

Substantial Increase in Resource Size and Grade at North-T Zone Nechalacho

Highlights

- Updated Measured and Indicated JORC 2012 Resource of 101,000 T @ 9.01% LREO (2.2% NdPr) with cut-off grade of 0.3%
- Key resource upgrade highlights include:
 - Contained rare earths has increased by 210%
 - The overall grade of the resource has increased by 85% making the North T deposit one of the highest grade rare earth deposits in the world
 - The total size of the Resource has increased 67%.
 - The Measured and Indicated Resource has increased 174%
- Resource is within 30m of surface
- Resource grade is consistent with samples used for ore sorting testwork which achieved a 35% concentrate grade by a single pass, as announced on 5th December, 2019
- Increased rare earth grade and tonnage increases the potential for a very low cost, early production North T starter pit

Vital Metals Limited (ASX:VML) (“Vital” or the “Company”) is pleased to announce a significant increase in resource size and grade at the company’s North -T, Nechalacho site, another step toward the company becoming North America’s next rare earth mining company.

Resource	tonnes	% LREO	LREO tonnes
New JORC 2012			
Measured	68,000	9.60%	6,528
Indicated	33,000	7.80%	2,574
Total	101,000	9.01%	9,102
Previous JORC 2012			
Measured	-	-	-
Indicated	36,813	5.36%	1,974
Inferred	23,492	4.08%	958
Total	60,305	4.86%	2,932

Table 1: JORC 2012 resource for the Bastnaesite Subzone of the North T deposit

Commenting revised JORC 2012 Resource, Vital Metals Managing Director Geoff Atkins said:

“These results make the North – T Zone amongst the highest grade rare earths deposits in the world, which, coupled with the ability to produce a high grade concentrate from simple ore sorting provides Vital the confidence to push forward towards its target of developing one of the world’s lowest cost rare earth operations”.

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North T Zone REO Mineral Resource for the Bastnaesite Subzone

Nechalacho's North T Zone is a small, high grade REO deposit about 2km north of the much larger Upper Zone. The North T Zone contains two distinct zones of REO mineralisation, a Bastnaesite Sub-zone near the surface with an underlying Xenotime Subzone. Vital Metals is considering the Bastnaesite Subzone in the North T Zone as a potential high-grade start-up operation.

A new Mineral Resource for the Bastnaesite Subzone based on the new geological interpretations and validated data from the core resampling and 2019 drill program was prepared according to the 2012 version of the JORC code (Table 2). Historical assay data that was only assayed for Nd, Ce and Y has only been used to help with the geology modelling of the bastnaesite mineralisation.

The JORC 2012 Mineral Resource estimate of the North T Zone Bastnaesite Sub-zone comprises 105 kt @ 8.9% LREO using a cut-off grade of 0.3% Nd₂O₃. (See Table 2 for the details).

JORC Resources in Bastnaesite Sub-zone 1, North T-Zone

Bastnasite Sub-zone	Kilo Tonnes	LREO (%)	LA ₂ O ₃ (%)	CEO ₂ (%)	PR ₆₀₁₁ (%)	ND ₂ O ₃ (%)
Measured	68	9.6	2.5	4.9	0.5	1.8
Indicated	33	7.8	2.0	4.0	0.4	1.5
Inferred	4	5.8	1.4	2.9	0.3	1.1
Total	105	8.9	2.3	4.5	0.5	1.6

Table 2: Light Rare Earth Mineral Resources of the North-T Zone Bastnaesite Sub-zone Nechalacho. Mineral Resource Estimation prepared in accordance with JORC 2012 under the supervision of Brendan Shand Member of the AusIMM as the Competent Person. The cut-off grade for this resource estimate of 0.3% Nd₂O₃ is preliminary, at pre-scoping study level, as no detailed market, metallurgical or engineering studies have been performed.

The North T Bastnaesite Subzone is an elongated saucer shape with the outer edges of the mineralisation close to the surface and the deepest part of the mineralisation in the centre of the Subzone. The deepest bastnaesite mineralisation is approximately 45 metres below the surface.

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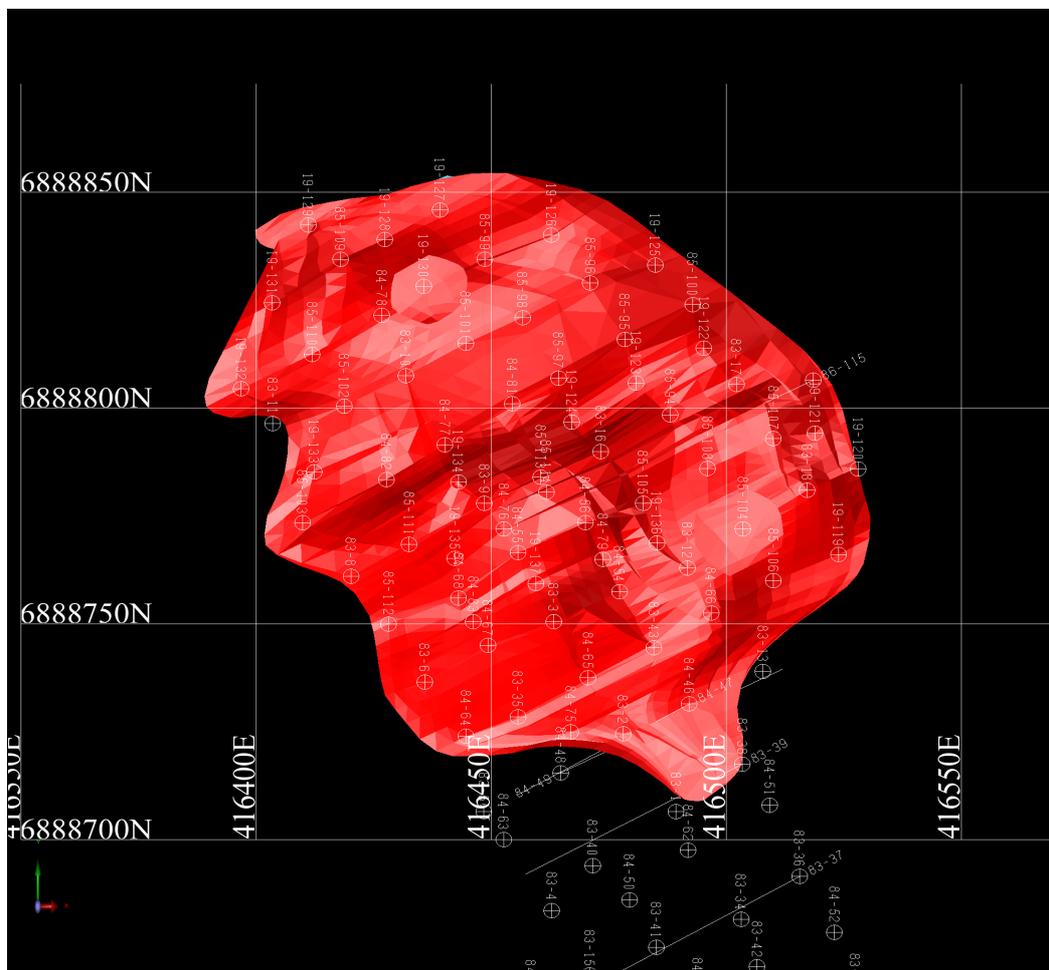


Fig. 1: Plan view showing the 3D geology wireframe for the North T-Zone Bastnaesite Subzone

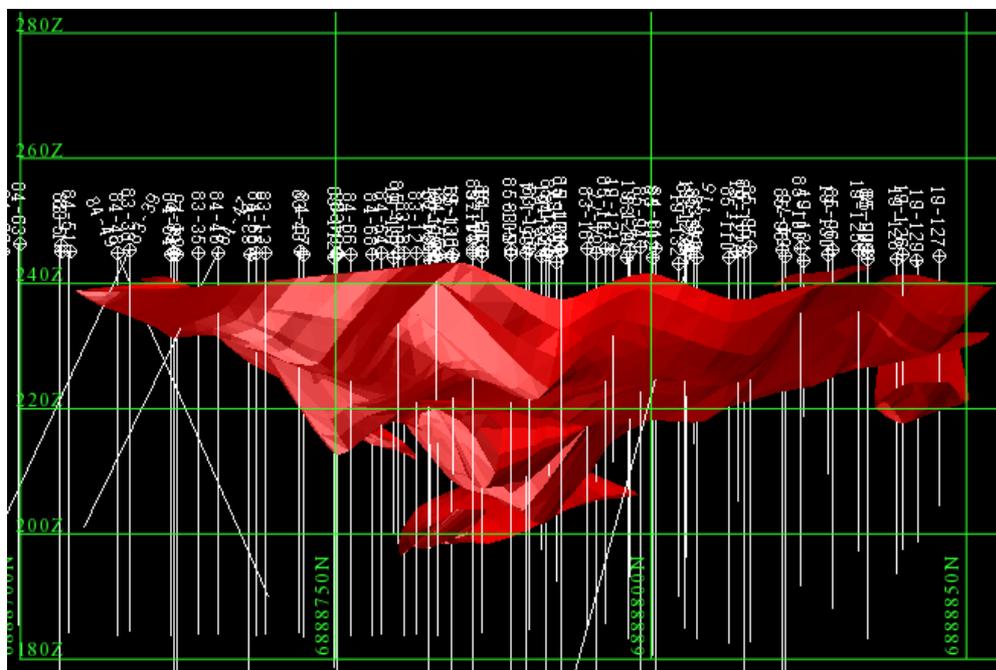


Fig. 2: Long section view of the 3D geology wireframe for the North T-Zone Bastnaesite Subzone (long section view from the east)

This resource grade is consistent with samples Vital used to undertake ore-sorting testwork (see ASX announcement 5th December 2019). This testwork achieved concentrate grades of 35%+ REO via conventional ore sorting technology without the use of chemicals or water.

The cost of concentrating ore without the use of water and chemicals is substantially lower than a typical REO concentration process requiring extensive crushing, chemicals and a capital intensive cracking and leaching plant with associated tailings dam and storage facilities costs.

Further, the bastnaesite mineralisation has excellent metallurgical characteristics with 97% recoveries of the rare earths into solution via sulphuric acid leach (see ASX announcement 13 December 2019).

North T Zone Drilling and Resampling

As announced on 19th February, 2020, Vital completed a 2019 drilling and resampling of historical drill core was carried out to define the limits of the Bastnaesite Subzone. The 2019 program was successful in redefining the zone through the extension of LREO mineralisation to the limits of the Bastnaesite Subzone and has resulted in a resource model suitable for mining studies. The combination of the new drilling and the resampling of historical drill core has defined the limits of the North T Zone bastnaesite mineralisation on a nominal 10 by 10 metre drill pattern.

The drilling and resampling program achieved some of this highest grade drill results seen in North America.

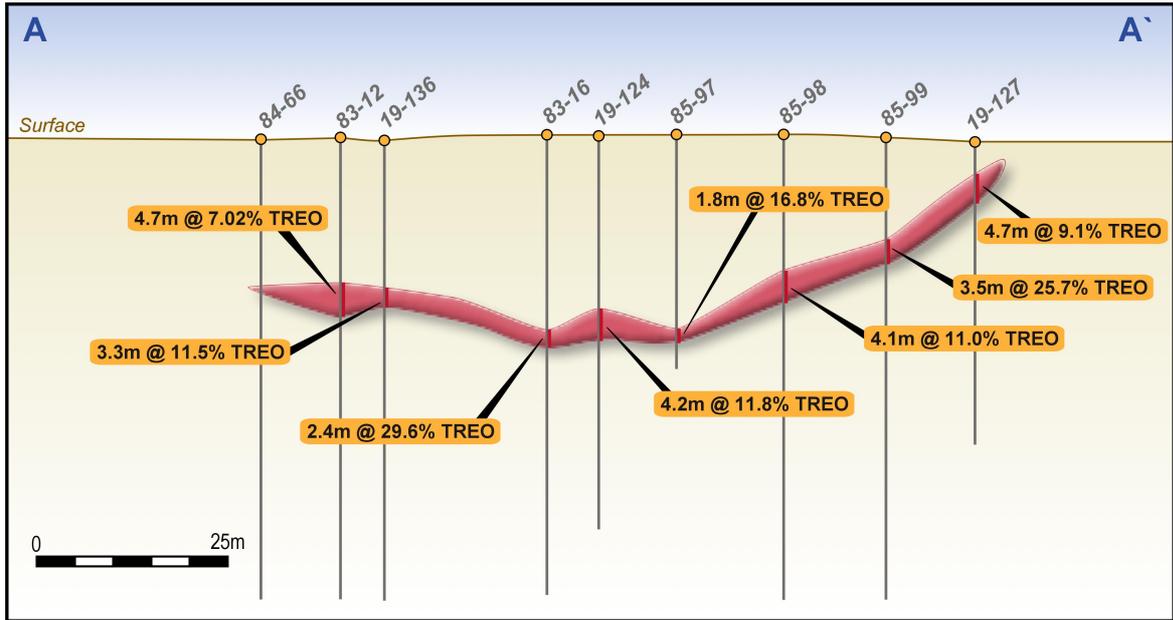


Fig. 3: A typical long section through the Bastnaesite Subzone showing high grade intercepts

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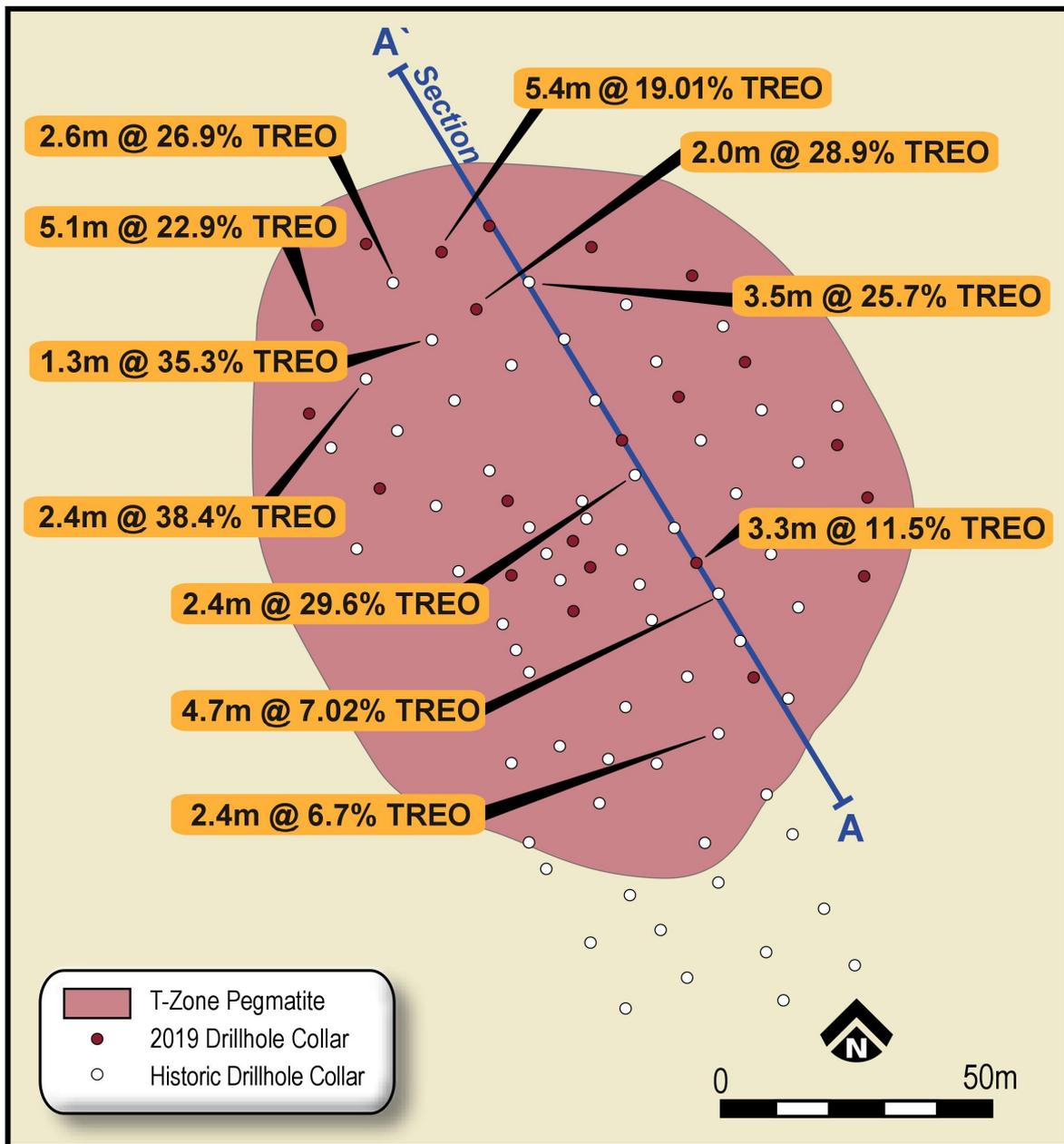


Fig. 4: Drill hole collar locations and geological interpretation of the North T-Zone pegmatite

Development Strategy

Vital Metals is progressing with its plan to bring its Nechalacho project into production. By commencing mining at the small but very high-grade North T deposit, and upgrading the ore to a >35% REO concentrate, the company anticipates it will have a low cost but high value product for sale, with minimal up-front capital cost compared to other world class rare earth projects.

ENDS

This announcement has been approved by the Board of Vital Metals.

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Appendices

Appendix 1 has a list of drill holes – North T Zone.

Appendix 2 has a complete list of significant LREO intersections including the grades of the individual light rare earth oxides.

Information provided pursuant to ASX Listing Rule 5.8.1**Definitions**

REO includes the rare earth element oxides, La₂O₃, CeO₂, Nd₂O₃, Pr₆O₁₁, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₄O₇, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃ and Y₂O₃.

LREO includes the light rare earth element oxides, La₂O₃, CeO₂, Nd₂O₃ and Pr₆O₁₁.

kt thousands of metric tonnes.

Geology and Geological Interpretation

The area referred to in this report is located near Thor Lake in the Mackenzie Mining District of the Northwest Territories. The Nechalacho deposit is hosted by a syenite intrusion that is part of the Blatchford Lake Intrusive Complex. One or several magmatic layers, collectively referred to as the Upper Zone, host the rare earth mineralization in the upper part of the Nechalacho intrusion. The magmatic boundaries of the Upper Zone were wireframed using an approximate outline of 1% TREO. The T-Zone is a peripheral pegmatite to the Nechalacho intrusion, which hosts rare earth and other rare metal mineralization in multiple lenses. The sharp contacts of the Bastnaesite and Xenotime Subzone lenses in the North T Zone pegmatite were outlined using drill hole assay data.

Sampling and sub-sampling techniques

The geological database used for the North T Zone Resource estimate consists of 90 assays from 56 diamond drill holes over a total assay length of 156.13 metres for the Bastnaesite Subzone. The drill hole spacing is a nominal 10 by 10 over most of the Bastnaesite Subzone. The samples are mechanical half splits where whole core is available and quarter splits where previous sampling has resulted in only half core being available. The sample lengths range from 0.45 to 3.71 metres with most of the samples in the 1.5 to 2.0 metre range. The sample lengths are dictated by the lithology of the core.

Samples were riffle split following crushing, before being pulverized (see Table 1 for further details).

Drilling Techniques

Drilling was diamond core drilling, mainly with a BQ (3.65 cm) inner core diameter for the historical drilling and NQ (4.76 cm) for the 2019 drilling program.

Classification Criteria

The lithological controls on the mineralization have been extensively studied and are well understood, and adequate density data sets are available for the estimated resource domains. The

resource confidence categories were assigned based on successively larger search ellipses for Nd₂O₃. Further details are provided in Table 1.

Sample Analysis Method

For the Bastnaesite Subzone, assaying of 14 lanthanides as well as Y, Nb, Be, Li, Ga, Zr, Th and U have been performed by ALS Global Laboratories in Vancouver, Canada using ICP-MS techniques for assays below 500 ppm REO and XRF techniques for assays above 500 ppm REO. Other independent laboratories were used to check the accuracy of the assaying.

Estimation Methodology

The Inverse Distance Squared (IDW2) method was used for the interpolation of all composited elements. The search ellipse dimensions for each interpolation pass are based on observations from the variography and within the observed ranges. Neodymium, as the principal element of economic interest, was used to classify the resource with successive interpolation passes; all other elements were interpolated using the Pass3 search ellipse. For each block, a maximum of two composites from the same hole were allowed and the minimum and maximum number of samples are 6 and 12, respectively. Hence, mostly 3 - 6 holes were used to interpolate each block. However, due to the thin vertical extent of the bastnaesite zone in some areas, encompassing only one composite, seven or eight holes were used for some blocks.

Cut off grades

Nd₂O₃, as the rare earth oxide of principal economic interest, was chosen for the cut-off grade. The cut-off grade for this resource estimate is preliminary, at pre-scoping study level, as no detailed market, metallurgical or engineering studies have been performed.

Mining and metallurgical considerations

Mining and metallurgical factors or assumptions were not explicitly used in estimating the Mineral Resource, but open pit mining methods will be utilised for any future mining operations. Metallurgical test work and associated mineralogical study work has been carried out both in Australia and Canada to support the process flowsheet development and economic assessment.

ABOUT VITAL METALS

Vital Metals Limited (ASX:VML) is an explorer and developer focussing on rare earths, technology metals and gold projects. Our projects are located across a range of jurisdictions in Canada, Africa and Germany.

Nechalacho Rare Earth Project

The Nechalacho project is a high grade, light rare earth (bastnaesite) project located at Nechalacho in the Northwest Territories of Canada and has potential for a start-up operation exploiting high-grade, easily accessible near surface mineralisation. The Nechalacho Rare Earth Project hosts within the Upper Zone, a JORC Compliant Resource of 94.7Mt at 1.46% REO (25% NdPr).

Wigu Hill Project

The Company has signed a project development and option agreement with Montero Mining & Exploration Ltd, to acquire and develop the Wigu Hill Project located near Kisasi in Tanzania.

The Wigu Hill project is a light rare earth element deposit and consists of a large carbonite complex with bastnaesite mineralisation with a NI 43-101 Inferred resource estimate of 3.3Mt at 2.6% LREO5 including 510,000t @ 4.4% LREO5 on 2 of 10 possible drill targets.

Aue Project – Germany

The Aue Project (100% Vital) is located in the western Erzgebirge area of the German state of Saxony. The permit, comprising an area of 78 sq km is located in the heart of one of Europe's most

famous mining regions surrounded by several world class mineral fields. Historical mining and intensive exploration work carried out between from the 1940s and 1980s showed high prospectivity of the Aue permit area for cobalt, tungsten, tin, uranium and silver mineralisation.

Qualified/Competent Persons Statement

Nechalacho Rare Earth Project

The information in this report relating to Exploration Results and Mineral Resources at the Nechalacho Rare Earths Project is based on, and fairly represents, information and supporting documentation prepared for Vital by Avalon Advanced Materials Inc. and Mr Brendan Shand. Mr Shand is a Competent Person and a member of the Australasian Institute of Mining and Metallurgy and an employee of the Company. Mr Shand has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Shand consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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Hole ID	Northing	Easting	Elevation	Length (m)	Azimuth	Dip
83-1	6888706.4	416489.38	245	60.96	0	-90
83-2	6888724.4	416478.13	244.82	122.83	0	-90
83-3	6888750.4	416463.35	244.6	60.96	0	-90
83-4	6888683.4	416462.95	246.28	60.96	0	-90
83-5	6888706.4	416448.51	246.07	90.83	0	-90
83-6	6888736.4	416435.88	244.56	152.4	0	-90
83-8	6888760.9	416420.2	244.7	60.96	0	-90
83-9	6888777.9	416448.63	244.56	60.96	0	-90
83-10	6888807.4	416431.88	244.11	60.96	0	-90
83-11	6888796.4	416403.57	244.11	60.96	0	-90
83-12	6888762.9	416491.79	244.91	60.96	0	-90
83-13	6888738.9	416507.85	244.89	60.96	0	-90
83-15	6888668.4	416471.01	245.56	60.96	0	-90
83-16	6888789.9	416473.35	245.47	60.96	0	-90
83-17	6888805.4	416502.2	245.92	61	0	-90
83-18	6888780.9	416517.29	245.61	60.96	0	-90
83-33	6888654.9	416480.29	245.59	152.4	0	-90
83-34	6888681.4	416503.2	245.3	127.1	0	-90
83-35	6888728.4	416455.73	244.76	60.96	0	-90
83-36	6888691.4	416515.66	245.31	60.96	0	-90
83-37	6888691.4	416515.66	245.31	76.2	240	-46.26
83-38	6888717.4	416503.48	245.26	60.96	0	-90
83-39	6888717.4	416503.48	245.26	76.2	241.09	-46.36
83-40	6888693.9	416471.63	246.24	60.96	0	-90
83-41	6888674.9	416485.16	245.76	60.96	0	-90
83-42	6888670.4	416506.63	245.51	121.92	0	-90
83-43	6888744.4	416484.7	245.14	60.96	0	-90
83-44	6888662.9	416527.45	245.59	60.96	0	-90
84-46	6888731.4	416492.2	244.86	60.96	0	-90
84-47	6888731.4	416492.2	244.86	60.96	240	-46
84-48	6888715.4	416464.82	244.7	60.96	0	-90
84-49	6888715.4	416464.82	244.7	76.2	63	-46
84-50	6888685.9	416479.48	245.78	60.96	0	-90
84-51	6888707.9	416509.32	245.1	60.96	0	-90
84-52	6888678.4	416523.1	245.28	60.96	0	-90
84-53	6888661.9	416493.95	245.43	61	0	-90
84-54	6888757.4	416477.35	244.75	60.96	0	-90
84-55	6888766.4	416455.73	244.52	60.96	0	-90
84-56	6888773.4	416470.07	245.02	60.96	0	-90
84-57	6888661.4	416458.48	245.56	61	0	-90
84-62	6888697.4	416491.98	245.05	60.96	0	-90
84-63	6888699.9	416452.7	246.24	61	0	-90
84-64	6888723.9	416444.7	244.5	60.96	0	-90
84-65	6888737.4	416470.7	244.73	60.96	0	-90
84-66	6888752.4	416496.85	244.66	60.96	0	-90

84-67	6888744.9	416449.32	244.49	60.96	0	-90
84-68	6888755.9	416443.1	244.5	60.96	0	-90
84-75	6888724.9	416466.98	244.46	191.11	0	-90
84-76	6888771.9	416452.76	244.81	212.45	0	-90
84-77	6888791.4	416440.23	244.81	191.11	0	-90
84-78	6888821.4	416426.73	244.36	114.91	0	-90
84-79	6888764.9	416473.82	244.83	178.92	0	-90
84-80	6888656.4	416516.85	245.24	78.33	0	-90
84-81	6888800.9	416454.51	245.47	84.43	0	-90
84-82	6888783.4	416427.79	244.44	89	0	-90
84-83	6888750.4	416446.26	244.74	105.77	0	-90
84-84	6888629.9	416535.88	246.18	84.43	0	-90
84-85	6888603.4	416543.48	246.18	40.23	0	-90
84-86	6888575.9	416558.13	247.14	63.09	0	-90
84-87	6888546.4	416573.95	249.6	73.76	0	-90
84-88	6888609.4	416550.63	245.28	78.33	0	-90
84-89	6888580.9	416565.04	246.48	76.81	0	-90
85-94	6888798.4	416488.13	245.67	75.29	0	-90
85-95	6888815.9	416478.48	245.79	63.09	0	-90
85-96	6888828.9	416471.13	245.38	57.45	0	-90
85-97	6888806.9	416464.35	245.41	31.09	0	-90
85-98	6888820.9	416456.7	245.32	68.88	0	-90
85-99	6888834.4	416448.7	244.93	61.72	0	-90
85-100	6888823.9	416492.91	245.57	53.95	0	-90
85-101	6888814.9	416444.63	245.1	75.28	0	-90
85-102	6888800.4	416418.76	244.12	63.7	0	-90
85-103	6888773.4	416409.88	244.23	54.86	0	-90
85-104	6888771.9	416503.6	245.2	49.98	0	-90
85-105	6888777.9	416482.38	245.33	77.11	0	-90
85-106	6888759.9	416510.1	244.85	46.48	0	-90
85-107	6888792.9	416510.1	245.6	60.05	0	-90
85-108	6888785.9	416496.1	245.58	72.24	0	-90
85-109	6888834.4	416417.95	243.81	57	0	-90
85-110	6888812.4	416411.95	243.96	61.57	0	-90
85-111	6888768.4	416432.6	244.05	86.56	0	-90
85-112	6888749.9	416428.23	244.04	65.53	0	-90
85-113	6888783.9	416460.57	245.21	36	0	-90
85-114	6888780.4	416461.76	244.81	102.71	0	-90
86-115	6888806.4	416518.57	245	166.73	243	-59
86-116	6888636.19	416599.6	245.07	108.81	241	-55.5
86-117	6888607.12	416611.02	245.48	84.43	241	-50
86-118	6888521.59	416659.25	247.33	85.65	241	-48.5
19-119	6888766.04	416523.96	244.278	23	0	-90
19-120	6888785.77	416528.11	245.163	30	0	-90
19-121	6888794.07	416518.96	245.388	34	0	-90
19-122	6888813.81	416495.31	245.157	40	0	-90
19-123	6888805.81	416480.84	245.176	49	0	-90

19-124	6888796.72	416467.2	245.12	52	0	-90
19-125	6888833.09	416484.93	245.225	48	0	-90
19-126	6888840	416462.83	244.496	47	0	-90
19-127	6888845.92	416439.15	244.349	40	0	-90
19-128	6888839.03	416427.42	243.944	50.5	0	-90
19-129	6888842.37	416411.12	243.67	45	0	-90
19-130	6888828.21	416435.67	244.472	35	0	-90
19-131	6888824.4	416403.44	243.567	25	0	-90
19-132	6888804.41	416396.84	243.034	53	0	-90
19-133	6888785.17	416412.34	243.417	51	0	-90
19-134	6888782.85	416443.05	244.386	47	0	-90
19-135	6888765.15	416442.33	243.633	46	0	-90
19-136	6888768.63	416485.3	244.54	35	0	-90
19-137	6888759.25	416459.52	244.178	44	0	-90

Appendix 2: North T Bastnaesite Subzone significant assays reported in this announcement

Hole ID	From	To	Length	La2O3 (%)	CeO2 (%)	Pr6O11 (%)	Nd2O3 (%)	LREO (%)
83-10	19.2	20.7	1.5	2.8	5.4	0.6	1.9	10.7
83-12	19.2	20.8	1.6	2.5	5.2	0.6	2.2	10.5
83-12	23.2	23.9	0.7	4.7	9.5	1.1	3.8	19.1
83-16	26.1	28.5	2.4	7.3	14.6	1.6	5.3	28.7
83-17	14.6	17.7	3.0	0.4	0.8	0.1	0.3	1.5
83-17	20.7	21.6	0.9	1.5	3.1	0.3	1.1	6.1
83-6	16.3	17.4	1.1	0.9	1.8	0.2	0.7	3.5
83-8	19.8	20.6	0.8	2.7	5.3	0.6	1.8	10.4
83-9	33.8	36.0	2.1	0.7	1.4	0.2	0.7	2.9
84-46	7.3	9.8	2.4	1.6	3.2	0.4	1.3	6.4
84-47	11.6	14.3	2.7	1.0	2.1	0.2	0.9	4.2
84-54	26.2	27.6	1.4	0.5	1.0	0.1	0.5	2.1
84-56	32.5	36.0	3.5	0.6	1.2	0.1	0.5	2.5
84-68	19.7	20.6	0.9	0.9	1.7	0.2	0.7	3.5
84-68	26.9	30.4	3.5	0.5	1.0	0.1	0.4	2.1
84-76	29.1	30.5	1.4	0.9	1.9	0.2	0.8	3.8
84-77	26.5	29.1	2.6	2.9	5.9	0.7	2.4	11.9
84-78	16.7	18.0	1.3	8.8	17.4	1.9	6.2	34.4
84-79	19.7	22.7	3.0	3.6	7.1	0.8	2.5	14.0
84-81	25.3	26.4	1.1	5.3	10.7	1.2	4.3	21.5
84-82	35.4	37.5	2.1	2.7	5.6	0.6	2.2	11.1
84-82	39.0	40.8	1.8	2.7	5.5	0.6	2.2	11.1
85-94	15.3	15.8	0.5	2.4	5.1	0.6	2.1	10.2
85-94	20.4	23.0	2.6	4.0	8.1	0.9	3.1	16.0
85-95	18.0	18.9	0.9	3.8	7.5	0.8	2.9	15.0
85-95	20.1	21.3	1.2	6.4	12.8	1.4	4.7	25.3

85-96	15.2	20.6	5.4	3.1	6.0	0.7	2.1	11.9
85-97	25.9	27.7	1.8	4.0	8.1	0.9	3.1	16.1
85-98	18.0	19.5	1.5	2.0	4.0	0.5	1.6	8.0
85-98	20.7	22.1	1.4	5.9	11.3	1.2	3.9	22.4
85-99	13.3	16.8	3.5	6.5	12.8	1.4	4.4	25.1
85-100	9.6	10.4	0.8	6.6	13.3	1.5	5.0	26.4
85-101	19.5	20.6	1.0	7.2	14.1	1.5	5.0	27.8
85-102	15.1	19.7	4.6	0.9	1.7	0.2	0.7	3.5
85-103	14.2	15.4	1.2	1.1	2.2	0.2	0.8	4.3
85-104	11.6	13.4	1.8	1.4	2.8	0.3	1.1	5.6
85-104	18.4	20.4	2.0	3.0	6.2	0.7	2.5	12.4
85-105	23.5	24.4	0.9	1.4	2.8	0.3	1.1	5.6
85-106	9.6	11.4	1.8	2.7	5.7	0.7	2.4	11.6
85-107	20.6	21.3	0.8	5.7	10.9	1.1	3.8	21.5
85-108	19.8	22.6	2.7	2.3	4.9	0.6	1.9	9.7
85-109	4.9	7.5	2.6	7.0	13.3	1.4	4.5	26.2
85-110	10.4	11.0	0.6	6.1	12.5	1.4	4.9	24.9
85-110	13.0	15.4	2.4	9.9	19.0	2.0	6.2	37.0
85-112	8.2	9.0	0.8	1.1	2.2	0.3	0.9	4.5
85-114	27.3	28.0	0.8	2.5	5.0	0.5	1.8	9.9
86-115	22.9	23.9	1.1	1.1	2.2	0.2	0.8	4.2
19-119	2.5	4.0	1.5	0.9	1.6	0.2	0.6	3.3
19-120	No significant intersection							
19-121	11.0	12.6	1.6	1.6	3.3	0.4	1.3	6.5
19-122	17.0	21.2	4.2	1.0	1.8	0.2	0.6	3.5
19-123	14.5	21.7	7.2	1.9	3.8	0.4	1.4	7.6
19-124	15.9	18.8	2.9	0.9	1.8	0.2	0.7	3.7
19-124	22.8	26.9	4.2	2.9	5.8	0.6	2.1	11.4
19-125	8.3	9.8	1.5	4.8	9.8	1.1	3.6	19.3
19-126	14.0	16.8	2.8	0.7	1.4	0.2	0.5	2.8
19-126	21.0	23.0	2.0	0.7	1.3	0.1	0.4	2.6
19-127	4.0	8.7	4.7	2.2	4.5	0.5	1.7	8.9
19-127	14.0	15.5	1.5	1.0	1.7	0.2	0.5	3.3
19-127	21.8	24.0	2.2	0.9	1.7	0.2	0.5	3.3
19-128	2.6	8.0	5.4	4.7	9.4	1.0	3.3	18.5
19-129	13.0	17.0	4.0	0.5	1.0	0.1	0.3	2.0
19-130	2.7	4.7	2.0	7.3	14.4	1.6	4.9	28.2
19-131	12.2	17.3	5.1	5.7	11.3	1.2	4.0	22.3
19-132	6.1	10.0	3.9	0.7	1.3	0.1	0.5	2.6
19-133	18.0	20.5	2.5	0.8	1.6	0.2	0.6	3.1
19-134	39.0	41.0	2.0	0.4	0.8	0.1	0.4	1.7
19-135	38.1	38.7	0.6	1.9	4.1	0.5	1.8	8.2
19-135	44.0	46.0	2.0	0.3	0.7	0.1	0.4	1.5
19-136	19.6	22.9	3.3	2.7	5.6	0.6	2.2	11.1

JORC Code, 2012 Edition – Table 1 report – North T Zone Bastnaesite Subzone

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"> 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. 	<ul style="list-style-type: none"> Resampling of historical core are half splits of drill core where no samples had previously been taken. Where samples had previously been taken the samples are quarter splits of drill core. For the 2019 drill program all the samples are half splits of drill core. Samples were collected from the bastnaesite mineralisation with lengths ranging 0.45 to 3.71 metres. The typical sample length was between 1.5 and 2.0 metres. The sampling lengths were dictated by the lithology of the core. The samples were pulverised and assayed using ICP-MS techniques for assays less than 500 ppm REO and assayed using XRF for assays over 500ppm REO. The accuracy of the assaying has been validated through a combination of using standards with a known grade and sending a number of samples to an external laboratory as a check.
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> BQ-diameter core drilling for the historical drilling and NQ diameter core for the 2019 drill program
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Good core recovery in outcropping and sub-cropping competent rock with little weathering, a report by Currie (2003) indicates core recoveries >95% for the historical core. Good core recovery was observed for the 2019 drill program. The geological nature of the mineralization in the Bastnaesite Subzone (coarse bastnaesite), in many cases, is such that the risk of biased sampling is somewhat reduced.
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Historic geological drill logs completed by an experienced professional geoscientist were used to delimit the outer pegmatite contacts. Qualitative logging, no systematic core photography available for historic core

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged. 	<p>and the 2019 drill program.</p> <ul style="list-style-type: none"> • Most drill core is still on site, as half core, and can be viewed. • Total length of the logged North T-Zone core is 7536 m and the core are 100% logged.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • 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 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. 	<ul style="list-style-type: none"> • Half core splits were sampled for historical core that had not previously been sampled and quarter core splits were sampled where the historical core had previously been sampled. Half core splits were sampled for the 2019 drill program. • For each sampled interval the entire interval was either half split or quarter split to ensure a representative sample of the interval. The sampled core was pulverised before assaying to ensure the material from the entire interval was analysed during the assaying process.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Analyses of pulp duplicates by a secondary laboratory was carried out to ensure assay accuracy. • Standards supplied by Avalon Advanced Materials Inc and external standards inserted by ALS were analysed with each batch of assays to ensure the assaying procedures gave accurate results.
Verification of sampling and assaying	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The assay data was collated by Volker Moeller of Avalon Advanced Materials Inc and verified by Brendan Shand of Cheetah Resources. • For the Bastnaesite Subzone samples the entire data set was downloaded from the ALS portal and converted to oxides. No assay data was manually inserted reducing the likelihood of human data entry errors. • Geology tables distinguishing pegmatite and host rock syenite were created from the original drill logs

Criteria	JORC Code explanation	Commentary
Location of data points	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • All historic holes were surveyed at the time by a professional surveyor – Thomson Underwood McLellan Surveys Ltd of Yellowknife. • Wardrop completed check surveys of 3 drill holes in 2006. • 13 drill hole collars were re-surveyed by a professional surveyor in 2018 and the locations were reproduced within 2.6 m, with an average deviation of 2.3 m. This is considered sufficient accuracy for the purpose here. • Historic collar locations are recorded in UTM NAD27 Zone 12 N • A good agreement was observed between the historic collar elevations and a 2010 satellite topography survey. • The 2019 drill holes were surveyed by a professional surveyor.
Data spacing and distribution	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The drill hole spacing is approximately 10 by 10 m over the Bastnaesite Subzone. • The drill hole spacing is considered to be adequate for the measured resource confidence category. • For the Bastnaesite Subzone the compositing was set to 0.5 metres to ensure all samples were included in the estimation process.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Most drill holes were drilled at or close to right angles to the orientation of the bastnaesite mineralisation reducing any chance of bias produced by the drill hole orientation.
Sample security	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	<ul style="list-style-type: none"> • The historic programs included standard provisions for sample security and storage • 2018 and 2019 assay samples were sealed using zip locks, and multiple samples were placed in rice bags sealed with zip locks. Independent lab verified sealed sample integrity upon receipt. • Analyses for elements such as rare earths, niobium and beryllium are unlikely to be altered as a result of insecurity of samples such as contamination.
Audits or reviews	<ul style="list-style-type: none"> • The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> • The historic sample methods were externally reviewed by Wardrop, a large Canadian independent engineering company, in 2006/2007 and considered adequate for resource estimation

Criteria	JORC Code explanation	Commentary
		purposes. This included a four-day site visit in 2006.

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"> 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. 	<ul style="list-style-type: none"> The North T-Zone is located on Mining Lease NT-3179 registered to Avalon Advanced Materials Inc. and expires 21 May 2027. On June 24, 2019, Avalon Advanced Materials Inc. announced that it has entered into a definitive agreement with Cheetah Resources Pty Ltd. to transfer ownership of the near-surface mineral resources on the Property, which includes the North T-Zone (see News Release NR 19-04). Operating licenses in the Northwest Territories are subject to the approvals by provincial and environmental regulators and require consultation with local communities.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The historic exploration drilling was largely performed by Highwood Resources in 1983-4. The geologist who supervised the historic work, J.C.Pedersen, P. Geo, is an experienced geologist in the rare metals pegmatites field, and is well known as reliable geoscientist to the present parties.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The North T-Zone is a polymetallic (REE, Nb, Li, Be) NYF-type pegmatite hosted by an Archean alkaline granite intrusion, the Thor Lake Syenite. It is peripheral to the Nechalacho REE-Nb deposit, a large layered magmatic deposit. REO-mineralization in the North T-Zone is hosted in separate zones of high-grade bastnaesite and low-grade xenotime enrichment, which form sub-horizontal lenses in the quartzofeldspathic pegmatite. Seven Bastnaesite and three Xenotime Subzones of the pegmatite have been outlined as wireframes based on cross-sectional interpretations.

Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul style="list-style-type: none"> • 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"> ○ 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 ○ 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. 	<ul style="list-style-type: none"> • The historic data set for the North T-Zone includes 86 diamond drill holes. 79 holes are vertical, and seven holes were drilled at an azimuth of approx. 240° and dips between -46 and -59°. The 2019 drill program includes 19 drill holes and all these holes are vertical. • The drill holes are 23 - 212 m long over a total length of 7,536 m. • See the attached appendices for the details of each of the holes and the assay intervals used for the resource estimation.
Data aggregation methods	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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. 	<ul style="list-style-type: none"> • Where there was more than 1 assay for an interval a weighted average was used for the grade of the interval. The weighted average was calculated by using the following formula. Interval grade= (Sum of (Assay length X assay grade))/(total interval length) • No capping was applied as no outliers were observed.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • 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'). 	<ul style="list-style-type: none"> • The intervals reported closely approximate the true width of the mineralisation as most holes intersect at right angles to the dip of the mineralisation. • The sample intervals are suitable for the mineralisation. • The drill holes intersect the deposit at approximately right angles to the orientation of the orebody which is the ideal orientation. • The orientation of the holes to the mineralization is well established.
Diagrams	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • See figures in this ASX release for maps and section.

Criteria	JORC Code explanation	Commentary
<i>Balanced reporting</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> All intervals used in the Mineral Resource estimation are reported Appendix 3.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Not applicable. Deleterious and contaminating materials are not present except for some thorium as is commonly present in rare earth deposits and well established with respect to levels.
<i>Further work</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No additional drilling is required on the Bastnaesite Sub-zone. There is confidence the outer limits of the Bastnaesite Subzone have been delineated. Mining and processing studies are on-going.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	<ul style="list-style-type: none"> The drilling data is maintained in a Maxwell DataShed database which has built-in error detection systems.
<i>Site visits</i>	<ul style="list-style-type: none"> Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	<ul style="list-style-type: none"> Brendan Shand, the competent person for this mineral resource, has visited the site in August 2019 and has developed a good understanding of the Bastnaesite Subzone.
<i>Geological interpretation</i>	<ul style="list-style-type: none"> Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of 	<ul style="list-style-type: none"> The geological interpretation was limited to distinguishing pegmatite and host rock syenite. There is a high degree of confidence that these units were correctly recorded in the historic drill logs and transcribed into the database correctly. The outlines of the REO-mineralized zones were created within the pegmatite outline based on the drill hole assays. The pegmatite has an intrusive contact with the surrounding syenite, thus

Criteria	JORC Code explanation	Commentary
	<i>grade and geology.</i>	providing a 'hard' outer boundary. The continuity of the REO-mineralization zones was controlled by magmatic processes in the pegmatite, i.e., the formation of pegmatitic lenses.
Dimensions	<ul style="list-style-type: none"> The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource. 	<ul style="list-style-type: none"> The zones of LREO-mineralization extend 150 m in NNW direction and 120 in the ENE direction, and from 5 to 45m depth.
Estimation and modelling techniques	<ul style="list-style-type: none"> The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available. 	<ul style="list-style-type: none"> Based on the observation of no outliers, the assay data was uncapped prior to compositing. The number of composites was insufficient for variography Block size was set to 1 x 1 x 1 m. Grade interpolations were constrained by 7 wireframes outlining the zones of Bastnaesite mineralization. For grade interpolation, the IDW² method was used. For each block, a maximum of two composites from the same hole were allowed and the minimum and maximum number of samples are 6 and 12, respectively. Hence, mostly 3 - 6 holes were used to interpolate each block. However, due to the thin vertical extent of the bastnaesite zone in some areas, encompassing only one composite, seven or eight holes were used for some blocks. with a limit of one composite per hole and 3 – 6 composites were used for each block. Search ellipses with successively larger radii were used for Pass 1 (20 m), Pass 2 (30 m), Pass 3 (40 m) for each of the LREO in the Bastnaesite Subzones. Only composites located within each of the interpolated Subzones were used to interpolate the Subzone. Validation of the grade estimates was performed by checking the block grades relative to the composites and assays, and by visual inspection in cross-sections. Validation of the volumes was performed by comparing the volume of the blocks to that of the wireframes The general deposit characteristics were validated using swath and grade-tonnage diagrams.
Moisture	<ul style="list-style-type: none"> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	<ul style="list-style-type: none"> Tonnage was estimated on a dry basis. As a pegmatitic igneous rock which experienced little weathering it has a low porosity and a very low moisture content

Criteria	JORC Code explanation	Commentary
		can be expected.
Cut-off parameters	<ul style="list-style-type: none"> The basis of the adopted cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> Estimation of operating costs and potential market value of the final product. The cut-off grades are preliminary, at pre-scoping study level, as no detailed engineering is available.
Mining factors or assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	<ul style="list-style-type: none"> No detailed mine plan or design has been prepared. However, the deposit is very close to surface, with mineralisation located above 80 depth, and it is assumed that open pit mining would be not difficult. Mining studies are being carried out using this resource estimation.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made. 	<ul style="list-style-type: none"> Preliminary test work carried out in 2019 has shown the Bastnaesite Subzone is amenable to ore sorting upgrading and has high recoveries in leaching using sulphuric or hydrochloric acid. The results from the test work indicate the Bastnaesite Subzone has the potential to support a small low cost LREO process plant.
Environmental factors or assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	<ul style="list-style-type: none"> Extensive environmental baseline studies of the property have been completed, and an approval exists for the mining and concentrating of similar ore zones found on the property. These studies include aquatic and terrestrial plant and animal studies. Physical studies include groundwater, air quality, weather, soil, sediment and water chemistry. Extensive environmental management plans have been developed and approved for exploration and early construction activities, and well developed for REE mining and concentrating operations, under a different and higher risk business model than proposed for the T Zone. Ore and waste environmental characteristics from the T Zone are anticipated to be very

Criteria	JORC Code explanation	Commentary
		<p>similar with low environmental risk.</p> <ul style="list-style-type: none"> • A tailing management area has been designed and approved for wastes from a mine concentrator under a different, more complex project processing model. This site could also be suitable for wastes from the North T Zone. The waste rock is anticipated to be barren and can be utilized for road and plant site development and dam construction. • It is assumed that the ore and waste products from the proposed works will be similar to the existing approved project, and the project is anticipated to have the benefits of higher density waste (no grinding), and use less water, reagent and energy than the existing approved project. • In conclusion, while confirmation studies of the ore, waste rock and sorting rejects have not been completed on the T Zone, the rock is expected to be very similar to other zones that have been extensively studied, and no significant new environmental impacts are anticipated from the T Zone.
Bulk density	<ul style="list-style-type: none"> • <i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i> • <i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i> • <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i> 	<ul style="list-style-type: none"> • A density of 2.91 t/m³ was used to estimate the tonnage of the Bastnäs site Subzone. This value, 2.91 ± 0.23 t/m³ (1 standard deviation), represents an average of 34 measurements performed in 2019. The density database includes mainly Archimedes method field measurements of single core fragments and a limited number of complete assay interval rock fragment measurements (N = 4) and pycnometer measurements on assay pulps (N = 5) for the bastnaesite zone.
Classification	<ul style="list-style-type: none"> • <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> • <i>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i> • <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i> 	<ul style="list-style-type: none"> • The resource confidence categories were assigned based on the interpolation of Nd₂O₃, the principal rare earth oxide of economic interest. • Despite the interpolation of a significant percentage of the resources using the Pass 1 search ellipse (circular, 20 m radius) which would normally be considered to represent Measured Resources, because of uncertainty related to the historic quality control, the Pass 1 resources were classed as indicated as a conservative approach. Those interpolated with the Pass 2 search ellipse (circular, 30 m radius), together with

Criteria	JORC Code explanation	Commentary
		<p>blocks interpolated with the Pass 3 search ellipse (circular, 60 m radius) were assigned the inferred category. A minimum of 3 and maximum of 6 drill holes were used to estimate the grade of each block.</p> <ul style="list-style-type: none"> • Brendan Shand, the competent person for this Mineral Resource estimate, regards these criteria as appropriate for the deposit and the estimate.
<p>Audits or reviews</p>	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of Mineral Resource estimates.</i> 	<ul style="list-style-type: none"> • The current resource estimation has not been externally reviewed. The resource estimation was generated by Volker Moeller and reviewed by the Brendan Shand, the competent person.
<p>Discussion of relative accuracy/ confidence</p>	<ul style="list-style-type: none"> • <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i> • <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i> • <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i> 	<ul style="list-style-type: none"> • No detailed statistical estimate has been made of the accuracy of the mineral resource estimate. The close spacing of the drilling combined with high quality QAQC on the assaying allows for a high degree of certainty with accuracy of the modelling. Hence most of the resource is categorised as either Measured or Indicated. • Comparisons between the volumes of the wireframes and those of the blocks indicate that the volumes for the REE-mineralized zones were estimated accurately. • Global comparisons between the grades of the composites and those of the blocks (averages and ranges) indicate that the grades were estimated accurately. • Local comparisons between block and sample grades in cross-sections indicate that the grades were interpolated accurately. • No production has taken place at the North T-Zone. A bulk sample was extracted in the 1980s, but the REO grades were not systematically recorded at the time.