



23 January 2023

POSITIVE METALLURGICAL RESULTS DEMONSTRATE PATHWAY TO PRODUCTION AT TOWER DEPOSIT

HIGHLIGHTS

- **Initial diagnostic Metallurgical results confirm ionic component to REE clay mineralisation and demonstrate positive extraction recoveries**
- **Highly encouraging metallurgical recoveries on key critical rare earth elements of up to 64% Nd and 61% Pr achieved**
- **Recoveries compare favourably to other globally significant clay hosted rare earth projects**
- **Mineralogical studies indicate majority of the rare earths are hosted in clay or as rare earth minerals sized <20 micron, indicating potential opportunity for simple beneficiation processing to increase the grade and recovery**
- **Additional supplementary test work programs will commence in early 2023 to refine and improve the metallurgical process, with a primary aim of expanding the program over an extended area of study during 2023**

Krakatoa Resources Limited (ASX: KTA) (“Krakatoa” or the “Company”) is pleased to announce positive metallurgical and mineralogical results from a test work program completed at the Company’s flagship Tower REE Project (“Tower”), located in the north-western margins of the Yilgarn Craton in Western Australia.

Following delivery of the maiden Mineral Resource Estimate of 101MT @ 840ppm TREO at Tower in late November (*ASX Announcement 21 November 2022*), Krakatoa has completed another milestone achieving excellent metallurgical recoveries on the critical key rare earth elements Neodymium (Nd) and Praseodymium (Pr) of up to 64% and 61% respectively using simple extraction techniques. These initial recovery rates compare favourably with other globally significant clay hosted REE projects.

The metallurgical and mineralogy test work was completed by the Australian Nuclear Science and Technology Organisation (ANSTO) and importantly, the results from the program will be used by Krakatoa to optimise the extraction process options and develop a viable processing and production pathway at Tower.



ASX Code
KTA

Capital Structure

344,709,917 Fully Paid Shares
21,200,000 Options @ 7.5c exp 29/11/23
5,000,000 Options @15c exp 29/11/23
15,000,000 Performance Rights at 20c, 30c and 40c.

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Timothy Hogan

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Krakatoa's CEO, Mark Major commented, *"We are very pleased with the initial diagnostic metallurgical results from the Tower deposit. These have generated impressive recoveries of the key magnetic rare earths Nd-Pr-Dy-Tb, all highly sort after and highly priced rare earth elements. Importantly, these results provide the Company with a high-level of confidence that the metallurgy of Tower is amenable to the use of common simple extraction techniques and provides us with a clearer understanding of the REE hosts and its suitability for beneficiation.*

The Tower deposit is characterised by a combination of ionically absorbed, acid soluble and refractory minerals. Comparatively, these results are very similar to other extraction results generated by globally significant and well-known clay hosted REE projects with similar processing methods.

Krakatoa now has one of the biggest clay hosted REE mineral resource in Australia with a positive extraction and production pathway. The Company will now focus on progressing the Project towards mining operations by further optimising the extraction process, while increasing the resource confidence which will lead to the commencement of economic studies.

Krakatoa is now also in a position to commence strategic discussions with end users and industry groups related to potential development, funding, off-take arrangements, and downstream processing opportunities."

Mineralogical Analysis Overview

A mineralogical study was conducted by the ANSTO research facility in Sydney on two selected samples using QEMSCAN (quantitative evaluation of minerals by scanning electron microscopy) techniques. The two samples selected had similar REE composition and grades but variable metallurgical extraction reports. These samples were selected after the initial diagnostic metallurgical test work was complete.

The QEMSCAN process included particle mineralogical analysis (PMA), mineral liberation and association analysis, chemical assay and comparison with chemical analysis data (using XRF-ICPMS) and manual SEM (scanning electron microscopic and X-ray microanalysis) and EDS (energy dispersive system) analysis.

The resulting analysis provided encouraging results which indicated that clay is dominated by smectites with minor amounts of refractory minerals present. The small refractory mineral proportion is dominated by monazite, with the higher extractions aligning with the sample having less contained monazite. An additional REE-containing phase mineral, thought to be britholite, was also present in both samples. All the REE minerals and phases are typically less than 20 micron, which suggests simple beneficiation would provide an upgrade ore.

Metallurgical Test Work Overview

Metallurgical testwork was undertaken on select 2021 drilled air core composite samples between the period of May to November 2022. The metallurgical testing was conducted in conjunction with the ANSTO research facility in Sydney, which has extensive experience in rare earth metallurgical testing on samples from many deposits worldwide, including China.

A broad and systematic diagnostic test work pathway was completed on these samples, with a focus on identifying the variability within the sampled area, gaining insight into possible initial development zones and to develop an initial understanding of the chemical properties of the clay hosted rare earth system.

Metallurgical extractions of REEs from five lower to middle saprolite 4m composite samples with midrange rare earth head grades, underwent three selected rudimentary process pathways tests. The three tests were

established based on pH variations of 1, 1.5 and 4 and were varied with time, lixiviant used (either modest acidic water or ammonium sulphate) and temperature.

The five composite samples represented the main mineralised saprolite over 4-hole locations, with head grades ranging from 441-846ppm TRE+Y (300-527ppm TRE-Ce) (see Table 1). Notably, the testwork showed that the extraction of the key magnetic (payable) REE's achieved up to 63% for Neodymium (Nd), 61% Praseodymium (Pr), 53% Terbium (Tb) and 44% Dysprosium (Dy). These results were achieved using modest acidic water as the lixiviant at 50 °C and pH 1 for a duration of 6 hours.

Previously reported weak acid Aqua Regia (WAR) leach (*ASX Announcement 12 April 2022*) test work confirmed the predicated maximum extraction recoveries are higher than the current testing regime. These extraction levels for the Pr and Nd were over 90% for each of the five sample. The WAR method is considered a higher pH level closer to 0.5 and is a partially digestion assay method, not a metallurgical extraction method, meaning only those elements not held in refractory mineral will be liberated.

Location of the samples and associated drill holes are shown in Figure 1 with details shown in Table 2. The diagnostic testwork results showing the rare earth elemental extractions via the various diagnostic tests for each of the five samples are shown in Figure 2.

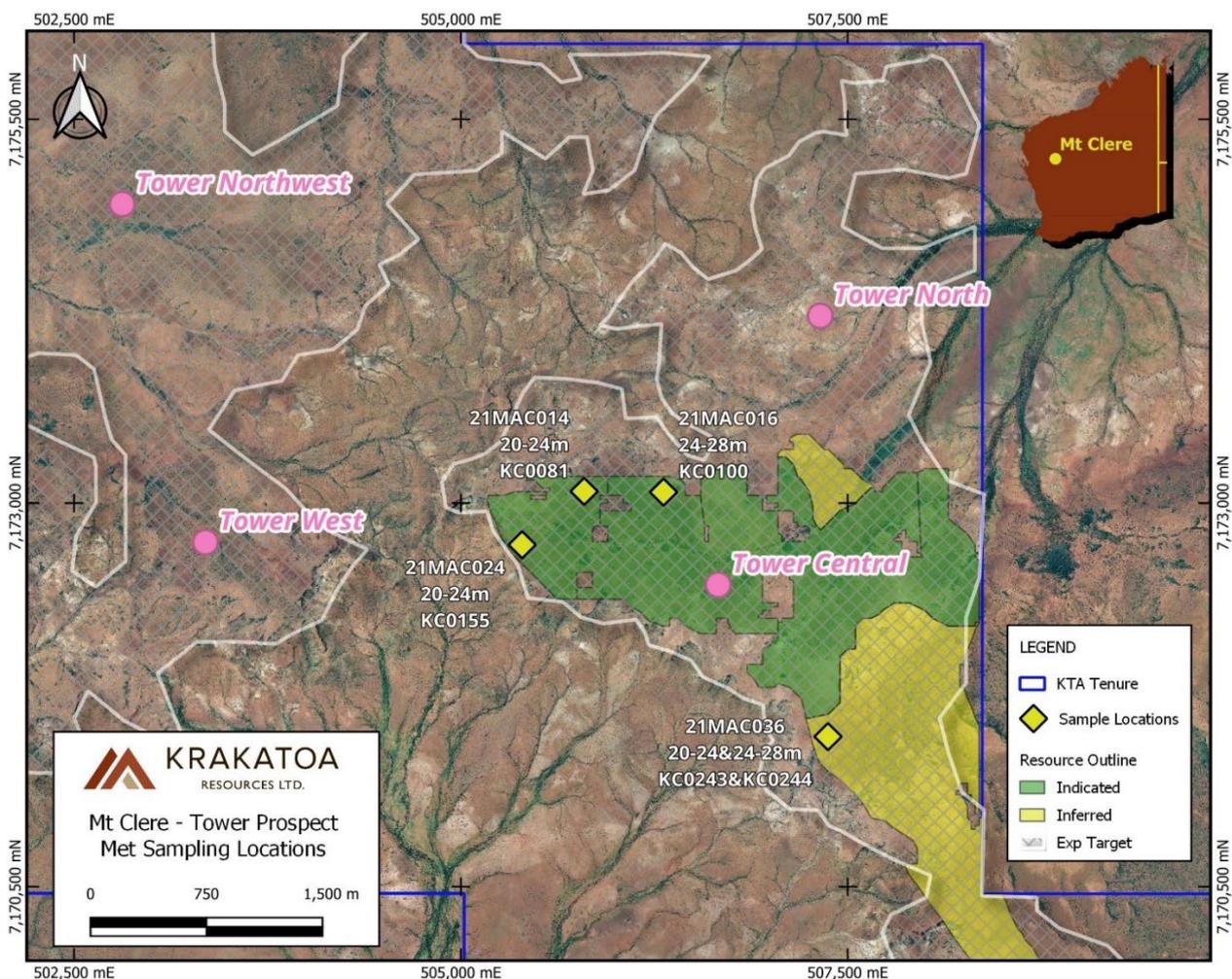


Figure 1: Drillhole plan showing location of the five diagnostic samples

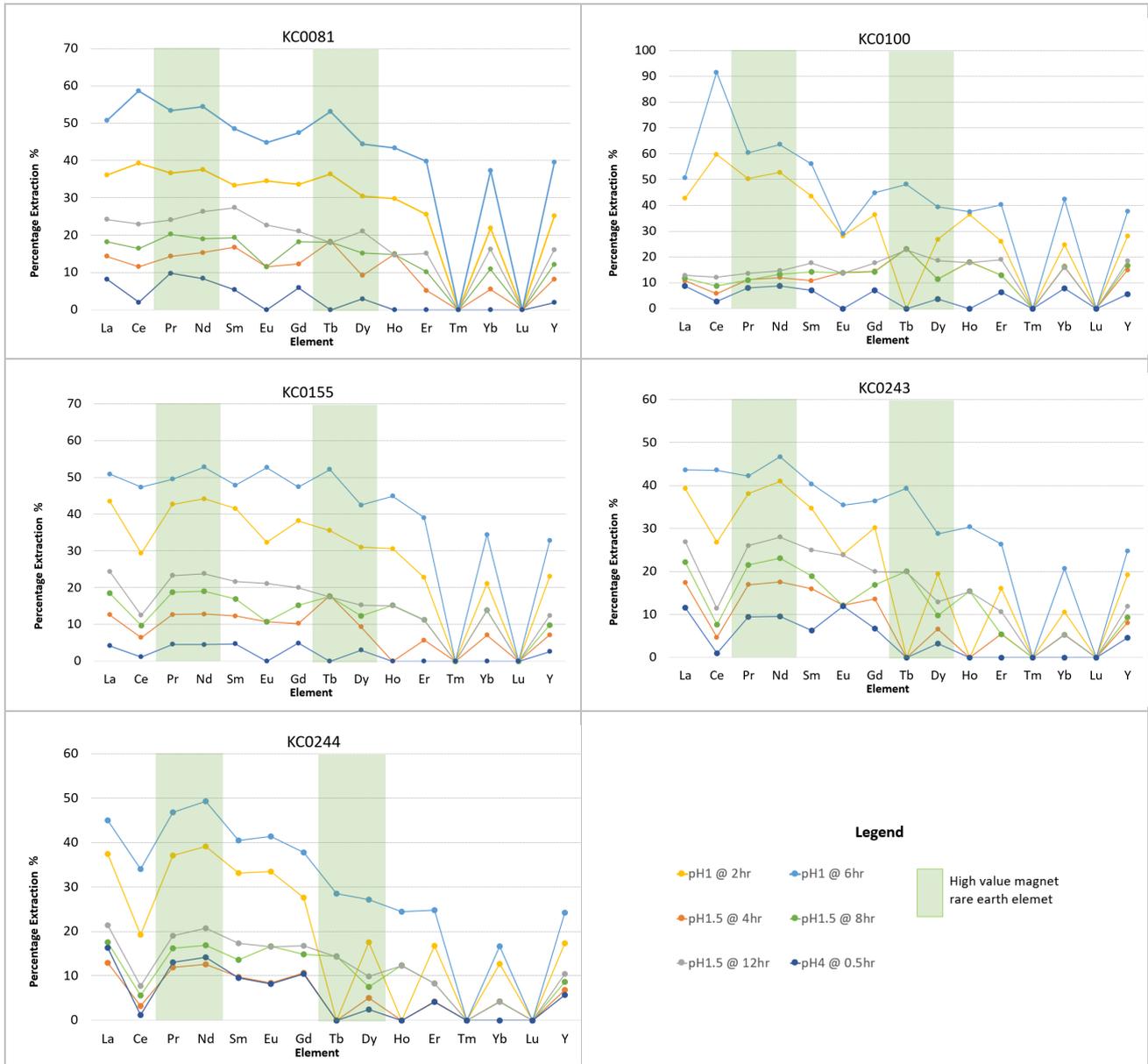


Figure 2: Extraction of rare earth elements using various diagnostic tests

Current Work Programs

The Company is currently evaluating the next phase of the metallurgical and mineralogy programs which are expected to commence in early 2023 once samples are assigned to the laboratories.

Krakatoa will look to undertake initial beneficiation testing, supplementary mineralogical studies and particle size distribution of the rare earth hosting clay to help assist with optimisation of the rare earth recoveries and overall metallurgical process.

Additional and extended metallurgical test work programs will be undertaken to expand on the area distribution to reflect all zones within the current Tower resource. Infill core drilling will also be undertaken to collect in-situ samples for further metallurgical and material classification works, while also assisting with increasing the level of resource classification.



Table 1. Composite samples head analysis

Element	Unit	KC0081	KC0100	KC0155	KC0243	KC0244
Al	wt%	6.8	8.1	7.7	6.7	5.5
Ba	ppm	416	640	753	260	673
Ca	wt%	1.35	2.46	1.75	0.75	0.93
Fe	wt%	6.87	7.53	6.96	4.55	4.54
K	wt%	0.84	1.36	1.33	0.41	1.09
Mg	wt%	1.24	1.61	1.11	0.78	2.09
Mn	wt%	0.06	0.12	0.06	0.03	0.06
Na	wt%	2.35	2.37	2.17	0.87	1.16
Sc	ppm	19	19	14	17	14
Si	wt%	29.7	26.9	28.9	32.8	32.7
Th	ppm	24	3	58	16	27
U	ppm	1	0.7	1	2	2
La	ppm	110	81	167	87	155
Ce	ppm	438	141	363	211	285
Pr	ppm	24	17	31	20	33
Nd	ppm	90	65	115	76	132
Sm	ppm	18	13	20	15	25
Eu	ppm	4	3	5	4	6
Gd	ppm	16	13	19	14	23
Tb	ppm	3	2	3	2	3
Dy	ppm	16	13	16	15	19
Ho	ppm	3	3	3	3	4
Er	ppm	10	7	9	9	12
Tm	ppm	1	1	1	1	2
Yb	ppm	9	6	7	9	12
Lu	ppm	1	1	1	1	2
Y	ppm	72	75	89	73	101
LRE ¹	ppm	661	304	675	394	604
HRE ³	ppm	43	33	39	41	53
TRE+Y	ppm	814	441	846	542	812

Notes:

- (1) LRE = La, Ce, Pr, Nd
- (2) HRE = Tb, Dy, Ho, Er, Tm, Yb Lu

Table 2: Sample Hole details (Datum MGA Zone 50)

Sample ID	Hole ID	Easting	Northing	From	To
KC0081	21MAC014	505797	7173077	20	24
KC0100	21MAC016	506310	7173072	24	28
KC0155	21MAC024	505396	7172729	20	24
KC0243	21MAC036	507373	7171479	20	24
KC0244	21MAC036	507373	7171479	24	28

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Authorised for release by the Board.

FOR FURTHER INFORMATION:

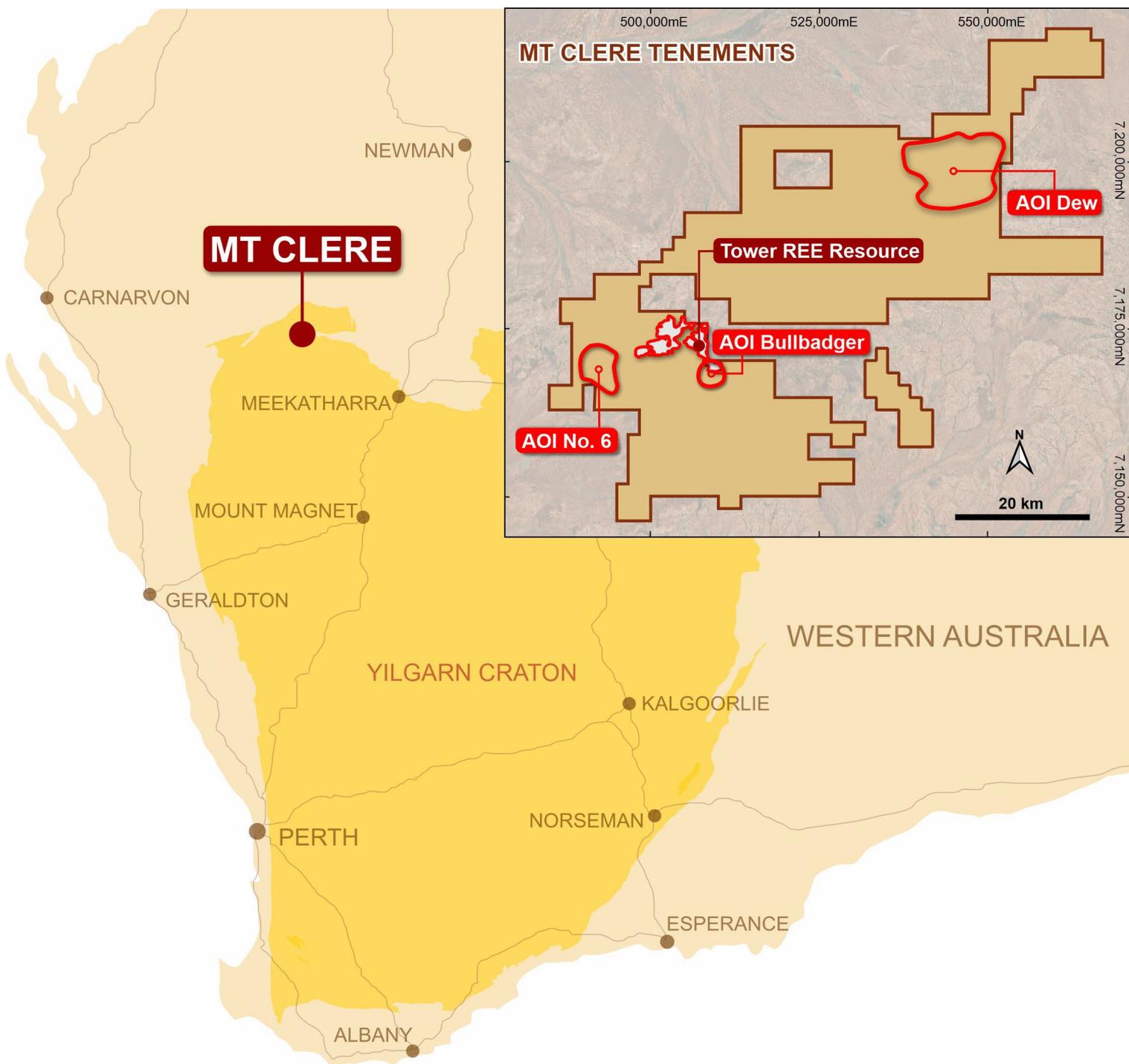
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Competent Person's Statement

The exploration and metallurgical information in this announcement are based on, and fairly represents information compiled by Mark Major, Krakatoa Resources CEO, who is a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Krakatoa Resources. Mr Major has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Major consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

Disclaimer

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.



Tower Mineral Resource Summary

JORC Classification	Tonnes (Mt)	TREO (ppm)	TREO – CeO ₂ (ppm)	CREO (ppm)	HREO (ppm)	LREO (ppm)	U ₃ O ₈ (ppm)	ThO ₂ (ppm)
Indicated	40	824	481	233	182	642	1	31
Inferred	61	852	540	290	266	586	2	32
Total⁽¹⁾	101	840	517	267	233	607	2	32

Notes:

- (1) Mineral Resources previously reported to the ASX on 21 November 2022, titled “KTA Delivers Maiden Rare Earth Mineral Resource at Tower”. The Mineral Resource is based on a cut-off grade of 300 ppm TREO-CeO₂. The Mineral Resource is produced in accordance with the 2012 Edition of the Australian Code for Reporting of Mineral Resources and Ore Reserves (JORC 2012). The Company is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

The information in this report and above, which relates to Mineral Resources for the Tower rare earth deposit is based upon and fairly represents information compiled by Mr Greg Jones who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Jones is a full-time employee of IHC Mining and has sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity which he is undertaking 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”. Mr Jones consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Appendix 1 -JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialized 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. In cases where 'industry standard' work has been done this would be relatively simple (eg' reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverized to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Aircore (AC) holes were collected at 1 metre intervals and contained in large plastic bags. Samples for geochemical analysis were collected as 2m to 4m composites, taken by the spear method from each 1 metre plastic bag. Near the end-of-hole narrower composite sample intervals, usually 3 to 1m depending on the depth of the remainder of the hole. A representative sample was taken by spearing from each one metre bulk sample and depositing into calico bags to create a composited ~3kg sample. Additionally, a representative 1m calico sample was also speared from each bulk sample bag and kept as master sample. All AC samples were prepped by ALS Global in Perth. All AC samples were pulverised to 95% passing 75 microns. All AC sample weights were recorded. Lithium Borate Fusion on sample pulps analyzed via ICP-MS (ME-MS81) Elements include: Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sm, Sn, Sr, Ta, Tb, Th, Tm, U, V, W, Y, Yb, Zr.
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g., core, RC, open-hole hammer, RAB, auger etc.) and details (e.g., 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.). 	<ul style="list-style-type: none"> AC blade drilling with a face sampling bit, 90mm nominal hole diameter.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximize 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. 	<ul style="list-style-type: none"> AC sample recovery and moisture content was monitored and recorded. AC sample recovery is ensured by keeping the hole as dry as possible and cleaning the cyclone out at regular intervals. If groundwater couldn't be controlled the holes were terminated. No relationship has been observed between sample recovery and grade. Sample bias is unlikely due to the good general recovery of sample.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> All AC 1 metre intervals were qualitatively logged in detail, for particular observations such as weathering, alteration, vein and mineral content a quantitative recording is made. Rock samples were described qualitatively. The detailed descriptions recorded were more than sufficient in detail to support the current work.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn, whether 1/4, 1/2 or whole core taken. If non-core, whether riffled, 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 maximize 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. 	<ul style="list-style-type: none"> AC samples are speared from the bulk samples, which are collected in buckets from the rig's cyclone then tipped into plastic bulk sample bags. Sample moisture is recorded. Most samples were dry. Sample preparation comprises an industry standard of drying and pulverising to -75 microns (85% passing). Samples over 3kg were split. Duplicate field samples, certified reference material samples and blank samples were prepared in the field and submitted to ALS.. The size of the sample is considered to have been appropriate to the grain size for all holes. Metallurgical samples were made up of the remaining samples from the AC drilling provided to ALS for initial analysis. Selected samples were bagged and numbered according to the AC sampling then land freighted to ANSTO in New South Wales to undergo testwork.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> 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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of 	<ul style="list-style-type: none"> Samples were transported by road fright direct to ALS Laboratory in Perth Australia. All samples were weight, given unique ID (barcodes), underwent high temperature drying, crushed, split with a subsample pulverized (with QC checking) before being assayed using a Lithium Borate Fusion ICP-MS (ALS Global method ME-MS81); which is considered to be near total digestion and recognised as an industry standard for analysis technique for REE suite and associated elements. Field duplicates were collected and submitted at a frequency of 1 per 20 samples. Blank samples were submitted at a frequency of 1 per 400 samples.

Criteria	JORC Code explanation	Commentary																																																
	<p><i>bias) and precision have been established.</i></p>	<ul style="list-style-type: none"> • Certified reference material samples were submitted at a frequency of 1 per 200 samples. • ALS completed its own internal QA-QC checks that include laboratory repeats • There is no evidence of systematic analytical bias or errors from these results. • The nature and quality of the QA-QC and analytical methods are considered appropriate to style of mineralisation at this stage of the project. <p>Metallurgical Test Samples</p> <ul style="list-style-type: none"> • At ANSTO all samples were initially dried at 50°C followed by pulverization. The samples were then sub-sampled to obtain 40g portions for each leach test and a sample head assay made. • Head assays were analysed by XRF at ANSTO for major gangue elements (Al, Ca, Fe, K, Mg, Mn, Na, Si). The rare earth elements together with U, Th and Sc were analysed by fusion digest and ICP-MS (lithium tetraborate method) at ALS Geochemistry Laboratory in Brisbane. • Variable diagnostic testwork was undertaken on each sample using a standard set of conditions: • Testwork A consisted of 0.5 M (NH₄)₂SO₄ as lixiviant; pH 4; for duration of 0.5 h; at ambient temperature (~22 °C); and a 2 wt% slurry density. 1 Molar H₂SO₄ was used to maintain the pH for the duration of the test. • Testwork B consisted of acidic water (using H₂SO₄) as lixiviant; pH 1; at temperature 50 °C; with 2 wt% solids density, over a 2 hours and 6 hour duration. • Testwork C consisted of acidic water (using H₂SO₄) as lixiviant; pH 1.5; at temperature 50 °C; with 2 wt% solids density, over a 4-, 8- and 12-hours duration. • At the completion of all tests, the final pH was measured, the slurry was vacuum filtered to separate the primary filtrate (PF). • The final residue solids were thoroughly water washed (100 g DI/40 g solid), dried and analysed • Analysing of the residue was undertaken using ICP-MS for Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Mn, Nd, Pb, Pr, Sc, Sm, Tb, Th, Tm, U, Y, Yb by ALS Brisbane and ICP-OES for Al, Ca, Fe, K, Mg, Mn, Na, Si at ANSTO • QEMSCAN was undertaken using a Quanta 650 electron microscope with dual Bruker XFlash 5030 energy dispersive detectors, controlled by iDiscover and iMeasure image analysis hardware/software 																																																
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Verification has been undertaken by Company personnel. • Sample results from previous methods are comparable to those undertaken in both drilling campaigns. • AC sample data has been recorded in a database with QA-QC analysis of samples undertaken to validate data prior to it being inserted into the database. • Conversion of elemental analysis (REE parts per million) to stoichiometric oxide (REO parts per million) was undertaken by KTA geological staff using the below element to stoichiometric oxide conversion factors. <table border="1" data-bbox="1220 954 1547 1369"> <thead> <tr> <th>Element</th> <th>-Conversion Factor</th> <th>-Oxide Form</th> </tr> </thead> <tbody> <tr><td>Ce</td><td>1.2284</td><td>CeO₂</td></tr> <tr><td>Dy</td><td>1.1477</td><td>Dy₂O₃</td></tr> <tr><td>Er</td><td>1.1435</td><td>Er₂O₃</td></tr> <tr><td>Eu</td><td>1.1579</td><td>Eu₂O₃</td></tr> <tr><td>Gd</td><td>1.1526</td><td>Gd₂O₃</td></tr> <tr><td>Ho</td><td>1.1455</td><td>Ho₂O₃</td></tr> <tr><td>La</td><td>1.1728</td><td>La₂O₃</td></tr> <tr><td>Lu</td><td>1.1371</td><td>Lu₂O₃</td></tr> <tr><td>Nd</td><td>1.1664</td><td>Nd₂O₃</td></tr> <tr><td>Pr</td><td>1.2083</td><td>Pr₆O₁₁</td></tr> <tr><td>Sm</td><td>1.1596</td><td>Sm₂O₃</td></tr> <tr><td>Tb</td><td>1.1762</td><td>Tb₄O₇</td></tr> <tr><td>Tm</td><td>1.1421</td><td>Tm₂O₃</td></tr> <tr><td>Y</td><td>1.2699</td><td>Y₂O₃</td></tr> <tr><td>Yb</td><td>1.1387</td><td>Yb₂O₃</td></tr> </tbody> </table> <ul style="list-style-type: none"> • Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations are used for compiling REO into their reporting and evaluation groups: 	Element	-Conversion Factor	-Oxide Form	Ce	1.2284	CeO ₂	Dy	1.1477	Dy ₂ O ₃	Er	1.1435	Er ₂ O ₃	Eu	1.1579	Eu ₂ O ₃	Gd	1.1526	Gd ₂ O ₃	Ho	1.1455	Ho ₂ O ₃	La	1.1728	La ₂ O ₃	Lu	1.1371	Lu ₂ O ₃	Nd	1.1664	Nd ₂ O ₃	Pr	1.2083	Pr ₆ O ₁₁	Sm	1.1596	Sm ₂ O ₃	Tb	1.1762	Tb ₄ O ₇	Tm	1.1421	Tm ₂ O ₃	Y	1.2699	Y ₂ O ₃	Yb	1.1387	Yb ₂ O ₃
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		<ul style="list-style-type: none"> TREO (Total Rare Earth Oxide) = La₂O₃ + CeO₂ + Pr₆O₁₁ + Nd₂O₃ + Sm₂O₃ + Eu₂O₃ + Gd₂O₃ + Tb₄O₇ + Dy₂O₃ + Ho₂O₃ + Er₂O₃ + Tm₂O₃ + Yb₂O₃ + Y₂O₃ + Lu₂O₃. TREO-Ce = TREO – CeO₂ LREO (Light Rare Earth Oxide) = La₂O₃ + CeO₂ + Pr₆O₁₁ + Nd₂O₃ + Sm₂O₃ HREO (Heavy Rare Earth Oxide) = Eu₂O₃ + Gd₂O₃ + Tb₄O₇ + Dy₂O₃ + Ho₂O₃ + Er₂O₃ + Tm₂O₃ + Yb₂O₃ + Y₂O₃ + Lu₂O₃ CREO (Critical Rare Earth Oxide) = Nd₂O₃ + Eu₂O₃ + Tb₄O₇ + Dy₂O₃ + Y₂O₃ MREO (Magnetic Rare Earth Oxide) = Pr₆O₁₁ + Nd₂O₃ + Tb₄O₇ + Dy₂O₃.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar & 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. 	<ul style="list-style-type: none"> Drillhole collars were surveyed by a handheld GPS (Garmin Map 64sx with 3-5m precision). Following this they were surveyed using a Trimble R2 RTX GPS with expected accuracy of 20mm horizontally and 30mm vertical. The grid system used on the Mt Clere Project for all surveys is GDA94 Zone 50. No downhole surveys were done on the AC holes as all holes were drilled vertically.
Data spacing and distribution	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Analytical data points downhole are sufficient to characterize the nature of the rock and its mineralisation. Drill hole spacings are designed to test specific anomalies relative to ease of access. All are appropriate for exploration results reporting. The holes were roughly drilled between 150 m to 400 m spacings where drill rig access could be achieved. This spacing has been accounted for in the Mineral Resources estimation and classified as appropriate. 2 to 4 m AC sample composites were nominally taken on site for the AC Drilling, with 1m samples taken near end of hole.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All AC holes were drilled vertically. The holes were designed to test various regolith geology. The orientation of the mineralisation is typically within the saprolite of the regolith profile, although some areas of the laterite and saprock profiles are mineralised.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> 2 to 4 metre composite sub-set samples were collected via the riffle splitter into pre-labelled calico bags. Calico bags were placed into polyweave sacks that were sealed with plastic cable ties. The polyweaves were placed into large bulka bags and submitted in four batches. Each batch was transported-frighted to ALS Global Perth in sealed bulka bags.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No independent audits or reviews have been completed to date.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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 in the area. 	<ul style="list-style-type: none"> The tower project is situated within E09/2537 which is a granted license to Krakatoa The tenements are owned and managed by Krakatoa The Company holds 100% interest and all rights in the Mt Clere tenements All are considered to be in good standing.
Exploration by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Various parties have held different parts of the Mt Clere Project in different periods and explored for different commodities over several decades. The project area was previously explored by BHP, All Star and Astro Mining NL respectively for Au, Pb-Zn-Ag mineralisation and diamonds (see ASX announcement 9 October 2020 and 19 June 2019).
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> Ionic absorption Clay and Clay hosted rare earth deposit. The project is focused on multiple REE opportunities, including REE and thorium in enriched monazite sands released from gneissic rocks, REE ion adsorption on clays within the widely preserved deeply weathered lateritic profiles and lastly REE occurring in plausible carbonatites associated with alkaline magmatism. The project covers regions of structural complexity within the Narryer Terrane in the Yilgarn Craton said to represent reworked remnants of greenstone sequences that are prospective for intrusion-hosted Ni-Cu-(Co)-(PGE's).
Drill hole Information	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length 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. 	<ul style="list-style-type: none"> No drill holes are being reported in this release
Data aggregation methods	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No metal equivalents have been used. Assay results of REE are reported in ppm and the conversion of elemental analysis (REE parts per million) to stoichiometric oxide (REO parts per million) was undertaken using stoichiometric oxide conversion factors.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> 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 (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> The AC drilling intercepts are reported as downhole (vertical) widths. The mineralisation is interpreted to be horizontal, flat lying within the regolith profile. No solid information is known or available about mineralisation true width.

Criteria	JORC Code explanation	Commentary
Diagrams	<ul style="list-style-type: none"> 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 sectional views. 	<ul style="list-style-type: none"> The pertinent maps for this stage of Project are included in the release.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be made to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> All relevant data has been reported. This reporting is considered to be balanced Where data may have been excluded, it is considered not material.
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All new and meaningful material exploration data has been reported.
Further work	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Mineralogy and further analysis of additional samples is progressing and will be reported when received Further drilling is being considered.