ASX ANNOUNCEMENT
13 September 2023

Positive initial reconnaissance REE results for Ema

BBX Minerals Limited (**ASX: BBX**) ("**BBX**" or the "**Company**") is pleased to announce the first assay results from its initial reconnaissance auger drilling programme for rare earth elements (REEs) at Ema in the Apuí region in Brazil. The Ema-Ema East REE project comprises 2 tenements (Figure 1) of a total of 9 tenements secured for REE exploration, encompassing an area of 700 sq km.

Ten of the 13 holes assayed reported significant Total Rare Oxide (TREO[1]) values (Table 1).

Highlights

- **Wide zone with high grade TREO defines the first continuous mineralised zone with drill holes ending in high TREO values indicating significant high-grade potential at depth.**
- **Regional reconnaissance drilling is in progress to identify other high-grade zones, prior to follow up, with sample batches dispatched regularly.**

Significant results:

- 4 metres **@ 816 ppm TREO** from 5m including 1m @ **1,233 ppm TREO** at EOH (TR-16)
- 2 metres **@ 900 ppm TREO** from 8m (TR-10)
- 3 metres **@ 739 ppm TREO** from 5m (TR-017)
- 3 metres **@ 649 ppm TREO** from 15m, including 1m @ **730 ppm TREO** at EOH (TR-018)
- 8 metres **@ 623 ppm TREO** from 12m, including 2m @ **718 ppm TREO** at EOH (TR-013)

The results demonstrate the persistence of REEs in the regolith with a clear enrichment with depth (see Appendix 1), with the majority of the holes ending in the maximum TREO values obtained. Grades are compatible with typical ionic REE (iREE) deposits, with some auger holes terminated before intersecting the enriched zone due to the intersection of hard material and/or the water table. Assays of TR-013 (8m @ 623 ppm TREO) clearly show the REE enriched zone starting at 12 metres with a systematic increase with depth of NdPr and DyTb from 147ppm and 9 ppm, respectively, to 184 ppm and 19 ppm in the last metre recovered.

The auger holes were over 200m apart, across a ridge, strategically conducted to validate the presence of RREs within the regolith in the target areas and understand its relationship to the landform. A wide zone (>1000m) from TR-13 to TR-18 (Figures 2 and 3), with holes ending in high TREO values, constitutes the first zone defined within these 189 sq km for future follow up, to be conducted after completion of the regional reconnaissance auger drilling programme and ranking of the prospects defined.

It is important to note that the mineralisation characteristics of this zone are similar to the enriched zone in EMD-017, where ionic REEs were confirmed by a positive ammonium sulphate leach test.

A total of 42 auger holes has been completed covering 2 sq km of the 189 sq km´s of the Ema-Ema East REE project (Figure 4).

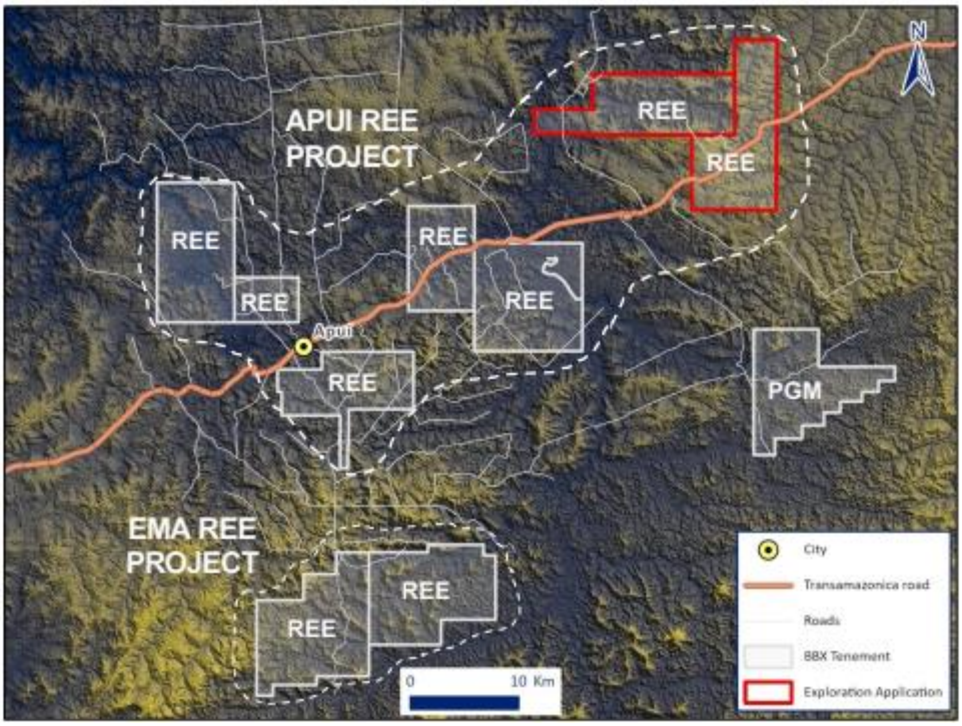
Andre J. Douchane, CEO, commented: *"While these results are very positive, we're not surprised by the continuity we're seeing with this very large discovery. Now that we see the consistency, we will put all our*

[1] TREO = La2O3 + CeO2 +Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu 2O3 + Y2O3

efforts toward a JORC resource which is planned to be completed during first quarter of 2024. Additionally, we expect to receive results from the recovery test work being done by CETEM, Brazil's national mining center, by the end of September and once received, we will be able to develop a production method and cost profile. The team is continuously drilling the Ema deposits, and as a result, there should be a steady flow of results. We continue to compare these discoveries to Makuutu in Uganda for a good reason. Like Makuutu, Ema's IREE results are near surface in unconsolidated material which lends itself to very low mining costs and since the SGS ammonium sulphate assay indicted easily recovered iREEs the cost profile will be at the low end of current iREE projects.

Work also continues with the PGM/Tres Estados pilot plant development. We have finished our preliminary metal recovery test work on the bioleached material from TED020 and as a result we have established a basis for a full pilot plant and preliminary metal recoveries as they relate to TED020. A full report will be issued as soon as possible."

Figure 1- BBX´s REE projects



Ema-Ema East REE project

Ema and Ema East are unique amongst Brazilian REE projects in that they share identical characteristics with the iREE deposits developed over felsic volcanic rocks in southwest China, with an area of 189 sq km to be prospected.

Ionic REE deposits are hosted in clays within the lateritic profile, commonly up to 20 meters thick, with economic TREO grades generally above 600 ppm. The weathered portions of the 2021 drill holes returned values up to 8 times higher than those in the fresh rock, which is typical of the ionic REE adsorbed clay deposits found in China developed on top of rhyolites. These results indicate the presence of a lateritic regolith at Ema-Ema East with REE-enriched horizons potentially at economic grades. Ionic adsorption-type REE deposits associated with felsic volcanic rocks account for 37.87% of the total deposits of this type in southwest China.

The high-grade TREO in the EMD-017, over 9m from 10m to 19m, ends in saprock (almost fresh rhyolite) with the last 7 metres showing good ammonium sulphate leach recoveries. This would suggest a high probability of encountering higher grades with good ionic recoveries in the mineralised zone defined by the auger holes TR-013 to 018 (Figure 3) at a similar position in the weathering profile, in contact with the fresh felsic rhyolite.

Auger hole results

Table 1: Ema intersections above 500ppm TREO cut-off grade

Auger hole	From (m)	Interval (metres)	TREO ppm	% HREO[2]	% MREO[3]	NdPr ppm	DyTb ppm
TR-008	7	7	593	30	28	153	17
TR-009	10	7	596	21	24	131	12
TR-010	8	2	900	21	16	146	22
TR-011	3	1	543	18	22	107	12
TR-013	12	8	623	22	28	162	12
TR-015	13	5	531	18	17	82	9
TR-016	11	4	816	18	31	241	14
TR-017	5	3	739	20	16	120	15
TR-018	15	3	649	17	23	142	10
TR-019	8	2	595	13	6	28	7

[2] HREO (Heavy Rare Earth Oxide) = Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3
[3] MREO (Magnetic Rare Earth Oxide) = Tb4O7 + Dy2O3 + Nd2O3 + Pr6O11

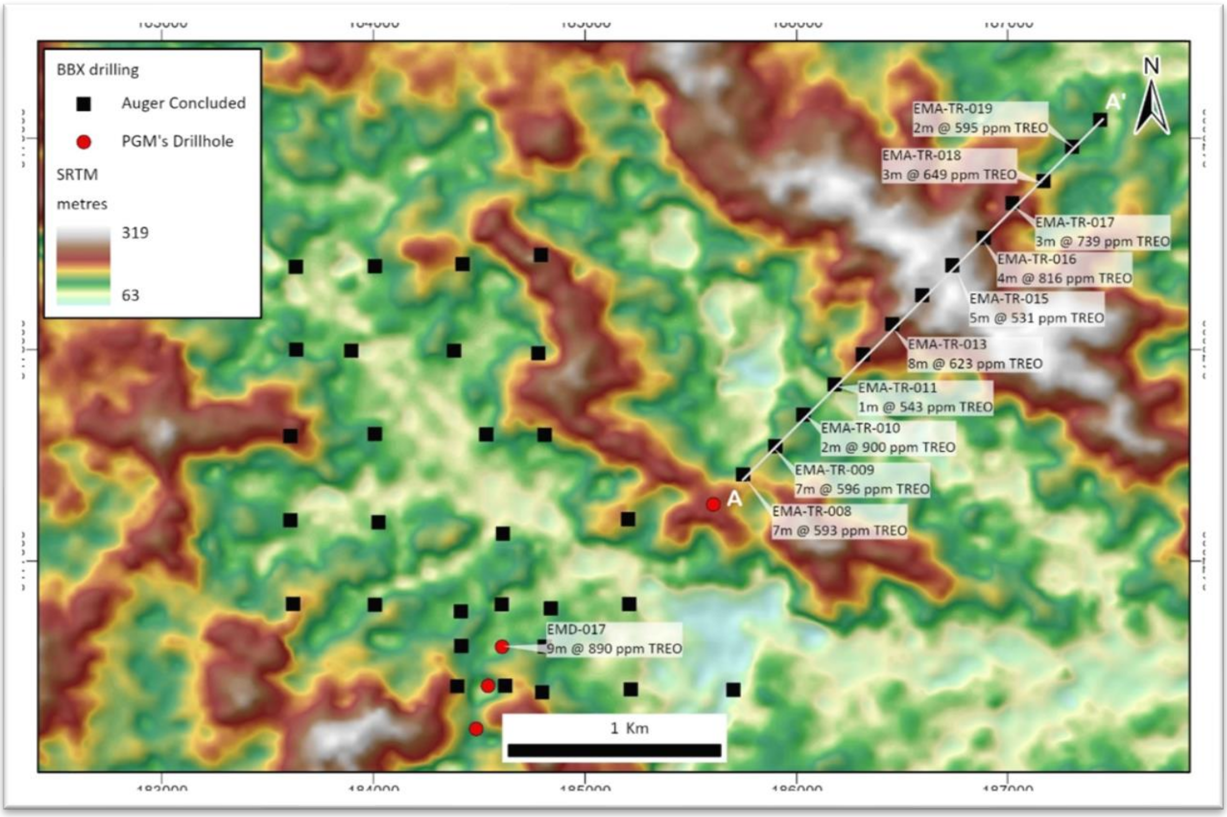


Figure 1 - Ema auger status

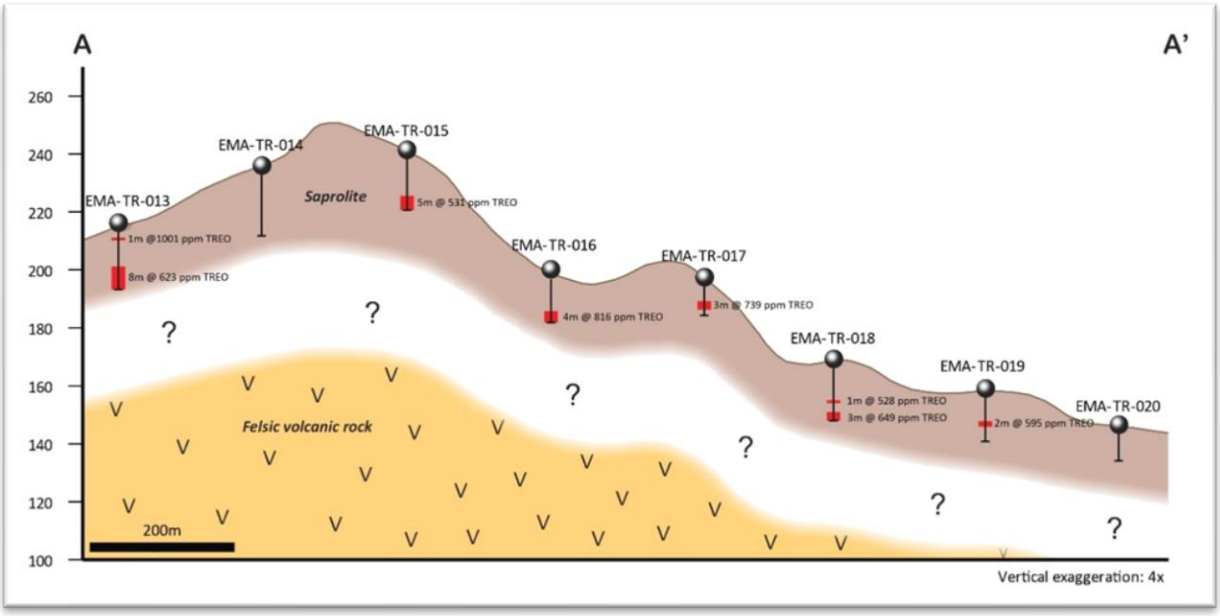


Figure 2 - Cross section A-A' at the Ema REE project

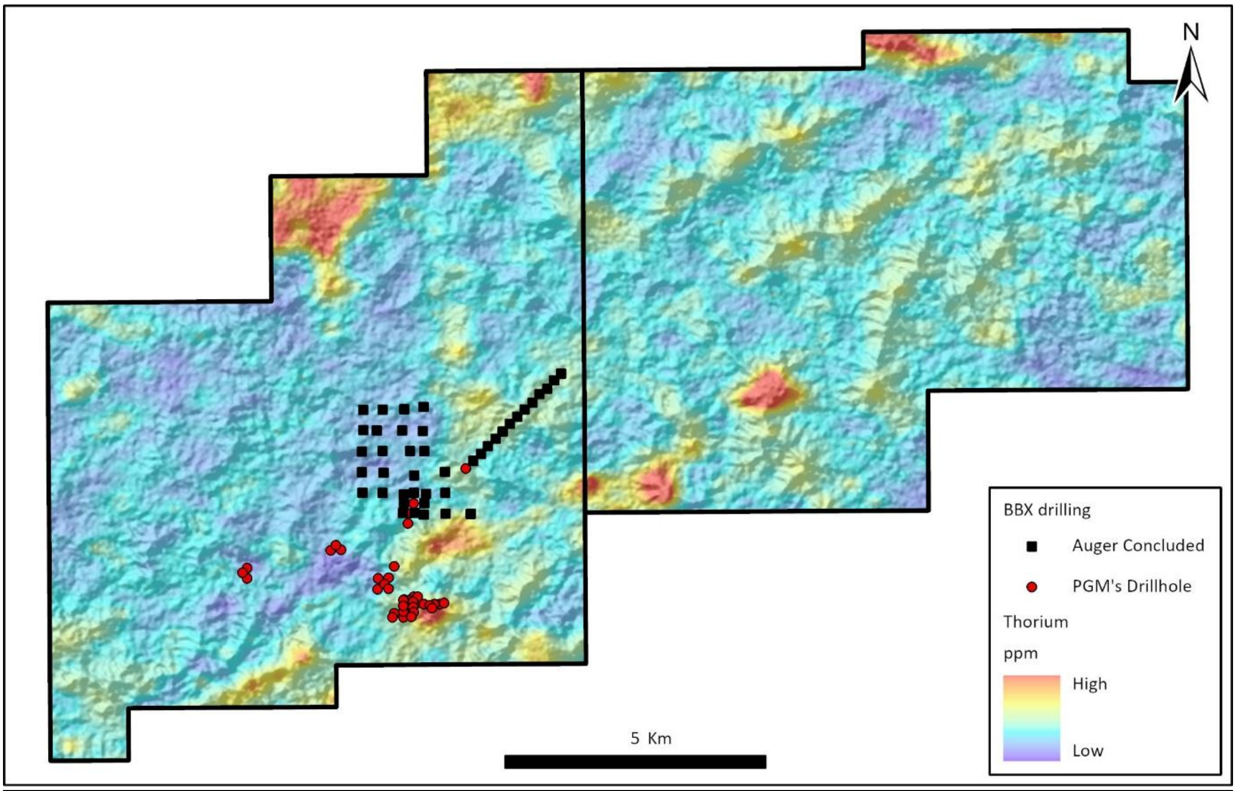


Figure 3 - Ema-Ema East REE project – drilling status

Exploration strategy and future work at Ema/Ema East

The ongoing programme of broad-spaced auger drilling is designed to further investigate the REE distribution within the weathered zone to assist in identifying the highest-grade zones. This drilling campaign aims to obtain a more detailed understanding of the REE high grade distribution within the 189 sq km area and define potential enriched zones within the regolith and the potential areal extent of high grade mineralisation (800-1200ppm TREO), to define zones for detailed deep drilling, for an MRE.

This announcement has been authorised for release by the Board of Directors.

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About BBX Minerals Ltd

BBX Minerals Limited is a unique mineral exploration and mineral processing technology company listed on the Australian Securities Exchange.

Its major exploration focus is Brazil, mainly in the southern Amazon, a region BBX believes is vastly underexplored with high potential for the discovery of world class gold-PGM, base metal and Ionic Adsorbed Clay (IAC) Rare Earth Element deposits. BBX's key assets are the Três Estados and Ema gold-PGM projects and the iREE projects at Ema, Ema East and Apui. The company has 718km² of exploration tenements within the Colider Group and adjacent sediments, a prospective geological environment for gold, PGM, base metal and iREE deposits.

BBX is also developing an environmentally friendly and sustainable beneficiation process to extract precious metals using a unique bio leach process. This leading-edge process, that extracts precious metals naturally, is being developed initially for the primary purpose of economically extracting Platinum Group metals from the Três Estados mineral deposit. It is expected that such technology will be transferable and relevant to many other PGM projects. BBX believes that this processing technology is critical in the environmentally timely PGM space and supports a societal need to move towards a carbon neutral economy.

Competent Person Statement

The information in this report that relates to exploration results is based on information compiled by Mr. Antonio de Castro, BSc (Hons), MAusIMM, CREA, who acts as BBX´s Senior Consulting Geologist through the consultancy firm, ADC Geologia Ltda. Mr. de Castro has sufficient experience which is relevant to the type of deposit under consideration and to the reporting of exploration results and analytical and metallurgical test work 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. Castro consents to the report being issued in the form and context in which it appears.

CREA/RJ:02526-6D
AusIMM:230624

Appendices

Appendix 1 – Total REE oxide distribution down-hole

HOLE ID	FROM	TO	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm	Int
EMA-TR-008	0	1	277	31	17	39	9	
EMA-TR-008	1	2	313	28	16	42	9	
EMA-TR-008	2	3	351	27	15	44	10	
EMA-TR-008	3	4	312	33	15	36	11	
EMA-TR-008	4	5	349	29	17	50	10	
EMA-TR-008	5	6	378	27	19	61	10	
EMA-TR-008	6	7	446	24	23	91	11	
EMA-TR-008	7	8	502	24	28	128	12	
EMA-TR-008	8	9	584	25	30	162	13	
EMA-TR-008	9	10	746	29	29	195	21	
EMA-TR-008	10	11	753	27	34	236	20	593
EMA-TR-008	11	12	539	35	28	134	18	
EMA-TR-008	12	13	518	36	25	110	18	
EMA-TR-008	13	14	507	35	24	107	17	
EMA-TR-008	14	15	462	35	22	86	16	
EMA-TR-008	15	16	417	33	19	68	13	
EMA-TR-008	16	17	389	34	20	66	13	
EMA-TR-008	17	18	357	32	20	59	11	
EMA-TR-008	18	19	319	29	20	56	9	
EMA-TR-008	19	20	316	32	21	57	10	
EMA-TR-009	0	1	229	38	17	31	9	
EMA-TR-009	1	2	481	22	27	117	13	
EMA-TR-009	2	3	310	32	11	24	10	
EMA-TR-009	3	4	289	35	12	25	10	
EMA-TR-009	4	5	320	28	12	28	9	
EMA-TR-009	5	6	466	19	8	29	9	
EMA-TR-009	6	7	476	24	10	37	12	
EMA-TR-009	7	8	532	18	10	42	10	532
EMA-TR-009	8	9	429	23	18	67	10	
EMA-TR-009	9	10	492	23	20	88	11	
EMA-TR-009	10	11	512	22	20	93	11	
EMA-TR-009	11	12	607	20	24	132	12	
EMA-TR-009	12	13	700	18	19	124	12	
EMA-TR-009	13	14	622	20	27	156	11	596
EMA-TR-009	14	15	557	21	25	128	12	
EMA-TR-009	15	16	582	22	27	143	12	
EMA-TR-009	16	17	591	23	26	143	12	
EMA-TR-010	0	1	309	33	30	82	11	
EMA-TR-010	1	2	265	35	25	57	9	

HOLE ID	FROM	TO	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm	Int
EMA-TR-010	2	3	202	41	16	24	8	
EMA-TR-010	3	4	245	37	14	25	9	
EMA-TR-010	4	5	257	34	14	26	9	
EMA-TR-010	5	6	269	36	12	24	9	
EMA-TR-010	6	7	249	50	14	22	13	
EMA-TR-010	7	8	296	36	13	28	11	
EMA-TR-010	8	9	1183	27	25	257	34	900
EMA-TR-010	9	10	617	14	7	35	9	
EMA-TR-010	10	11	423	22	14	50	9	
EMA-TR-010	11	12	392	23	18	63	9	
EMA-TR-010	12	13	486	25	18	77	12	
EMA-TR-010	13	14	457	24	24	99	10	
EMA-TR-010	14	15	556	24	25	128	13	556
EMA-TR-011	0	1	345	22	11	29	8	
EMA-TR-011	1	2	451	20	12	47	9	
EMA-TR-011	2	3	387	29	13	38	12	
EMA-TR-011	3	4	543	18	22	107	12	543
EMA-TR-011	4	5	331	31	16	44	10	
EMA-TR-011	5	6	441	32	17	62	14	
EMA-TR-011	6	7	427	26	14	48	11	
EMA-TR-011	7	8	358	26	18	56	9	
EMA-TR-011	8	9	430	20	14	50	8	
EMA-TR-011	9	10	386	26	18	61	10	
EMA-TR-011	10	11	145	22	16	20	3	
EMA-TR-012	0	1	250	30	12	22	8	
EMA-TR-012	1	2	321	27	10	23	8	
EMA-TR-012	2	3	322	25	9	21	8	
EMA-TR-012	3	4	553	15	22	110	10	553
EMA-TR-012	4	5	387	18	19	66	8	
EMA-TR-012	5	6	439	20	10	36	9	
EMA-TR-012	6	7	395	21	13	43	9	
EMA-TR-013	0	1	187	42	8	8	8	
EMA-TR-013	1	2	332	25	5	8	8	
EMA-TR-013	2	3	1001	14	50	490	9	1001
EMA-TR-013	3	4	277	30	6	10	8	
EMA-TR-013	4	5	297	27	6	11	8	
EMA-TR-013	5	6	325	28	7	13	9	
EMA-TR-013	6	7	315	27	8	17	8	
EMA-TR-013	7	8	353	24	10	26	8	
EMA-TR-013	8	9	382	22	12	39	7	
EMA-TR-013	9	10	499	18	26	121	10	
EMA-TR-013	10	11	457	20	20	84	8	

HOLE ID	FROM	TO	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm	Int
EMA-TR-013	11	12	458	20	23	98	8	
EMA-TR-013	12	13	603	18	26	147	9	623
EMA-TR-013	13	14	566	20	28	147	9	
EMA-TR-013	14	15	627	20	30	176	11	
EMA-TR-013	15	16	516	22	28	133	10	
EMA-TR-013	16	17	582	22	28	151	11	
EMA-TR-013	17	18	654	22	28	172	13	
EMA-TR-013	18	19	705	26	29	185	16	
EMA-TR-013	19	20	731	29	28	184	19	
EMA-TR-014	0	1	168	61	10	6	10	
EMA-TR-014	1	2	153	54	10	8	8	
EMA-TR-014	2	3	185	51	8	5	9	
EMA-TR-014	3	4	176	55	9	6	9	
EMA-TR-014	4	5	181	55	8	6	9	
EMA-TR-014	5	6	221	51	11	13	10	
EMA-TR-014	6	7	193	53	9	8	10	
EMA-TR-014	7	8	177	55	10	9	9	
EMA-TR-014	8	9	182	53	12	11	9	
EMA-TR-014	9	10	225	44	14	22	9	
EMA-TR-014	10	11	251	41	15	28	9	
EMA-TR-014	11	12	275	36	16	36	9	
EMA-TR-014	12	13	249	39	15	29	9	
EMA-TR-014	13	14	328	31	15	39	9	
EMA-TR-014	14	15	334	30	16	46	9	
EMA-TR-014	15	16	332	31	17	48	9	
EMA-TR-014	16	17	354	30	18	55	9	
EMA-TR-014	17	18	375	29	18	59	9	
EMA-TR-014	18	19	398	27	19	65	9	
EMA-TR-014	19	20	404	26	20	70	9	
EMA-TR-014	20	21	389	27	19	65	9	
EMA-TR-015	0	1	137	66	12	7	9	
EMA-TR-015	1	2	154	58	10	7	9	
EMA-TR-015	2	3	168	45	8	6	7	
EMA-TR-015	3	4	176	54	9	6	9	
EMA-TR-015	4	5	360	23	5	10	7	
EMA-TR-015	5	6	445	19	5	15	8	
EMA-TR-015	6	7	402	23	7	22	8	
EMA-TR-015	7	8	451	22	9	33	9	
EMA-TR-015	8	9	362	23	12	37	7	
EMA-TR-015	9	10	413	23	14	49	8	
EMA-TR-015	10	11	372	23	16	53	8	
EMA-TR-015	11	12	411	22	18	64	8	

HOLE ID	FROM	TO	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm	Int
EMA-TR-015	12	13	406	22	18	65	8	
EMA-TR-015	13	14	534	18	16	74	9	531
EMA-TR-015	14	15	573	17	14	75	9	
EMA-TR-015	15	16	508	19	18	83	9	
EMA-TR-015	16	17	539	18	18	89	9	
EMA-TR-015	17	18	502	20	20	91	9	
EMA-TR-016	0	1	230	24	7	11	5	
EMA-TR-016	1	2	271	23	7	14	5	
EMA-TR-016	2	3	264	24	8	16	6	
EMA-TR-016	3	4	258	23	8	16	5	
EMA-TR-016	4	5	276	20	9	21	5	
EMA-TR-016	5	6	337	21	14	42	6	
EMA-TR-016	6	7	396	18	15	52	6	
EMA-TR-016	7	8	440	17	15	60	7	
EMA-TR-016	8	9	424	17	19	75	6	
EMA-TR-016	9	10	448	17	20	82	7	
EMA-TR-016	10	11	484	18	23	101	8	
EMA-TR-016	11	12	632	17	28	164	10	816
EMA-TR-016	12	13	640	16	27	162	9	
EMA-TR-016	13	14	760	19	32	233	13	
EMA-TR-016	14	15	1233	21	35	404	23	
EMA-TR-017	0	1	174	48	11	11	8	
EMA-TR-017	1	2	292	29	21	51	9	
EMA-TR-017	2	3	273	31	7	11	8	
EMA-TR-017	3	4	285	33	7	12	9	
EMA-TR-017	4	5	331	38	8	16	12	
EMA-TR-017	5	6	504	41	12	40	21	739
EMA-TR-017	6	7	829	22	16	118	16	
EMA-TR-017	7	8	885	18	15	121	14	
EMA-TR-017	8	9	495	19	20	91	8	
EMA-TR-017	9	10	498	19	19	88	9	
EMA-TR-018	0	1	182	45	11	13	8	
EMA-TR-018	1	2	343	24	21	62	9	
EMA-TR-018	2	3	304	25	8	17	7	
EMA-TR-018	3	4	327	21	6	12	6	
EMA-TR-018	4	5	344	24	10	25	8	
EMA-TR-018	5	6	351	21	8	22	6	
EMA-TR-018	6	7	318	22	9	23	6	
EMA-TR-018	7	8	380	19	10	31	6	
EMA-TR-018	8	9	389	18	12	41	6	
EMA-TR-018	9	10	405	19	18	66	7	
EMA-TR-018	10	11	428	19	20	77	7	

HOLE ID	FROM	TO	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm	Int
EMA-TR-018	11	12	528	16	22	109	7	528
EMA-TR-018	12	13	491	16	20	93	7	
EMA-TR-018	13	14	413	18	19	70	6	
EMA-TR-018	14	15	489	18	20	91	8	
EMA-TR-018	15	16	559	17	22	113	9	
EMA-TR-018	16	17	676	16	24	151	10	649
EMA-TR-018	17	18	713	17	24	161	12	
EMA-TR-019	0	1	166	68	11	8	11	
EMA-TR-019	1	2	140	52	10	7	7	
EMA-TR-019	2	3	217	37	21	38	8	
EMA-TR-019	3	4	149	35	9	9	5	
EMA-TR-019	4	5	114	19	6	5	2	
EMA-TR-019	5	6	329	17	4	9	6	
EMA-TR-019	6	7	258	30	13	25	8	
EMA-TR-019	7	8	423	17	7	24	7	
EMA-TR-019	8	9	679	11	5	26	7	595
EMA-TR-019	9	10	511	14	7	29	7	
EMA-TR-019	10	11	409	20	15	52	8	
EMA-TR-019	11	12	443	19	15	57	8	
EMA-TR-019	12	13	413	22	19	70	9	
EMA-TR-019	13	14	496	19	28	127	10	
EMA-TR-019	14	15	397	21	18	65	8	
EMA-TR-020	0	1	140	54	14	12	7	
EMA-TR-020	1	2	128	53	14	11	7	
EMA-TR-020	2	3	120	48	13	10	6	
EMA-TR-020	3	4	155	35	15	18	5	
EMA-TR-020	4	5	184	32	14	21	5	
EMA-TR-020	5	6	222	25	10	17	5	
EMA-TR-020	6	7	414	14	7	21	6	
EMA-TR-020	7	8	425	15	10	38	6	
EMA-TR-020	8	9	331	20	15	42	6	

Appendix 2: Auger drill-hole location

Hole ID	East	North	RL (m)	Depth	Azimuth	Dip	Tenement
EMA-TR-008	185746.02	9177407.33	161.17	20.00	0	-90	880.107/2008
EMA-TR-009	185898.62	9177542.57	145.55	17.00	0	-90	880.107/2008
EMA-TR-010	186030.89	9177692.52	135.95	15.00	0	-90	880.107/2008
EMA-TR-011	186179.02	9177835.59	128.41	11.00	0	-90	880.107/2008
EMA-TR-012	186313.24	9177976.47	169.55	7.00	0	-90	880.107/2008
EMA-TR-013	186451.96	9178120.81	196.96	20.00	0	-90	880.107/2008
EMA-TR-014	186594.72	9178257.31	203.58	21.00	0	-90	880.107/2008
EMA-TR-015	186737.44	9178398.35	234.18	18.00	0	-90	880.107/2008
EMA-TR-016	186887.31	9178529.37	187.77	15.00	0	-90	880.107/2008
EMA-TR-017	187022.38	9178693.16	174.51	10.00	0	-90	880.107/2008
EMA-TR-018	187170.42	9178797.38	152.60	18.00	0	-90	880.107/2008
EMA-TR-019	187305.73	9178959.51	147.70	15.00	0	-90	880.107/2008
EMA-TR-020	187439.15	9179086.98	141.34	9.00	0	-90	880.107/2008

Appendix 3

The following Table and Sections are provided to ensure compliance with JORC Code (2012 Edition).

JORC (2012) Table 1 – Section 1: Sampling Techniques and Data for auger hole drilling

Item	JORC code explanation	Comments
Sampling Techniques	• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representativity 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 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 (eg submarine nodules) may warrant disclosure of detailed information.	• Exploration results are based on auger drilling conducted by BBX´s exploration team. • The data presented is based on the assay of soils and saprolite by auger drilling at 1m sample intervals. • Sampling was supervised by a BBX geologist or field assistants. • Every 1-metre sample was collected in a raffia bag in the field and transported to the exploration shed to be dried in the sun, prior to homogenisation. • Samples were homogenised and subsequently riffle split with about 2 kg sent to SGS for analysis and a similar amount stored. • 1 certified blank sample, 1 certified reference material (standard) samples and 1 field duplicate sample were inserted into the sample sequence for each 25 samples.
Drilling Techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond	• Auger drilling was completed by a hand held-mechanical auger with a 3" auger bit. The drilling is an open hole, meaning there is a significant chance of contamination from surface and other parts of the auger hole. Holes are vertical and not oriented.

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	tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	
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 recoveries are recorded. • The operator observes the volume of each metre and notes any discrepancy. • No relationship is believed to exist between recovery and grade.
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 holes were logged by BBX geologists or field technicians, detailing the colour, weathering, alteration, texture and any geological observations. Care is taken to identify transported cover from in-situ saprolite/clay zones and the moisture content. Logging was done to a level that would support a Mineral Resource Estimate. • Qualitative logging with systematic photography of the stored box. • The entire auger hole is logged.
Sub- Sampling Techniques and Sampling Procedures	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.	• Auger sampling procedure is completed in the exploration shed in Apui. • The entire one metre sample is bagged on site, in a raffia bag which is transported to the exploration shed, where it is naturally dried prior to homogenisation, then quartered to about 1kg to go to SGS and another 1kg to store on site. • Sample preparation for the auger samples was conducted at SGS Vespasiano (greater Belo Horizonte) comprising oven drying, crushing of entire sample to 75% < 3mm followed by rotary splitting and pulverisation of 250 to 300 grams at 95% minus 150#

<table>
<tr><th>Item</th><th>JORC code explanation</th><th>Comments</th></tr>
<tr><td></td><td>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.</td><td>The <3mm rejects and the 250-300 grams pulverised sample were returned to BBX for storage.</td></tr>
<tr><td>Quality of Assay Data and Laboratory Tests</td><td>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.
For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established</td><td>1 blank sample, 1 certified reference material (standard) sample and 1 field duplicate sample were inserted by BBX into each 25-sample sequence.
Standard laboratory QA/QC procedures were followed, including inclusion of standard, duplicate and blank samples.
The assay results of the standards fall within acceptable tolerance limits and no material bias is evident.
The assay technique used for REE was Lithium Metaborate Fusion ICP-MS (SGS code ICP95A and IMS95A). This is a recognised industry standard analysis technique for REE suite and associated elements. Elements analysed at ppm levels:<table>
<tr><td>Ba</td><td>Ce</td><td>Cr</td><td>Cs</td><td>Dy</td><td>Er</td><td>Eu</td><td>Ga</td></tr>
<tr><td>Gd</td><td>Hf</td><td>Ho</td><td>La</td><td>Lu</td><td>Nb</td><td>Nd</td><td>Pr</td></tr>
<tr><td>Rb</td><td>Sm</td><td>Sn</td><td>Sr</td><td>Ta</td><td>Tb</td><td>Th</td><td>Tm</td></tr>
<tr><td>U</td><td>V</td><td>W</td><td>Y</td><td>Yb</td><td>Zr</td><td>Zn</td><td>Co</td></tr>
<tr><td>Cu</td><td>Ni</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>The sample preparation and assay techniques used are industry standard and provide total analysis.
The SGS laboratory used for the RRE assays is ISO 9001 and 14001 and 17025 accredited.</td></tr>
</table>

Item	JORC code explanation	Comments
		• Analytical standard for REE ITAK-705 was used as CRM material in the batches sent to SGS. • The assay results for the standards were consistent with the certified levels of accuracy and precision and no bias is evident. • The blanks used contain some REE, with critical elements Ce, Nd, Dy and Y present in small quantities. • Duplicate samples were allocated separate sample numbers and submitted with the same analytical batch as the primary sample. Variability between duplicate results is considered acceptable and no sampling bias is evident. • Laboratory inserted standards, blanks and duplicates were analysed as per industry standard practice. There is no evidence of bias from these results.
Verification of Sampling and Assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Apart from the routine QA/QC procedures by the Company and the laboratory, there was no other independent or alternative verification of sampling and assaying procedures. • Analytical results for REE were supplied digitally, directly from the SGS laboratory in Vespasiano to the BBX´s Exploration Manager in Rio de Janeiro. • No twinned holes were used. • Geological data was logged onto paper and transferred to Excel spreadsheets at end of the day and then transferred into the drill hole database. Microsoft Access is used for database storage and management and incorporates numerous data validation and data

<table>
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integrity checks. All assay data is imported directly into the Microsoft Access database.

No adjustments were made to the data.
All REE assay data received from the laboratory in element form is unadjusted for data entry.
Conversion of elements analysis (REE) to stoichiometric oxide (REO) was undertaken by spreadsheet using defined conversion factors. (Source:https://www.jcu.edu.au/advanced-analytical-centre/resources/element-to-stoichiometric-oxide-conversion-factors).

<table>
<tr><td>Element ppm</td><td>Conversion Factor</td><td>Oxide Form</td></tr>
<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>1.2082</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>
</table>
</td></tr>
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Item	JORC code explanation	Comments
		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: TREO (Total Rare Earth Oxide) = 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 + Y_2O_3 + Lu_2O_3 LREO (Light Rare Earth Oxide) = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 HREO (Heavy Rare Earth Oxide) = 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 + Y_2O_3 + Lu_2O_3 CREO (Critical Rare Earth Oxide) = Nd_2O_3 + Eu_2O_3 + Tb_4O_7 + Dy_2O_3 + Y_2O_3 (From U.S. Department of Energy, Critical Material Strategy, December 2011) MREO (Magnetic Rare Earth Oxide) = Nd_2O_3 + Pr_6O_{11} + Tb_4O_7 + Dy_2O_3 NdPr = Nd_2O_3 + Pr_6O_{11} DyTb = Dy_2O_3 + Tb_4O_7 In elemental from the classifications are: TREE: La+Ce+Pr+Nd+Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Tb+Lu+Y HREE: Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Tb+Lu+Y CREE: Nd+Eu+Tb+Dy+Y LREE: La+Ce+Pr+Nd

Item	JORC code explanation	Comments
Location of Data Points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• The UTM WGS84 zone 21S grid datum is used for current reporting. The drill holes collar coordinates for the holes reported are currently controlled by hand-held GPS.
Data Spacing and Distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Auger holes were over 200m apart, designed for reconnaissance testing over a single target area. • The data spacing and distribution is sufficient to establish the level of REE elements present in the target area and its continuity along the regolith profile. • No sample composition was applied.
Orientation of Data in relation to Geological Structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• The location and depth of the sampling is appropriate for the deposit type. • Relevant REE values are compatible with the exploration model for ionic REEs. • No relationship between mineralisation and drilling orientation is known at this stage.
Sample security	• The measures taken to ensure sample security.	• The auger samples in sealed plastic bags were sent directly to SGS by bus and then airfreight. The Company has no reason to believe that sample security poses a material risk to the integrity of the assay data.
Audit or Reviews	• The results of any audits or reviews of sampling techniques and data.	• The sampling techniques and data have been reviewed by the Competent Person and are found to be of industry standard.

JORC (2012) Table 1 - Section 2: Reporting of Exploration Results

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.	• The EMA and EMA EAST leases are 100% owned by BBX with no issues in respect to native title interests, historical sites, wilderness or national park and environmental settings. • The company is not aware of any impediment to obtain a licence to operate in the area.
Exploration done by Other Parties	• Acknowledgment and appraisal of exploration by other parties.	• No exploration by other parties has been conducted in the region.
Geology	• Deposit type, geological setting and style of mineralisation.	• The REE mineralisation at EMA is contained within the tropical lateritic weathering profile developed on top of felsic rocks, rhyolites as per the Chinese deposits. • The REE mineralisation is concentrated in the weathered profile where it has dissolved from the primary mineral, such as monazite and xenotime, then adsorbed on to the neo-forming fine particles of aluminosilicate clays (e.g. kaolinite, illite, smectite). • This adsorbed iREE is the target for extraction and production of REO.

Drill Hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
	    • easting and northing of the drill hole collar
	    • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
		• Auger locations and diagrams are presented in this announcement.
		• Details are tabulated in the announcement.

Criteria	JORC code explanation	Commentary
	• 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.	
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Weighted averages were calculated for all intercepts. • 500ppm TREO cut-off grade was applied to define the relevant intersections. • No metal equivalent values reported.
Relationship between mineralization widths and intercepted lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• Significant values of REE were reported for the auger samples. • Mineralisation orientation is not known at this stage, although assumed to be flat. • The downhole depths are reported, true widths are not known at this stage.

Criteria	JORC code explanation	Commentary
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.	• Maps and tables of the soil auger holes location and target location are inserted.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Relevant REE mineralisation in auger holes is reported, confirmation of IAC (Ionic Adsorbed Clay) type mineralisation was obtained for EMD-017 in this same geological setting.
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.	• No other significant exploration data has been acquired by the Company.
Further Work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Conduct reconnaissance auger holes 200m apart over other selected targets. • Refine the main targets amenable to auger drill testing for enriched REE zones, using detailed topography and radiometry as a subsidiary exploration tool. • Composite samples will be tested for their ionic clay potential based on metallurgical test work with ammonium sulphate leach.