krakatoa
resources limited
ABN 39 155 231 575

KRAKATOA RESOURCES LTD

Board:
Colin Locke (Exec. Chairman)
David Palumbo (Non-Exec. Director)
Timothy Hogan (Non-Exec. Director)

Capital Structure:
117,500,000 Fully Paid Shares
12,000,000 Options @ 10c exp 24/10/20
10,893,878 Options @ 40c exp 12/12/19

ASX Code:
KTA

Projects
Dalgaranga (Ta-Li-Rb)
Mac Well (Be, Au)
Corkill-Lawson and Farr (Co-Ag)

19 June 2019

Krakatoa acquires highly prospective Rare Earth Project in WA

- ***100% interest in the Mt Clere Rare Earth Project acquired via direct licence application (E52/3720), subject to grant***

- ***Project covers 403km^2, within the Gascoyne Region of Western Australia and is prospective for three rare earth element (REE) deposit styles:***
  - ***Monazite sands in vast alluvial terraces;***
  - ***Chinese-type ion adsorption clays in extensive laterite areas; and***
  - ***Carbonatite dyke swarms***

- ***BHP sampling delineated numerous highly prospective areas for thorium and REE mineralisation:***
  - ***substantial monazite (with mineral abundances exceeding 50%) identified in a significant number (>20%) of pan concentrate stream sediment samples***
  - ***Monazite concentrates can contain up to 70% REE after physical upgrading, primarily cerium (Ce) and lanthanum (La) as well as significant concentrations of neodymium (Nd), praseodymium (Pr), and samarium (Sm). The thorium (Th) content is also high, ranging from 4% to 12%***
  - ***The distribution and REE-composition of monazite at the project remains untested***

- ***Extraordinarily high monazite (up to 48%) was independently confirmed in heavy mineral concentrates taken by Astro Mining NL***

- ***Heavy mineral concentrates also included very high zircon (up to 60%), ilmenite (up to 29%) and leucoxene (up to 20%)***

- ***The extremely high levels of thorium are apparent in the airborne radiometric imagery, form prime targets for Chinese-type ion adsorption clays***

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- ***Project's REE prospectivity further confirmed by All Star Minerals Plc:***
  - ***Heavy mineral concentrate produced from alluvium returned up to 0.46% Ce, 0.25% La, 0.12% Th, 1.4% Zr and 9.9% Ti;***
  - ***Numerous REE anomalies returned in limited shallow auger drilling, including sample EBA052: 1050ppm Ce, 660ppm La, 112ppm Pr, 360ppm Nd and 43ppm Sm***

- ***Carbonatite type geochemical signatures exist in the district, with identification of numerous lamprophyre dykes and a carbonatite dyke swarm. The nearby Gifford Creek-Yangibana area contains a resource of 21.67 Mt at 1.17% TREO (Hasting Technology Metals Ltd, ASX release 22 November 2018)***

- ***Data compilation and non-invasive groundwork to commence immediately***

Overview

Krakatoa Resources Limited ("**Krakatoa**" or the "**Company**") (ASX: KTA) is pleased to announce that it has acquired a 100% interest in the exploration licence application for the Mt Clere Rare Earth Project ("the Project"). The Project contains multiple targets, including REE and thorium in enriched monazite sands, REE ion adsorption on clays within the widely preserved deeply weathered lateritic profiles and lastly REE occurring in plausible carbonatites associated with alkaline magmatism.

The Project covers a substantial area of 403km^2, in the Gascoyne Region of Western Australia, and was acquired via direct licence application (E52/3720, subject to grant). Whilst the Company is not aware of any reason why the exploration licence for the Project will not be be granted in due course (anticipated within 5 - 9 months), investors are cautioned that there is a risk the exploration licence will not be granted.

The Company will compile the historical exploration data and undertake non-invasive groundwork including mapping and sampling prior to granting of the exploration licence.

The Project is located approximately 200km northwest of Meekatharra, in Western Australia. Access from Meekatharra is northwest along the unsealed road to Mt Augustus via Mt Gould and Errabiddy and Erong Springs stations. Unsealed tracks and pastoral station fence tracks provide access within the project area.

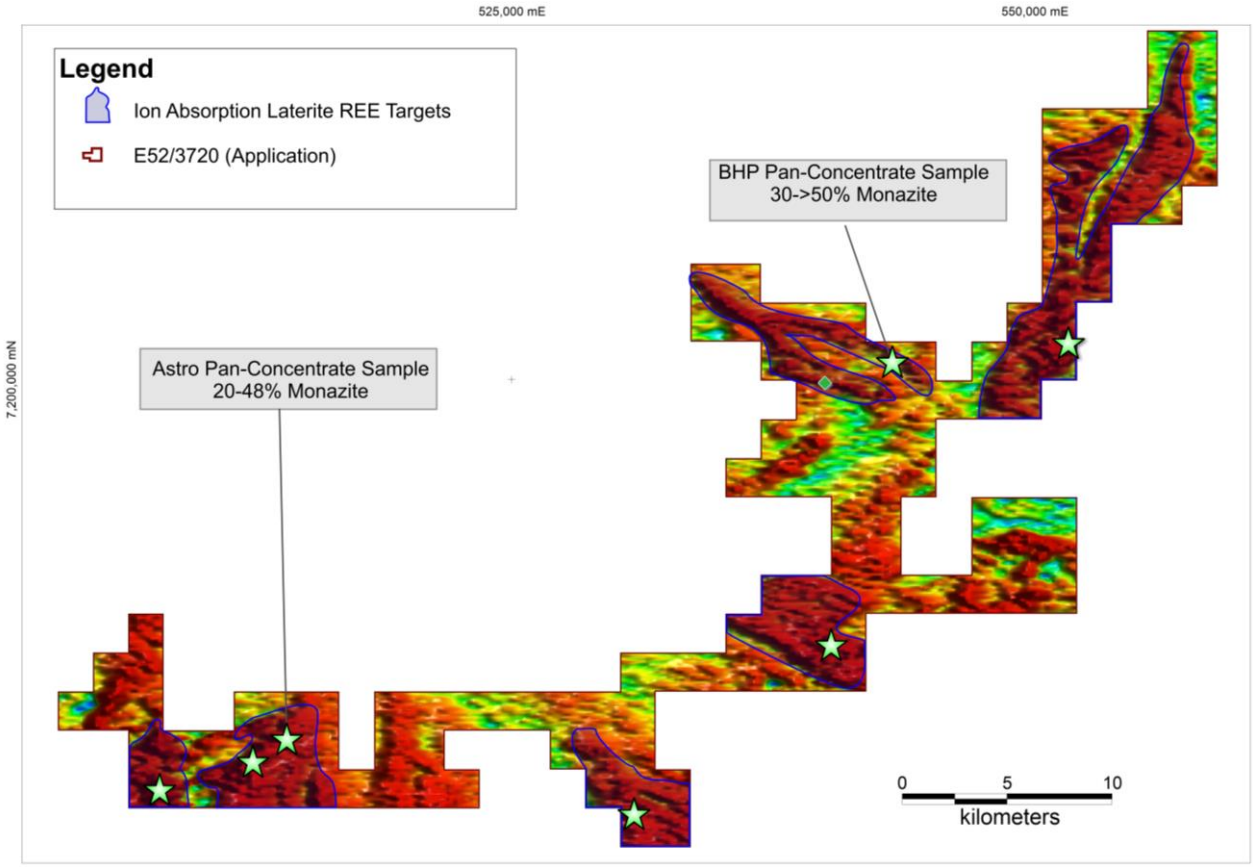

Figure 1:Mt Clere REE Project- Thorium Radiometric Imagery, Ion Absorption Laterite REE Targets, Pan Concentrate Geochemistry

Project Geology

The Project lies near the Errabiddy Shear Zone, a major thrust contact between the Narryer Terrane in the NW part of the Archean Yilgarn Craton and the Palaeoproterozoic Glenburgh Terrane (Figure 2). The Narryer Terrane, which contains the oldest known rocks in Australia (c. 3730 Ma), was reworked by deformation and metamorphism in the late Archaean. It includes several groups of gneiss derived from early to late Archaean granites, and interleaved meta-sedimentary and mafic meta-igneous rocks.

During the Capricorn Orogeny, the north-eastern part of the Narryer Terrane, where the Project is partly located, was deformed, metamorphosed, and intruded by voluminous granite sheets and dykes. This part of the Narryer Terrane is referred to as the Yarlarweelor Gneiss Complex.

The Glenburgh Terrane comprises c.2540–2000 Ma gneissic granitic rocks and metasedimentary rocks that may in part be an exotic terrane incorporated into the Gascoyne Complex during the Palaeoproterozoic. The Glenburgh Terrane is intruded by large plutons of potassic and silicic granite, belonging to the 1830–1780 Ma Moorarie Supersuite.

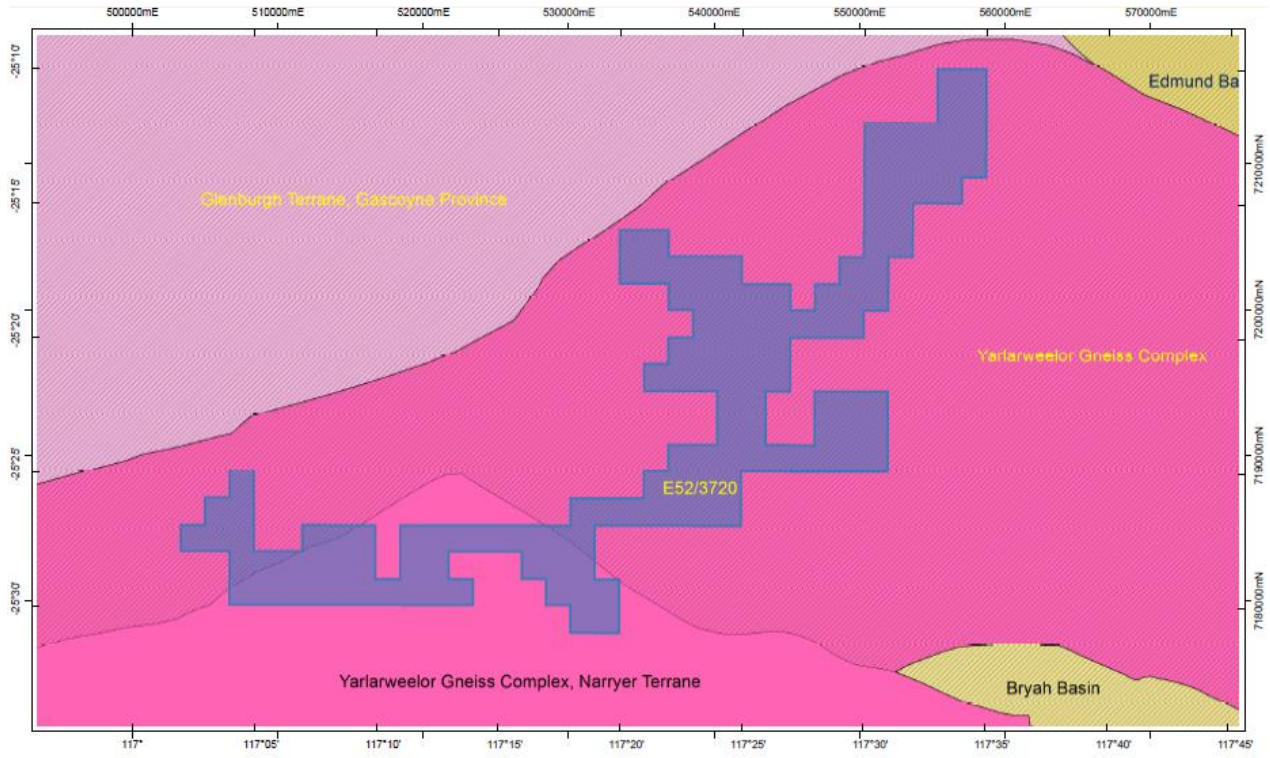

Figure 2: Mt Clere REE Project- Project Geology

Large tracts of the Project are covered by a considerable thickness of transported regolith, including broad alluvial sheet-wash and colluvial plains containing braided steams consisting of unconsolidated sand, silt and gravel.

Monazite [$(REE)PO_4$], an important ore for thorium, lanthanum, and cerium, represents one of three primary exploration targets within the Project, is enriched within present day and previous, now-obscured, drainage channels. The mineral is ubiquitous in granitic and many metamorphic rocks, beach sand, and is a primary and hydrothermal mineral in carbonatite. The total REE_2O_3 contents within monazite range from 49.6 to 74.13 wt % and the average value is 64.31 wt %. Most monazite contains additional thorium, uranium, calcium, strontium, silica, and lead, and some also accommodate sulphur.

Historical exploration work

From 1995, exploration programs were completed by BHP, Astro Mining NL, and All Star Resources Plc. A summary of this work is detailed below.

BHP

Between 1985-1987, a comprehensive programme of stream sediment sampling, heavy mineral sampling and mineralogical analysis across the eastern portion of the Mt Clere Rare Earth Project, targeting Pb-Zn-Ag mineralisation similar to that found at Broken Hill.

Heavy mineral sampling was completed at the approximate density of 500 samples per 1,000km2. The sampling confirmed the presence of gahnite (a mineral associated with Pb-Zn-Ag mineralisation at Broken Hill) but failed to locate any base metal mineralisation.

The ample presence of monazite in pan concentrates, with grades exceeding 50%, was confirmed in greater than 20% of the 176 samples. BHP classified the samples as follows (WAMEX Report A30270):

A = Abundant = >50% of estimated relative abundance of grains
C = Common = 30 – 50%
F = Frequent = 5 – 30%
R = Rare = <5%

The resulting abundances for monazite (n=176 samples) is:

Abundant = 21.4%
Common = 26%

Thus 47.4% of the samples returned a relative abundance exceeding 30% monazite.

The anomalous samples have not been investigated further, nor has the REE distribution within the monazite been assessed. Given The samples also report varying levels of ilmenite and zircon.

Petrographic analysis of 20 samples sites across the Project area confirmed the following accessory occurrences, which are indicative of REE prospectivity:

- Allanite, a sorosilicate group of minerals within the broader epidote group that contain a significant amount of rare-earth elements with cerium, lanthanum, neodymium or yttrium normally the dominate rare earth present. Allanite occurs mainly in metamorphosed clay-rich sediments and felsic igneous rocks.
- Titanite, which is a calcium titanium nesosilicate mineral that commonly presents rare earth metals cerium and yttrium.

Astro Mining NL

Between 2005 and 2006, Astro Mining explored the western portion of the Mt Clere Rare Earth Project for diamonds. Nineteen discrete, primitive, alkaline lamprophyres were located during their search, which involved stream sediment sampling and geological surveys.

Though no micro-diamonds were recovered by Astro, grain counts of mineral species in selected samples of heavy mineral concentrates produced extraordinarily high monazite (up to 48%) and very high zircon (up to 60%), ilmenite (up to 29%) and leucoxene (up to 20%). The results independently validate the thorium and REE prospectivity latent in the Project (WAMEX report A58632).

Diamond exploration was unsuccessful for Astro. However, their work has proved very fertile for rare earth elements, niobium and thorium mineralisation. The company recognised lamprophyre rocks of a deep crustal origin within a highly complex area located at the edge of an Archaean craton. This supports the area as having the considerable potential for a suit of intrusive alkaline ultramafic rocks, including carbonatites which are known hosts for RRE.

All Star Minerals Plc

All Star collected two large samples of alluvium in 2006 to produce a heavy mineral concentrate. Each concentrate was sent for analysis and microscopic mineral examination at Genalysis Laboratory Services. The two samples respectively returned 3% and 2% monazite, as well as 1.4% zircon, 40% and 44% ilmenite, and 9.9% titanium. Rare earth elements, cerium and lanthanum, reported at 0.46% and to 0.25%, respectively.

Seventy-seven samples were collected at a maximum depth of 1.8 metres from auger drilling in 2007. Of the 77 auger regolith samples taken, 55 returned an encouraging grade of over 50 ppm cerium, 30 returned a grade of over 50 ppm lanthanum, and 17 returned a grade of over 200 ppm zircon. Thirty-three (33) samples graded over 30 ppm neodymium, with highs of 360 ppm, 103 ppm, 102 ppm, 95.9 ppm, 87.6 ppm, and 82.6 ppm. Whereas, sample EBA052 [506041 Z50E, 7184977 Z50N] recorded 320 ppm thorium, 660 ppm lanthanum, 37 ppm yttrium, 360 ppm neodymium, 112 ppm praseodymium, 43 ppm samarium. The results confirm the presence of monazite and other rare earths in the alluvium. Refer to Appendix 1 for the full results.

REE Prospectivity

Consequently, the Company believes the Project area shows considerable prospectivity for three REE target styles:

1) Monazite sands in vast alluvial terraces
2) Chinese-type Ion Absorption clays in extensive laterite areas, and
3) Carbonatite dyke swarms

Monazite sands in vast alluvial terraces

The BHP and Astro pan concentrates bearing substantial abundances monazite lie within and are the likely cause of the unusually high thorium anomalies present in radiometric imagery (Figure 1). Many of the samples contained relative abundance mineral estimates exceeding 50% monazite, and many of these samples also contained other valuable heavy minerals, such as ilmenite (to 29%), leucoxene (to 20%) and zircon (to 60%). These minerals all concentrate within the Project's area drainage networks.

The Company believes that simple screening followed by magnetic, gravity or density separation will recover the key target minerals, including monazite, xenotime, ilmenite, leucoxene and zircon.

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Chinese-type Ion Absorption clays in extensive laterite areas

The areas covered by the Mt Clere Rare Earth Project include broad zones with high tenor Th radiometric anomalies. Many, but not all, are associated with concentrations of monazite sands in the drainage networks. Others, however, lie over deeply weathered terrain developed in the country rocks. Such occurrences may represent the primary sources for the monazite found within the drainage networks and may support the prospectivity for ion adsorption REE (Rare Earth Elements) clay-type deposits similar to those found in South China.

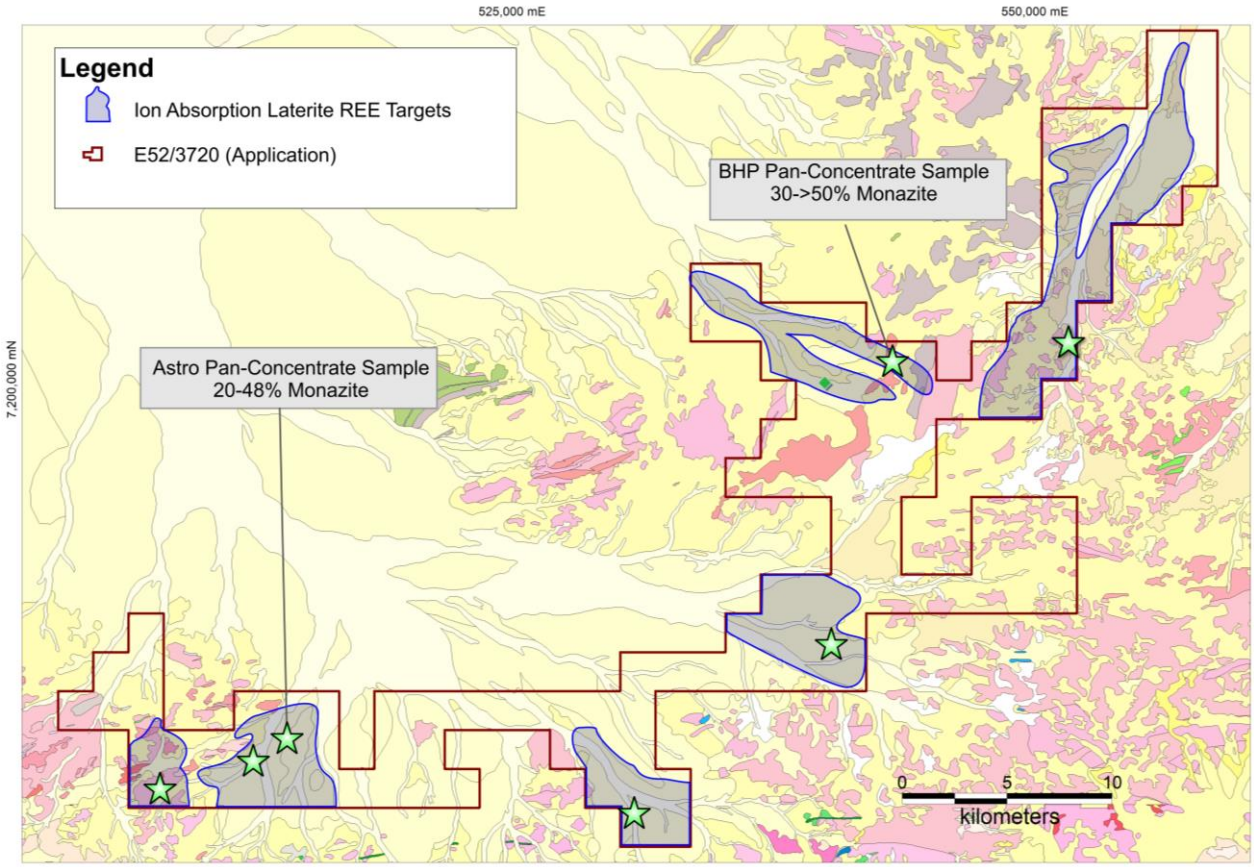

Figure 3: Mt Clere Project Geology and Ion Absorption Laterite REE Targets

The supergene, ion-adsorption REE clay deposits are formed as a result of in-situ lateritic weathering of REE-rich host rocks, leading to the formation of aluminosilicate clays that are capable of adsorbing dissolved REE. Coincident areas between deeply weathered bedrock and high tenor radiometric thorium form a prime target for this style of REE deposits.

Ion-adsorption REE deposits have the benefit of easier mining and ore processing as they involve shallow, open pit mining and no milling.

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Carbonatite dyke swarms

Astro Mining (WAMEX Report A58633) confirmed the presence of 19 discrete, primitive lamprophyres within the district. Their presence indicates the area is favourable for alkaline magmatism, which may include the presence of genetically-related REE-bearing carbonatites.

Approximately >50% of global rare earth element (REE) resources are hosted by carbonatite related deposits, of which monazite is one of the most important REE minerals. Monazite dominates more than 30 carbonatite-related REE deposits around the world.

Carbonatite type geochemical signatures are known in the Project area, and a carbonatite dyke swarm occurs 230km to the NW in the Gifford Creek-Yangibana area. The latter contains a resource of 21.67 Mt at 1.17% TREO (Hasting Technology Metals Ltd, ASX release 22nd November 2018).

While carbonatite is yet to be identified within the Project area, any carbonatite is likely obscured by the extensive regolith cover in the hinterland, and the target type remains largely unconsidered.

The Company believe's the carbonatite-related rare earth potential at the project is significant.

Exploration Program

Prior to grant of the exploration licence, the Company will complete the following:

- Compilation of legacy data and reprocessing the existing geophysical datasets using modern approaches and enhancements;
- Geological mapping of the various laterite/hard cap types to further understand controls on mineralisation and assist with ion-adsorption clay drill target generation;
- Ground search for and sampling of alkaline ultramafic outcrops;
- Non-ground disturbing activity's including the collection of monazite samples to determine the relative thorium and rare earth contents with monazite grains.

This work will commence immediately.

FOR FURTHER INFORMATION:

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Disclaimer

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

Competent Persons Statement

The information in this announcement is based on and fairly represents information compiled by Mr Jonathan King, consultant geologist, who is a Member of the Australian Institute of Geoscientists and employed by Collective Prosperity Pty Ltd, and is an accurate representation of the available data and studies for the Project. Mr King has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr King consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

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Appendix 1 – Auger Drilling Results

SAMPLE	Depth	EAST	North	Regolith	Ce	Dy	Er	Eu	Gd	Ho	La	Nd	Pr	Sc	Sm	Tb	Th	Tm	U	Y	Yb	Zr
	m	GDA94 Zone50			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
EBA001	1.9	7174100	503081	OC	86	3.47	2.01	0.84	4.78	0.68	60	27.4	7.12	9.77	5.34	0.59	14.3	0.28	0.9	22	2.02	162
EBA002	0.5	7174294	503149	LAT CAP	86	2.69	1.05	0.73	5.09	0.39	51	32.8	8.35	13.6	6.06	0.53	65.4	0.16	2	9.7	1.13	260
EBA003	0.8	7174398	503274	LAT CAP	57	2.27	1.28	0.48	3.72	0.43	30	20.2	5.19	23.1	4.19	0.41	46.6	0.21	2.8	10	1.67	280
EBA004	1.4	7174480	503429	LAT CAP	61	2.91	1.53	0.52	3.85	0.53	30	21.6	5.55	10.7	3.94	0.44	34.6	0.28	2.8	12.8	1.97	540
EBA005	0.8	7174674	503567	HARD CAP	140	4.87	2.51	1.23	6.72	0.86	62	43.1	11.4	13.6	8.28	0.8	92.2	0.39	2.1	20	2.85	171
EBA006	1.9	7175847	504128	COL - LAT	140	5.61	2.79	1.63	8.7	1.04	79	51.7	12.5	11.6	8.62	1	27.9	0.4	1.6	30	2.74	112
EBA007	1	7175986	504233	HARD CAP	66	3.41	1.89	0.77	4.06	0.62	25	19.2	4.82	18.5	4.02	0.53	25.3	0.33	1.8	14.3	2.11	134
EBA008	1	7176111	504324	LAT CAP	72	2.69	1.34	0.5	4.06	0.48	36	23.5	6	13.4	4.33	0.46	26.7	0.23	2.3	11.5	1.7	220
EBA009	0.3	7176178	504471	LAT CAP	30	1.31	0.74	0.24	1.93	0.24	17	11.6	3.35	8.46	2.4	0.2	62.6	0.11	1.2	5.4	0.83	155
EBA010	0.4	7176345	504640	HARD CAP	150	6.06	2.2	0.99	8.58	0.92	69	46.5	13.1	11.4	9.62	1.01	59.1	0.32	2.7	19.9	2.06	193
EBA011	0.1	7176451	504751	HARD CAP	69	2.68	1.45	0.47	3.24	0.49	32	19.4	5.5	11.1	4.4	0.39	19.8	0.35	2.1	11.6	1.7	240
EBA012	0.5	7176496	504927	HARD CAP	115	3.35	1.75	0.74	5.55	0.62	65	39.7	11.7	9.4	7.34	0.56	25.6	0.28	2.4	14.2	1.86	300
EBA013	0.7	7176559	505126	HARD CAP	180	3.69	1.67	0.71	8.06	0.63	110	64	18.6	12.3	8.79	0.68	62.2	0.27	2	16	1.49	162
EBA014	0.7	7176720	505187	HARD CAP	36	2.22	1.27	0.43	2.1	0.43	16	11.7	3.19	11.1	2.32	0.27	21.7	0.22	1.7	15.6	1.36	200
EBA015	1.5	7176873	505127	CAL 0.3-1.5	36	2.45	1.36	0.48	2.38	0.45	21	13.5	3.63	11.1	2.33	0.3	17.8	0.22	1.5	11.7	1.38	144
EBA016	1.8	7177020	505123	CAL 0.2-0.4	6.5	0.5	0.31	0.11	0.56	0.11	6.5	3.05	0.88	3.07	0.69	X	11.8	X	0.6	2.8	0.34	147
EBA017	1.8	7177174	505173	CAL 0.2-0.4	74	3.42	1.65	0.68	3.57	0.58	22	16.9	4.37	11.2	3.41	0.47	14.3	0.27	1.2	13.5	1.55	138
EBA018	1.2	7177318	505192	CAL 0.2-0.4	67	3.82	2.11	0.86	4.42	0.73	42	24.3	7.09	9.99	4.6	0.55	12.1	0.32	1.6	19.2	1.8	134
EBA019	0.4	7177500	505160	CAL 0.2-0.5	60	3.07	1.67	0.55	3.47	0.56	31	19.1	5.62	9.67	5.52	0.43	16.2	0.25	1.6	13.5	1.77	150
EBA020	0.5	7177655	505101	CAL 0.2-1.5	49	3.29	1.71	0.5	3.61	0.63	28	18.7	5.14	8.37	5.25	0.41	12	0.26	1.4	20	1.82	260
EBA021	[illegible]	7177800	505022	CAL 0.4-1.6	16.6	1.69	1.09	0.33	1.68	0.33	15	9.34	2.73	11.2	1.75	0.23	12	0.17	1	9.1	1.22	93.7
EBA022	1.6	7177990	504981	CAL 0.4-1	270	4.39	2.32	1.07	6.48	0.8	57	33.8	9.74	10.4	5.61	0.65	15.4	0.36	1.7	19.9	2.08	120
EBA023	1	7178184	504948	CAL 0.4-1.8	96	5.02	2.61	1.08	5.54	0.93	51	34.1	9.62	12.2	6.51	0.72	14	0.41	1.4	25	2.5	108
EBA024	1.8	7178340	504940	CAL 0.4-1.8	34	2.8	1.57	0.51	2.85	0.55	22	13.6	3.95	9.21	3.2	0.4	11.1	0.23	0.9	17.7	1.47	80.2
EBA025	1.8	7178520	504982	CAL 0.4-1.8	16.9	1.81	1.07	0.35	1.58	0.35	15	8.64	2.41	16.3	1.76	0.24	5.57	0.19	0.7	8.3	1.08	67.7
EBA026	1.8	7178626	504944	CAL	17.6	1.38	0.71	0.27	1.46	0.27	12	8.58	2.32	21	1.7	0.19	9.09	0.12	0.7	6.6	0.73	59.3
EBA027	1.8	7178850	504985	CAL 0.3-1.5	24	0.71	0.39	0.12	0.73	0.13	5	3.35	1.01	21.3	0.64	X	4.05	X	1.1	2.7	0.44	71.6
EBA028	1.5	7178950	505015	CAL HARD CAP	21	1.22	0.6	0.25	1.26	0.21	12.5	7.92	2.27	7.88	1.53	0.18	8.86	X	0.8	4.9	0.58	67.2
EBA029	1	7180535	504887	OC	56	3.8	1.95	0.83	4.02	0.72	34	23.1	6.52	12.4	4.5	0.51	11.9	0.32	1.6	18.8	2.12	110
EBA030	1.8	7180384	504940	COL	59	3.2	1.9	0.67	3.34	0.63	29	19.5	5.47	13.4	3.59	0.41	9.5	0.28	3.4	15.4	1.83	107
EBA031	1.8	7180294	505006	CAL 0.5-1.8	43	2.58	1.28	0.54	2.67	0.45	19	14.9	3.81	9.16	2.93	0.37	7.87	0.2	2.7	11	1.12	118

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SAMPLE	Depth	EAST	North	Regolith	Ce	Dy	Er	Eu	Gd	Ho	La	Nd	Pr	Sc	Sm	Tb	Th	Tm	U	Y	Yb	Zr
	m	GDA94 Zone50			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
EBA032	1.8	7180197	505079	CAL HARD CAP	57	5.63	3.01	0.96	5.03	1.09	31	24.3	6.39	10.5	4.85	0.71	7.51	0.42	1.8	29	2.66	168
EBA033	1	7180440	505167	OC	67	3.58	1.87	0.85	3.85	0.67	35	23.8	6.48	10.5	4.12	0.48	7.61	0.28	1.3	18.7	1.73	83.7
EBA034	0.4	7179901	505279	OC	47	3.33	1.76	0.77	3.13	0.6	30	17.8	5.34	9.08	3.72	0.45	7.91	0.3	1.2	16.7	1.85	176
EBA035	1.5	7179856	505399	OC	54	5.6	2.97	1.14	4.96	1.07	31	26.3	6.7	19.4	5.38	0.75	3.48	0.45	0.5	28	2.63	29.1
EBA036	1.8	7179939	505555	OC	39	8.75	3.79	2.74	9.03	1.45	66	53.7	13.9	6.76	10.3	1.33	1.33	0.52	1	26	3.2	84
EBA037	0.6	7180022	505704	OC	150	13.8	7.8	3.16	14.5	2.69	81	66.9	17.8	8.12	14.4	2.02	21.7	1.06	1.6	67	6.27	280
EBA038	0.6	7180114	505824	OC	66	3.95	2.05	0.87	4.84	0.74	40	29.9	8.28	9.81	5.48	0.61	11.3	0.3	1.8	19.1	1.51	98.2
EBA039	0.8	7180258	505907	COL	35	5.68	3.29	0.73	4.29	1.09	26	20.2	5.26	9.37	4.36	0.69	4.9	0.52	1.1	28	3.41	52.8
EBA040	1.8	7180401	506081	COL	47	4.11	2.17	1.18	4.11	0.75	26	21.9	5.83	20.1	4.64	0.57	3.1	0.3	0.9	19.5	1.87	41.7
EBA041	0.9	7180457	506236	OC	38	3.4	1.93	0.8	3.08	0.67	22	17.9	4.59	8.75	3.44	0.46	5.14	0.27	1	19.9	1.71	53.8
EBA042	0.4	7180511	506385	OC	72	4	2.2	0.8	4.52	0.74	44	27.3	7.87	10	5.15	0.58	15.9	0.35	2.3	19	2.36	198
EBA043	0.7	7180606	506694	OC	115	5.42	2.68	1.09	6.77	0.98	73	44.3	13.3	10.7	7.6	0.78	31	0.42	2.4	26	2.58	220
EBA044	0.4	7180695	506812	COL	68	3.81	2.13	0.85	4.12	0.71	36	23.9	6.81	10	4.36	0.51	15.2	0.33	2.5	17.5	2.11	260
EBA045	0.9	7180752	506909	CREEK/OC	170	7.15	2.89	1.01	10.5	1.16	95	64.4	18.8	8.49	12	1.19	54.7	0.41	3.5	28	2.49	220
EBA046	0.6	7180854	507102	CREEK/OC	105	4.28	1.99	1.18	6	0.74	90	50.3	15.6	9.16	7.53	0.67	22.2	0.36	1.7	20	1.96	220
EBA047	1.4	7180981	507224	COL	285	6.08	2.44	1.07	10.6	0.97	190	95.9	30.1	9.97	12.5	1.03	44.8	0.37	2.3	24	2.29	165
EBA048	1.2	7185031	505577	SANDY CK	96	5.38	2.43	0.86	7	0.95	56	40.8	11.2	8.18	8.03	0.86	26.2	0.37	1.3	23	1.99	184
EBA049	1.2	7184950	505662	SANDY CK	46	2.4	1.37	0.56	2.71	0.45	27	18	5.06	6.37	3.14	0.33	14.3	0.19	1.3	9.8	1.3	170
EBA050	1	7185003	505780	SANDY CK	76	3.08	1.44	0.68	4.11	0.54	37	23.4	7	9.36	4.33	0.47	18.2	0.23	1.6	13.7	1.43	240
EBA051	1.2	7185043	505883	SANDY CK	195	4.35	1.83	0.95	8.28	0.75	120	69.1	20.9	8.59	9.47	0.74	72.8	0.26	1.5	15.9	1.42	145
EBA052	1.3	**7184977**	**506041**	**SANDY CK**	**1050**	**10.3**	**2.98**	**1.91**	**34.9**	**1.44**	**660**	**360**	**112**	**9.69**	**42.9**	**2.15**	**320**	**0.39**	**3.2**	**37**	**1.86**	**132**
EBA053	0.5	7184950	506203	HARD CAP	60	3.94	2.03	0.83	4.48	0.74	46	27.3	8.07	10.2	4.99	0.61	21	0.3	1.8	19.4	1.88	240
EBA054	0.7	7184905	506446	HARD CAP	67	4.31	2.3	1.06	4.88	0.77	48	32.2	8.87	10.3	5.67	0.61	15.9	0.35	2	21	2.03	173
EBA055	0.4	7184805	506722	HARD CAP	105	4.59	2.24	1.07	5.62	0.85	50	35.3	9.91	9.57	6.09	0.66	15.9	0.35	2.3	20	2.14	156
EBA056	1	7184767	507028	HARD CAP	98	4.56	2.41	1.14	5.91	0.88	60	38.5	10.8	9.3	6.64	0.7	20.7	0.33	1.8	25	2.06	127
EBA057	1.8	7183750	513794	COL	46	2.33	1.31	0.68	2.6	0.42	22	15.7	4.46	6.25	2.9	0.35	11.4	0.18	0.8	9.9	1.15	105
EBA058	1	7183732	513946	COL	150	5.53	2.56	1.02	8.65	0.96	94	64.5	18.6	9.66	10.4	0.9	60.5	0.37	2.7	25	2.15	157
EBA059	1.3	7183630	514078	COL	66	3.68	1.82	0.86	4.43	0.68	41	26.6	7.6	8.76	4.56	0.53	19	0.27	1.2	16.8	1.47	104
EBA060	1.6	7183538	514204	COL	71	4.46	2.32	1.05	5.11	0.82	46	31.3	9.01	11.6	5.52	0.63	23.5	0.36	1.4	21	2.06	200
EBA061	1	7183423	514340	COL	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L
EBA062	1.2	7183329	514480	COL	230	8.8	3.21	1.6	14.9	1.41	150	102	26.8	10.3	16	1.5	57.1	0.44	1.9	34	2.19	117
EBA063	1.3	7183210	514024	COL	185	8.95	4.05	1.93	12.7	1.55	120	82.6	23.1	11.5	14	1.4	55	0.57	1.8	36	3.23	177

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SAMPLE	Depth	EAST	North	Regolith	Ce	Dy	Er	Eu	Gd	Ho	La	Nd	Pr	Sc	Sm	Tb	Th	Tm	U	Y	Yb	Zr
	m	GDA94 Zone50			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
EBA064	1.2	7183096	514787	COL	235	6.6	2.39	1.17	12.4	1	140	87.6	25.9	8.48	14.6	1.17	57.6	0.33	2	24	1.79	140
EBA065	1.1	7180700	512965	COL	67	3.9	1.97	0.83	4.6	0.71	38	26.2	7.21	11.1	5.38	0.57	27.4	0.3	1.7	16.7	1.8	193
EBA066	0.4	7180662	512913	HARD CAP	115	6.64	2.74	1.26	8.83	1.08	72	51.8	14.5	9.12	9.8	1.01	31.1	0.37	2	28	2.06	130
EBA067	1	7181002	512861	HARD CAP	73	4.45	2.07	0.97	5.23	0.78	46	30.6	8.54	10.2	6	0.64	57	0.32	1.8	18.7	2.04	117
EBA068	0.5	7181162	512838	HARD CAP	84	7.22	3.89	1.59	7.68	1.41	58	41.3	10.9	10.1	8.41	1.06	17	0.51	1.5	38	3.03	126
EBA069	1	7181338	512820	HARD CAP	69	4.53	2.35	1.04	5.29	0.86	48	33.3	8.94	12.4	5.93	0.66	17.2	0.34	1.4	22	2.16	102
EBA070	1.5	7181564	512774	HARD CAP	89	5.77	3.02	1.44	7	1.07	66	41.1	11.3	10.1	6.92	0.83	14.4	0.43	1.2	29	2.37	81.7
EBA071	0.7	7181760	512749	HARD CAP	85	5.29	2.69	1.26	6	0.96	50	34.9	9.65	8.28	7.15	0.79	10.7	0.38	1.4	27	2.19	120
EBA072	1.2	7181935	512730	HARD CAP	260	6.26	2.39	1.17	12.6	0.99	165	103	30.6	8.22	15.9	1.13	91.2	0.31	2	23	1.86	115
EBA073	1	7182081	512703	SANDY CK	46	2.91	1.5	0.68	3.44	0.56	29	19.1	5.31	6.51	3.91	0.43	13	0.25	1.4	12.8	1.45	145
EBA074	1.5	7182209	512696	SANDY CK	60	3.09	1.56	0.72	3.78	0.54	32	21.8	6.14	7.64	4.04	0.48	17.1	0.23	1.8	13.8	1.46	200
EBA075	1.2	7182372	512631	SANDY CK	54	2.95	1.52	0.69	3.64	0.53	36	22.9	6.41	8.08	4.02	0.44	13.7	0.2	1.6	14	1.29	142
EBA076	0.4	7182515	512633	HARD CAP	105	4.59	2.36	1.1	6.45	0.86	59	42.5	11.6	8.5	7.33	0.74	25.9	0.35	3	21	2.02	220
EBA077	0.4	7182651	512716	SANDY	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L

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JORC Code, 2012 Edition – Table 1 report template

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 (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• Sampling by the primary explorers of the region (BHP and Astro) was for Pb-Zn-Ag mineralisation and diamonds. Little consideration was given to the reporting levels for the monazite and other "accessory" minerals to support future exploration on the property, as these were not the target commodity. • Panned heavy mineral concentrates derived from stream sediment sampling and collected from heavy mineral trap sites within the alluvial channel were the main tool adopted for use in exploration by all companies. • Recovered bag weights varied significantly between trap sites depending on size and how effectively they were cleaned of their heavy mineral content. • It is unknown how much fine fraction was removed from the sample before the final concentrate was taken • The pan concentrates were reviewed and analyzed by various parties and relative abundance estimates made relative to the total weight of the con. • Qualified mineral observers provided the grain counts and estimates. • This is the standard procedure for diamond exploration. • Additional stream sediments were taken in base metal exploration and assayed for Cu, Pb, Zn producing no significant results (and are not relevant to this report).

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Criteria	JORC Code explanation	Commentary
		• Deep soil samples were collected from vertical Auger drilling. In all 77 holes were drilled to a maximum depth of 1.8m. • No QAQC procedures were discussed in the body of any report.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• 77 shallow, vertical auger drill holes completed on several traverses across accessible thorium anomalous zones. • Holes were drilled to maximum depth of 1.8m.
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.*	• Each auger sample was scanned with a scintillometer and total counts recorded. • The base of hole was collected, bagged and submitted for multielement analysis • QA/QC procedures were not discussed within the body of any of the historical reports relating to the exploration undertaken
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.*	• The regolith type was recorded for each sample produced from the auger drilling. • All drilling was at the reconnaissance level and not used in resource estimation.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in*	• The exact procedure was not explained. However, panned concentrates are processed through a panning dish to remove the lighter fractions, including quartz and mica, etc. • The heavy mineral fraction accumulates beneath the lighter mineral fraction which is removed. • The heavier fraction is then collected and dried before further cleaning occurs. • The balance of the process before observation occurs was not explained.

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Criteria	JORC Code explanation	Commentary
	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.*	• This is the standard approach for the collection of heavy minerals in stream environments during early stage exploration. • Drilling approaches were standard, and suitable for the target type being explored.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Auger samples were analysed at Actlabs Pacific in Perth, using Code HFICP after pulverizing to 90% passing 75 microns. • The digestion uses a hydrofluoric/nitric/perchloric acid digestion with a hydrochloric acid leach, and a final analytical determination by ICP-MS. • This aggressive acid digestion is suitable for dissolving silicate minerals. • It gives a near total digestion except for chromite, spinels, barite, monazite, zircon, gahnite and cassiterite. • REE are likely to be under reporting as several target minerals, including monazite and zircon, are likely partly digested.
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.*	• Appendix 1 carries the assay results for the auger program • No adjustments were made to the data • Mineral analysis and estimates for work completed by the essential players are included in the various open file reports listed in the announcement. • These reports are available through DMIRSby searching the relevant report number (BHP – A30270; Astro -A58631, 58632, A58633; All Star Minerals – A77119).
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.*	• Auger drilling and other sampling was controlled by GPS or DGPS • Most the early stream sediment/pan concentrate data by BHP was collected using WGS84 Lats and Longs with sample sites chosen where a suitable trap was identified. • Later pan cons/stream sediments were collected by Astro using MGA94 Z50. • All locations will be within 5 m of their true location

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Criteria	JORC Code explanation	Commentary
		• No formal grids were established. • Auger drilling was on set bearing, mostly perpendicular to the local drainage orientation • No resource work was completed
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.*	• Data spacing is suitable for the exploration stage, which is mostly at the reconnaissance level • All completed exploration work targeted commodities other than those under consideration in this announcement • Thework completed was appropriate for the exploration stage • No resource is currently identified • No sample compositing was used
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.*	• No bias introduced. • Sample sizes reflect the size of the heavy mineral trap site being exploited
Sample security	• *The measures taken to ensure sample security.*	• Historical reports did not document the chain of custody to ensure sample security
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No reviews or audits of sampling techniques was undertaken. The data collated was reviewed respective to each generation of work undertaken and

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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.*	• Krakatoa has submitted an Exploration licence application (52/3720). • The tenement is owned and managed by Krakatoa, subject to grant • KTA is not in partnership or any joint venture with respect to the tenement. • Krakatoa doe not perceive any impediments that would prevent grant of title
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Project area was previously explored by BHP and Astro Mining NL respectively for Pb-Zn-Ag mineralisation and diamonds • Neither party sort the commodities under discussion in this announcement, though both acknowledge the significance of revilement commodities during their exploration efforts.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Project is focused on multiple REE opportunities, including REE and thorium in enriched monazite sands released from gneissic rocks, REE ion adsorption on clays within the widely preserved deeply weathered lateritic profiles and lastly REE occurring in plausible carbonatites associated with alkaline magmatism.

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*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
		• 77 shallow auger holes drilled across zones of anomalous Th as displayed in the Thorium channel of radiometric imagery.
		• Drilling occurred on 6 lines of variable length and orientation. Collar spacing per line was a fairly uniform 100m.
		• All holes were vertical and drilled to a maximum depth of 1.8m.
		• Collar positions stored in MGA94, Zone 50.

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Criteria	JORC Code explanation	Commentary
	○ *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.*	• No weightings or other manipulations were made to the data. • No cut off grades were applied to drilling results • Relative mineral abundance numbers were either binned or subject to rounding • No metal equivalents were used or calculated
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Too early for any relationship to be determined. • Exploration originally targeted base metals and diamonds. • The completed work is relevant and appropriate for Monazite and REE exploration even though these formed the accessory and not the primary target minerals.
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.*	• The pertinent maps for this stage of project are included in the release. • Co-ordinates in MGA94Z50 are shown on all maps
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.*	• The report has relied on the information in the public records released by the previous explorers (see WAMEX reports). • No interpretation has been made, as it wasn't necessary, and the results are self-explanatory. • Mineral abundance estimates have been reviewed for all pan concentrate samples. This information requires collating, but

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Criteria	JORC Code explanation	Commentary
		the results presented are factual and drawn directly from the listed reports.
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.*	• Other geophysical data sets for the project area are available in the public domain. This will be recovered and reprocessed prior to reinterpretation to support future exploration. • Thorough compilation of the historical results is necessary
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.*	• Some of the recommended program is outlined in the preceding response. • Geological mapping and site visit to review the targets is necessary before commencing any field work. • This work along with a site visit will commence imminently.