

## Vital expands Tardiff Scoping Study to include niobium

### Highlights:

- Vital's Scoping Study to examine the size and scalability of its Tardiff rare earths deposit, Canada, is expanding to include potential niobium recovery
- Niobium ( $\text{Nb}_2\text{O}_5$ ) is hosted within the same geological formations as Tardiff's rare earth mineralisation, with a maiden niobium resource included in Vital's January 2025 Tardiff MRE<sup>1</sup>
- Tardiff contains an estimated 636,000 tonnes of NdPr and 578,000 tonnes of  $\text{Nb}_2\text{O}_5$
- Niobium is used in aeronautic engines, electronics (due to superconducting properties), and as an additive to lithium-ion batteries to enhance battery life
- Initial metallurgical testwork for the Scoping Study focused solely on recoveries for rare earth elements. Niobium is not a rare earth, but showed a 15% recovery rate.
- With exploratory targeted Niobium recovery testwork, substantial value could be added to the project.
- Additional testwork will take ~8 weeks to complete and incorporate results into the study, which is now on track for release in late April 2025.
- Vital is working with the Canadian Government on potential creation of a central rare earths processing hub to help build the nation's critical mineral supply chain.

**Vital Metals Limited** (ASX: **VML**) ("**Vital**", "**Vital Metals**" or "**the Company**"), an advanced stage exploration/development rare earths company, is pleased to announce it will complete further testwork to determine the viability of niobium recovery from its Tardiff deposit in Northwest Territories, Canada, as part of a Scoping Study currently underway.

Vital reported niobium ( $\text{Nb}_2\text{O}_5$ ) hosted at Tardiff in its updated January 2025 Mineral Resource Estimate (MRE) for the first time, after initial metallurgical testwork completed for the Scoping Study indicated its potential recovery from the deposit. Tardiff has a MRE of 192.7 million tonnes at 1.3% total rare earth oxide (TREO) and 0.3% niobium, containing 636,000 tonnes of NdPr (neodymium oxide + praseodymium oxide) and 578,000 tonnes of  $\text{Nb}_2\text{O}_5$ .

Vital is using the updated MRE as the basis for its Scoping Study, which is examining the size and scalability of future production scenarios at Tardiff. It will now complete further niobium studies which will be captured by reprocessing flotation tailings as a first-phase evaluation and

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<sup>1</sup> See VML ASX Announcement dated 20 January 2025



add these results to the study, which is now due in late April 2025.

Niobium pentoxide 99.5% has a current market price of US\$58.46/kg<sup>2</sup> and is experiencing increased demand due to its low oxidation point and relatively high melting point. It is used as an alloy in aeronautic engines, electronic applications (due to its superconducting properties) and as an additive to lithium-ion batteries to enhance battery life. Niobium is a key Critical Mineral, with limited current production sources globally. NdPr Oxide has a current market price of US\$61.90/kg.<sup>3</sup> The similar price decks show that if similar recoveries are achieved for grades (which will require further optimization in metallurgical test work) then Niobium could add substantial value to the project.

**Vital Metals' Managing Director Lisa Riley** commented: *“With our initial flotation testwork indicating potential recovery of niobium from Tardiff, in addition to its significant NdPr resource, we want to include that into our Scoping Study as we consider what shape Tardiff might take in development.*

*“Previous metallurgical work did not focus on niobium recovery. This will now be a component of additional testwork to deliver the Scoping Study alongside further REE testwork.*

*“While Vital has primarily focused on rare earths at Tardiff, the potential to include niobium is now clear, and while additional niobium testwork will delay the completion of our Scoping Study, it will provide a more thorough understanding of the material and the value of its inherent parts. Given the contained niobium resource is almost equal in size and value to the NdPr resource, it is very important to maximise recovery and grade of both.”*

In January 2025, Vital delivered an updated MRE for Tardiff which included results from drilling completed in 2023. In addition to delivering a 56% increase in Measured and Indicated rare earth resources at Tardiff, a maiden niobium resource was also estimated.

**Table 1. Tardiff Mineral Resource Estimate, TREO ≥ 0.7%**

JORC Resource Classification	Tonnage	Average Grade (%)				Contained Oxide	
		TREO	Nd <sub>2</sub> O <sub>3</sub>	Pr <sub>6</sub> O <sub>11</sub>	Nb <sub>2</sub> O <sub>5</sub>	TREO Kt	NdPr Kt
Measured	7.6	1.48	0.28	0.08	0.24	112	27
Indicated	41.0	1.29	0.25	0.07	0.25	528	131
Measured + Indicated	48.6	1.32	0.26	0.07	0.25	640	158
Inferred	144.1	1.31	0.26	0.07	0.32	1,883	477
<b>Total</b>	<b>192.7</b>	<b>1.31</b>	<b>0.26</b>	<b>0.07</b>	<b>0.30</b>	<b>2,523</b>	<b>636</b>

Notes:

1. Due to effects of rounding, the total may not represent the sum of all components.
2. TREO (ppm) includes: Light Rare Earth Oxides (LREO): La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>; and Heavy Rare Earth Oxides (HREO): Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>; +

<sup>2</sup> Shanghai Metals Market, Niobium Pentoxide 99.5% Price, USD/kg, 26/02/2025

<sup>3</sup> Shanghai Metals Market, Praseodymium-Neodymium Oxide Price, USD/kg, 26/02/2025



- Y<sub>2</sub>O<sub>3</sub>
3. Mineral Resource is reported from blocks at or above the 150 m RL and within unconstrained optimised open pit shell "Optimized\_Pits\_2\_Pit\_85\_100tr/pt"
  4. Revenue in cutoff grade calculation is attributable to Nd<sub>2</sub>O<sub>3</sub> and Pr<sub>6</sub>O<sub>11</sub>
  5. NdPr = Nd<sub>2</sub>O<sub>3</sub> + Pr<sub>6</sub>O<sub>11</sub>
  6. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
  7. The Mineral Resource effective date is 18th December 2024.

### Government relations

With increasing geopolitical tensions globally, Ms Riley has taken a leadership role in progressing discussions between mining companies, industry and State, Territory and Federal Government bodies to better position Canada as a mine to metal REE producer. Vital's Tardiff and high-grade North T deposits at Nechalacho are positioned to be significant components of this initiative.

**Ms Riley commented:** *"The current geopolitical environment and the focus on global critical minerals supply chains supports the initiative for collaboration in mining and metal processing potential in Canada. We are excited to be progressing one of the key REE deposits in North America and are well positioned to participate in any potential REE processing hub in Canada."*

*"We continue to negotiate with the Canadian Government to drive the Canadian rare earth industry forward. We want to better position Canada to create a Canadian rare earth supply chain from mine to metals."*

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

### Contact

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### About Vital Metals

Vital Metals Limited (ASX: VML) is developing the large Nechalacho Rare Earth Project in Canada's Northwest Territories. Nechalacho has the potential to underpin a significant rare earths supply chain for North America with responsibly sourced critical minerals for the green economy transformation.

### ASX Listing Rule Information

This announcement contains information relating to Mineral Resource Estimates in respect of the Nechalacho Project extracted from ASX market announcement reported previously and published on the ASX platform on 20 January 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed. The Mineral Resource Estimate of 192.7Mt @ 1.3% TREO comprises 144.1 Mt @ 1.31% TREO Inferred, 41.0Mt @ 1.29% TREO Indicated and 7.6Mt @ 1.48% TREO Measured.



## **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.