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*Exploration with Purpose*

# MREO focused metallurgical test-work underway by ANSTO

## Highlights

- **Specialist consultant, ANSTO[1], has been appointed to undertake comprehensive metallurgical test-work on six samples from Fence Gossan, Reefs and Tors Tanks Prospects (BHA Project's East Zone) to understand the potential to extract rare earth elements (REE) from shallow clay zones; results should take 8-10 weeks**
- **The scope of work will focus on characterising REE leachability from the six samples which comprise fresh pegmatite to highly weathered clay, especially with Magnetic Rare Earth Oxide (MREO) grades ranging from 362-603ppm (refer Appendix A)**
- **This is an important step towards advancing the viability of the BHA Project's East Zone REE potential and securing interest from prospective development partners, especially given the extent of high-value MREO (Nd+Pr+Dy+Tb) within the system**
- **To recap, the best RC and diamond core assay result intercepts from Tors Tank and Fence Gossan – across the shallow, clay-hosted, REE system[2] – were:**
  - **13m @ 1,550ppm Total Rare Earth Oxides (TREO) from 5m; 38.9% MREO (TT_005DD)[2] of the TREO grade vs 25% peer average[3]**
  - **17m @ 1,605ppm TREO from 2m; 28.6% MREO & 1m @ 3,236 TREO from 19m; 28.9% MREO (FG_003RC)[2]**
  - **10m @ 1,013ppm TREO from 49m; 24.7% MREO (FG_001RC)[2]**
  - **6m @ 1,480ppm TREO from 7m; 28.9% MREO (FG_004RC)[2]**
  - **5m @ 1,598ppm TREO from 14m; 29.1% MREO (TT_002RC)[2]**
- **Meanwhile, work on the Big One Deposit optimisation study and updating the Cangai Copper Mine Mineral Resource Estimate is progressing on schedule**

**Castillo Copper's Chairman Ged Hall commented:** *"The Board is delighted ANSTO is conducting specialist metallurgical test-work on samples from the BHA Project's East Zone. Understanding the potential to extract REE mineralisation, especially MREOs, will greatly assist in our efforts to align with a future development partner. Pleasingly, the work done to date clearly confirms there is an extensive shallow REE system across the central part of the BHA Project's East Zone."*

# ANSTO UNDERTAKING METALLURGICAL TEST-WORK

**Castillo Copper Limited's ("CCZ")** Board is delighted to announce that it has appointed specialist consultant, ANSTO[1], to undertake metallurgical test-work on six samples from Fence Gossan, Reefs and Tors Tanks Prospects within the BHA Project's East Zone.

The scope of work that ANSTO will perform is designed to provide a deeper understanding of the following:

- The potential to extract REE mineralisation from shallow clay zones;
- Characterising the REE leachability from the six samples which comprise fresh pegmatite to highly weathered clay; and
- Separating out high-value MREO (Nd+Pr+Dy+Tb) as the grades in the samples range from 362-603ppm MREO (Figure 1).

### FIGURE 1: COMPOSITE SAMPLE DESCRIPTIONS FOR ANSTO TEST PROGRAM

| Drillhole | Sample Number(s) | From (m) | To (m) | Thick. (m) | Comments on samples |
|---|---|---|---|---|---|
| **TT_002RC** | CCZ03888-92 | 14.00 | 19.00 | 5.00 | MREO = 466 ppm; highly weathered clay |
| **TT_005DD** | CCZ04936-49 | 5.00 | 18.00 | 13.00 | MREO = 603 ppm; highly weathered clay |
| **FG_003RC** | CCZ04513-30 | 2.00 | 20.00 | 18.00 | MREO = 459 ppm; highly weathered clay |
| **FG_004RC** | CCZ04686-91 | 7.00 | 13.00 | 6.00 | MREO = 427 ppm; highly weathered clay |
| **RT_001RC** | CCZ03819-21 | 14.00 | 17.00 | 3.00 | MREO = 466 ppm; highly weathered clay |
| **RT_001RC** | CCZ04869 | 64.00 | 65.00 | 1.00 | MREO = 362 ppm; fresh pegmatite |

Note: MREO elements (Nd+Pr+Dy+Tb)
Source: REE Analyses using ALS Method ME-MS81

The Board believes this is a crucially important step towards materially advancing the viability of the BHA Project's East Zone. Furthermore, robust metallurgical test-work results for high-value MREO mineralisation should aid securing interest from prospective development partners.

### Assay result recap

To recap, diamond core drill-hole from the Tors Tank Prospect returned an excellent assay result:

- 13m @ 1,550ppm TREO from 5m; **38.9% MREO** (TT_005DD)[2]

Notably, the high value MREO reading was well above the 25% average among the peer group[2].

Re-assays of 1m samples from the Tors Tank and Fence Gossan Prospects re-affirmed high MREO percentages (Figure 2) and provided clearer evidence there is an extensive, shallow REE mineralisation system across the centre of the BHA Project's East Zone (refer Appendix B & C).

## FIGURE 2: BEST "RC" INTERCEPTS TORS TANK / FENCE GOSSAN

| Hole | From (m) | To (m) | Width (m) | TREO (ppm) | MREO (%) |
|---|---|---|---|---|---|
| **TT_001RC** | 25 | 27 | 2 | 1,048 | **27.1%** |
| **TT_002RC** | 14 | 19 | 5 | 1,598 | **29.1%** |
| **TT_003RC** | 4 | 11 | 7 | 890 | **34.6%** |
| | 12 | 13 | 1 | 1,103 | **28.4%** |
| | 15 | 17 | 2 | **3,491** | **24.6%** |
| **FG_001RC** | 8 | 20 | 12 | 907 | **31.0%** |
| | 49 | 59 | 10 | 1,013 | **24.7%** |
| **FG_002RC** | 11 | 16 | 5 | 1,065 | **28.9%** |
| **FG_003RC** | 2 | 19 | 17 | 1,605 | **28.6%** |
| | 19 | 20 | 1 | **3,236** | **28.9%** |
| **FG_004RC** | 7 | 13 | 6 | 1,480 | **28.9%** |
| | 28 | 32 | 4 | 1,342 | **22.9%** |

Source: CCZ geology team

In addition, hand auger surface sampling assays delineated a sizeable (circa 4.5km$^2$) anomalous REE zone around the Fence Gossan Prospect.

**The Board of Castillo Copper Limited authorised the release of this announcement to the ASX.**

**Dr Dennis Jensen**
**Managing Director**

**Competent Person's Statement**

The information in this report that relates to Exploration Results for "BHA Project, East Zone" is based on information compiled or reviewed by Mr Mark Biggs. Mr Biggs is a director of ROM Resources, a company which is a shareholder of Castillo Copper Limited. ROM Resources provides ad hoc geological consultancy services to Castillo Copper Limited. Mr Biggs is a member of the Australian Institute of Mining and Metallurgy (member #107188) and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities 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, and Mineral Resources. Mr Biggs holds an AusIMM Online Course Certificate in 2012 JORC Code Reporting. Further, Mr Biggs consents to the inclusion in this report of the matters based on information in the form and context in which it appears.



**References**

1) ANSTO. Available at: https://www.ansto.gov.au/services/resources-sector/minerals

2) CCZ ASX Release – 23 November 2022, 15 & 28 February 2023

3) Nelson, S. "Rare earths rush showed no signs of abating in Q4 2022" 6 February 2023. Available at: https://www.proactiveinvestors.com.au/companies/news/1005217/rare-earths-rush-showed-no-signs-of-abating-in-q4-2022-1005217.html

**Appendix References:**

4) Total REE extraction is not necessarily the best indicator as the individual REE's will likely dissolve to different extents, and the value of the individual REE's varies significantly (the most valuable are Nd, Pr, Tb, and Dy).

5) Mt Weld, Peak Resources, Arafura, Northern, Hastings and Iluka.

6) Hydrochloric acid is an alternative, but sulfuric acid is preferred based on cost.

7) Higher temperatures can be tested in further work, but higher temperature accelerates gangue dissolution and adds to costs, particularly for a low-grade clay feed at a relatively low slurry density. Clay processing is probably limited to a slurry density of ~35 wt%.

8) NaCl and MgSO4 are also potential adsorbents, but ammonium sulphate is typically the best for a true ionic clay. Other options could consider the concentration being decreased. These are possible options for later stages of testing.

## About Castillo Copper

Castillo Copper Limited is an Australian-based explorer primarily focused on copper across Australia and Zambia. The group is embarking on a strategic transformation to morph into a mid-tier copper group underpinned by its
core projects:

A large footprint in the in the Mt Isa copper-belt district, north-west Queensland, which delivers significant exploration upside through having several high-grade targets and a sizeable untested anomaly within its boundaries in a copper rich region.

Four high-quality prospective assets across Zambia's copper-belt which is the second largest copper producer in Africa.

A large tenure footprint proximal to Broken Hill's world-class deposit that is prospective for cobalt-zinc-silver-lead-copper-gold and platinoids.

Cangai Copper Mine in northern New South Wales, which is one of Australia's highest grading historic copper mines.

The group is listed on the LSE and ASX under the ticker "CCZ."

## Directors

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# APPENDIX A: METALLURGY TESTING AT ANSTO STARTED

## BACKGROUND AND SCOPE

CCZ recently identified clay-hosted REE mineralisation across the Fence Gossan, Tors and Reefs Tanks Prospects. Since then, initial flotation tests show the REE minerals can be separated from the clays and hard rock (such as monazite) by flotation to produce a higher-grade concentrate (2-3 times REE enrichment). The next step in this process is to develop an understanding of the potential to extract the REE's contained in the clay zones.

CCZ has engaged ANSTO to progress a work program that characterises the REE/clay mineralisation with respect to leachability for six samples ranging from fresh pegmatite to highly weathered clay (see Figure A1). Note, the MREO (Magnetic REE's – Pr, Nd, Tb, Dy) grades of the samples supplied vary from 362 - 603 ppm.

**FIGURE A1: COMPOSITE SAMPLE DESCRIPTIONS FOR ANSTO TEST PROGRAM**

| Drillhole | Sample Number(s) | From (m) | To (m) | Thick. (m) | Comments on samples |
|---|---|---|---|---|---|
| **TT_002RC** | CCZ03888-92 | 14.00 | 19.00 | 5.00 | MREO = 466 ppm; highly weathered clay |
| **TT_005DD** | CCZ04936-49 | 5.00 | 18.00 | 13.00 | MREO = 603 ppm; highly weathered clay |
| **FG_003RC** | CCZ04513-30 | 2.00 | 20.00 | 18.00 | MREO = 459 ppm; also, Preliminary Met ALS Perth sample; highly weathered clay |
| **FG_004RC** | CCZ04686-91 | 7.00 | 13.00 | 6.00 | MREO = 427 ppm; highly weathered clay |
| **RT_001RC** | CCZ03819-21 | 14.00 | 17.00 | 3.00 | MREO = 466 ppm; highly weathered clay |
| **RT_001RC** | CCZ04869 | 64.00 | 65.00 | 1.00 | MREO = 362 ppm; fresh pegmatite |

Note: MREO elements (Nd+Pr+Dy+Tb)
Source: REE Analyses using ALS Method ME-MS81

Key questions to answer are the proportion of ionically adsorbed REEs and potential for increased extraction by a simple direct acid leaching approach.

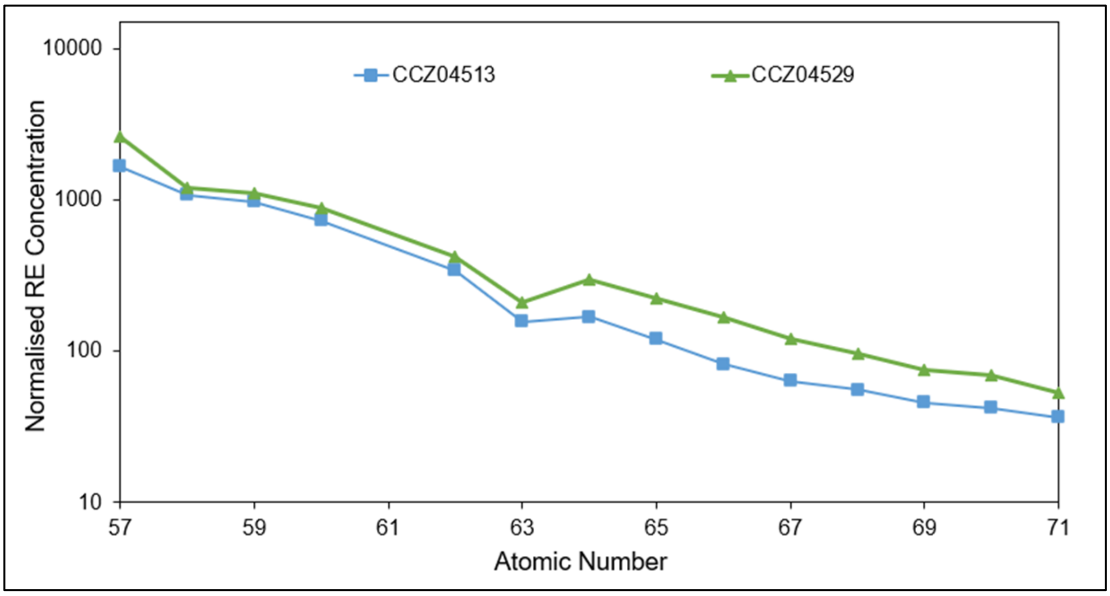
## OBJECTIVES OF THE WORK PROGRAM

The main objective of the work program is to assess the leachability of REEs from clay samples over a range of pHs. The specific tasks in the scope are:

1. Drying of as-received samples and preparation for compositing, assay, and leach tests.
2. Head assays on six samples (XRF, fusion digest/MS).
3. Carry out a diagnostic leach on the six samples using ammonium sulphate (AS) at pH 4.
4. Carry out a diagnostic leach tests on six samples using ammonium sulphate at pH 1 (in sulfuric acid).
5. Provision of a data pack, with a summary note and discussion of the main findings.

Chondrite normalised plots below (Figure A2) for two individual samples from the composites listed in Figure A1 shows the assays plot as expected, and the slope of the plot is typical for this deposit type. Figure A2 would tend to indicate the REEs are not solely present as monazite.

## FIGURE A2: CHONDRITE NORMALISED PLOTS FROM TWO FENCE GOSSAN SAMPLES




Source: Ansto 2023

## CLAY REE DEPOSITS

The so-called REE ionic clay deposits (IADs) are commercially leached in China and Myanmar as a major source of heavy REEs. A feature of the IADs is the REE's are present as physically adsorbed ions which can be readily solubilised by displacing the REE ions with an appropriate cation. Typical desorption conditions are contact with 0.3-0.5 ammonium sulphate at pH 4-5 for ~ 30 minutes at ambient temperature, 20-30 wt% solids. Under these conditions up to 70% extraction (typically 40-60%) of the TREO + Y can be obtained, with very little dissolution of gangue elements, which makes for simple downstream processing to produce a mixed REE carbonate.

Over the last few years, there have been numerous reports of elevated concentrations of REE's associated with clays, but in most cases the deposits have not proven to be of the classic ionic clay type, and a lower pH has been found to be necessary to dissolve the REE's. Under these circumstances, the economics of the process will depend on REE extraction, acid consumption and the concentrations of dissolved gangue elements.

The objective of the current studies is to obtain an initial indication of potential economic viability by leaching under desorption conditions (pH 4) and a lower pH to determine REE extraction[4] versus gangue dissolution.

## ANSTO: BACKGROUND IN RE PROCESSING

The minerals group at ANSTO has extensive experience in REE process development, with several experts in their organisation having >30 years' experience that dates back to some early work on the Mt Weld deposit (monazite mineralogy) in the early 1990s. Over the last 10 to 15 years, ANSTO has worked on numerous REE projects both in terms of process development, piloting[5] and providing expert advice.

ANSTO have experience in the processing of monazite, bastnasite, and xenotime, as well as from less frequently exploited REE sources such as apatite, ionic clays and complex ores containing zirconium/niobium silicates. Further, ANSTO have undertaken process development work for clients in Australia and across the globe. Their work has included all facets of REE process flowsheets, including acid leaching, sulfation baking, caustic conversion, alkaline roasting, selective precipitation, impurity removal, solvent extraction, ion exchange, process water treatment (softening) and chemical concentrate production. Incrementally, ANSTO are experts in the deportment and the management of radioactivity in the REE process flowsheets, and all radionuclide analyses are carried out in-house (as well as standard REE elemental assays).

## PROPOSED APPROACH

### Desorption response

Diagnostic tests (pH 4) will be carried out on the six supplied samples under classic ionic clay conditions to confirm extractions. This is recommended as the ability to use desorption conditions would have many advantages.

### Leach response

A diagnostic test will be carried out with ammonium sulphate at pH 1 on all 6 samples to determine if the REEs can be extracted at "moderate" acidity. Conditions will be ammonium sulphate+ sulfuric acid[6] at pH1 for 2h at ambient temperature[7]. Note, pH 1 conditions will indicate a limit for extraction, with economic conditions likely to be at a higher pH (preferably pH ~4). Note, that pH 1 conditions will not dissolve primary REE minerals such as monazite or xenotime.

All diagnostic tests are carried out on pulverised samples at high L/S ratio, where there are no effects of adsorption, co-precipitation etc. These tests will indicate the maximum extraction that could be achieved under the test conditions (at more practical lower L/S ratios, extraction could be less). Slurry leach tests are not recommended at this stage as several other variables are introduced, which would need some degree of optimisation that is not warranted at this early stage of the work.

## WORK PROGRAM

### Sample preparation

The samples are composites from drill holes in the three prospects in the East Zone. The supplied samples will be dried at 50°C to constant weight, crushed to < 1 mm, if necessary. A 250-500 g sub-sample will then be taken, pulverised, and split into representative portions for head assay and leach tests. The remainder of the composites will be stored.

### Sample characterisation

The head samples (dried at 105°C) will be analysed by a combination of XRF (in-house) and fusion digest/ICP-MS (ALS, Brisbane) for the following elements:

- XRF - Al, Ca, Cu, Fe, K, Mg, Mn, Na, P, S, Si, Zn
- Digest/ICP-MS – Ag, Ce, Co, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pb, Pr, Sc, Sm, Tb, Th, Tm, U, Y, Yb

## LEACH TESTS

### Desorption conditions

Diagnostic leach tests on all samples will be conducted under following desorption conditions:

- 0.5 M ammonium sulphate[8] as lixiviant;
- pH 4.
- 0.5 h.
- Ambient temperature (~22°C); and
- 4 wt% solids density.

Prior to commencing the leach test-work, a bulk solution of AS will be prepared, and the pH will be adjusted to the appropriate target using $H_2SO_4$.

All tests will be conducted on 80g of dry (dried at 50°C), pulverised sample and 1,920g of the lixiviant in a 2L titanium/ stainless steel baffled leach vessel equipped with an overhead stirrer. No thief samples will be taken. The pH for the duration of the test will be maintained by addition of 1M $H_2SO_4$, if necessary.

At the completion of each test, the slurry will be vacuum filtered to separate the leach liquor. The final residue solids will be thoroughly water washed on the filter with 200mL of DI water, and dried at 105°C. The individual REE recoveries for each sample will be calculated using the measured head and the final leach liquor composition. The final leach liquors will be analysed as follows:

- ICP-MS for Ag, Ce, Co, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pb, Pr, Sc, Sm, Tb, Th, Tm, U, Y, Yb (ALS).
- ICP-OES for Al, Ca, Cu Fe, K, Mg, Mn, Na, P, S, Si, Zn (in-house).

The water wash will be collected, and a sub-sample will be stored but not analysed. The final washed residue will be stored, but not analysed.

**Acid leach conditions**

A diagnostic leach tests will be conducted on all samples under the following conditions:

- 0.5 M ammonium sulphate as lixiviant.
- pH 1.
- 2 h.
- Ambient temperature (~22 °C); and
- 4 wt% solids density.

The leach will be conducted on a pulverised sample. Sulfuric acid will be added to control pH. Prior to commencing the leach test work, a bulk AS solution will be prepared, and the pH adjusted to the target using $H_2SO_4$.

Each of the leach tests will be conducted on 80g of dry, pulverised sample and 1,920 g of the lixiviant in a 2L titanium/ stainless steel baffled leach vessel equipped with an overhead stirrer. No thief samples will be taken during the tests. The pH for the duration of the test will be maintained by addition of conc $H_2SO_4$, if necessary. The acid addition for each test will be measured.

At the completion of each test, the slurry will be vacuum filtered to separate the leach liquor. The final residue solids will be thoroughly water washed on the filter with 200mL of DI water, and dried at 105°C. The individual final RE recoveries will be calculated using the head and the final leach liquor composition, and the head and leach residue assays.

The final liquor samples will be analysed as indicated in Gangue element concentrations will give an indication of acid consumption.

The leach residue samples will be analysed by XRF (at ANSTO) and digest/ICP-MS (lithium tetraborate method) at ALS, for the elements specified in the sample characterisation section. The water wash will be collected, and a sub-sample will be stored but not analysed.

# APPENDIX B: ALS PERTH FG COMPOSITE 1M DATA

One of the samples delivered for the ANSTO sampling and testing program is over the same interval as the composite sample used for the ALS Perth hard rock metallurgy program.

This comprised a composite sample of RC chips from Fence Gossan drillhole FG_003RC was constructed over the interval from 0-20m (reference). The material reported over that interval had lithology logged as clay, haematite, goethite, and extremely weathered pegmatite. The main hard rock rare earth element-containing minerals are thought to be monazite, allanite, xenotime, and maybe baryte or celsian (to account for the high barium contents of some samples).

These assumptions need to be tested by XRD and/or QEM-SEM testing. The composite was made up of 1m samples tested using ME-MS81 analysis method (the results for which are provided in Figure B1).

## FIGURE B1: DRILLHOLE FG_003RC – 0 TO 20M COMPOSITE USED FOR ALS PERTH METALLURGICAL TESTING, 1M ANALYSIS

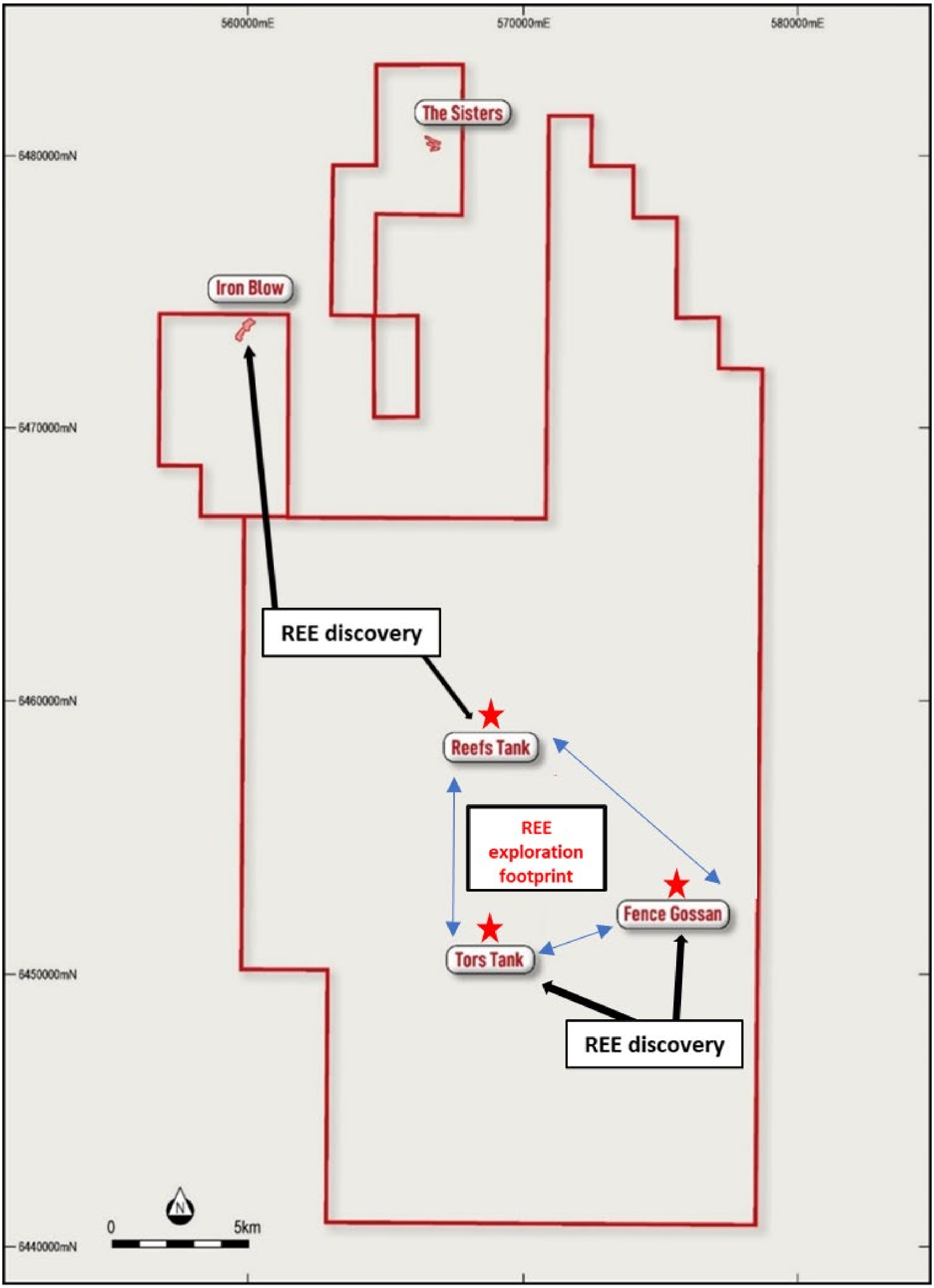
| Sample Number | From | To | Length | PGM-MS23 | PGM-MS23 | PGM-MS23 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 | ME-MS81 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Au | Pt | Pd | Ba | Ce | Cr | Cs | Dy | Er | Eu | Ga | Gd | Hf | Ho | La | Lu | Nb | Nd | Pr | Rb | Sc | Sm | Sn | Sr | Ta | Tb | Th | Ti | Tm | U | V | W | Y | Yb | Zr |
| | m | m | m | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| **CCZ04511** | 0 | 1 | 1 | 0.002 | 0.001 | 0.002 | 297 | 131 | 61 | 3.13 | 6.48 | 3.92 | 1.71 | 23.5 | 7.17 | 5.56 | 1.35 | 70 | 0.58 | 10.85 | 54.8 | 16.1 | 67.5 | 16.4 | 10.3 | 3.2 | 128 | 0.9 | 1.18 | 12.85 | 0.49 | 0.59 | 4.02 | 190 | 3.1 | 37 | 3.69 | 223 |
| **CCZ04512** | 1 | 2 | 1 | 0.006 | 0.0013 | 0.003 | 910 | 172.5 | 73 | 2.58 | 7.57 | 4.05 | 2.16 | 38.1 | 8.71 | 4.09 | 1.52 | 97.5 | 0.46 | 10.55 | 74.2 | 21 | 51.2 | 20 | 12.35 | 2.4 | 180 | 0.8 | 1.28 | 13.65 | 0.41 | 0.55 | 7.54 | 247 | 4 | 35.3 | 3.39 | 134 |
| **CCZ04513** | 2 | 3 | 1 | 0.004 | 0.0011 | 0.002 | 648 | 696 | 71 | 2.64 | 20.9 | 9.3 | 9.12 | 46.2 | 34.4 | 4.18 | 3.6 | 409 | 0.93 | 12.75 | 347 | 94.2 | 51.7 | 19.4 | 52.8 | 3.2 | 126 | 1 | 4.53 | 14.55 | 0.38 | 1.18 | 15.65 | 191 | 4.4 | 76.9 | 7.01 | 137 |
| **CCZ04514** | 3 | 4 | 1 | 0.002 | 0.0007 | 0.001 | 166.5 | 580 | 72 | 5.2 | 17.85 | 6.75 | 7.5 | 55.9 | 28.5 | 3.02 | 2.76 | 369 | 0.54 | 10.4 | 276 | 74.4 | 92.2 | 37.5 | 41.8 | 3.5 | 129.5 | 1 | 3.79 | 16.3 | 0.33 | 0.84 | 13.85 | 171 | 2.8 | 50.3 | 5.02 | 109 |
| **CCZ04515** | 4 | 5 | 1 | 0.002 | 0.0007 | 0.001 | 143 | 511 | 80 | 5.01 | 16.35 | 6.43 | 6.46 | 51.2 | 25.9 | 3.39 | 2.67 | 336 | 0.63 | 13.85 | 252 | 67.4 | 89.1 | 27.5 | 38.7 | 4.3 | 109.5 | 1.2 | 3.52 | 14.95 | 0.4 | 0.78 | 12.5 | 178 | 2.8 | 53.6 | 5.09 | 110 |
| **CCZ04516** | 5 | 6 | 1 | 0.001 | 0.0008 | 0.001 | 98.4 | 376 | 75 | 3.04 | 10.5 | 3.86 | 3.91 | 53.5 | 17.5 | 3.05 | 1.62 | 229 | 0.36 | 12.8 | 175.5 | 46.6 | 51.2 | 14.7 | 25.9 | 3.5 | 91.3 | 1.1 | 2.28 | 16.25 | 0.38 | 0.55 | 7.46 | 129 | 3.7 | 30.9 | 2.88 | 100 |
| **CCZ04517** | 6 | 7 | 1 | <0.001 | 0.0008 | 0.001 | 91.9 | 480 | 76 | 3.89 | 13.75 | 4.51 | 5.55 | 54.5 | 22.4 | 3.37 | 2.03 | 293 | 0.47 | 11.9 | 221 | 59.8 | 78.9 | 14.7 | 33.2 | 2.6 | 99.1 | 1 | 2.98 | 16.35 | 0.34 | 0.57 | 9.41 | 106 | 4.3 | 35.8 | 3.23 | 110 |
| **CCZ04518** | 7 | 8 | 1 | <0.001 | 0.0007 | 0.001 | 59.1 | 332 | 90 | 3.2 | 8.64 | 3.14 | 3.43 | 60.5 | 14.3 | 3.18 | 1.33 | 204 | 0.28 | 15.4 | 142.5 | 39.3 | 79.8 | 11.6 | 22.6 | 3.2 | 101 | 1.2 | 1.88 | 18.25 | 0.38 | 0.38 | 7.65 | 102 | 6.3 | 25.5 | 2.31 | 107 |
| **CCZ04519** | 8 | 9 | 1 | <0.001 | 0.0007 | 0.001 | 87.2 | 422 | 88 | 5.13 | 12.5 | 5.17 | 4.67 | 53.4 | 19 | 2.97 | 2.05 | 258 | 0.6 | 12.55 | 184.5 | 49.7 | 121 | 16.7 | 29 | 3.6 | 100 | 1.2 | 2.58 | 14.9 | 0.35 | 0.71 | 10.7 | 140 | 3 | 43.1 | 4.57 | 99 |
| **CCZ04520** | 9 | 10 | 1 | <0.001 | 0.0008 | 0.001 | 94.5 | 287 | 78 | 5.62 | 7.68 | 3.76 | 2.49 | 56.5 | 10.55 | 2.62 | 1.37 | 175 | 0.49 | 13.2 | 116.5 | 31.3 | 160.5 | 19.6 | 16.3 | 3.5 | 84.7 | 1.1 | 1.5 | 14.3 | 0.32 | 0.55 | 8.74 | 150 | 2.2 | 28.2 | 4.08 | 87 |
| **CCZ04521** | 10 | 11 | 1 | 0.001 | 0.0007 | 0.001 | 110.5 | 366 | 81 | 6.57 | 8.9 | 4.09 | 3.31 | 48.3 | 14.05 | 2.56 | 1.69 | 231 | 0.55 | 10.95 | 145.5 | 42.6 | 196 | 20.4 | 21.6 | 4.1 | 89.8 | 0.9 | 1.96 | 14.5 | 0.31 | 0.59 | 12.1 | 149 | 1.7 | 33.6 | 3.97 | 87 |
| **CCZ04522** | 11 | 12 | 1 | <0.001 | 0.0007 | 0.001 | 118.5 | 384 | 90 | 6.47 | 12.3 | 6.33 | 3.66 | 58.3 | 16.7 | 2.95 | 2.2 | 258 | 0.92 | 13.1 | 158.5 | 43.4 | 171.5 | 20.2 | 24 | 3.7 | 117 | 1.1 | 2.28 | 19.6 | 0.34 | 0.96 | 15.85 | 149 | 3.5 | 50.9 | 6.62 | 99 |
| **CCZ04523** | 12 | 13 | 1 | <0.001 | 0.0007 | 0.001 | 88.6 | 292 | 85 | 3.63 | 9.33 | 5.15 | 2.71 | 57.2 | 12.45 | 3.51 | 1.79 | 202 | 0.61 | 12.7 | 117 | 32.1 | 108.5 | 21.4 | 16.55 | 3.1 | 98.9 | 1.1 | 1.79 | 17.65 | 0.34 | 0.73 | 11.2 | 101 | 6.3 | 38.4 | 4.72 | 116 |
| **CCZ04524** | 13 | 14 | 1 | <0.001 | 0.0007 | 0.001 | 98.8 | 318 | 81 | 5.38 | 12.6 | 5.77 | 4.14 | 56.9 | 17.65 | 2.9 | 2.28 | 233 | 0.68 | 13.15 | 145.5 | 38.3 | 131 | 20.4 | 22.3 | 5 | 103.5 | 1 | 2.28 | 17.3 | 0.33 | 0.79 | 12.5 | 136 | 4 | 49 | 4.78 | 97 |
| **CCZ04525** | 14 | 15 | 1 | <0.001 | 0.0009 | 0.001 | 45.7 | 486 | 91 | 4.58 | 17.9 | 6.78 | 5.7 | 63 | 28.4 | 3.06 | 2.93 | 341 | 0.61 | 12.45 | 222 | 59.1 | 98.8 | 15.7 | 35.2 | 4.3 | 88.2 | 1.1 | 3.64 | 18.45 | 0.36 | 0.81 | 14.2 | 170 | 3.5 | 57 | 5 | 95 |
| **CCZ04526** | 15 | 16 | 1 | <0.001 | 0.0008 | 0.001 | 69.4 | 577 | 71 | 9.24 | 29 | 13.5 | 7.19 | 61.2 | 38.1 | 3.58 | 5.31 | 427 | 1.5 | 11.4 | 266 | 68.9 | 143.5 | 19.2 | 41.5 | 4.3 | 81.2 | 1 | 5.56 | 18.25 | 0.31 | 1.78 | 20.7 | 184 | 2.7 | 115.5 | 11.75 | 113 |
| **CCZ04527** | 16 | 17 | 1 | 0.001 | 0.0025 | 0.002 | 53.4 | 453 | 67 | 5.76 | 23.3 | 11.35 | 5.34 | 47.1 | 28 | 4.04 | 4.32 | 322 | 1.29 | 10.1 | 195 | 50.9 | 84.4 | 17.6 | 30.9 | 3.5 | 64.9 | 0.9 | 4.24 | 12.7 | 0.27 | 1.54 | 19.1 | 147 | 3.6 | 95.8 | 9.92 | 142 |
| **CCZ04528** | 17 | 18 | 1 | 0.003 | 0.0017 | 0.002 | 118 | 698 | 53 | 17.75 | 30.3 | 14.65 | 7.91 | 48.2 | 40.5 | 1.46 | 5.72 | 466 | 1.5 | 5.57 | 303 | 81.5 | 139.5 | 17.8 | 47 | 3.8 | 51.4 | 0.4 | 5.61 | 6.91 | 0.15 | 1.98 | 38.1 | 498 | 4.2 | 137 | 12.55 | 53 |
| **CCZ04529** | 18 | 19 | 1 | 0.045 | 0.002 | 0.002 | 109 | 774 | 54 | 6.11 | 42.4 | 16.05 | 12.35 | 40.3 | 60.8 | 1.61 | 6.9 | 644 | 1.36 | 6.51 | 425 | 106.5 | 52 | 38.5 | 66 | 5.7 | 110 | 0.4 | 8.47 | 4.76 | 0.74 | 1.94 | 73.4 | 580 | 3 | 128 | 11.6 | 50 |
| **CCZ04530** | 19 | 20 | 1 | 0.005 | 0.0011 | 0.001 | 193 | 661 | 60 | 2.69 | 104.5 | 69.3 | 15.6 | 25.8 | 100 | 2.98 | 23.8 | 597 | 8.34 | 7 | 403 | 94.2 | 32.7 | 41.9 | 72.2 | 1.5 | 146 | 0.4 | 16 | 1.57 | 1.11 | 9.13 | 48.7 | 442 | 1.1 | 722 | 57.8 | 94 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Average** | | | | | | | 180.0 | 449.8 | 74.9 | 5.4 | 20.6 | 10.2 | 5.7 | 50.0 | 27.3 | 3.2 | 3.9 | 308.1 | 1.1 | 11.4 | 211.2 | 55.9 | 100.1 | 21.6 | 33.0 | 3.6 | 105.0 | 0.9 | 3.9 | 14.2 | 0.4 | 1.3 | 18.2 | 208.0 | 3.5 | 92.2 | 8.5 | 108.1 |

Notes:

1. Source: ALS Adelaide methods ME-MS81 and PGM-MS23 used.
2. Drillhole FG_003RC drilled October 2022.

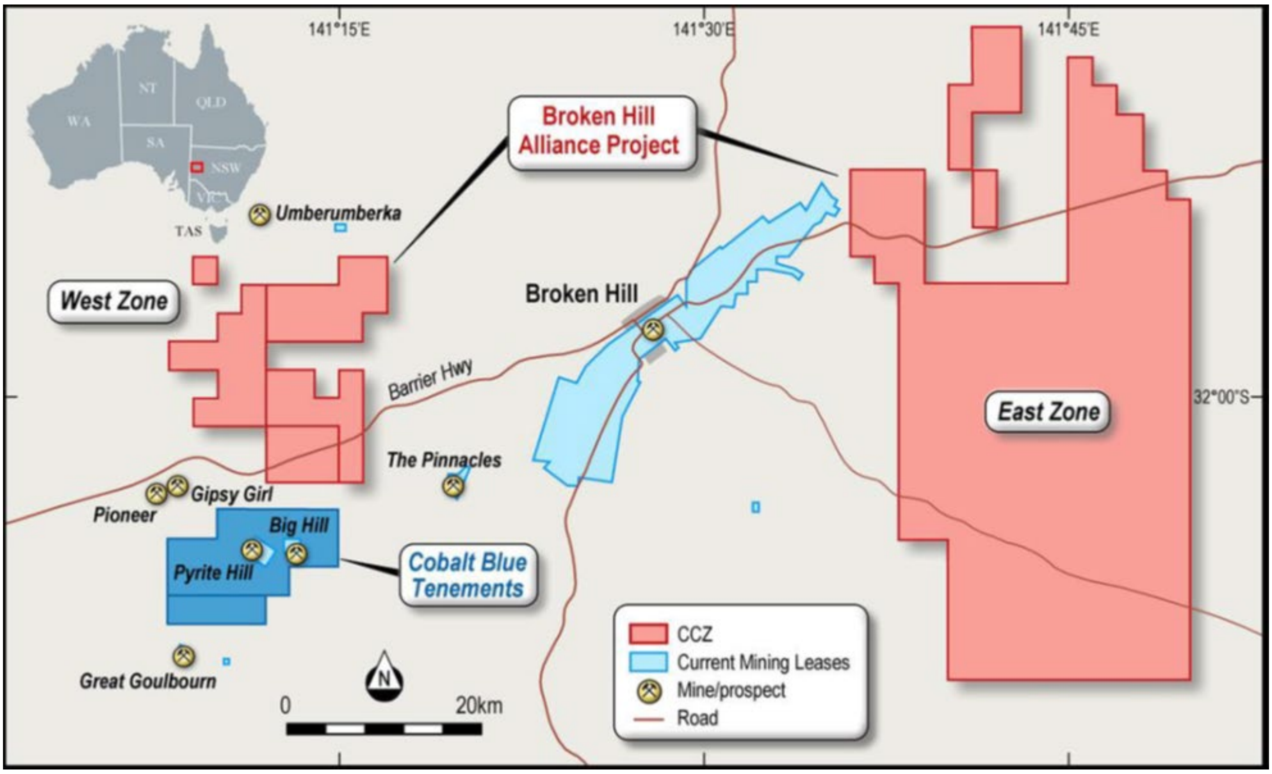
# APPENDIX C: BHA PROJECT'S EAST ZONE

### FIGURE A1: BHA PROJECT's EAST ZONE - REE EXPLORATION FOOTPRINT




Source: CCZ geology team

## FIGURE A2: BHA PROJECT




Source: CCZ geology team