iTECH MINERALS
ASX: ITM

ASX RELEASE
7 October 2022

METALLURGY UPDATE: CLAY HOSTED REE PROJECTS PROGRESS TO SECOND ROUND OF TESTING

- **iTech has commenced second stage metallurgical trials at its Caralue Bluff high purity kaolin and clay hosted REE project on the Eyre Peninsula, SA**
- **Early metallurgical results have been received from 19 of the 260 holes (7%) drilled earlier this year, of these only 8 occur within the currently defined exploration target**
- **Preliminary leaching test work using standardised leach conditions for ionically bound and colloidal rare earth elements reported maximum recoveries of the magnet REEs of**
  - **Nd – 28%**
  - **Pr – 31%**
  - **Dy – 65%**
  - **Tb – 57%**
- **Consultation with experts at ANSTO has led to a revised leaching program aimed at improving recoveries by varying leaching conditions with the next round of results expected in the next 4-6 weeks**
- **The Caralue Bluff Project has a substantial exploration target of high purity kaolin with associated REE mineralisation of 110 - 220 Mt @ 635 - 832 ppm TREO and 19-22% Al_2O_3**
- **The high purity nature of the kaolin and REE mineralisation allows iTech to explore improved leaching conditions while keeping impurity levels low**

"Clay hosted REE projects typically have complex metallurgy, and it normally takes several iterations of test work to "crack the code" for good recoveries. Having a high purity kaolin as the host to REE mineralisation at Caralue Bluff allows iTech to explore a range of metallurgical techniques to recover the REE's into solution while keeping impurities at low levels."

- Managing Director, Mike Schwarz -

iTech has received the results from the first stage of diagnostic metallurgical test work at the Caralue Bluff Project on the Eyre Peninsula in South Australia. The aim of the test work was to determine if standardised leach conditions for ionic clay hosted rare earths would readily liberate the rare earth element hosted in the high purity kaolin clays at Caralue Bluff. Tests were undertaken at pH 4 with 0.5M ammonium sulphate and sulphuric acid to assess the ionic component and at pH 1 with just sulphuric acid to assess the colloidal component. All tests were undertaken at atmospheric pressure and temperature. Maximum recoveries of the four magnet REEs (Nd, Pr, Dy and Tb) range between 28-65% which suggest the potential to increase extractions with variations to the leaching conditions.

Investors should be aware that the potential quantity and grade of the Exploration Target reported are conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

BOARD & MANAGEMENT

Glenn Davis - Chair
Michael Schwarz - MD
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CAPITAL STRUCTURE

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Issued 96.1M

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In consultation with experts at ANSTO, iTech has now commenced stage two leaching trials with the aim of increasing recoveries by testing the effects of increasing acid concentration and/or increasing leaching temperature. Another option the company will be investigating is to leach the beneficiated kaolin fraction (-45 micron) which has shown significantly increased REE grades.

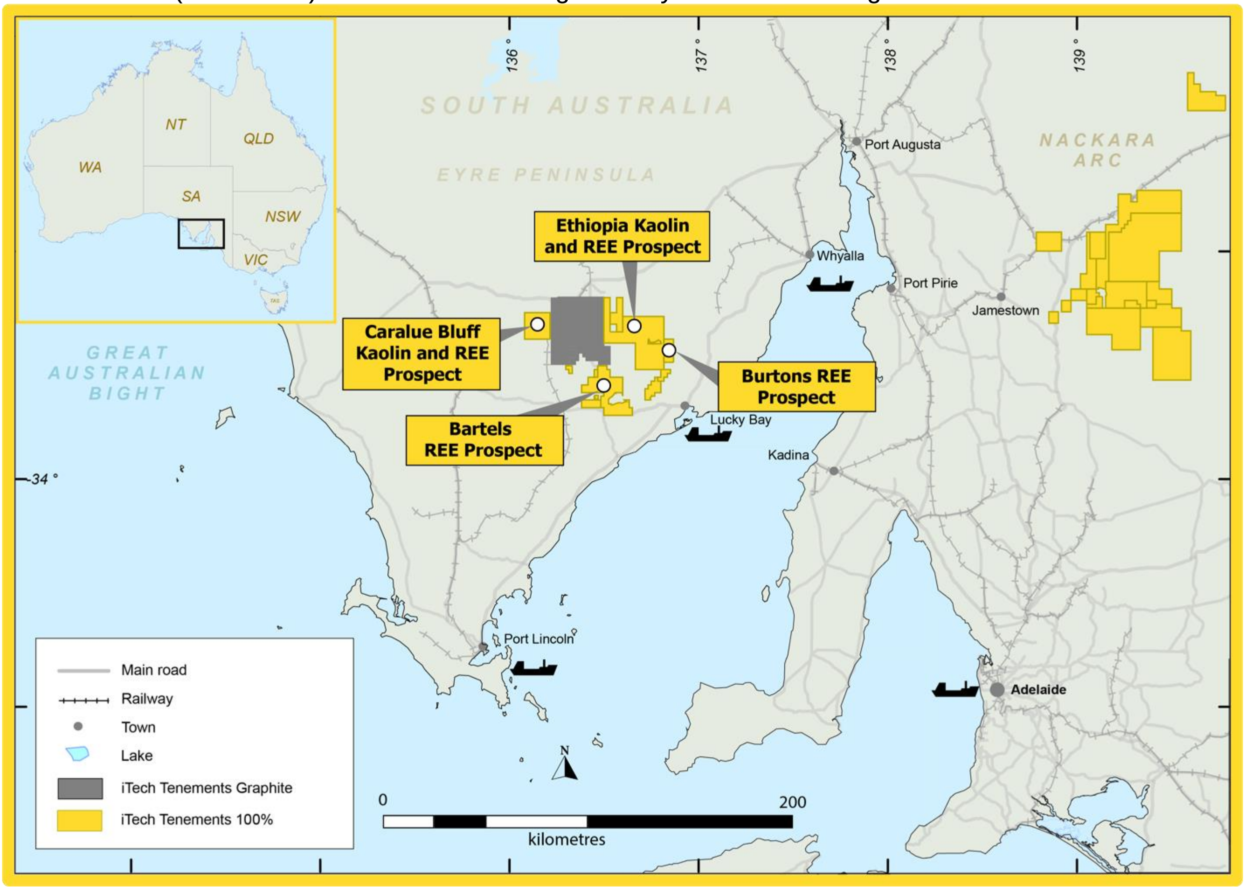

Figure 1. Location of the Caralue Bluff Kaolin and REE Prospect – Eyre Peninsula, South Australia

Initial Metallurgical Evaluation

In May 2022, iTech Minerals Ltd (**iTech** or **Company** ASX: **ITM**) commenced high-level test work on selected intervals of samples recently drilled at the Caralue Bluff Prospect on Eyre Peninsula. Samples were from 19 of the 260 holes (7%) drilled earlier this year, of these only 8 occur within the currently defined exploration target (Figure 2). Samples were sent to both ANSTO (the Australian Nuclear and Science Technology Organisation) in Sydney and the ALS Metallurgy laboratory in Perth. Results have been reviewed by Damian Connelly at METS Engineering.

Acid leach test work (pH 1) was undertaken at both ANSTO in Sydney and ALS Metallurgy Laboratories in Perth (35 samples). The aim of this test work was to determine both the ionic and colloidal (rare earth element oxide) component under standard conditions.

- pH 1 using H_2SO_4
- 2 hours
- Ambient temperature of 25^0C; and
- 2 wt% solids density

Ionic leach test work, on 35 samples, was also undertaken at ALS Laboratories in Perth. Given that the aim of the test work was diagnostic, a very simple leach process was employed to test the easily leachable ionic fraction under standard conditions.

- 0.5M $(NH_4)_2SO_4$ as lixiviant
- pH 4 using H_2SO_4
- 30 minutes
- Ambient temperature of 25^0C; and
- 2 wt% solids density

This process was designed to only target the easily leachable ionic component of REE mineralisation over a short exposure period. No additional leach steps, analysis of wash water or variation of pH, were undertaken which have the potential to increase levels of extraction.

Each of the leach tests was conducted on 40g of dry, pulverised sample and 1960g of the lixiviant in a 2 L titanium / stainless steel baffled leach vessel equipped with an overhead stirrer. The results of the tests on selected clay samples were used to calculate average extractions for each composite sample.

The testing demonstrated that while average recoveries of the four main magnet REEs were relatively low, the maximum recoveries show the potential for improved extraction with variations to the leaching conditions.

Leach Summary of ALS test work - Magnet Elements						
	pH4-Ammoniumm Sulphate			pH1		
	Average	Min	Max	Average	Min	Max
Acid Addition (kg/t)	10	5	31	724	677	986
Temp (^{0}C)	18	15	21	23	21	26
Nd (%)	6	2	19	8	1	28
Pr (%)	6	1	20	8	1	31
Dy (%)	18	2	65	12	1	40
Tb (%)	13	1	41	15	2	57

Table 1. Summary of extraction results for the magnet rare earth elements of early samples at Caralue Bluff

Discussion and Next Steps

In consultation with experts at ANSTO, iTech has now commenced stage two leaching trials with the aim of increasing recoveries by testing the effects of increasing acid concentration and/or increasing leaching temperature. Results are expected in the next 4-6 weeks. As has been seen with other clay hosted REE project worldwide, several iterations of metallurgical test work are required to determine the optimum leaching conditions for a particular deposit. The standardised tests used by iTech initially are intended to act as a guide to determine effective leaching conditions in the next round of test work.

The Caralue Bluff Project also contains a significant high purity kaolin exploration target; the company will be investigating the potential to leach the-beneficiated kaolin fraction which has shown significantly increased REE. Having a high purity kaolin as the host to REE mineralisation at Caralue Bluff allows iTech to explore a range of metallurgical techniques to recover the REE’s into solution while keeping impurities at low levels.

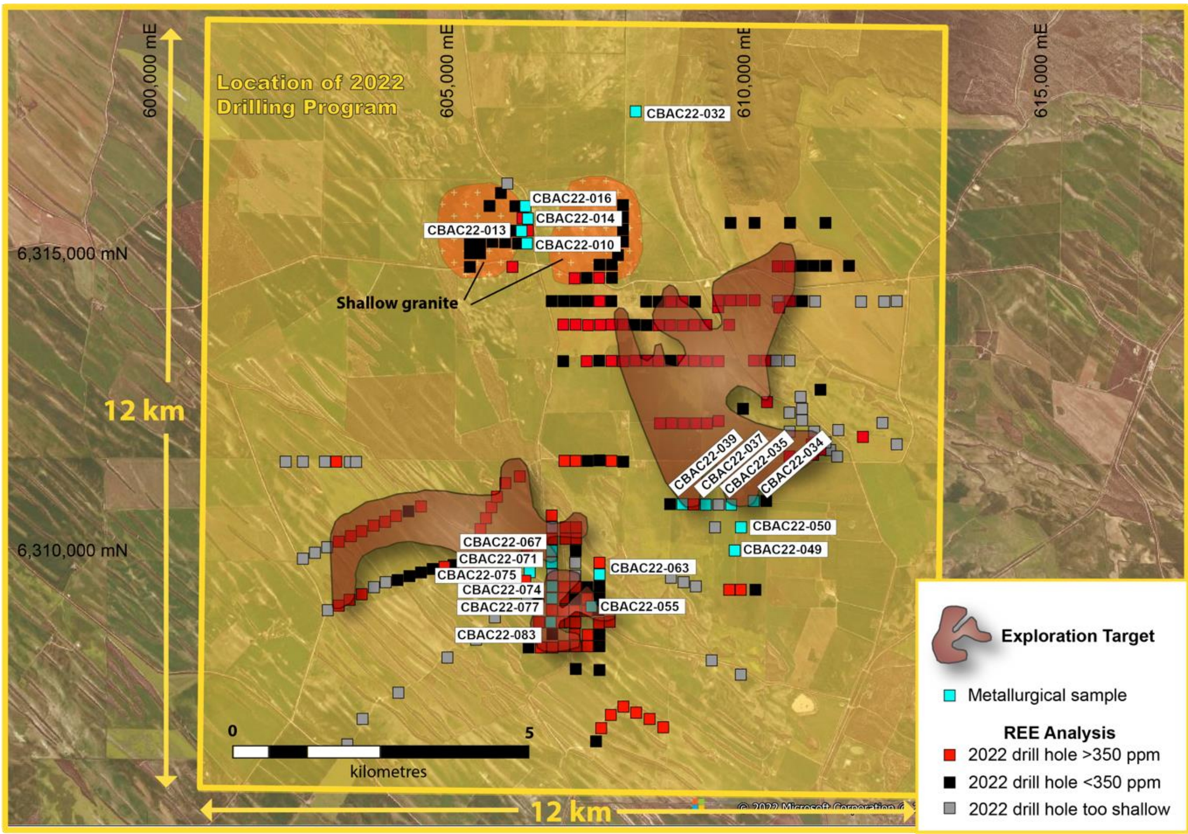

Figure 2. Location of the Caralue Bluff metallurgy samples – Eyre Peninsula, South Australia

For further information please contact the authorising officer Michael Schwarz:

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COMPETENT PERSON STATEMENT

The information which relates to exploration results is based on and fairly represents information and supporting documentation compiled by Michael Schwarz. Mr Schwarz has sufficient experience, which is relevant to the style of mineralisation and 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' (the JORC Code). Mr Schwarz is a full-time employee of iTech Minerals Ltd and is a member of the Australian Institute of Geoscientists and the Australian Institute of Mining and Metallurgy. Mr Schwarz consents to the inclusion of the information in this report in the form and context in which it appears.

The information contained in this report, relating to metallurgical results, is based on, and fairly and accurately represent the information and supporting documentation prepared by Damian Connelly. Mr Connelly is a full-time employee of METS Engineering who are a Contractor to iTech, and a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Connelly has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Connelly consents to the inclusion in the report of the matters based on the results in the form and context in which they appear.

ABOUT iTECH MINERALS LTD

iTech Minerals Ltd is a newly listed mineral exploration company exploring for and developing battery materials and critical minerals within its 100% owned Australian projects. The company is exploring for kaolinite-halloysite, clay hosted rare earth element mineralisation and developing the Campoona Graphite Deposit in South Australia. The company also has extensive exploration tenure prospective for Cu-Au porphyry mineralisation, IOCG mineralisation and gold mineralisation in South Australia and tin, tungsten, and polymetallic Cobar style mineralisation in New South Wales.

This announcement contains results that have previously released as "Replacement Prospectus" on 19 October 2021, "Rare Earth Potential Identified at Kaolin Project" on 21 October 2021, "Rare Earth Potential Confirmed at Kaolin Project" on 12 November 2021, "New Rare Earth Prospect on the Eyre Peninsula" on 29 November 2021, "Positive Results Grow Rare Earth Potential at Kaolin Project" on 13 December 2021, "More Positive Rare Earth Results - Ethiopia Kaolin Project" on 12 January 2022, "Exploration Program Underway at EP Kaolin-REE Project" on 19 January 2022, "Eyre Peninsula Kaolin-REE Drilling Advancing Rapidly" on 16 February 2022, "Ionic Component Confirmed at Kaolin-REE Project" on 9 March 2022, "Drilling confirms third REE Prospect at Bartels – Eyre Peninsula" on 22 March 2022, "Eyre Peninsula Kaolin-REE Maiden Drilling Completed" on 7 April 2022, "Significant REEs discovered at Caralue Bluff" on 14 April 2022, "Substantial REEs in first drill holes at Ethiopia, Eyre Peninsula" on 18 May 2022, "Caralue Bluff and Ethiopia Prospects Continue to Grow" on 20 June 2022,"New REE drill results expand Caralue Bluff Prospect" on 18 July 2022, "More thick, high grade REEs at Caralue Bluff" on 22 July 2022, "Final Results from Caralue Bluff Prospect" on 11 August 2022 and " Exploration Target defined at Caralue Bluff" on 18 August 2022. iTech confirms that the Company is not aware of any new information or data that materially affects the information included in the announcement.

GLOSSARY

CREO = Critical Rare Earth Element Oxide
HREO = Heavy Rare Earth Element Oxide
IAC = Ion Adsorption Clay
LREO = Light Rare Earth Element Oxide
REE = Rare Earth Element
REO = Rare Earth Element Oxide
TREO = Total Rare Earth Element Oxides
%NdPr = Percentage amount of neodymium and praseodymium as a proportion of the total amount of rare earth elements
wt% = Weight percent

JORC 2012 EDITION - TABLE 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised 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 (e.g. submarine nodules) may warrant disclosure of detailed information.	• All samples were collected through a cyclone into plastic bags at 1 m intervals, then subsampled into ~2kg samples within numbered calico bags, composite samples were created from selected 1 metre intervals, which have been sent for chemical analyses. • Composite intervals were created based upon the geology and colour. As such the composite intervals created vary in length from 2m to 5m. Composite samples weigh roughly 1-2 kg for initial test work. • The Competent Person has reviewed referenced publicly sourced information through the report and considers that sampling was commensurate with industry standards current at the time of drilling and is appropriate for the indication of the presence of mineralisation.
Drilling Techniques	• Drill type (e.g., core, reverse circulation, open hole hammer, rotary air blast, auger, Bangka, sonic, 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.).	• McLeod Drilling used a Reverse Circulation Aircore drill rig mounted on a 6-wheel drive Toyota Landcruiser. • Aircore drilling uses an 76mm aircore bit with 3 tungsten carbide blades and is a form of drilling where the sample is collected at the face and returned inside the inner tube. The drill cuttings are removed by the injection of compressed air into the hole via the annular area between the inner tube and the drill rod. • Aircore drill rods are 3 m NQ rods. • All aircore drill holes were between 2m and 60m in length. • The Competent Person has inspected the drilling program and considers that drilling techniques was commensurate with industry standards current at the time of drilling and is appropriate for the indication of the presence of mineralisation.

Criteria	JORC Code Explanation	Commentary
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.	• No assessment of recoveries was documented. • All efforts were made to ensure the sample was representative. • No relationship is believed to exist, but no work has been done to confirm this.
Logging	• 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, etc.) photography. • The total length and percentage of the relevant intersections logged.	• All samples were geologically logged to include details such as colour, grain size and clay content. • Collars were located using a handheld GPS • As this is early-stage exploration, collar locations will have to be surveyed to be used in mineral resource estimation. • The holes were logged in both a qualitative and quantitative fashion relative to clay content.

Sub-Sampling Techniques and Sample Preparation	• If core, whether cut or sawn and whether quarter, half or all cores 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.
		• All samples were collected through a cyclone into plastic bags at 1 m intervals, then subsampled into ~2kg samples within numbered calico bags, composite samples were created from selected 1 metre intervals, which have been sent for chemical analyses.
		• A full profile of the bag contents was subsampled to ensure representivity.
		• All samples were dry.
		• Composite intervals were created based upon the geology and colour. As such the composite intervals created vary in length from 2m to 5m. Composite samples weigh roughly 1-2 kg for initial test work.
		• Kaolin rich intervals were subsampled and submitted for kaolin analysis at Bureau Veritas using the following method
		  ○ Screen with 45-micron screen using cold water
		  ○ Retain both fractions
		  ○ Dry each fraction at low temp overnight
		  ○ Record masses
		  ○ Riffle split a 10gm (+45 and -45 fraction) for whole rock assay (14 element oxides), LOI and REEs.

Criteria	JORC Code Explanation	Commentary
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Whole Rock and REE analysis was undertaken by Bureau Veritas using both the XRF (XRF4B) and ICP-MS (IC4M) techniques. • Both the +45 and -45 fraction were analysed for REEs and the bulk sample result was calculated from the relative proportions and REE values of each fraction. **XRF (Detection limits in ppm)** Al (100) As (10) Ba (10) Ca (100) Cr (10) Cu (10) Fe (100) K (100) Mg (100) Mn (10) Na (100) Ni (10) P (10) Pb (10) S (10) Si (100) Ti (100) U (10) W (10) Y (10) Zn (10) Zr (10) **LA-ICP-MS (Detection limits in ppm)** Ag (0.1) As (0.2) Ba (0.5) Be (0.2) Bi (0.02) Cd (0.1) Co (0.1) Cr (1) Cs (0.01) Cu (2) Dy (0.01) Er (0.01) Ga (0.1) Gd (0.01) Hf (0.01) Ho (0.01) In (0.05) La (0.01) Mn (1) Mo (0.2) Nb (0.01) Nd (0.01) Ni (2) Pb (1) Rb (0.05) Re (0.01) Sb (0.1) Sc (0.1) Se (5) Sm(0.01) Sr (0.1) Ta (0.01) Tb (0.01) Te (0.2) Th (0.01) Ti (1) Tm (0.01) U (0.01) V (0.1) W (0.05) Y (0.02) Yb (0.01) Zn (5) Zr (0.5) • Selected samples that didn't require screening of the -45µm fraction were submitted to ALS Perth using their ME-MS61 technique for multi-elements. As such the digestion of REE's is not complete. • A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, silver and tungsten and diluted accordingly. Samples meeting this criterion are then analyzed by inductively coupled plasma-mass spectrometry. Results are corrected for spectral interelement interferences. • NOTE: Four acid digestions are able to dissolve most minerals; however, although the term "near-total" is used, depending on the sample matrix, not all elements are quantitatively extracted. • Results for the additional rare earth

Criteria	JORC Code Explanation	Commentary
		elements will represent the acid leachable portion of the rare earth elements. • Detection Limits are as follows

Element	Unit	DL
Ag	ppm	0.01
Al	%	0.01
As	ppm	0.2
Ba	ppm	10
Be	ppm	0.05
Bi	ppm	0.01
Ca	%	0.01
Cd	ppm	0.02
Ce	ppm	0.01
Co	ppm	0.1
Cr	ppm	1
Cs	ppm	0.05
Cu	ppm	0.2
Fe	%	0.01
Ga	ppm	0.05
Ge	ppm	0.05
Hf	ppm	0.1
In	ppm	0.005
K	%	0.01
La	ppm	0.5
Li	ppm	0.2
Mg	%	0.01
Mn	ppm	5
Mo	ppm	0.05
Na	%	0.01
Nb	ppm	0.1
Ni	ppm	0.2
P	ppm	10
Pb	ppm	0.5
Rb	ppm	0.1
Re	ppm	0.002
S	%	0.01
Sb	ppm	0.05
Sc	ppm	0.1
Se	ppm	1
Sn	ppm	0.2
Sr	ppm	0.2
Ta	ppm	0.05
Te	ppm	0.05
Th	ppm	0.2
Ti	%	0.005
Tl	ppm	0.02
U	ppm	0.1
V	ppm	1
W	ppm	0.1
Y	ppm	0.1
Zn	ppm	2
Zr	ppm	0.5
Dy	ppm	0.05

<table>
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<tr><td>Er</td><td>ppm</td><td>0.03</td></tr>
<tr><td>Eu</td><td>ppm</td><td>0.03</td></tr>
<tr><td>Gd</td><td>ppm</td><td>0.05</td></tr>
<tr><td>Ho</td><td>ppm</td><td>0.01</td></tr>
<tr><td>Lu</td><td>ppm</td><td>0.01</td></tr>
<tr><td>Nd</td><td>ppm</td><td>0.1</td></tr>
<tr><td>Pr</td><td>ppm</td><td>0.03</td></tr>
<tr><td>Sm</td><td>ppm</td><td>0.03</td></tr>
<tr><td>Tb</td><td>ppm</td><td>0.01</td></tr>
<tr><td>Tm</td><td>ppm</td><td>0.01</td></tr>
<tr><td>Yb</td><td>ppm</td><td>0.03</td></tr>
</table>
</td></tr>
<tr><td>Verification of Sampling and Assaying</td><td>
• 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.</td><td>
• No verification of sampling, no use of twinned holes.
• Data is exploratory in nature and is compiled into excel spreadsheets.
• Rare earth element analyses were originally reported in elemental form but have been converted to relevant oxide concentrations as in the industry standard.
○ TREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3
○ CREO = Nd_2O_3 + Eu_2O_3 + Tb_4O_7 + Dy_2O_3 + Y_2O_3
○ LREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3
○ HREO = Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3
○ MREO = Nd_2O_3 + Pr_6O_{11} + Tb_4O_7 + Dy_2O_3
○ NdPr = Nd_2O_3 + Pr_6O_{11}
○ TREO-Ce = TREO - CeO_2
○ % NdPr = NdPr/ TREO
○ %HREO = HREO/TREO
○ %LREO = LREO/TREO</td></tr>
<tr><td>Location of Data Points</td><td>
• Accuracy and quality of surveys used to locate drillholes (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.</td><td>
• The location of drill hole collar was undertaken using a hand-held GPS which has an accuracy of +/- 5m using UTM MGA94 Zone 53.
• The quality and adequacy are appropriate for this level of exploration.</td></tr>
<tr><td>Data Spacing and Distribution</td><td>
• 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.</td><td>
• There is no pattern to the sampling and the spacing is defined by access for the drill rig, geological parameters, and land surface.
• Data spacing and distribution are sufficient to establish the degree of geological and grade continuity for future drill planning, but not for resource reporting.</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
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.	• It is believed that the drilling has intersected the geology at right angles, however, it is unknown whether the drill holes have interested the mineralisation in a perpendicular manner. The mineralised horizon is obscured by a thin veneer of transported material. • It is believed there is no bias has been introduced.
Sample Security	• The measures taken to ensure sample security.	• All samples have been in the custody of iTech employees or their contractors. • Best practices were undertaken at the time. • All residual sample material (pulps) is stored securely.
Audits or Reviews	• The results of any audits or reviews of sampling techniques and data.	• None undertaken.

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 in the area.	• Tenement status confirmed on SARIG. • The tenements are in good standing with no known impediments.
Exploration Done by Other Parties	• Acknowledgment and appraisal of exploration by other parties.	• Relevant previous exploration has been undertaken by Shell Company of Australia Pty Ltd, Adelaide Exploration Pty Ltd and Archer Materials Ltd
Geology	• Deposit type, geological setting and style of mineralisation.	• The tenements are within the Gawler Craton, South Australia. • iTech is exploring for porphyry Cu-Au, epithermal Au, kaolin and halloysite and REE deposits. • This release refers to kaolin mineralisation and ion adsorption rare earth elements mineralisation related to lateritic weathering processes on basement rock of the Gawler Craton, in particular the Palaeoproterozoic Miltalie Gneiss and Warrow Quartzite.
Drillhole 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: – 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 – Downhole length and interception depth – Hole length • If the exclusion of this information is justified on the basis that the information	• See Appendix 1 for sample information. • Exploration results have been released in previous announcements by the company.

Criteria	JORC Code Explanation	Commentary
	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.	
Data Aggregation Methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., 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.	• REE analysis intervals were aggregated using downhole sample length weighted averages with a lower cut-off of 400 ppm TREO with no upper limit applied. A maximum internal dilution of 4m @ 200 ppm TREO was used. • No high cut has been applied.
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 downhole lengths are reported, there should be a clear statement to this effect (e.g., 'downhole length, true width not known').	• All holes are believed to intersect the mineralisation at 90 degrees and therefore represent true widths • All intercepts reported are down hole lengths.
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.	• See main body of 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 avoiding misleading reporting of Exploration Results.	• All other relevant data has been reported. • The reporting is considered to be balanced. • Where data has been excluded, it is not considered material.
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.	**Metallurgical Testwork** Acid leach test work (pH 1) was undertaken at both ANSTO in Sydney (20 samples) and ALS Metallurgy Laboratories in Perth (35 samples). The aim of this test work was to determine both the ionic and colloidal (rare earth element oxide) component under standard conditions. • pH 1 using H_2SO_4

Criteria	JORC Code Explanation	Commentary
		• 2 hours • Ambient temperature of 25⁰C; and • 2 wt% solids density Ionic leach test work, on 35 samples, was also undertaken at ALS Laboratories in Perth. Given that the aim of the test work was diagnostic, a very simple leach process was employed to test the easily leachable ionic fraction under standard conditions. • 0.5M $(NH_4)_2SO_4$ as lixiviant • pH 4 using H_2SO_4 • 30 minutes • Ambient temperature of 25⁰C; and • 2 wt% solids density • The Project area has been subject of significant exploration for base metals, graphite and gold. • All relevant exploration data has been included in this report.
Further Work	• The nature and scale of planned further work (e.g., 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.	• Further exploration, sampling, geochemistry and drilling required at all prosects • Approximately 5 samples from Caralue Bluff are undergoing modified metallurgical test work to determine recovery rate of REEs.

Appendix 1.
Metallurgical test work samples – Caralue Bluff

Hole Id	Easting (m)	Northing (m)	Sample number	Depth from (m)	Depth to (m)	Laboratory	Tests
CBAC22_010	606408	6315160	NB3936	10	14	ANSTO, ALS	2
CBAC22_013	606295	6315394	NB3967	10	14	ANSTO, ALS	2
CBAC22_014	606410	6315615	NB3962	2	6	ALS	1
CBAC22_014	606410	6315615	NB3963	6	10	ALS	1
CBAC22_014	606410	6315615	NB3964	10	14	ANSTO, ALS	2
CBAC22_014	606410	6315615	NB3965	14	18	ALS	1
CBAC22_014	606410	6315615	NB3966	18	22	ALS	1
CBAC22_016	606337	6315798	NB3972	6	10	ANSTO, ALS	2
CBAC22_032	608208	6317396	NB3999	10	12	ANSTO, ALS	2
CBAC22_032	608208	6317396	NB4000	12	16	ALS	1
CBAC22_032	608208	6317396	NB4001	16	19	ALS	1
CBAC22_034	610203	6310864	NB4014	9	12	ANSTO, ALS	2
CBAC22_034	610203	6310864	NB4015	12	17	ANSTO, ALS	2
CBAC22_034	610203	6310864	NB4016	17	21	ANSTO, ALS	2
CBAC22_034	610203	6310864	NB4017	21	25	ANSTO, ALS	2
CBAC22_035	609794	6310767	NB4025	1	4	ALS	1
CBAC22_035	609794	6310767	NB4026	4	8	ANSTO, ALS	2
CBAC22_035	609794	6310767	NB4027	8	12	ALS	1
CBAC22_037	609399	6310770	NB4033	1	6	ANSTO, ALS	2
CBAC22_039	608996	6310784	NB4054	23	27	ANSTO, ALS	2
CBAC22_039	608996	6310784	NB4055	27	31	ALS	1
CBAC22_049	609920	6310011	NB4099	3	8	ALS	1
CBAC22_049	609920	6310011	NB4100	8	10	ALS	1
CBAC22_049	609920	6310011	NB4101	10	13	ALS	1
CBAC22_049	609920	6310011	NB4102	13	16	ALS	1
CBAC22_049	609920	6310011	NB4103	16	20	ALS	1
CBAC22_050	609997	6310398	NB4107	5	9	ANSTO, ALS	2
CBAC22_050	609997	6310398	NB4108	9	13	ALS	1
CBAC22_055	607453	6309015	NB4137	4	7	ANSTO, ALS	2
CBAC22_063	607595	6309603	NB4192	9	13	ANSTO, ALS	2
CBAC22_063	607595	6309603	NB4193	13	17	ALS	1
CBAC22_067	606796	6310000	NB4211	11	15	ALS	1
CBAC22_067	606796	6310000	NB4212	15	19	ALS	1
CBAC22_067	606796	6310000	NB4213	19	23	ALS	1
CBAC22_067	606796	6310000	NB4214	23	25	ALS	1
CBAC22_071	606794	6309802	NB4239	16	21	ALS	1
CBAC22_074	606808	6309425	NB4257	11	15	ALS	1
CBAC22_074	606808	6309425	NB4258	15	19	ALS	1
CBAC22_074	606808	6309425	NB4259	19	21	ALS	1
CBAC22_075	606416	6309646	NB4267	27	30	ALS	1
CBAC22_077	606796	6309205	NB4277	4	8	ANSTO, ALS	2
CBAC22_077	606796	6309205	NB4278	8	12	ANSTO, ALS	2
CBAC22_077	606796	6309205	NB4279	12	16	ANSTO, ALS	2
CBAC22_077	606796	6309205	NB4280	16	20	ANSTO, ALS	2
CBAC22_083	606797	6308800	NB4316	7	11	ANSTO, ALS	2