



9 October 2017

## HIGH NEODYMIUM (Nd) AND PRASEODYMIUM (Pr) ORE GRADE DISCOVERED AT NEW TARGETS

### HIGHLIGHTS

- Assay results received from the Company's major 2017 drilling programme include those from two new targets – **Yangibana and Simon's Find**
- Best intersections at Yangibana include:-
  - 3m at 3.23%TREO including 1.60%Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>
  - 4m at 1.94%TREO including 0.93%Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>
  - 4m at 1.43%TREO including 0.69%Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>, and
  - 4m at 1.31%TREO including 0.61%Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>
- Best intersections at Simon's Find include:-
  - 3m at 1.10%TREO including 0.63%Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>, and
  - 2m at 1.11%TREO including 0.61%Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>
- Both targets host mineralisation with high Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>:TREO ratios of 44-51% and up to 52-57% respectively
- Simon's Find assays also indicate significant niobium grades with best intersections including:-
  - 12m at 2.24%Nb<sub>2</sub>O<sub>5</sub>, and
  - 5m at 1.88%Nb<sub>2</sub>O<sub>5</sub>

### INTRODUCTION

Hastings Technology Metals Limited (ASX:HAS) advises that assay results were received from its major 2017 drilling programme, mainly at two new targets, Yangibana and Simon's Find (Figure 1). Both are held 100% by Hastings and neither was included in the Company's July 2017 JORC Resources.

Both have very high ratios of Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>:TREO. Neodymium and praseodymium are the primary rare earths of Hastings and these are significant discoveries.

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### Board

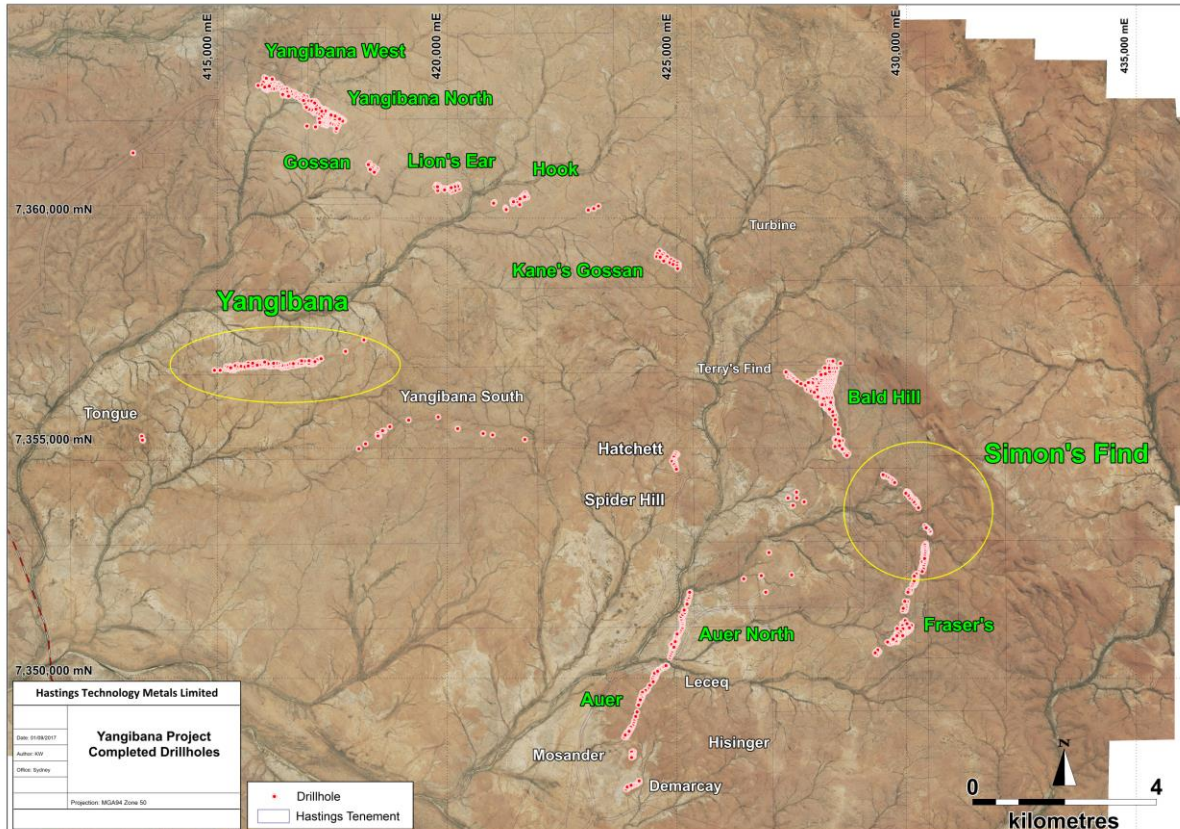
Charles Lew (Executive Chairman)

Anthony Ho (Non-Exec Director)

Jean Claude Steinmetz (Non-Exec  
Director)

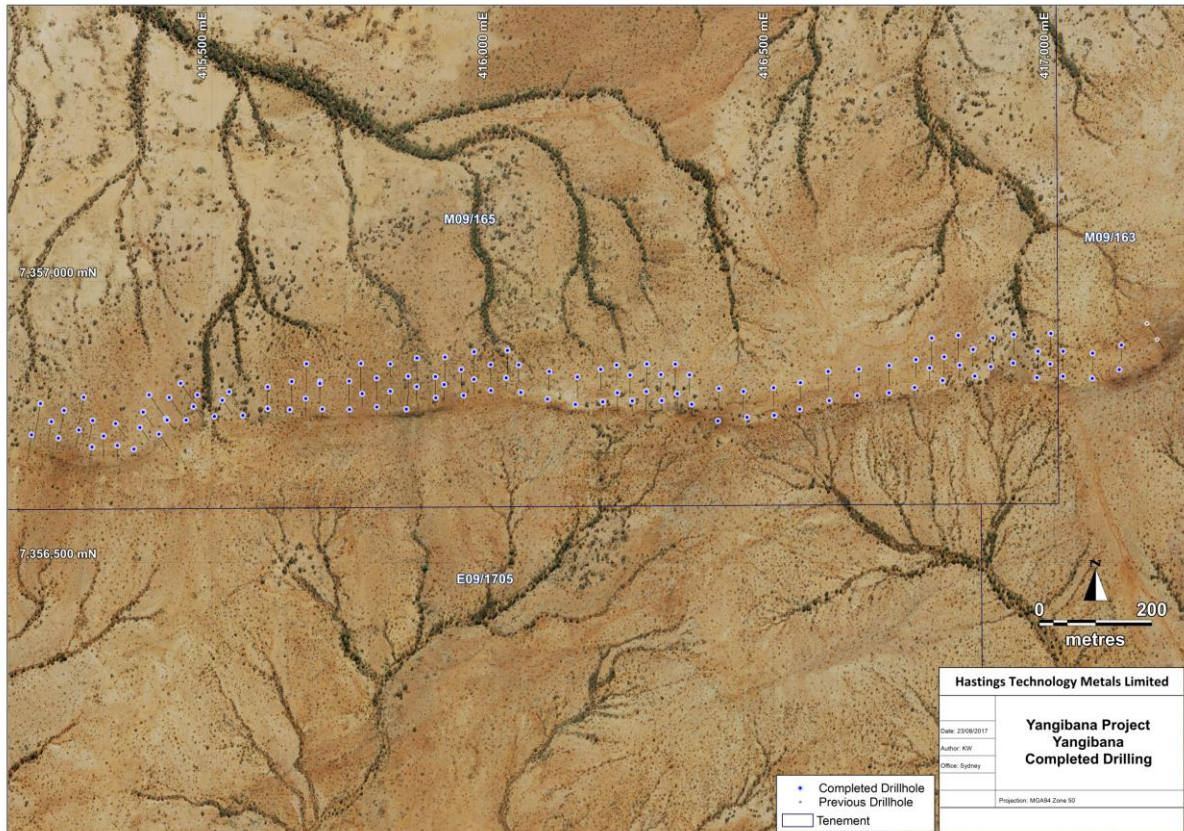
Guy Robertson  
(Finance Director  
and Company Secretary)

The Yangibana prospect (Figure 1) lies within Mining Lease M09/165 and was briefly drill-tested in 2015. Subsequent mapping and rock chip sampling established the potential for economic rare earths mineralisation over approximately 2.0km of strikelength within the ML, despite the narrow width of the structure at surface.



**Figure 1 – Yangibana Project, Hastings’ drilling to date showing location of Yangibana and Simon’s Find prospects**

111 reverse circulation (RC) holes (6,500m) and 3 diamond drillholes (249.4m) were drilled during the recent programme, testing 1.95km of strikelength of discontinuously outcropping ironstone (Figure 2).



**Figure 2 – Yangibana Project, Yangibana Prospect, 2017 drill locations**

Selected results from the RC drilling at Yangibana are shown in Table 1 and confirm the high  $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}:\text{TREO}$  ratio of between 44% and 51%.

Hole No	From	To	Interval	%TREO	% $\text{Nd}_2\text{O}_3+\text{Pr}_6\text{O}_{11}$
<b>YARC</b>					
15	24	28	4	1.31	0.61
19	16	18	2	1.68	0.77
21	55	58	3	1.64	0.78
23	7	9	2	4.11	1.97
27	11	13	2	3.93	1.83
35	18	21	3	3.23	1.60
53	2	6	4	1.43	0.69
67	69	71	2	1.85	0.90
68	66	72	6	1.84	0.81
69	33	37	4	1.56	0.75
72	15	18	3	1.70	0.82
93	50	54	4	1.94	0.93
96	56	62	6	1.30	0.67

**Table 1 – Yangibana Project, Yangibana Prospect 2017 Drilling, best results**

Drillhole parameters are provided in Appendix 1 and detailed assays are provided in Appendix 5.

### Simon’s Find Prospect

Simon’s Find prospect (Figure 1) covers a discontinuously outcropping ironstone unit within Exploration Licences E09/2018, E09/2129 and E09/1943 that extends over 2km between the Bald Hill Southeast JORC resource within M09/157 to the north and the Fraser’s North JORC resource within M09/158 to the south.

Previous mapping and rock chip sampling identified this as another potential target for high  $Nd_2O_3+Pr_6O_{11}:TREO$  mineralisation, albeit with narrow width at surface.

70 reverse circulation holes (2,895m) and 4 diamond drillholes (263.6m) were drilled during the recent programme, testing some 2.35km of strikelength of discontinuously outcropping ironstone (Figure 3).

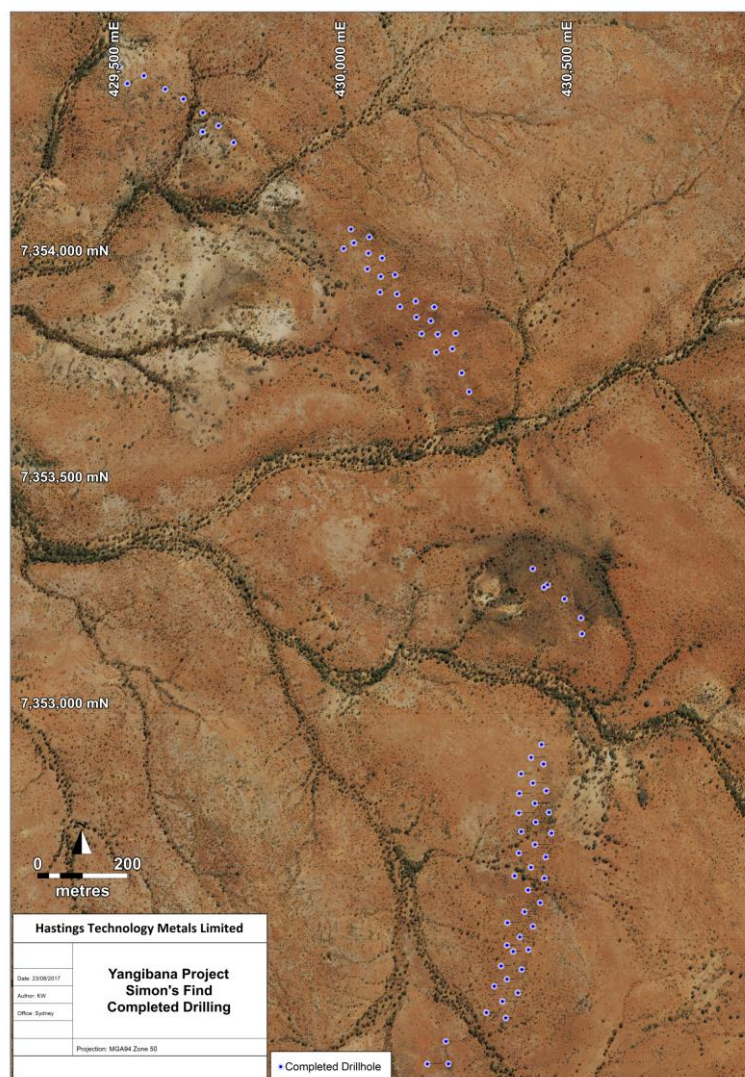


Figure 3 – Yangibana Project, Simon’s Find prospect, 2017 drillhole locations

Selected results from Simon’s Find drilling are shown in Table 2.

Hole No	From	To	Interval	%TREO	%Nd <sub>2</sub> O <sub>3</sub> +Pr <sub>2</sub> O <sub>3</sub>
<b>SFRC</b>					
8	3	6	3	1.10	0.63
35	25	29	4	1.91	1.06
40	35	40	5	2.36	1.33
48	25	30	5	1.21	0.63

**Table 2 – Yangibana Project, Simon’s Find Prospect 2017 Drilling, best results**

***Significantly, the mineralisation at Simon’s Find has the highest ratio of Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>:TREO of all deposits and prospects identified to date over the Yangibana Project, ranging from 52% to 57%.***

The Simon’s Find drilling also returned high grade niobium results associated with and adjacent to the rare earths mineralisation, but over wider mineralised intervals including those shown in Table 3.

Hole No	From	To	Interval	%Nb <sub>2</sub> O <sub>5</sub>
<b>SFRC</b>				
7	4	11	7	0.68
14	0	8	8	0.68
30	18	28	10	0.70
48	25	31	6	1.18
50	0	8	8	1.04
51	18	23	5	1.88
57	0	14	14	0.60
65	6	18	12	2.24
70	3	13	10	0.69
74	0	33	33	0.36

**Table 3 – Yangibana Project, Simon’s Find Prospect 2017 Drilling, best niobium results**

Drillhole parameters are provided in Appendix 2 and detailed assays are provided in Appendix 6.

### **Yangibana North**

Hastings also recently completed a twelve-hole infill drilling programme into the shallow portion of the Yangibana North deposit (Hastings 70%) to provide samples for metallurgical testwork. Best results from this drilling are shown in Table 4. The Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>:TREO ratio at Yangibana North ranges from 25% and 31%.

Hole No	From	To	Interval	%TREO	%Nd <sub>2</sub> O <sub>3</sub> +Pr <sub>2</sub> O <sub>3</sub>
<b>YGRC</b>					
98	36	40	4	3.83	0.96
99	20	24	4	2.87	0.90
101	5	9	4	2.34	0.59
105	3	6	3	2.42	0.72
106	19	22	3	2.62	0.68

**Table 4 – Yangibana Project, Yangibana North Deposit 2017 Infill Drilling, best results**

Drillhole parameters are provided in Appendix 3 and detailed assays are provided in Appendix 7.

### **Auer**

Results from eight RC holes drilled into the northern extension of the Auer deposit. High grade results were returned from this new target as shown in Table 5, with Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>:TREO ratios of between 33% and 48%.

Hole No	From	To	interval	%TREO	%Nd <sub>2</sub> O <sub>3</sub> +Pr <sub>6</sub> O <sub>11</sub>
<b>AURC</b>					
51	60	72	12	2.20	0.80
55	17	19	2	2.48	0.82
56	67	72	5	1.98	0.70
58	6	7	1	4.82	2.34
and	18	29	11	1.54	0.51

**Table 5 – Yangibana Project, Auer Deposit, northern extension, best results**

Drillhole parameters are provided in Appendix 4 and detailed assays are provided in Appendix 8.

Drilling is ongoing at Auer and Auer North.

### **Bald Hill**

Final assays have been received from the 2017 reverse circulation drilling programme at Bald Hill. Hole BHRC325 returned an intersection of 10m (83-93m) at 1.11% TREO including 0.43% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>. This hole is the south-westernmost hole drilled at Bald Hill to date and indicates that this mineralisation remains strongly open to the southwest.

## **TERMINOLOGY USED IN THIS REPORT**

**TREO** is the sum of the oxides of the light rare earth elements lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), and samarium (Sm) and the heavy rare earth elements europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu), and yttrium (Y).

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## **About Hastings Technology Metals**

- Hastings Technology Metals is a leading Australian rare earths company, with two rare earths projects hosting JORC-compliant resources in Western Australia.
- The Yangibana Project hosts JORC Resources totalling 17.02 million tonnes at 1.27% TREO (comprising Measured Resources of 2.92 million tonnes at 1.04% TREO, Indicated Resources of 7.19 million tonnes at 1.43% TREO and Inferred Resources of 6.90 million tonnes at 1.21% TREO), including 0.41% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub>.
- The Brockman deposit contains JORC Indicated and Inferred Resources totalling 41.4 million tonnes (comprising 32.3mt Indicated Resources and 9.1mt Inferred Resources) at 0.21% TREO, including 0.18% HREO, plus 0.36% Nb<sub>2</sub>O<sub>5</sub> and 0.90% ZrO<sub>2</sub>.
- Rare earths are critical to a wide variety of current and new technologies, including smart phones, hybrid cars, wind turbines and energy efficient light bulbs.
- The Company aims to capitalise on the strong demand for critical rare earths created by expanding new technologies.

## **Competent Persons' Statement**

*The information in this announcement that relates to Resources is based on information compiled by Lynn Widenbar. Mr Widenbar is a consultant to the Company and a member of the Australasian Institute of Mining and Metallurgy. The information in this announcement that relates to Exploration Results is based on information compiled by Andy Border, an employee of the Company and a member of the Australasian Institute of Mining and Metallurgy.*

*Each has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this announcement and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code"). Each consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.*

## Appendix 1 –Yangibana drillhole parameters for holes reported in this document

Hole_ID	Easting	Northing	RL	Dip	Azimuth	EOH
YARC015	415286	7356707	331	-60	190	48
YARC019	415405	7356730	330	-60	145	78
YARC021	415454	7356754	328	-60	145	36
YARC022	415423	7356795	328	-60	145	80
YARC023	415504	7356761	328	-60	145	30
YARC027	415639	7356773	332	-60	180	24
YARC035	415898	7356794	335	-60	180	33
YARC053	417068	7356829	337	-60	180	18
YARC067	415444	7356820	328	-60	145	100
YARC068	415388	7356799	329	-60	145	100
YARC069	415467	7356779	328	-60	145	54
YARC072	415599	7356775	330	-60	180	36
YARC093	416350	7356835	338	-60	180	72
YARC096	416192	7356845	335	-60	180	72
YARC097	416151	7356831	335	-60	180	78

## Appendix 2 – Simon’s Find drillhole parameters for holes reported in this document

Hole_ID	Easting	Northing	RL	Dip	Azimuth	EOH
SFRC007	430430	7352829	349	-60	90	18
SFRC008	430436	7352782	349	-60	90	18
SFRC014	430390	7352478	350	-60	90	18
SFRC030	430396	7352660	348	-60	90	60
SFRC035	430372	7352506	349	-60	90	42
SFRC040	430360	7352641	347	-60	90	54
SFRC048	430243	7353753	350	-60	60	42
SFRC050	430230	7353840	350	-60	60	24
SFRC051	430191	7353838	349	-60	60	36
SFRC057	430037	7354018	349	-60	60	30
SFRC065	430260	7353711	349	-60	60	72
SFRC070	429629	7354358	341	-60	60	18
SFRC074	429982	7354028	346	-60	60	36

## Appendix 3 – Yangibana North drillhole parameters for holes reported in this document

Hole_ID	Easting	Northing	RL	Dip	Azimuth	EOH
YGRC098	417556	7362166	343	-90	0	42
YGRC099	417560	7362223	344	-90	0	27
YGRC101	417473	7362247	345	-90	0	15
YGRC105	417224	7362390	341	-90	0	12
YGRC106	417144	7362376	337	-90	0	24



## Appendix 4 – Auer drillhole parameters for holes reported in this document

Hole_ID	Easting	Northing	RL	Dip	Azimuth	EOH
AURC051	424673	7350234	318	-60	150	78
AURC055	424790	7350276	318	-60	150	30
AURC056	424762	7350283	318	-60	150	78
AURC058	424702	7350233	318	-60	150	42

## Appendix 5 – Yangibana Prospect, detailed assays for intercepts reported in this release

Hole_ID	From	To	%TREO	%Nd2O3+Pr6O11
YARC015	23	24	0.03	0.01
YARC015	24	25	0.65	0.31
YARC015	25	26	0.65	0.31
YARC015	26	27	1.47	0.68
YARC015	27	28	2.48	1.15
YARC015	28	29	0.13	0.06
YARC019	15	16	0.19	0.08
YARC019	16	17	1.37	0.60
YARC019	17	18	2.00	0.93
YARC019	18	19	0.22	0.09
YARC021	15	16	0.06	0.02
YARC021	16	17	2.96	1.48
YARC021	17	18	0.97	0.44
YARC021	18	19	1.15	0.54
YARC021	19	20	0.12	0.06
YARC022	54	55	0.13	0.06
YARC022	55	56	1.32	0.62
YARC022	56	57	1.79	0.85
YARC022	57	58	1.80	0.87
YARC022	58	59	0.20	0.09
YARC023	6	7	0.04	0.01
YARC023	7	8	7.69	3.69
YARC023	8	9	0.53	0.24
YARC023	9	10	0.09	0.04
YARC027	10	11	0.03	0.01
YARC027	11	12	4.55	2.14
YARC027	12	13	3.31	1.52
YARC027	13	14	0.06	0.02
YARC035	17	18	0.04	0.02
YARC035	18	19	4.53	2.25
YARC035	19	20	4.70	2.31
YARC035	20	21	0.46	0.23
YARC035	21	22	0.28	0.14
YARC053	1	2	0.04	0.01
YARC053	2	3	1.97	0.93
YARC053	3	4	0.66	0.32



YARC053	4	5	2.14	1.05
YARC053	5	6	0.94	0.45
YARC053	6	7	0.31	0.14
YARC067	68	69	0.38	0.17
YARC067	69	70	2.20	1.07
YARC067	70	71	1.50	0.72
YARC067	71	72	0.41	0.19
YARC067	72	73	0.22	0.10
YARC068	65	66	0.28	0.12
YARC068	66	67	1.07	0.51
YARC068	67	68	1.09	0.51
YARC068	68	69	1.94	0.92
YARC068	69	70	4.09	1.95
YARC068	70	71	2.25	1.06
YARC068	71	72	0.61	0.29
YARC068	72	73	0.25	0.11
YARC069	32	33	0.05	0.02
YARC069	33	34	1.50	0.71
YARC069	34	35	1.83	0.89
YARC069	35	36	1.51	0.74
YARC069	36	37	1.39	0.67
YARC069	37	38	0.09	0.03
YARC072	14	15	0.04	0.01
YARC072	15	16	1.29	0.62
YARC072	16	17	1.16	0.56
YARC072	17	18	2.64	1.27
YARC072	18	19	0.18	0.08
YARC093	49	50	0.05	0.02
YARC093	50	51	0.48	0.22
YARC093	51	52	0.74	0.36
YARC093	52	53	5.23	2.50
YARC093	53	54	1.32	0.63
YARC093	54	55	0.13	0.06
YARC096	55	56	0.27	0.13
YARC096	56	57	0.75	0.37
YARC096	57	58	2.80	1.45
YARC096	58	59	2.36	1.22
YARC096	59	60	1.09	0.55
YARC096	60	61	0.39	0.20
YARC096	61	62	0.44	0.23
YARC096	62	63	0.24	0.12

Appendix 6 –Simon’s Find Prospect, detailed assays for intercepts reported in this release. Anomalous Nb values shown in green at a nominal 1,000ppm Nb<sub>2</sub>O<sub>5</sub> cut off.



Hole_ID	From	To	%TREO	%Nd2O3+Pr6O11	ppm Nb
SFRC007	3	4	0.06	0.01	98
SFRC007	4	5	0.20	0.10	3363
SFRC007	5	6	0.36	0.19	6445
SFRC007	6	7	0.51	0.28	4680
SFRC007	7	8	0.27	0.14	10195
SFRC007	8	9	0.14	0.07	6010
SFRC007	9	10	0.06	0.03	1190
SFRC007	10	11	0.10	0.04	1246
SFRC007	11	12	0.04	0.01	140
SFRC008	2	3	0.04	0.01	67
SFRC008	3	4	0.49	0.27	2336
SFRC008	4	5	1.88	1.08	1079
SFRC008	5	6	0.94	0.54	1984
SFRC008	6	7	0.09	0.04	130
SFRC014	1	2	0.26	0.14	1400
SFRC014	2	3	0.31	0.17	1377
SFRC014	3	4	0.28	0.16	1842
SFRC014	4	5	1.23	0.71	1418
SFRC014	5	6	0.86	0.47	15930
SFRC014	6	7	0.24	0.13	13057
SFRC014	7	8	0.06	0.03	1020
SFRC030	18	19	0.05	0.02	1620
SFRC030	19	20	0.34	0.18	388
SFRC030	20	21	0.64	0.34	180
SFRC030	21	22	0.11	0.05	1108
SFRC030	22	23	0.27	0.15	1839
SFRC030	23	24	0.30	0.17	5680
SFRC030	24	25	0.43	0.24	10436
SFRC030	25	26	1.49	0.87	20342
SFRC030	26	27	0.43	0.25	5920
SFRC030	27	28	0.24	0.14	1558
SFRC030	28	29	0.11	0.06	593
SFRC035	24	25	0.05	0.03	138
SFRC035	25	26	1.78	0.97	361
SFRC035	26	27	0.66	0.37	4801
SFRC035	27	28	2.78	1.57	715
SFRC035	28	29	2.42	1.35	2557
SFRC035	29	30	0.09	0.05	981
SFRC040	34	35	0.20	0.10	2101
SFRC040	35	36	0.47	0.26	772
SFRC040	36	37	0.99	0.56	12124
SFRC040	37	38	8.34	4.75	9095
SFRC040	38	39	0.64	0.35	1666
SFRC040	39	40	1.33	0.75	3019
SFRC040	40	41	0.09	0.03	167
SFRC048	24	25	0.05	0.03	94



SFRC048	25	26	0.64	0.34	7811
SFRC048	26	27	2.65	1.47	18284
SFRC048	27	28	1.91	0.96	13475
SFRC048	28	29	0.35	0.17	3787
SFRC048	29	30	0.47	0.21	2367
SFRC048	30	31	0.26	0.12	3746
SFRC049	27	28	0.02	0.01	124
SFRC050	0	1	0.48	0.24	11062
SFRC050	1	2	0.36	0.19	9728
SFRC050	2	3	0.25	0.13	14977
SFRC050	3	4	0.07	0.04	2504
SFRC050	4	5	0.01	0.00	617
SFRC050	5	6	0.10	0.05	13568
SFRC050	6	7	0.03	0.01	469
SFRC050	7	8	0.23	0.12	5397
SFRC050	8	9	0.04	0.02	291
SFRC051	16	17	0.12	0.05	73
SFRC051	17	18	0.65	0.34	359
SFRC051	18	19	0.48	0.26	2974
SFRC051	19	20	0.83	0.42	9271
SFRC051	20	21	1.44	0.70	6928
SFRC051	21	22	1.10	0.56	42135
SFRC051	22	23	0.92	0.47	4315
SFRC051	23	24	0.09	0.04	662
SFRC056	10	11	0.05	0.01	64
SFRC057	0	1	0.62	0.34	4217
SFRC057	1	2	0.69	0.38	10372
SFRC057	2	3	0.48	0.25	4979
SFRC057	3	4	0.35	0.17	11129
SFRC057	4	5	0.39	0.19	2990
SFRC057	5	6	0.34	0.17	2144
SFRC057	6	7	0.29	0.15	3631
SFRC057	7	8	0.47	0.25	8539
SFRC057	8	9	0.41	0.22	2730
SFRC057	9	10	0.05	0.02	263
SFRC057	10	11	0.04	0.01	229
SFRC057	11	12	0.09	0.05	4681
SFRC057	12	13	0.10	0.04	1260
SFRC057	13	14	0.09	0.03	1581
SFRC057	14	15	0.02	0.01	171
SFRC065	5	6	0.15	0.04	602
SFRC065	6	7	0.04	0.02	831
SFRC065	7	8	0.21	0.10	11613
SFRC065	8	9	0.29	0.15	44291
SFRC065	9	10	0.17	0.08	30352
SFRC065	10	11	0.16	0.08	31109
SFRC065	11	12	0.17	0.08	20138



SFRC065	12	13	0.18	0.09	3620
SFRC065	13	14	0.54	0.28	13634
SFRC065	14	15	0.26	0.14	7890
SFRC065	15	16	0.36	0.18	15659
SFRC065	16	17	0.17	0.09	7614
SFRC065	17	18	0.05	0.02	803
SFRC065	18	19	0.04	0.01	293
SFRC070	2	3	0.04	0.01	47
SFRC070	3	4	0.33	0.16	6772
SFRC070	4	5	0.30	0.13	2845
SFRC070	5	6	1.95	0.93	2740
SFRC070	6	7	0.31	0.14	15738
SFRC070	7	8	0.07	0.03	6620
SFRC070	8	9	0.21	0.08	2190
SFRC070	9	10	1.06	0.46	2967
SFRC070	10	11	0.26	0.11	4931
SFRC070	11	12	0.56	0.25	1632
SFRC070	12	13	1.08	0.51	1744
SFRC070	13	14	0.03	0.01	169
SFRC074	0	1	0.07	0.03	1025
SFRC074	1	2	0.03	0.01	1748
SFRC074	2	3	0.04	0.02	2488
SFRC074	3	4	0.03	0.01	1503
SFRC074	4	5	0.04	0.02	1883
SFRC074	5	6	0.05	0.02	1617
SFRC074	6	7	0.05	0.02	3018
SFRC074	7	8	0.05	0.02	1906
SFRC074	8	9	0.11	0.06	7138
SFRC074	9	10	0.04	0.02	1231
SFRC074	10	11	0.29	0.15	6021
SFRC074	11	12	0.14	0.06	1750
SFRC074	12	13	0.05	0.02	168
SFRC074	13	14	0.07	0.02	51
SFRC074	14	15	0.53	0.26	8880
SFRC074	15	16	0.24	0.11	1895
SFRC074	16	17	0.38	0.19	4263
SFRC074	17	18	0.46	0.25	4499
SFRC074	18	19	0.23	0.12	2251
SFRC074	19	20	0.41	0.22	1209
SFRC074	20	21	0.73	0.40	4432
SFRC074	21	22	0.74	0.40	4949
SFRC074	22	23	0.06	0.03	493
SFRC074	23	24	0.05	0.02	1204
SFRC074	24	25	0.53	0.30	3086
SFRC074	25	26	0.29	0.16	4908
SFRC074	26	27	0.76	0.41	4138
SFRC074	27	28	0.20	0.11	1209

SFRC074	28	29	0.28	0.15	1411
SFRC074	29	30	0.12	0.06	270
SFRC074	30	31	0.38	0.20	1545
SFRC074	31	32	0.03	0.01	86

Appendix 7 – Yangibana North Prospect, detailed assays for intercepts reported in this release

Hole_ID	From	To	%TREO	%Nd2O3+Pr6O1
YGRC098	36	37	0.72	0.22
YGRC098	37	38	8.28	2.08
YGRC098	38	39	4.23	1.03
YGRC098	39	40	2.08	0.51
YGRC099	19	20	0.04	0.01
YGRC099	20	21	1.63	0.44
YGRC099	21	22	1.64	0.43
YGRC099	22	23	7.35	2.44
YGRC099	23	24	0.88	0.28
YGRC099	24	25	0.20	0.06
YGRC101	4	5	0.09	0.03
YGRC101	5	6	4.03	0.97
YGRC101	6	7	2.98	0.82
YGRC101	7	8	0.45	0.12
YGRC101	8	9	1.91	0.46
YGRC101	9	10	0.41	0.10
YGRC105	2	3	0.64	0.16
YGRC105	3	4	2.59	0.73
YGRC105	4	5	3.89	1.21
YGRC105	5	6	0.78	0.22
YGRC105	6	7	0.62	0.19
YGRC106	18	19	0.69	0.17
YGRC106	19	20	2.89	0.72
YGRC106	20	21	3.34	0.89
YGRC106	21	22	1.63	0.45
YGRC106	22	23	0.48	0.13

Appendix 8 – Auer Prospect, detailed assays for intercepts reported in this release

Hole_ID	From	To	%TREO	%Nd2O3+Pr6O1
AURC051	59	60	0.55	0.17
AURC051	60	61	2.01	0.62
AURC051	61	62	2.25	0.67
AURC051	62	63	1.09	0.33
AURC051	63	64	5.27	1.69
AURC051	64	65	3.01	0.89
AURC051	65	66	2.35	0.69
AURC051	66	67	2.50	0.76



AURC051	67	68	3.24	1.03
AURC051	68	69	1.57	0.50
AURC051	69	70	1.24	0.40
AURC051	70	71	1.01	0.32
AURC051	71	72	0.82	0.27
AURC055	16	17	0.72	0.19
AURC055	17	18	3.16	0.90
AURC055	18	19	1.80	0.74
AURC055	19	20	0.41	0.17
AURC056	66	67	0.14	0.05
AURC056	67	68	0.80	0.26
AURC056	68	69	3.16	1.04
AURC056	69	70	1.39	0.60
AURC056	70	71	1.02	0.41
AURC056	71	72	3.54	1.21
AURC056	72	73	0.24	0.09
AURC056	73	74	0.73	0.27
AURC057	50	51	0.03	0.01
AURC058	17	18	0.12	0.05
AURC058	18	19	1.29	0.46
AURC058	19	20	3.20	1.12
AURC058	20	21	1.96	0.62
AURC058	21	22	2.86	0.94
AURC058	22	23	1.88	0.61
AURC058	23	24	0.65	0.21
AURC058	24	25	0.83	0.25
AURC058	25	26	0.17	0.05
AURC058	26	27	1.86	0.60
AURC058	27	28	0.38	0.12
AURC058	28	29	1.85	0.59
AURC058	29	30	0.08	0.02

## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<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>Assay results reported in this announcement relate to reverse circulation drilling that tested new targets at Yangibana, within M09/165: at Simon's Find, within Es09/2018, 2129 and 1943; and at deposits with JORC Resources at Yangibana North within M09/159; Auer within E09/1989; and Bald Hill within M09/157. The aim is to extend the overall JORC resources within the Yangibana Project, particularly within tenements held 100% by the Company, and to provide material for metallurgical testwork as required</li> <li>Samples from each metre were collected in a cyclone and split using a 3-level riffle splitter. Field duplicates, blanks and Reference Standards were inserted at a rate of approximately 1 in 20.</li> <li>The area tested by this drilling programme includes new targets at Yangibana and Simon's Find.</li> </ul>
<b>Drilling techniques</b>	<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 drilling at the various targets utilised a nominal 5 1/4 inch diameter face-sampling hammer.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and 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>Recoveries are recorded by the geologist in the field at the time of drilling/logging.</li> <li>If poor sample recovery is encountered during drilling, the geologist and driller have endeavoured to rectify the problem to ensure maximum sample recovery. Visual assessment is made for moisture and contamination. A cyclone and splitter were used to ensure representative samples and were routinely cleaned.</li> <li>Sample recoveries to date have generally been high, and moisture in samples minimal. Insufficient data is available at present to determine if a relationship exists between recovery and grade.</li> </ul>
<b>Logging</b>	<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> </ul>	<ul style="list-style-type: none"> <li>All drill chip samples are geologically logged at 1m intervals from surface to the bottom of each individual hole to a level that will support appropriate future Mineral Resource studies.</li> <li>Logging is considered to be semi-quantitative</li> </ul>





Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<p>given the nature of reverse circulation drill chips.</p> <ul style="list-style-type: none"> <li>All RC drill holes in the current programme are logged in full.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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>The RC drilling rig is equipped with an in-built cyclone and triple tier riffle splitting system, which provided one bulk sample of approximately 25kg, and a sub-sample of 2-4kg per metre drilled.</li> <li>All samples were split using the system described above to maximise and maintain consistent representivity. Most samples were dry. For wet samples the cleanliness of the cyclone and splitter was constantly monitored by the geologist and maintained to avoid contamination.</li> <li>Bulk samples were placed in green plastic bags, with the sub-samples collected placed in calico sample bags.</li> <li>Field duplicates were collected directly from the splitter as drilling proceeded through a secondary sample chute. These duplicates were designed for lab checks as well as lab umpire analysis.</li> <li>A sample size of 2-4kg was collected and considered appropriate and representative for the grain size and style of mineralisation.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<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 laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Genalysis (Perth) was used for all analysis work carried out on the 1m drill chip samples and the rock chip samples. The laboratory techniques below are for all samples submitted to Genalysis and are considered appropriate for the style of mineralisation defined at the Yangibana REE Project: FP6/MS</li> <li>Blind field duplicates were collected at a rate of approximately 1 duplicate for every 20 samples that are to be submitted to Genalysis for laboratory analysis. Field duplicates were split directly from the splitter as drilling proceeded at the request of the supervising geologist.</li> </ul>
<b>Verification of sampling and assaying</b>	<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>At least two company personnel verify all significant intersections.</li> <li>All geological logging and sampling information is completed firstly on to paper logs before being transferred to Microsoft Excel spreadsheets. Physical logs and sampling data are returned to the Hastings head office for scanning and storage. Electronic copies of all information are backed up daily.</li> <li>No adjustments of assay data are considered necessary.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys),</li> </ul>	<ul style="list-style-type: none"> <li>A Garmin GPSMap62 hand-held GPS is used to define the location of the drill hole collars.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>trenches, mine workings and other locations used in Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<p>Standard practice is for the GPS to be left at the site of the collar for a period of 5 minutes to obtain a steady reading. Collar locations are considered to be accurate to within 5m. Collars will be picked up by DGPS in the future. Down hole surveys are conducted by the drill contractors using a Reflex electronic single-shot camera with readings for dip and magnetic azimuth nominally taken every 30m down hole, except in holes of less than 30m. The instrument is positioned within a stainless steel drill rod so as not to affect the magnetic azimuth.</p> <ul style="list-style-type: none"> <li>• Grid system used is MGA 94 (Zone 50)</li> <li>• Topographic control is based on the detailed 1m topographic survey undertaken by Hyvista Corporation in 2016.</li> </ul>
<b>Data spacing and distribution</b>	<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>• Hole collars were initially laid out at 50m beyond the previous drill coverage in areas considered to have potential to increase the Measured plus Indicated resources of the deposit. Collar locations were varied slightly dependent on access at a given site.</li> <li>• Further details are provided in the collar co-ordinate table contained elsewhere in this report.</li> <li>• No sample compositing is used in this report, all results detailed are the product of 1m downhole sample intervals.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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>• Most drill holes in the current programme are vertical (subject to access to the preferred collar position) and as such intersected widths do not represent true thickness.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• The chain of custody is managed by the project geologist who places calico sample bags in polyweave sacks. Up to 10 calico sample bags are placed in each sack. Each sack is clearly labelled with: <ul style="list-style-type: none"> <li>• Hastings Technology Metals Ltd</li> <li>• Address of laboratory</li> <li>• Sample range</li> </ul> </li> <li>• Samples were delivered by Hastings personnel to the Nexus Logistics base in order to be loaded on the next available truck for delivery to Genalysis. The freight provider delivers the samples directly to the laboratory. Detailed records are kept of all samples that are dispatched, including details of chain of custody.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	<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>No audit of sampling data has been completed to date but a review will be conducted once all data from Genalysis (Perth) has been received. Data is validated when loading into the database and will be validated again prior to any Resource estimation studies.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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>The RC drilling at Yangibana prospect was carried out within M09/165; at Simon's Find within Es09/2018, 2129 and 1943; at Yangibana North within M09/159; at Auer within E09/1989; and at Bald Hill within M09/157.</li> <li>All Yangibana tenements are in good standing and no known impediments exist.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Yangibana prospect was previously drilled to a limited extent by Hurlston Pty Limited in joint venture with Challenger Pty Limited in the late 1980s. No previous exploration has been carried out on the Simon's Find prospect. Auer was first drilled by Hastings. Both Yangibana North and Bald Hill received limited RC drilling by Hurlston in the 1980s.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Yangibana ironstones within the Yangibana Project are part of an extensive REE-mineralised system associated with the Gifford Creek Carbonatite Complex. The lenses have a total strike length of at least 12km.</li> <li>These ironstone lenses have been explored previously for base metals, manganese, uranium, diamonds and rare earths.</li> <li>The ironstones are considered by GSWA to be coeval with the numerous carbonatite sills that occur within Hastings tenements, or at least part of the same magmatic/hydrothermal system.</li> </ul>
<b>Drill hole Information</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>Refer to details of drilling in table in the body of this report and the appendices.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All intervals reported are composed of 1m downhole intervals and as such are length weighted. A lower cut-off grade of 0.20%Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub> has been used for assessing significant intercepts, and no upper cut-off grade was applied.</li> <li>• Maximum internal dilution of 1m was incorporated in reported significant intercepts.</li> <li>• The basis for the metal equivalents used for reporting are provided in the body of the ASX announcement.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>• True widths for mineralisation have not been calculated and as such only downhole lengths have been reported.</li> <li>• It is expected that true widths will be less than downhole widths, due to the apparent dip of the mineralisation.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections are available in the body of this ASX announcement.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Reporting of results in this report is considered balanced.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Geological mapping has continued in the vicinity of the drilling as the programme proceeds.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions, depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main</i></li> </ul>	<ul style="list-style-type: none"> <li>• The current drilling programme is primarily designed to expand the JORC Resources at the Yangibana Project, specifically at Yangibana and Simon's Find prospects and to provide metallurgical testwork samples as required.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	