

## 6.5km Rare Earth Channel Confirmed, Thickest Intercepts To-Date

- ❖ First pass drilling between Deep Leads and Rubble Mound Rare Earth discoveries confirms 6.5km contiguous mineralised channel
- ❖ Exceptionally thick, shallow zone encountered with highlights including:

Hole	From (m)	To (m)	Metres (m)	Permanent Magnet <sup>1</sup> ppm	TREO <sup>2</sup> avg ppm	TREO-CeO <sub>2</sub> ppm <sup>3</sup>	TREO max ppm
<b>RM217</b>	2	23	<b>21</b>	<b>149</b>	<b>564</b>	<b>475</b>	<b>2511</b>
Includes	2	4	<b>2</b>	<b>568</b>	<b>2092</b>	<b>1794</b>	<b>2511</b>
<b>RM218</b>	4	9	<b>5</b>	<b>327</b>	<b>987</b>	<b>804</b>	<b>1524</b>
Includes	6	9	<b>3</b>	<b>463</b>	<b>1349</b>	<b>1099</b>	<b>1524</b>
<b>RM220</b>	1	5	<b>4</b>	<b>183</b>	<b>1059</b>	<b>534</b>	<b>2347</b>
<b>RM221</b>	2	10	<b>8</b>	<b>184</b>	<b>750</b>	<b>652</b>	<b>1556</b>
Includes	4	8	<b>4</b>	<b>286</b>	<b>1138</b>	<b>1030</b>	<b>1556</b>
<b>RM222</b>	2	15	<b>13</b>	<b>137</b>	<b>621</b>	<b>451</b>	<b>993</b>

1 Permanent Magnet = the four high-value rare earth oxides: Nd<sub>2</sub>O<sub>3</sub> + Pr<sub>6</sub>O<sub>11</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub>

2 Total rare earth oxides

3 TREO minus cerium oxide

- ❖ Connecting area increases potential for further mineralisation and also highlights opportunity to further extend the channel
- ❖ Results to feed into maiden JORC Resource Estimation which is underway
- ❖ Follow-up drilling campaign planned of ~70 holes anticipated to commence in October 2022

ABx Group Limited (ASX: ABX) ("ABx" or the "Company") is pleased to provide assay results which confirm a 6.5km mineralised channel connecting the Company's Deep Leads and Rubble Mound rare earth discoveries, located in northern Tasmania.

The clay-hosted rare earth elements (REE) occur within a shallow channel structure that increases the prospect size by 27% to 5.1 km<sup>2</sup> and demonstrates the potential for the mineralised zone to deliver thick intersections as well as expand significantly along strike (see Figure 1). The combined prospective area to be drill tested has increased to more than 30km<sup>2</sup> as shown in Figure 1.

### Commenting on the discovery, ABx Group MD and CEO Dr Mark Cooksey said:

*"Our latest results represent a milestone moment in our development of the rare earth channel at Deep Leads and Rubble Mound. The extensive channel structure has connected and combined the two discoveries into a single deposit and, excitingly, the mineralisation has also been shown to return results which are thick – exceeding 20 metres thickness – and near surface.*

*"These are only first-pass results, with this emerging discovery possessing clear potential to significantly expand the mineralised corridor between the connected areas as well as along strike.*

*"The assays confirm the rare earth oxides encountered are rich in the four high-value 'permanent magnet' elements that are critical for advanced technologies, such as electric vehicles, smart phones and wind turbines.*

*"Furthermore, not all clay-hosted rare earths are created equal. Only those clay deposits formed by ionic adsorption of REE metals onto clays (IAC REE) achieve high extraction rates at low cost and are the most sought-after deposits. ABx Group has confirmed Deep Leads possesses these ionic adsorption clays and has successfully delivered extraction rates of 50% to 75% of contained REE using benign, low-cost processing techniques<sup>1</sup>. ABx is the first to discover true IAC REE in Tasmania."*

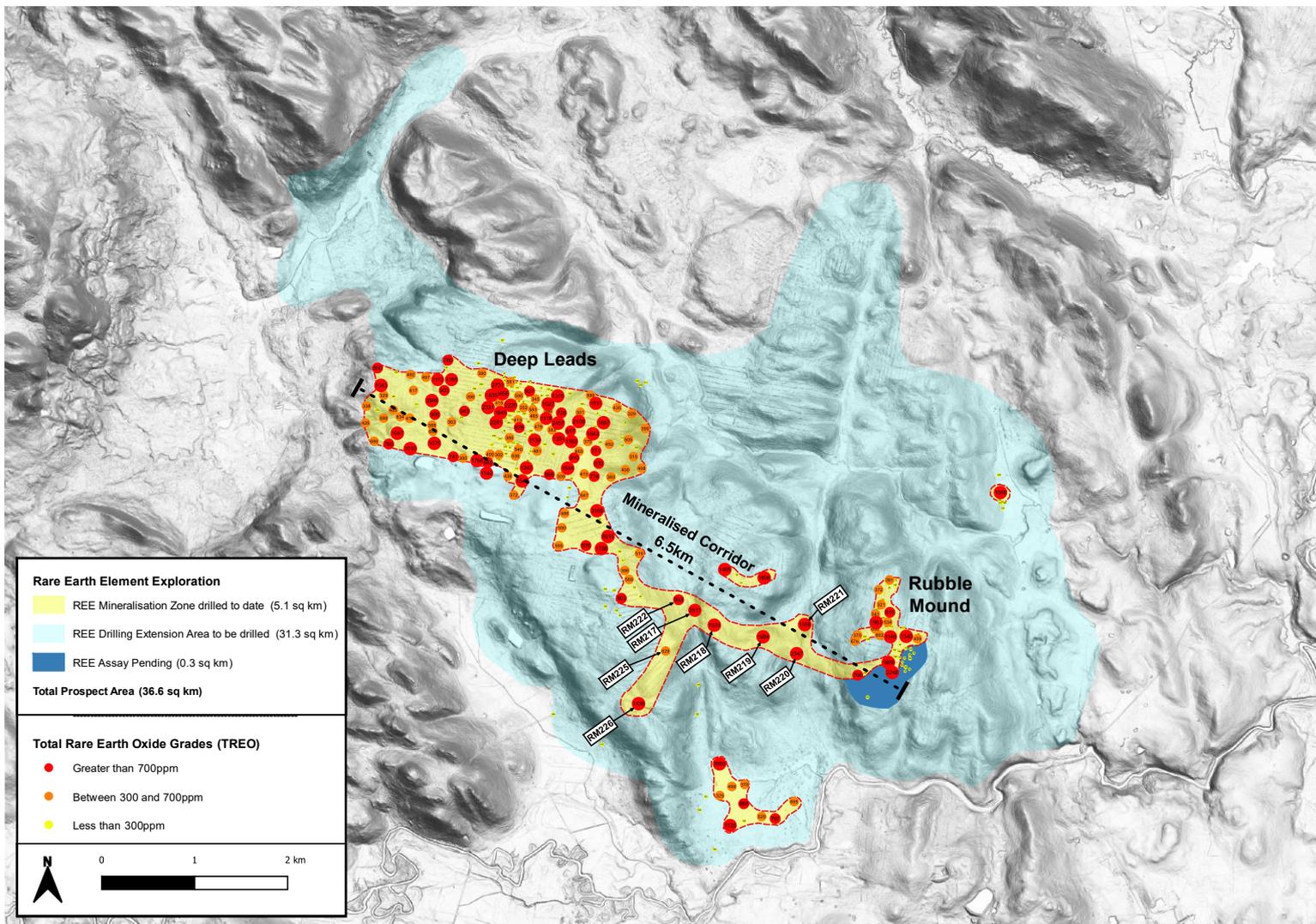


Figure 1: 6.5km long mineralised channel at Deep Leads-Rubble Mound REE discovery

While the Company's modelling had suggested the discoveries at Deep Leads and Rubble Mound are connected along a southeast trending channel, the results from holes RM217-225 provide confirmation of this interpretation.

<sup>1</sup> See ASX Announcement dated 31 May 2022.

Assay results confirm the adjoining mineralisation contains excellent grades, with holes such as RM217 returning a maximum of 2511 ppm of total rare earth oxide (TREO). This hole has also proven that the channel can host thicker intercepts, in this case to a depth of over 20 metres. Further work will be required to assess the size and depth potential of this connected area.

To date, rare earths encountered have typically been concentrated in buried channel structures of 6-12m depth. However, the latest results demonstrate the region's capacity to host even shallower mineralisation, with RM219 recording a 1m assay grading 1884ppm TREO at surface.

These results will feed into a maiden JORC Resource Estimation, which is already underway.

### **Upcoming drilling campaign**

The receipt of the Company's latest assay results has increased ABx's confidence in its geological interpretation and will inform targeting work for an upcoming drilling program, anticipated to commence in October 2022.

The campaign is pending government approvals with most proposed drill site locations already falling under a previously approved work program.

During this campaign, ABx intends to complete approximately 70 drill holes with much of this work focussed on stepping out from the known northwest trending channel. The company will also test in-fill targets between Deep Leads and Rubble Mound, as well as inspect a new style of REE mineralisation encountered in alluvial flats to the south of the project<sup>2</sup>.



Figure 2: Tasmania's eDrill drilling contractors on site at Deep Leads, led by ABx Group Operations Manager Nathan Towns

<sup>2</sup> See ASX Announcement dated 6 September 2022.

This announcement is approved for release by the board of directors.

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## Glossary of technical terms

**Rare earth elements:** (REE) are lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), promethium (Pm), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb) and lutetium (Lu). Yttrium (Y) is also typically grouped with the REE.

**TREO:** is total rare earth element oxides in the sample, with the REE metals expressed as rare earth element oxides, which is a common method for summarising the total grade.

**TREO-CeO<sub>2</sub>:** are TREO minus the amount of cerium oxide in the sample. CeO<sub>2</sub> is relatively low in value.

**ppm:** is parts per million by mass, which is the standard unit for reporting REE grades. 10,000ppm = 1.0%.

**Permanent magnets:** are used in electronic and computing equipment, batteries, electric vehicles, wind turbines, mobile phones and military systems. Nd & Pr are used in high-power permanent magnets. Dy, Sm & Tb are used in high-temperature permanent magnets. Some reporters called them “**Super Magnet**” REE.

**Ionic adsorption clay (IAC) REE:** In contrast with hard-rock REE ores, ionic adsorption clay REE mineralisation forms when REE attach loosely to clays and can be recovered by low-cost leaching methods. IAC REE deposits have been mined in southern China and Myanmar. ABx is one of the very few listed companies to discover true IAC REE mineralisation in Australia.

**Extraction rates from desorption tests:** To assess the potential of extracting REEs from these prospects, tests carried out by ANSTO in Sydney, which has extensive experience in metallurgical testing of clay-hosted rare earth deposits worldwide, were conducted at “standard” desorption conditions of 0.5 M ammonium sulfate at pH 4 which are low-acid, low-cost processing conditions for ionic adsorption clay REE.

The “extraction rate” is the proportion of REE contained in the sample that is extracted and reports to the leach solution. Very few other REE occurrences in Australia have achieved extraction rates that have been achieved on ABx’s REE mineralisation in the channels at the Deep Leads project area in northern Tasmania.

## Qualifying statements

**General:** The information in this report that relates to Exploration Information is based on information compiled by Ian Levy who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Levy is a qualified geologist and is a director of ABx Group Limited.

The information relating to Exploration Information and Mineral Resources in Tasmania has been prepared or updated under the JORC Code 2012. Mr Levy has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity, which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Mr Levy has consented in writing to the inclusion in this report of the Exploration Information in the form and context in which it appears.

**Table 2: Full REE results from new holes at Deep Leads & Rubble Mound**

Hole	From (m)	To (m)	Metres (m)	East	North	RL	Permanent Mag ppm	TREO avg ppm	TREO-CeO <sub>2</sub> ppm	TREO max ppm	Permanent Magnet REE "SuperMags"														
											Nd <sub>2</sub> O <sub>3</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	La <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm
RM216	1	2	1	480271	5407734	298.9	15	75	47	75	10	3	0.3	1.9	27	1	0	2	0	12	0	2	0	1	13
RM217	2	3	1	480557	5407867	290.9	456	1672	1390	1672	300	74	11.9	70.0	281	36	16	74	14	320	4	64	5	31	370
RM217	3	4	1	480557	5407867	290.9	680	2511	2198	2511	444	109	18.1	108.8	313	62	23	110	22	433	8	96	8	50	706
RM217	4	5	1	480557	5407867	290.9	94	471	387	471	57	13	3.2	21.2	84	14	3	18	5	75	2	13	2	13	149
RM217	5	6	1	480557	5407867	290.9	63	447	320	447	36	9	2.3	16.0	127	13	2	12	4	46	2	10	2	12	154
RM217	6	7	1	480557	5407867	290.9	46	233	172	233	27	7	1.5	10.5	62	8	2	8	2	26	2	7	1	9	61
RM217	7	8	1	480557	5407867	290.9	135	421	394	421	87	22	3.7	22.7	28	13	5	22	4	69	2	21	2	13	108
RM217	8	9	1	480557	5407867	290.9	80	303	264	303	49	12	2.4	15.8	39	10	3	13	3	44	2	12	2	11	85
RM217	9	10	1	480557	5407867	290.9	28	109	95	109	16	4	0.9	6.8	14	5	1	4	1	13	1	4	1	7	29
RM217	10	11	1	480557	5407867	290.9	399	933	858	933	282	74	6.7	35.8	75	16	13	42	6	185	2	62	2	15	115
RM217	11	12	1	480557	5407867	290.9	259	847	743	847	170	42	6.7	40.6	104	24	9	39	8	139	3	38	3	21	200
RM217	12	13	1	480557	5407867	290.9	205	740	662	740	137	33	5.1	29.6	78	16	7	33	6	162	2	27	2	14	188
RM217	13	14	1	480557	5407867	290.9	89	421	327	421	54	13	2.8	18.9	94	13	3	16	4	52	2	13	2	11	124
RM217	14	15	1	480557	5407867	290.9	82	431	339	431	49	12	2.7	18.9	92	14	3	15	4	47	2	11	2	12	146
RM217	15	16	1	480557	5407867	290.9	123	459	380	459	80	20	3.2	18.9	79	12	4	19	4	73	2	18	2	10	116
RM217	16	17	1	480557	5407867	290.9	94	348	281	348	63	16	2.3	13.7	67	8	3	14	3	58	1	13	1	7	78
RM217	17	18	1	480557	5407867	290.9	35	156	117	156	22	5	0.9	6.0	39	4	1	6	1	21	1	5	1	4	39
RM217	18	19	1	480557	5407867	290.9	46	212	161	212	29	8	1.3	8.0	51	5	2	8	2	30	1	7	1	5	55
RM217	19	20	1	480557	5407867	290.9	45	217	158	217	29	7	1.2	7.6	59	5	2	7	2	29	1	7	1	5	55
RM217	20	21	1	480557	5407867	290.9	56	257	183	257	37	9	1.5	9.4	74	6	2	9	2	35	1	8	1	5	58
RM217	21	22	1	480557	5407867	290.9	55	410	355	410	25	6	2.4	20.8	55	20	2	10	6	23	4	7	3	21	205
RM217	22	23	1	480557	5407867	290.9	52	251	195	251	32	8	1.6	10.2	55	8	2	8	2	30	1	7	1	8	76
RM218	3	4	1	480766	5407707	287.0	45	179	140	179	30	8	1.0	6.0	39	4	2	6	1	31	1	6	1	4	40
RM218	4	5	1	480766	5407707	287.0	81	311	253	311	54	14	1.9	11.9	58	8	3	11	3	53	1	11	1	8	73
RM218	5	6	1	480766	5407707	287.0	162	575	468	575	108	28	3.7	22.8	107	14	6	22	5	92	2	23	2	14	128
RM218	6	7	1	480766	5407707	287.0	388	1266	1021	1266	267	73	7.1	40.4	245	24	13	42	8	226	3	56	3	23	236
RM218	7	8	1	480766	5407707	287.0	554	1524	1247	1524	390	108	8.7	47.3	276	23	18	52	8	289	4	83	3	24	189
RM218	8	9	1	480766	5407707	287.0	448	1258	1029	1258	315	87	7.3	39.7	228	20	15	43	7	238	3	67	3	20	165
RM219	0	1	1	481291	5407583	268.0	689	1884	1510	1884	485	138	10.4	55.4	373	27	22	64	10	354	4	103	4	26	206
RM220	1	2	1	481653	5407402	268.6	158	540	447	540	108	28	3.1	19.3	92	11	5	19	4	102	2	22	2	10	113
RM220	2	3	1	481653	5407402	268.6	132	452	388	452	89	22	2.9	18.0	64	10	5	17	4	82	2	19	2	10	105
RM220	3	4	1	481653	5407402	268.6	227	2347	670	2347	152	39	5.2	31.1	1677	19	8	31	6	140	3	32	3	18	184
RM220	4	5	1	481653	5407402	268.6	215	896	630	896	144	37	5.0	29.8	267	17	8	29	6	121	3	33	2	16	178
RM221	2	3	1	481738	5407716	246.0	86	385	270	385	56	14	2.2	13.4	116	8	3	12	3	56	1	13	1	8	78
RM221	3	4	1	481738	5407716	246.0	101	444	307	444	65	16	2.7	17.0	137	9	4	15	3	59	1	16	1	10	87
RM221	4	5	1	481738	5407716	246.0	283	888	748	888	194	49	6.1	34.7	141	18	11	38	6	163	2	43	3	16	164
RM221	5	6	1	481738	5407716	246.0	383	1165	1027	1165	264	66	8.3	45.2	138	22	15	53	8	254	3	56	3	19	211
RM221	6	7	1	481738	5407716	246.0	266	1556	1493	1556	141	33	11.9	80.1	64	57	11	66	19	153	7	38	7	41	828
RM221	7	8	1	481738	5407716	246.0	213	944	851	944	132	32	6.8	42.5	93	28	8	39	9	125	3	31	4	21	368
RM221	8	9	1	481738	5407716	246.0	86	353	303	353	56	14	2.3	13.8	49	9	4	14	3	61	1	12	1	7	107
RM221	9	10	1	481738	5407716	246.0	56	262	216	262	36	8	1.5	9.8	46	6	2	10	2	43	1	8	1	5	82
RM222	2	3	1	480381	5407981	286.3	179	730	578	730	116	28	4.7	29.7	152	19	7	28	6	101	3	26	3	16	190
RM222	3	4	1	480381	5407981	286.3	203	812	624	812	135	34	4.8	28.9	188	18	8	29	6	118	3	31	3	16	189
RM222	4	5	1	480381	5407981	286.3	243	993	690	993	165	42	5.4	31.3	302	17	9	34	6	144	2	37	2	16	178
RM222	5	6	1	480381	5407981	286.3	232	957	689	957	156	39	5.5	31.8	268	18	9	34	6	141	3	35	3	16	191
RM222	6	7	1	480381	5407981	286.3	140	675	511	675	87	20	4.3	28.1	163	18	6	25	6	81	3	20	3	16	195
RM222	7	8	1	480381	5407981	286.3	169	713	566	713	109	26	4.8	29.7	147	18	7	29	6	97	2	25	3	16	195
RM222	8	9	1	480381	5407981	286.3	135	648	468	648	87	20	4.0	23.8	180	15	6	24	5	83	2	20	2	12	164
RM222	9	10	1	480381	5407981	286.3	92	515	331	515	59	14	2.8	16.6	184	11	4	16	4	55	2	14	2	10	122
RM222	10	11	1	480381	5407981	286.3	104	549	370	549	66	15	3.1	19.3	179	12	4	19	4	60	2	16	2	11	137
RM222	11	12	1	480381	5407981	286.3	110	527	379	527	70	17	3.2	19.6	148	13	5	19	4	62	2	16	2	11	136
RM222	12	13	1	480381	5407981	286.3	61	331	234	331	37	9	2.0	13.6	98	9	3	12	3	34	1	10	1	8	93
RM222	13	14	1	480381	5407981	286.3	45	269	183	269	26	6	1.7	11.5	86	8	2	9	2	23	1	7	1	7	77
RM222	14	15	1	480381	5407981	286.3	67	358	243	358	41	10	2.2	13.7	115	9	3	12	3	37	1	10	1	8	92
RM222	15	16	1	480381	5407981	286.3	40	207	156	207	24	6	1.4	9.3	51	6	2	8	2	22	1	6	1	6	63

Table 2 continued: Full REE results from new holes at Deep Leads & Rubble Mound

Hole	From (m)	To (m)	Metres (m)	East	North	RL	Perman-ent Mag ppm	TREO avg ppm	TREO-CeO <sub>2</sub> ppm	TREO max ppm	Permanent Magnet REE "SuperMags"														
											Nd <sub>2</sub> O <sub>3</sub> ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Tb <sub>4</sub> O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	CeO <sub>2</sub> ppm	Er <sub>2</sub> O <sub>3</sub> ppm	Eu <sub>2</sub> O <sub>3</sub> ppm	Gd <sub>2</sub> O <sub>3</sub> ppm	Ho <sub>2</sub> O <sub>3</sub> ppm	La <sub>2</sub> O <sub>3</sub> ppm	Lu <sub>2</sub> O <sub>3</sub> ppm	Sm <sub>2</sub> O <sub>3</sub> ppm	Tm <sub>2</sub> O <sub>3</sub> ppm	Yb <sub>2</sub> O <sub>3</sub> ppm	Y <sub>2</sub> O <sub>3</sub> ppm
RM223	2	3	1	480595	5407063	239.7	37	149	118	149	24	5	1.1	6.7	30	4	2	7	1	20	1	6	1	4	36
RM223	3	4	1	480595	5407063	239.7	33	138	108	138	21	5	1.0	6.2	31	4	2	6	1	18	1	5	1	3	34
RM223	4	5	1	480595	5407063	239.7	29	121	94	121	19	4	0.8	5.3	27	3	1	5	1	16	0	4	0	3	31
RM223	5	6	1	480595	5407063	239.7	25	111	85	111	16	4	0.8	4.6	25	3	1	4	1	14	0	4	0	3	29
RM223	6	7	1	480595	5407063	239.7	20	96	73	96	13	3	0.6	3.8	23	3	1	4	1	12	0	3	0	2	26
RM223	7	8	1	480595	5407063	239.7	20	91	67	91	12	3	0.6	3.6	24	2	1	3	1	11	0	3	0	2	23
RM223	8	9	1	480595	5407063	239.7	21	98	72	98	13	3	0.6	3.9	26	3	1	4	1	12	0	3	0	2	26
RM223	9	10	1	480595	5407063	239.7	23	104	77	104	14	4	0.6	4.0	26	3	1	4	1	13	0	3	0	3	27
RM223	10	11	1	480595	5407063	239.7	17	81	62	81	11	3	0.5	3.4	18	2	1	3	1	9	0	3	0	2	24
RM224	1	2	1	480582	5406744	236.5	26	113	86	113	16	4	0.7	4.6	28	3	1	4	1	15	0	4	0	3	29
RM224	2	3	1	480582	5406744	236.5	29	128	95	128	18	4	0.8	5.2	33	3	1	4	1	15	1	4	1	3	32
RM224	4	5	1	480582	5406744	236.5	16	75	55	75	10	2	0.5	2.9	20	2	1	3	1	8	0	3	0	2	20
RM224	5	6	1	480582	5406744	236.5	16	73	55	73	10	2	0.5	3.0	18	2	1	3	1	8	0	2	0	2	20
RM225	1	2	1	480243	5407427	291.0	11	391	34	391	7	2	0.3	1.8	357	1	0	2	0	6	0	2	0	1	10
RM225	2	3	1	480243	5407427	291.0	19	629	60	629	12	3	0.5	3.5	569	2	1	3	1	11	0	3	0	2	18
RM226	2	3	1	479953	5406857	312.1	58	248	178	248	38	9	1.5	9.2	70	6	2	8	2	33	1	8	1	6	53
RM226	3	4	1	479953	5406857	312.1	46	197	143	197	30	7	1.1	7.3	55	5	2	7	2	26	1	7	1	5	43
RM226	4	5	1	479953	5406857	312.1	56	240	169	240	36	9	1.5	9.2	71	6	2	8	2	30	1	8	1	6	49
RM226	5	6	1	479953	5406857	312.1	70	281	212	281	46	11	1.8	11.7	68	7	3	10	2	38	1	11	1	7	62
RM226	6	7	1	479953	5406857	312.1	100	402	308	402	65	16	2.6	16.6	94	10	4	15	3	56	1	15	2	10	92
RM226	7	8	1	479953	5406857	312.1	185	626	560	626	122	30	4.5	28.5	66	18	7	26	6	105	2	27	3	16	164
RM226	8	9	1	479953	5406857	312.1	418	1438	1322	1438	275	69	10.1	63.8	116	41	17	62	14	257	5	60	6	34	409
RM226	9	10	1	479953	5406857	312.1	294	978	923	978	198	48	6.9	40.1	55	25	12	44	8	206	3	42	3	20	267
RM226	10	11	1	479953	5406857	312.1	198	713	659	713	129	31	5.1	32.0	54	20	8	32	7	133	3	30	3	17	210
RM226	11	12	1	479953	5406857	312.1	197	733	694	733	130	31	5.3	31.6	39	20	8	35	7	150	2	28	3	15	230
RM226	12	13	1	479953	5406857	312.1	121	456	412	456	79	19	3.4	20.5	44	13	5	21	4	79	2	17	2	11	139
RM226	13	14	1	479953	5406857	312.1	112	428	385	428	73	18	3.0	18.2	43	11	4	18	4	75	2	16	2	10	131
RM226	14	15	1	479953	5406857	312.1	32	158	133	158	20	5	1.0	6.2	25	4	1	6	1	25	1	5	1	3	53
RM226	15	16	1	479953	5406857	312.1	117	449	411	449	75	19	3.2	20.4	38	13	5	19	4	74	2	17	2	11	146
RM227	1	2	1	479036	5406739	214.5	61	246	220	246	39	10	1.7	10.8	26	7	2	11	2	42	1	8	1	5	79
RM227	2	3	1	479036	5406739	214.5	59	233	208	233	38	9	1.6	10.1	25	6	2	10	2	39	1	8	1	6	72
RM227	8	9	1	479036	5406739	214.5	33	149	98	149	21	5	0.8	4.8	51	3	1	5	1	21	0	5	0	3	26
RM227	11	12	1	479036	5406739	214.5	15	88	59	88	9	2	0.5	3.3	29	2	1	3	1	11	0	2	0	2	21
RM227	12	13	1	479036	5406739	214.5	19	85	62	85	12	3	0.5	3.2	23	2	1	3	1	12	0	3	0	2	20
RM227	13	14	1	479036	5406739	214.5	20	86	62	86	13	3	0.5	3.1	24	2	1	3	1	12	0	3	0	2	19
RM227	14	15	1	479036	5406739	214.5	10	44	32	44	6	2	0.2	1.5	12	1	0	1	0	7	0	1	0	1	10
RM228	1	2	1	479561	5406415	168.2	31	134	108	134	20	5	0.8	5.1	26	3	1	5	1	22	0	5	0	3	36
RM228	3	4	1	479561	5406415	168.2	32	167	98	167	20	5	0.9	5.4	70	3	1	5	1	17	1	4	1	3	30

**JORC Code, 2012 Edition – Table 1 report**

**Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes samples to 25 metres maximum depth but typically to 12 metres depth</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation rotary percussion and push-tube coring</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording &amp; assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery &amp; ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Weight tests indicated reliable sample recovery</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geologically logged in detail by senior geologists. Every sample photographed, with photos and logs and assays entered into ABx's proprietary ABacus database.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Chips are subsampled using bauxite shovel and quartering method in accordance with ISO standards</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external lab checks) &amp; whether</li> </ul>	<ul style="list-style-type: none"> <li>Assaying done at NATA-registered commercial labs of ALS Brisbane Australia and Labwest Minerals Analysis in Western Australia. Duplicate interlab assays done.</li> <li>Desorption extraction tests were conducted by ANSTO at Lucas Heights, Sydney NSW with assays done at ALS Brisbane.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>acceptable levels of accuracy (ie lack of bias) &amp; precision have been established.</i>	
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>All assaying done at NATA-registered commercial laboratories of ALS Brisbane Australia and Labwest Minerals Analysis Pty Ltd in Western Australia. Duplicate interlab assays showed excellent correspondence.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>GPS hole locations have been tested for accuracy on many prospects, all satisfactorily – within 1m.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling typically at 50 to 75 metre spacing on mineralised prospects</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Vertical holes through flat-dipping bauxite is as good as it gets</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples collected and assembled onto pallets every day</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Several audits confirmed reliability</li> </ul>

## 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	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Satisfactory to excellent. All tenements are unencumbered....</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>ABx is the first company to explore for Rare Earth Elements in northern Tasmania.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Bauxite deposit formed on Lower Tertiary basalts</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:               <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>GPS location.</li> <li>Airborne Radar RL topography</li> <li>Lidar topography contoured at 1m height intervals</li> <li>All holes are short straight vertical holes</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>All data are presented.</li> </ul>
Relationship between mineralisation widths & intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation typically 3 to 6 metres thick and Drillholes are sampled at 1 metre intervals</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>N.A.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All new results are reported in this report</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>N.A.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Step-out drilling over a wider area has been planned, work plans submitted and new drill rig configurations have been developed.</li> </ul>

END