

VITAL COMMENCES DRILLING TO DEFINE MINE PLAN FOR STAGE 2 RARE EARTHS PRODUCTION AT NECHALACHO

HIGHLIGHTS

- Vital commences drilling program at Nechalacho REE project in North West Territories, Canada
- Initial program of 30 holes (1,800m) diamond drill program aims to define a preliminary mine plan for Stage 2 production from Tardiff resource (94.7Mt @ 1.46% TREO with over 1.3Mt contained rare earths)
- Mine plan to provide sufficient feed for Nechalacho’s targeted Stage 2 production of 5,000t REO/yr from the high grade bastnaesite zone (3.2Mt @ 2.38% TREO)
- Vital on track to commence Stage 1 rare earth oxide production from North T at Nechalacho by end of CY2021
- T Zone drilling program to target satellite deposits to evaluate the potential to expand the high-grade North T resource of 105,000 tonnes at 8.9% TREO

Managing Director Geoff Atkins commented, “2021 will be a ground breaking year for Vital Metals. In addition to the commencement of development and construction activities for our Stage 1 operations at Nechalacho, the commencement of this drilling program marks the start of development activities for the larger Stage 2 operation.”

For further information on this announcement **PLAY AUDIO INTERVIEW** with Managing Director Mr Geoff Atkins:

<https://www.boardroom.media/broadcast?eid=602605aabefdd2001ac65e0c>

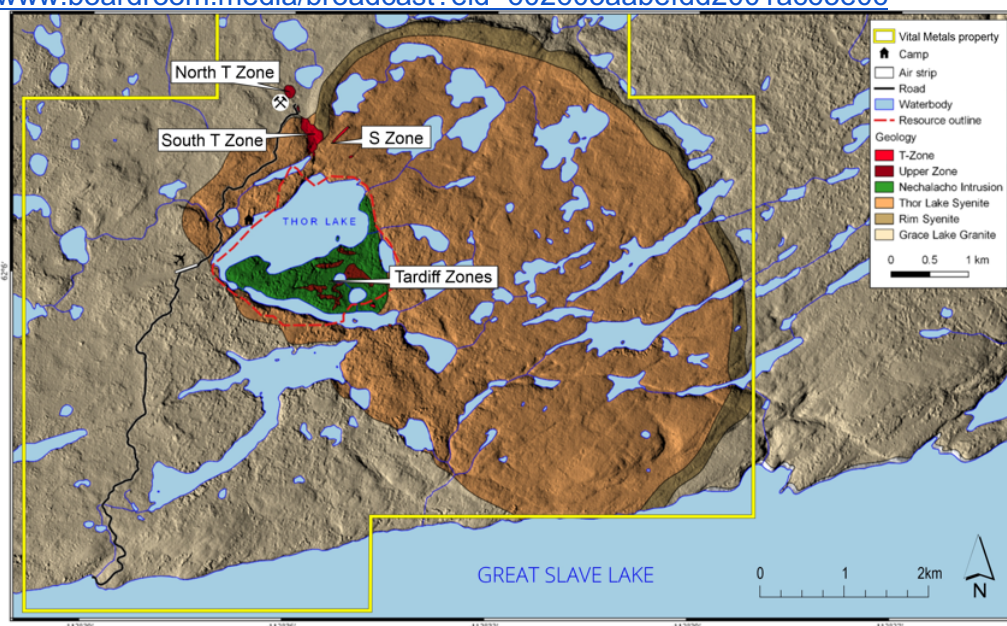


Figure 1: Nechalacho Project Area in North West Territories, Canada



Vital Metals Limited (ASX: **VML**) (“**Vital Metals**” or “**the Company**”) is pleased to announce it has entered into a drilling contract, through its subsidiary Cheetah Resources Corp, with NorthTech Ltd, a Yellowknife based drilling company. The 1,800m drill program will be completed over the coming winter on the Company’s Nechalacho Project in the North West Territories, Canada.

Vital’s drilling program will test three high-grade targets in the Tardiff deposit and evaluate potential expansion of the T Zone by targeting two additional zones, the South T and the S zones, which lie adjacent to the planned North T pit, where Vital plans to commence production later this year.

Drilling aims to enable Vital to develop a mine plan for the Nechalacho Stage 2 mine development, as well as define additional resources in the vicinity of the current pit.

Two Stage development program

Vital’s strategy is to develop Nechalacho in two stages. Stage 1 of the operations focuses on developing the T Zone resource and Stage 2 will involve the development of the much larger Tardiff deposit.

Stage 1: North T Deposit

Stage one will develop the previously drilled North T deposit located north of the main Tardiff Deposit (Fig 1). The North T contains a resource of 105,000 tonnes grading 8.9% TREO (Table 2).¹ Key feature of the Stage 1 operations are as follows:

- Near-term/low capex operation to finalise customer acceptance and ramp-up to production.
- Ore Sorter has been purchased and will be mobilized to site in March 2021 for simple beneficiation of bastnaesite mineralisation (see ASX announcement dated 5 December 2019)
- Vital has signed a Definitive Offtake Agreement with REEtec for Stage 1 production with the supply of 1,000t REO (ex-Cerium)/yr for an initial five-year period (see ASX Announcements 21 December 2020 and 2 February 2021).
- Vital will commence production of mixed rare earth carbonate in 2021.

Stage 2: Tardiff Deposit

Stage 2 envisages the development of several high-grade zones identified within the Tardiff (Upper Zone) deposit. The Company previously announced this deposit’s total resource of 95 million @ 1.46% total rare earth oxides (TREO) (1.3 million tonnes of contained TREO)². The Tardiff deposits are envisaged as providing the resource for the long-term operation and expansion of the project.

¹ Refer ASX announcement dated 15 April 2020. The Company is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the resource estimate in this announcement continue to apply and have not materially changed.

² Refer ASX announcement dated 13 December 2019. The Company is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the resource estimate in this announcement continue to apply and have not materially changed.

In addition to rare earths, this zone also contains zircon and niobium grades which are comparable with other polymetallic rare earth projects and were also the subject of feasibility test work previously undertaken at Nechalacho by Avalon Advanced Materials Inc. Key features of the proposed Stage 2 operations are as follows:

- Long-term/large-scale commercial operation providing long term security to the rare earth supply chain
- Fund expansion and the development of Tardiff deposit through the sale of mixed RE carbonate from North T
- Vital’s Definitive Offtake Agreement with REEtec provides the option for the supply of up to 5,000t REO (ex-Cerium)/yr for a period of more than 10 years. Should this option be exercised, this will be a cornerstone for Stage 2 operations at the Tardiff Zone.

Previous Exploration

Nechalacho Rare Earth Project has had several owners since first being staked in 1971. There have been four main phases of exploration carried out on the project, targeting various minerals associated with the Nechalacho Nepheline Syenite and a close by pegmatite known as the North T Zone.

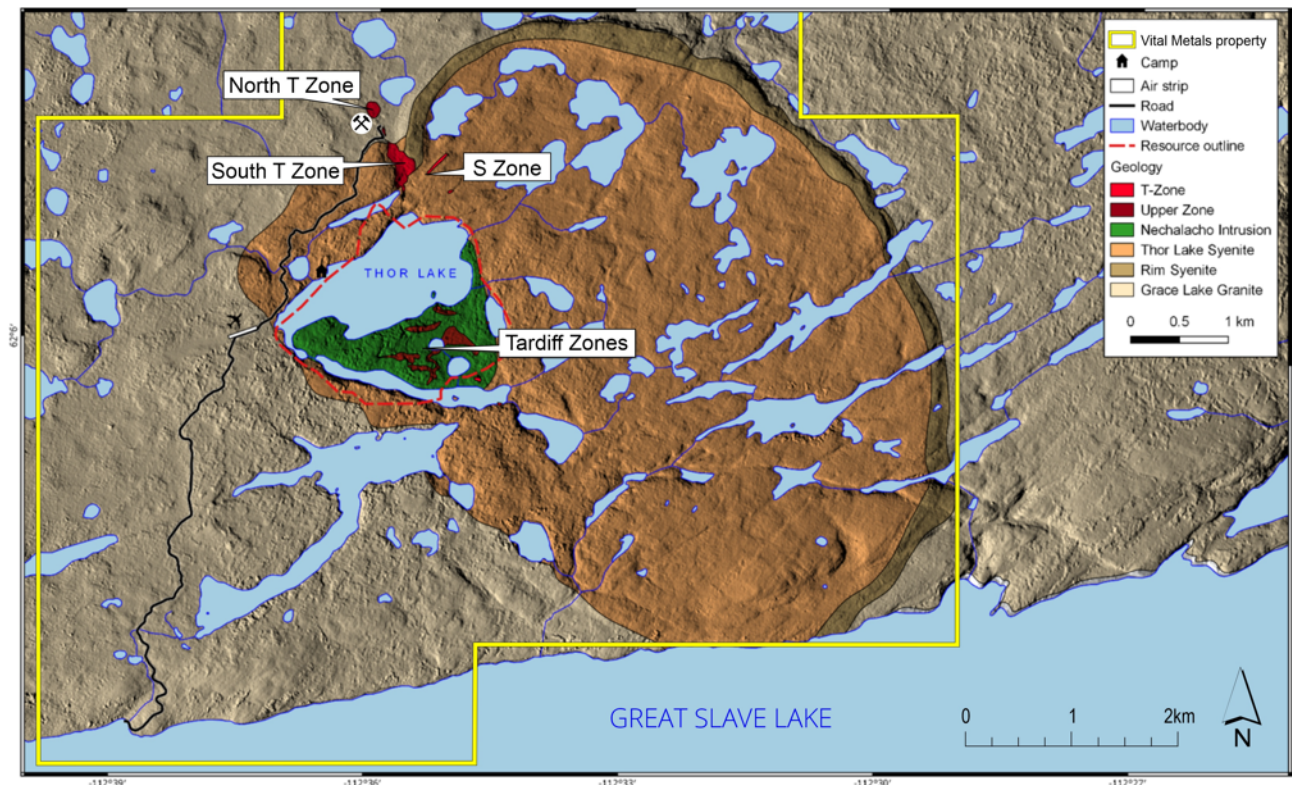


Figure 2: Nechalacho Project Area

Between 1976 and 1979, Highwood Resources Ltd identified the Nechalacho Nepheline Syenite during uranium exploration and proceeded to drill 22 holes testing targets for tantalum. In 1980, Placer Development Ltd (“Placer”) optioned the property from Highwood to investigate the tantalum mineralisation further. After conducting various geophysical surveys and drilling 17 holes,

Placer relinquished the property back to Highwood in 1982. It was during this phase of exploration that rare earth mineralisation was identified in the Nechalacho Nepheline Syenite. This zone of RE mineralisation is now known as the Lake Zone.

In 1983, Highwood discovered beryllium in a pegmatite (now known as the North T Zone) on the northern side of the Nechalacho Nepheline Syenite. Between 1983 and 1990 Highwood, and later in joint venture with Hecla Mining Company, conducted a considerable amount of work on a feasibility study to mine the beryllium mineralisation. The work included 127 drill-holes, a decline to take bulk samples and extensive metallurgy studies. During the feasibility studies, rare earth mineralisation was identified at the North T Zone with xenotime (heavy rare earths) associated with the beryllium and a zone of Bastnaesite identified sitting above the beryllium (xenotime) mineralisation. No further work has been carried out on the beryllium mineralisation since 1990.

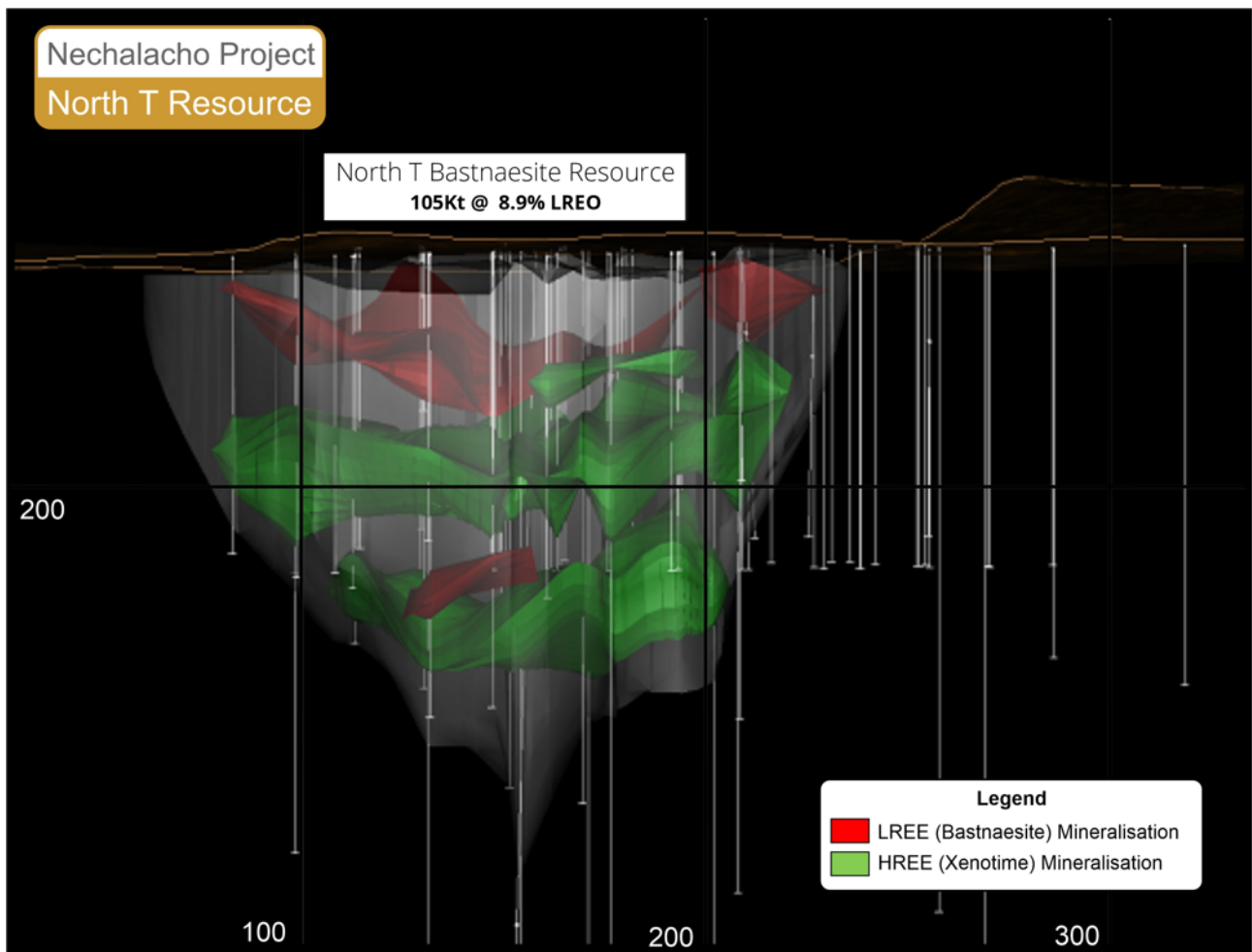


Figure 3: 3D representation of the Nechalacho North T deposit showing the Bastnaesite mineralisation (red) and the additional heavy rare earth xenotime mineralisation in green.

Between 2008 and 2013, Avalon Advanced Materials Inc carried out a major exploration program defining the rare earth mineralisation in the Lake Zone culminating in a full feasibility study which considered the production of rare earths, zircon and niobium products. Avalon defined two different types of REO mineralisation with a layer of light REO mineralisation in the top 90 metres of the Lake Zone, which Avalon called the Upper Zone, and below this, a layer of material with an overlay of

heavy REO mineralisation. Avalon called this the Basal Zone. Avalon completed a feasibility study on the Basal Zone.

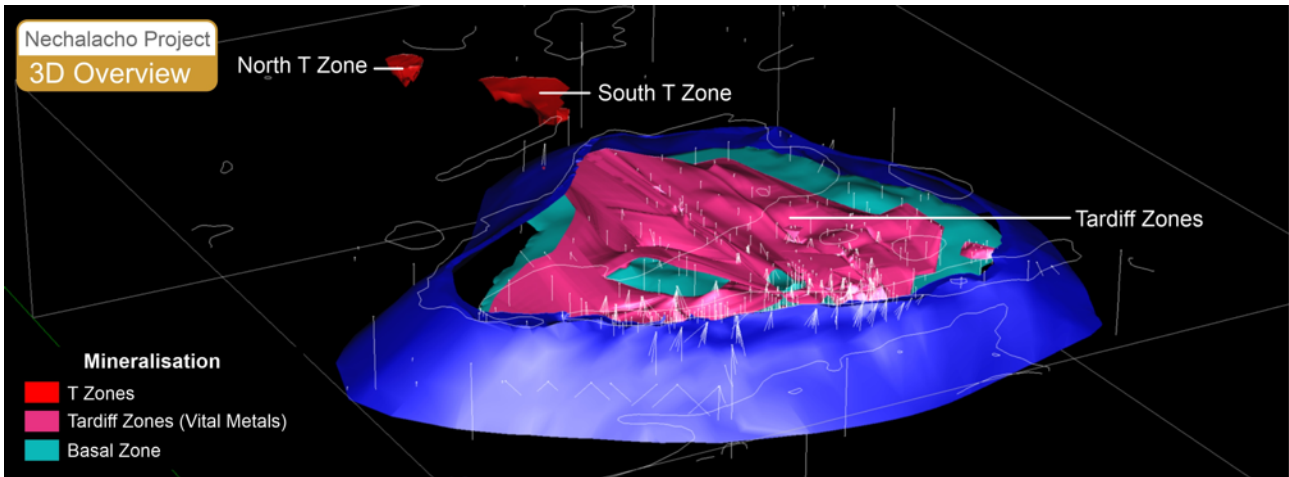


Figure 4: 3D representation of the Nechalacho deposits showing the Tardiff mineralisation and the North T deposit. Vital-owned Tardiff and T zones are shown in red while the Basal Zone is shown in green.

In 2019, Vital Metals finalised the acquisition of 100% of resources contained above the 150m elevation from Avalon. In December 2019, Vital Metals published an updated JORC compliant resource of 94.7 Mt @ 1.46% TREO (1.3Mt of contained TREO) for this area³.

Confidence Category	ND ₂ O ₃ cut-off grade	Tonnes (Mt)	REO (%)	LREO (%)	HREO (%)	ND ₂ O ₃	PR ₆ O ₁₁ (%)	NdPr:TR EO (%)
Measured	0.3	1.094	2.004	1.817	0.186	0.394	0.106	25.0%
	0.1	2.914	1.468	1.326	0.142	0.288	0.077	24.9%
Indicated	0.3	6.246	1.928	1.762	0.166	0.380	0.102	25.0%
	0.1	14.662	1.508	1.372	0.137	0.295	0.080	24.9%
Inferred	0.3	30.945	1.797	1.637	0.161	0.360	0.094	25.3%
	0.1	77.159	1.456	1.323	0.133	0.291	0.077	25.3%
Measured, Indicated and Inferred	0.3	38.285	1.825	1.662	0.162	0.364	0.096	25.2%
	0.1	94.735	1.464	1.330	0.134	0.291	0.078	25.2%

Table 1: Light Rare Earth Mineral Resources of the Nechalacho Upper Zone. The Mineral Resource Estimation was 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 is preliminary, at pre-scoping study level, as no detailed market, metallurgical or engineering studies have been performed.

It is noted that in addition to rare earths, the deposit also contains significant volumes of zircon and niobium at grades which are comparable with other polymetallic rare earth projects. Whilst Vital's

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current focus is on the rare earths, there exists potential in extracting these by-products at some time in the future.

In addition, during the December 2019 quarter, Vital Metals carried out a drill program and process work to define 105,000 tonnes of 8.9% TREO resource within the North T's bastnaesite sub-zone which will provide the material for Stage 1 of the operation⁴.

Bastnasite Sub-zone	Tonnes (Kt)	LREO (%)	LA ₂ O ₃ (%)	CEO ₂ (%)	PR ₆ O ₁₁ (%)	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. The Mineral Resource Estimation was 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 is preliminary, at pre-scoping study level, as no detailed market, metallurgical or engineering studies have been performed.

Xenotime Sub-zone	Y ₂ O ₃ cut-off grade (%)	Tonnage	CEO ₂ (%)	Y ₂ O ₃ (%) ⁵
Indicated	>0.1%	346,270	0.156	0.271
Inferred	>0.1%	4,700	0.177	0.224
Total	>0.1%	350,970	0.156	0.270

Table 3: Heavy Earth Mineral Resources of the North-T Zone Bastnaesite Sub-zone Nechalacho. The Mineral Resource Estimation was prepared in accordance with JORC 2012 under the supervision of Dr. William Mercer, registered Professional Geoscientist (P. Geo.) in the Northwest Territories and Ontario, Canada, as the Competent Person. 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.

Proposed Drilling Program

Tardiff Zone

Vital has designed the planned drilling program to increase the confidence in near-surface, high-grade zones of light REO mineralisation previous indicated by Avalon with very wide spaced drilling and to collect samples to conduct metallurgical test-work using recently developed ore sorting technology. Avalon's drilling target was the heavy REO Basal Zone, resulting in poor targeting of the light REO zones near the surface. To save on drill pads, Avalon drilled fans of holes from each drill site, resulting in very good coverage of Avalon's targeted Basal Zone but very poor coverage of the

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⁵ Yttrium is an indicator of xenotime mineralisation, which is the key source of dysprosium.

Upper Zone with clusters of very closely spaced holes and wide spacings between the clusters in the Upper Zone.

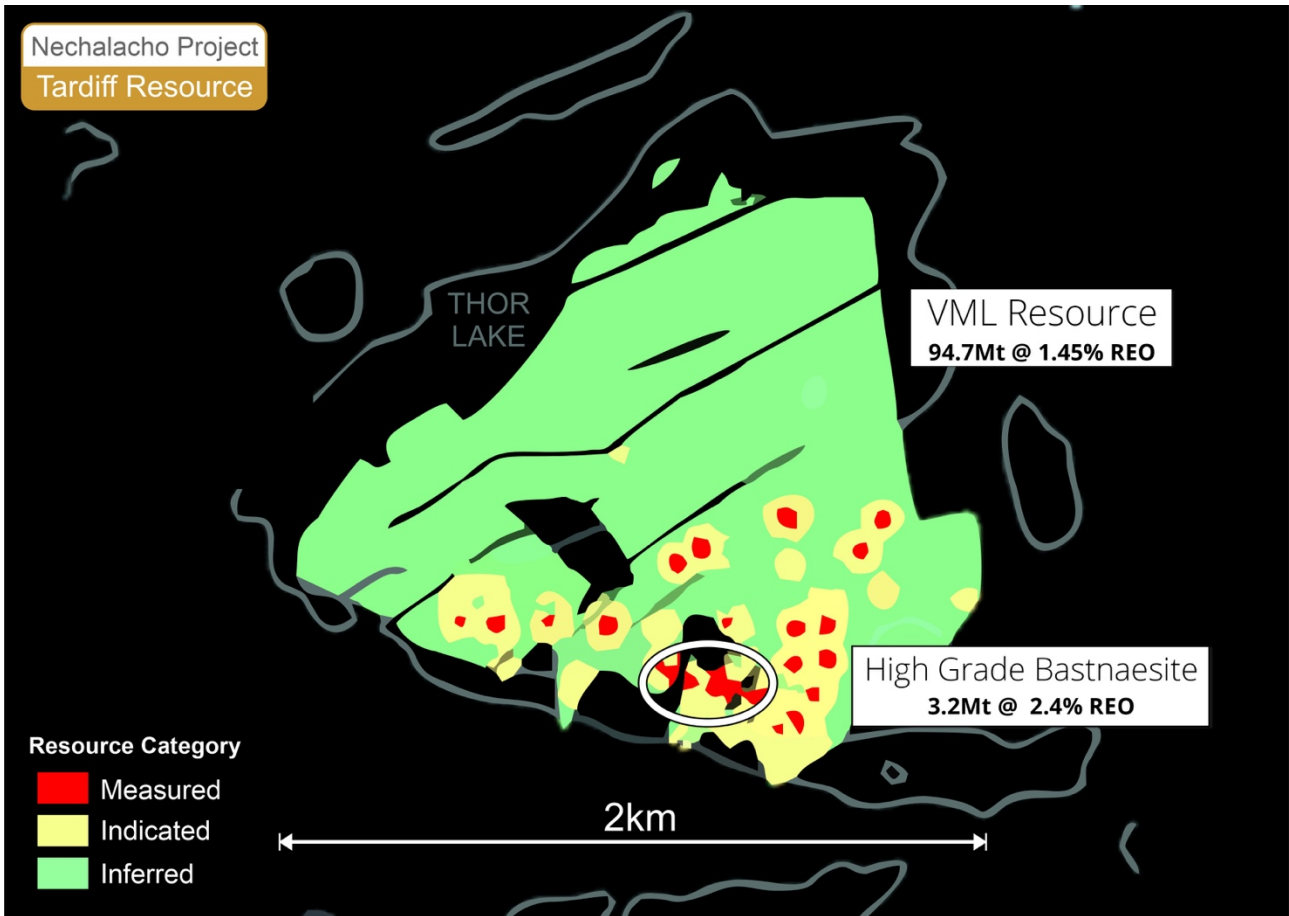


Figure 5: Graphical representation of Upper Zone resource classifications highlighting the inconsistency of drill spacing across the resource as a result of focusing on deeper resources (Red = Measured, Yellow = Indicated, Green = Inferred)

Previous work on the Tardiff deposit has identified several high-grade targets which contained similar bastnaesite mineralization to the North T resource.



Figure 6: Bastnaesite mineralization (red) within Tardiff resource

High Grade Bastnaesite Sub-Zone	Tonnes (Kt)	TREO (%)	LREO (%)	HREO (%)	PR ₆ O ₁₁ (%)	ND ₂ O ₃ (%)
Measured	286.6	2.729%	2.518%	0.211%	0.144%	0.515%
Indicated	1,611.3	2.429%	2.254%	0.176%	0.128%	0.457%
Inferred	1,297.1	2.237%	2.085%	0.152%	0.119%	0.423%
Total	3,195.0	2.378%	2.209%	0.169%	0.126%	0.449%

Table 4: Tardiff Zones high-grade near-surface subset of the Rare Earth Resources of the Upper Zone, Nechalacho deposit. Mineral Resource Estimation prepared in accordance with JORC 2012 under the supervision of Dr. William Mercer, registered Professional Geoscientist (P. Geo.) in the Northwest Territories and Ontario, Canada, as the Competent Person. 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.⁶

This drilling program will test two of these targets plus a high-grade zone adjacent to the previous defined resource. The program aims to delineate further high-grade resources, within the existing global resource (1.3Mt contained TREO), to enable the definition of a mine plan which will provide sufficient feed for the targeted Stage 2 production, including options contemplated within the definitive Offtake Agreement signed with REEtec for up to 5,000t REO (ex-Cerium)/yr. It is noted that cerium typically accounts for approximately 50% of the total rare earth oxides contained within bastnaesite mineralisation.

The drill program will comprise a minimum of 30 holes (1,800m) of HQ diamond drilling. The core will be assayed and will also provide additional samples for metallurgical testing to the develop the beneficiation and metallurgical processes for Stage 2.



Figure 7: Drill rig in place ready to commence first drill hole at Tardiff

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T Zone

Within the T Zone, the initial operation will be undertaken on the small, North T deposit. This contains 105Kt of bastnaesite ore at 8.9% LREO, or approximately 10Kt of contained REO. Original exploration at the T Zone focused on defining a beryllium resource and therefore samples were not assayed for rare earths. This exploration identified a number of mineralised zones but as they did not return significant beryllium assays, further work was not carried out. Surface mapping and sampling of the area surrounding the North T identified similar bastnaesite outcropping to the which was found within the defined North T resource. Specific targets warranting investigation were identified at South T and S Zone. The drill program will evaluate these areas for ore potential with the target being to expand the existing North T resource.

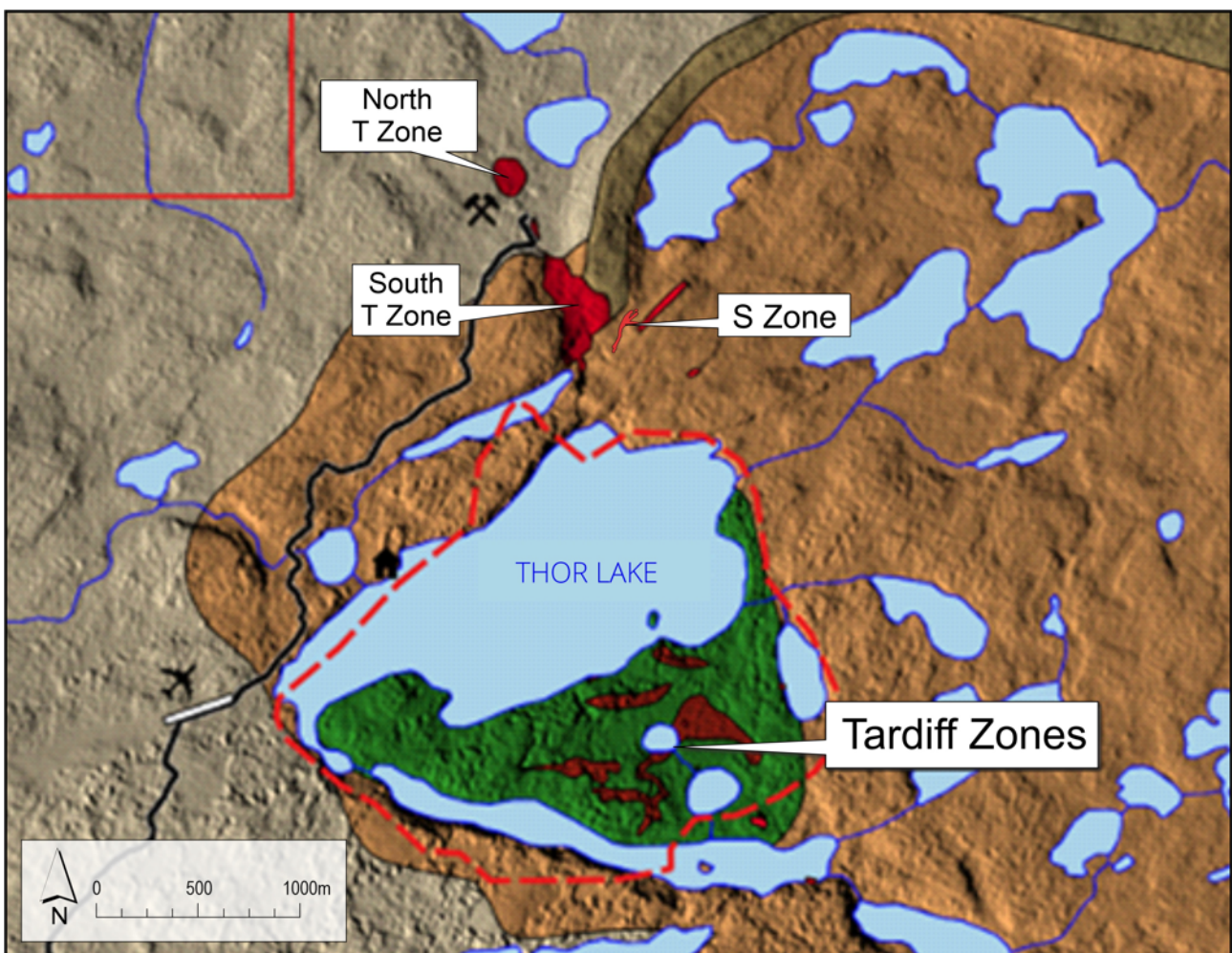


Figure 8: Location of T-Zone Satellite Deposits

Preliminary drilling at South T will determine the potential for the South T to be an extension of North T deposit, as surface mapping has indicated this is possible. Should this preliminary program indicate the potential for a rare earth resource, Vital will plan a full drilling program for the following drilling season to define a resource.

The S-Zone consists of a bifurcating series of en echelon dykes and linear hydrothermal alteration zones in syenite over a 250m strike length. Widths up to 15 metres on the northwest limb, with

cores of semi-massive polyolithionite and associated bastnaesite and columbite, occur adjacent to a strong NE-SW linear. It is intruded and cut off by a diabase dyke at its northern extremity.

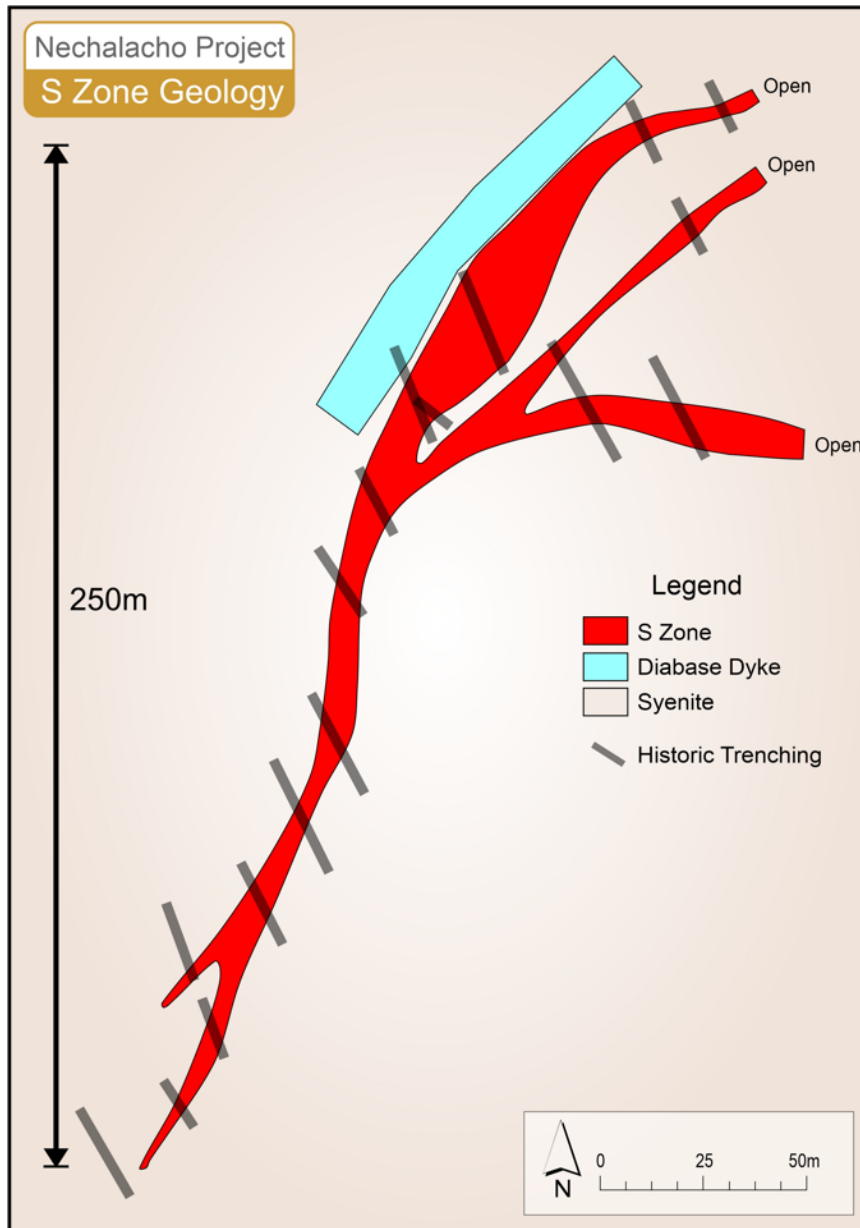


Figure 9: S-Zone Geology

Five short diamond drill holes completed in 1977 by Highwood Resources indicate vertical extension of surface showings, but at varying dips and attitudes. Although the zone as a whole is not large, it indicates that hydrothermal fluids are travelling along and coalescing in structural linears of varying orientations, with the potential for dilational structural traps for fluids to accumulate, similar to the structure hosting the T-Zone. It should be noted that "shadow zones", or zones of hydrothermal alteration in syenite and granite, occur along and under the dilational pegmatitic accumulations in the T-Zone structure, which appear similar to the hydrothermal alteration seen in the syenites of the S-Zone. Larger sub-cropping traps could occur adjacent to or along strike of the S-Zone alteration, or open to depth. Trenching and sampling has been carried out over the length of the



surface showings, and further exploration should focus on diamond drilling along the hydrothermal alteration zones to test for these potential structural dilations.

- ENDS-

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

ABOUT VITAL

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 - Canada

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 measured, indicated and inferred JORC Resource of **94MT at 1.46% TREO**.

This announcement contains information relating to Mineral Resource and Exploration Results extracted from ASX market announcements reported previously and published on the ASX platform on 13 December 2019, 19 February 2020 and 15 April 2020. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the original market announcements continue to apply and have not materially changed.

Forward Looking Statements

This release includes forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production output.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of resources or reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the company’s business and operations in the future. The company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the company or management or beyond the company’s control.

Although the company attempts to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be anticipated, estimated or intended, and many events are beyond the reasonable control of the company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements.

Forward looking statements in this release are given as at the date of issue only. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.