.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 RC drilling was carried out utilising a face sampling bit with holes generally 155mm in diameter. Vacuum Drilling was carried out using Strataprobe's tractor- mounted vacuum rig
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	 Drill chips were taken by sieving each 1m sample and any zones of poor recovery were noted in both drillers logs or geologist notes. Drilling was paused at 1m sampling intervals to reduce any smearing of results and sampling equipment routinely cleaned to avoid any contamination.
	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource	• Sieved drill chips were collected for each 1m interval and photographed for later interpretation and reference.

*The potential quantity and grade of the Exploration Target is conceptual in nature and there has been insufficient exploration completed to estimate Mineral Resources. Furthermore, it is uncertain if further exploration will result in defining additional Mineral Resources.

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Criteria	JORC Code explanation	Commentary
Logging	 estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 All geological logging is qualitative in nature. No geotechnical logging was conducted.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 No drill core undertaken. Resultant RC sample size of 3-5kg considered appropriate for 1m samples. Vacuum rig sample sizes were smaller at 1-3kg Wherever possible, RC samples were taken dry via a rotary onboard splitter. QA/QC data of the Asra drilling includes insertion and subsequent checks of periodical standards. Certified Reference Materials (CRM's) are included and analysed in each batch of samples.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 LabWest laboratories inserted check samples for each batch of samples analysed and reports these accordingly with all results. The laboratory QAQC has been assessed in respect of the RC chip sample assays and it has been determined that the levels of accuracy and precision relating to the samples are acceptable. Field duplicates were collected Drillholes within the anticipated Mineral Resource areas and OREAS certified standards were inserted into the sample submission sequence Rare Earth Element (and multi element) analysis have been obtained utilising LabWest's MMA-04 technique. This involves coupling of microwave assisted, HF based digestion with Induced Coupled Plasma-Mass Spectrometry (ICP-MS) determination.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Several RC holes of the drill program were designed to be close to previously drilled Vacuum drillholes at Yttria to check variability. Original LabWest assay files were supplied to Asra's database manager, MaxGeo, and merged in their DataShed software with matching sample numbers and hole-from-to data supplied by Asra. Terminology used in this report for the rare earth element follows the



Criteria	JORC Code explanation	Commentary
$\hat{\boldsymbol{\mathcal{T}}}$		 convention of the International Union of Pure and Applied Chemistry (IUPAC), whereby the LREE are defined as La, Ce, Pr, Nd and Sm, and the HREE as Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y. Elemental analysis was recalculated to oxide values for the purpose o standard reporting of REE's.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 Drill hole collars were located using a handheld GPS system referenced to MGA Zone 51 Datum GDA 94. Accuracy of the handled GPS devices is within +/-5m. Collar elevations were further enhanced by pressing an SRTM topographic digital terrain surface (Shuttle Radar Topographic Mission) data onto the drillhole plan and assigning a more representative topographic level value. Drillholes within the anticipated Mineral Resource areas were surveyed more accurately using the 'ANT' differential GPS system supplied by the Precision Mining and Drilling company and will be sub centimetre accuracy,
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	 Drill spacing is based on a 80m x 40m grid pattern with some infill to 40m x 40m. Samples were not composited.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 The drill grid is orientated 330 degrees to align with the general geological strike. The regolith hosted REE mineralisation is more vertically-variable, an therefore has no real alignment with the regional geological strike.
Sample security	The measures taken to ensure sample security.	 Drill samples were collected at the drill site in calico bags at Yttria, Mt Stirling, by Asra personnel. Samples were transported from site to LabWest laboratory in Perth by Asra employees/contractors. A sample submission form containing laboratory instructions was submitted to the laboratory.



Criteria	JORC Code explanation	Commentary
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	 A thorough review of sampling techniques has been performed internally by Asra but an independent audit is yet to be implemented The entire historical drillhole database at Mt Stirling has been reconstructed using Max Geo's DataShed database system. This has involved significant due diligence, ground truthing and verification of sample quality for ongoing work.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate. 	 Drilling was carried on valid Western Australian Prospecting Licenses 100% owned by Asra Minerals and are in good standing. PL's 37/8845, /8846, /8847, and /8899. There is a 2% Royalty to a third party for minerals on these licenses.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	 In 2022, Asra completed various vacuum auger drilling (AV) and RC drilling campaigns across parts of the Mt Stirling area. To date, 1317 vacuum holes for 16,516m have been drilled across the Mt Stirling tenements. In addition, 384 RC drillholes for 9,542m have been completed at Yttria by Asra. No other historical drilling work has been done on the licenses.
Geology	• Deposit type, geological setting and style of mineralisation.	 Tenements are located within the Leonora District of the Kalgoorlie terrane, approximately 30 km northwest of Leonora in Western Australia. Geologically, the project sits within the Archean Norseman-Wiluna Greenstone Belt. The area is moderately well exposed and contains many minor gold occurrences and old workings along with several significant economic gold discoveries in the surrounding Leonora District, including the King of the Hills, Sons of Gwalia, Tower Hill and Harbour Lights deposits. The Mt Stirling project areas are within the older (pre-2817 Ma) Leonora stratigraphy which consists of tholeiitic and komatiitic basalts, with minor interbedded sedimentary units



Criteria	JORC Code explanation	Commentary
		 The rocks are affected by amphibolite to upper greenschist metamorphism, with metamorphic grade increasing toward the contact with the Raeside Batholith. The Leonora Inlier is divided by a number of large shear zones including the Ursus and Tarmoola Shear Zones within the main northwest-trending greenstone package, and the Gwalia (Poker) She Zone on the eastern margin of the Raeside Batholith. The REE mineralisation at Yttria is associated with the regolith profile The origin of the rare earths are still not fully understood and is subjects to ongoing investigation and research by Asra. The discovery also represents a homogenous and large presence of significantly elevated scandium oxide (Sc₂O₃) throughout the entire regolith. Potential economic levels of Scandium are pervasive throughout the entire regolith profile at Yttria. Interpretation of specific chemical ratios within the Yttria regolith assays suggest that the mafic/ultramafic intrusion below Yttria is a comparatively rare plume-generated alkaline intrusion.
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	 Not applicable – Mineral Resource and Exploration Targets are defined. Exploration results are not being reported. Not required.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 Elemental assay values received by LabWest were recalculated to REE industry standard oxide equivalents using the following conversions: <u>Ia ce Pr Nd Sm Eu Gd Tb Dy Ho Er Tm Yb Lu Y Sc</u> <u>I1728 1.2284 1.2082 1.1664 1.1596 1.1579 1.1526 1.1762 1.1477 1.1455 1.1435 1.1421 1.1387 1.1371 1.2699 1.533</u> <u>La203 Ce02 Pr6011 Nd203 Sm203 Eu203 Gd203 Tb407 Dy203 Ho203 Er203 Tm203 Yb203 Lu203 Y203 Sc205 </u> Ratios of Total/Heavy/Light/Magnet REO have been reported according to IUPAC standards as tabled below:



Criteria	JORC Code explanation	Commentary
		Total HREYO Eu203 Gd203 Tb407 Dy203 Ho203 Er203 Tb203 Lu203 Y203 TREYO La203 Ce02 Pr6011 Nd203 Sm203 Eu203 Gd203 Tb407 Dy203 Ho203 Er203 Tm203 Y203 TREYO La203 Ce02 Pr6011 Nd203 Sm203 Eu203 Gd203 Tb407 Dy203 Ho203 Lu203 Y203 Magnet REF Pr6011 Nd203 Tb407 Dy203 Ho203 Eu203 Gd203 Tb407 Dy203 Ho203 Lu203 Y203 Magnet REF Pr6011 Nd203 Tb407 Dy203 Ho203 Lu203 Y203 Y203 Y203 Y203
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	 Mineralisation trends of REE are sub-horizontal. As drilling was vertical, reported drill intercepts are interpreted to be close to true widths. Scandium oxide mineralisation appears to be pervasive from near su and orientations not yet fully understood, However, high grade Sc₂C also appear to be sub horizontal and so reported drill intercepts are currently interpreted to be close to true widths.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Plan and cross-section figures are included in this report.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	 Refer to previous announcements listed in this announcement for reof REE and scandium results and metallurgical testwork. Asra believes the selection of assay and metallurgical data reporting appropriate and in no way misleading.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	 REE and scandium were first recognised as being highly anomalous a Stirling by Asra in 2022. To date, pXRF, vacuum and RC drilling has been conducted but no di drilling has yet been undertaken to ascertain density and structures. A bulk sample is being collected from Asra's drill samples for metallut testwork.
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Step-out pXRF geochemical surveys have been undertaken to deter potential along strike extensions of REE and scandium mineralisatio A Program of Work has been submitted to DMIRS to request approvidig a trial costean to expose the REE where it comes close to surface Yttria. Further drilling is planned to define REE and scandium mineralisatic extents. Several diamond holes are in planning to assist rock mineralisation.



Criteria	JORC Code explanation	Commentary
		mineralogical, metallurgical and density characterization.Further metallurgical testwork is planned

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Database integrity	 Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	 The drillhole database is managed by Max Geo. The entire historical drillhole database at Mt Stirling has been reconstructed using Max Geo's DataShed5 database system. This has involved significant due diligence, ground truthing and verification of sample quality for ongoing work. Additional data validation, by Snowden Optiro, included checking for outof-range assay data and overlapping or missing intervals.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	 Mrs C Standing (Snowden Optiro, acting as Competent Person for the Mineral Resource) has not visited the Yttria REE deposit but has visited many similar exploration and mining sites in the northeastern Goldfields region of Western Australia and is familiar with the geological setting. Mr R Longley (Asra, acting as Competent Person for the Exploration Results and Data) has spent a significant amount of time on the Mt Stirling Project area and the Yttria deposit over the last 18 months supervising and directing exploration work including sampling, surveying, geological mapping, pXRF testing, ground truthing and QAQC activities.
Geological interpretation	 Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	 REE mineralisation at Yttria is within the weathered regolith (saprolite) horizon. There is reasonable confidence in the geological interpretation of this horizon within the Mineral Resource area. Recent RC and vacuum drilling at the Yttria deposit was restricted to investigation of the saprolite horizon and the vertical extent of this horizon was controlled by the final depth of the RC drillholes and checking of chip tray samples.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The area used to constrain the Mineral Resource extends for 2.5 km along strike (NE-SE) by 700 m to 1.4 km across strike (NE-SW). The thickness of the interpreted REE mineralised horizon ranges from 1 to 31 m and has an average thickness of 9 m. The top of this horizon extends from surface to



Criteria	JORC Code explanation	Commentary
		27 m.
Estimation and modelling techniques	 The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. 	 Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. REO and scandium block grades were estimated using ordinary kriging (OK). Snowden Optiro considers OK to be an appropriate estimation technique for this type of mineralisation. The drillhole section spacing within the Mineral Resource area is generally at 40 m and 80 m with some sections at a spacing of 160 m. On-section drillhole spacing is generally at 40 m with some peripheral areas drilled at a spacing of 80 m, 120 m or 200 m. The central area of the deposit is truncated by a west-east oriented mafic dyke, was interpreted to have a vertical dip. There is a 320 m gap in the drilling to the south of the mafic dyke, however, Asra is confident in the geological continuity of the REE mineralised horizon within this area. A maximum extrapolation distance of 100 m along strike and 50 m across strike was applied around the drilled area and extrapolation of up to 320 m along strike to the edges of the interpreted central dyke. All areas of extrapolation have been assigned an Inferred classification. All samples selected for analysis have been taken over intervals of 1 m and so data compositing was not required for grade estimation. Categorical indicator kriging (CIK) was used to define REE mineralised (>230 ppm CeO₂) and scandium enriched blocks (>80 ppm Sc₂O₃) blocks within the weathered regolith horizon. Statistical analysis indicated that outlier grades are not present within the REE mineralised or the scandium enriched domains and top-cutting (grade-capping) was not applied. Correlation coefficients for the REO within the interpreted REE mineralised horizon are moderate to high (0.54 to 0.998) Variogram analysis was undertaken for La₂O₃, CeO₂, Pr₆O₁₁, Dy₂O₃ and Sc₂O₃ to determine the kriging estimation parameters used for OK estimation. Variogram parameters determined for Pr₅O₁₁ were applied for grade esti



Criteria	JORC Code explanation	Commentary
2		 Variogram analysis indicates that the maximum continuity ranges are 162 m to 650 m N to NE and 145 m to 450 m W to NW for the REOs. Kriging neighbourhood analysis was performed to determine the block size, sample numbers and discretisation levels. Three estimation passes were used in block grade estimation; the first search was based upon the variogram ranges; the second search was two times the initial search and the third search was up to eight times the initial search. The third search had reduced sample numbers required for estimation. 82% to 94% of the total block grades were estimated in the first search pass, 5% to 14% within the second search pass.
	Description of how the geological interpretation was used to control the resource estimates.	 Geological interpretations of the weathered regolith (saprolite) horizon and was completed using Datamine software. The 3D interpretation of th weathered regolith was used to constrain the Mineral Resource estimate. The REE mineralised horizon was interpreted using a mineralisation indicator grade of 57 ppm TREO. The scandium mineralised horizon, which generally envelopes the REE mineralisation, was interpreted using a mineralisation indicator grade of 55 ppm Sc2O3. As discussed above, categorical indicator kriging (CIK), at the sub-cell resolution, was used to define the REE enriched (>230 ppm CeO2) blocks and scandium enriched blocks (>80 ppm Sc2O3) blocks within the interpreted mineralised horizons. The mineralised domains are considered geologically robust in the contex of the resource classification applied to the estimate.
	• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	 Mineral Resources have not previously been reported for this deposit are and no production has occurred.
	• The assumptions made regarding recovery of by-products.	• No assumptions have been applied for the recovery of by-products. Asra investigating the possibility of recovering scandium (Sc2O3) as a by-product.
	• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	• Deleterious elements were not considered for the Mineral Resource estimate. U and Th were estimated.
	• In the case of block model interpolation, the block size in relation to the	• Grade estimation was into parent blocks of 20 mE by 20 mN by 1 mRL.



Criteria	JORC Code explanation	Commentary
	average sample spacing and the search employed.	 Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. Sub-cells to a minimum dimension of 5 mE by 10 mN by 0.5 mRL were used to represent volume. Drillhole sections are generally at 40 m and 80 m spacings with some sections at a spacing of 160 m. On-section drillhole spacing is generally at 40 m with some peripheral areas drilled at a spacing of 80 m, 120 m or 200 m. Search ellipse dimensions were selected from variogram analysis.
2	• Any assumptions behind modelling of selective mining units.	Selective mining units were not modelled.
	• Any assumptions about correlation between variables.	 The REOs have moderate to high correlation coefficients (0.54 to 0.998). All REOs (La₂O₃, CeO₂, Pr₆O₁₁, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃ and Y₂O₃) and Sc₂O₃ were estimated independently.
	• The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	 The estimated block model grades were: visually validated against the input drillhole data comparisons were carried out against the declustered drillhole data and by northing, easting and elevation slices. global statistical comparisons were carried out between the mean input sample grade with the estimated block grade. No production has taken place and thus no reconciliation data is available.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	 The Mineral Resource has been reported above a cut-off grade of TREO-Ce of 200 ppm and assumes extraction by open pit mining. This cut-off grade was selected by Asra based on the evaluation of other clay hosted rare earth Mineral Resources.
Mining factors or assumptions	 Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. 	 Planned extraction is by open pit mining. Mining factors such as dilution and ore loss have not been applied.



Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	 The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. 	 Preliminary metallurgical testwork was undertaken by Strategic Metallu Pty Ltd based in Perth Western Australia. Selected RC drill samples were delivered to Strategic by Asra personnel. Initial testwork was to determine if the detected REE present in the selected drill samples was ammonium sulphate desorbable. Representative portions of each sample as received were subjected to baseline ammonium sulphate desorption. The samples were continuou mixed for 16 hours at 10 % solids in approximately 1.25 moles per litre ammonium sulphate at pH 3 with sulfuric acid. The desorption products were characterised, with products being assayed by inductively coupled plasma followed by mass spectroscopy. Further testing progressed to dissolution of the rare earths and scandium using a wider variety of leaching methods and conditions. Extensive tests with both 32% HCl and 98% Sulfuric acid were undertake Best results were achieved using sulfuric acid in 10% magnesium chlorid dissolved in water at atmospheric pressure and warmed to 50°C. The extraction/recoverability of rare earths and scandium reported her are indicative only and do not currently account for potential additional losses that may occur during any further downstream processing. Further metallurgy testing is underway to validate these findings. This vinvolve testwork on more drill samples to assist optimisation of recover by fine tuning the key parameters including residence time, reagent composition and consumption, and defining distinct GeoMet domains.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.	 No assumptions have been made regarding waste and process residue.
Bulk density	 Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation 	 Density was measured for 24 samples from the saprolite zone. Asra advised than an average density of 1.94 t/m3 was to be applied for tonnage estimation. This is in-line with density data from similar weathered regolith material (saprolite).



Classification •	process of the different materials. The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality	 The Mineral Resources have been classified as Indicated and Inferred on the basis of confidence in geological and grade continuity and taking into account data quality, data density and confidence in the grade estimation,
	quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit.	 Indicated Resources are defined in area where the block grades were estimated in the first search pass and the majority of the drillholes are at a spacing of 40 m by 40 m or 40 m by 80 m. Inferred Resources are defined in area where the drill spacing is wider than 40 m by 80 m and in area of grade extrapolation. The assigned classification of Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimate.
Audits or reviews •	The results of any audits or reviews of Mineral Resource estimates.	 The Mineral Resource has been reviewed internally as part of normal validation processes by Snowden Optiro. No external audit or review of the current Mineral Resource has been conducted.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation.	 The assigned classification of Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimate. The statement relates to global estimates of tonnes and grade. No production data exists for REE or scandium at the Yttria deposit.