ASX Announcement

28 July 2025

Tardiff Scoping Study delivers robust economics and upside potential with mixed rare earth and niobium concentrate production over 11-year mine life

This Scoping Study considers the advancement of Tardiff, a Rare Earth and Niobium project located in the NWT of Canada and 100% owned by Vital Metals. This Study evaluates development of a hard rock starter open pit that extracts only 15% of the total Tardiff Mineral Resource Estimate of 192.7Mt at 1.3% Total Rare Earth Oxide (TREO). The adjacent 100% owned North T and South T deposits have not been included as part of this Study.

Highlights:

- **Scoping Study delivers robust financial outcomes of:**
  - **Pre-tax NPV_8 of US$776M and 32% IRR**
  - **Post-tax NPV_8 US$445M and 25.5% IRR**
- **Base case commodity pricing of US$90/kg of neodymium (Nd) and praseodymium (Pr), US$1322/kg for terbium (Tb) and US$338/Kg for dysprosium (Dy). The breakeven price for NdPr using all other prices from the base case is US$33.68/ kg.**
- **Average annual production estimate of 56kt of concentrate at a grade of 26.4% TREO and 3.3% Nb_2O_5, with 45.1% global TREO recovery over an initial 11-year life of mine (LOM). Average annual Rare Earth Element (REE) production is estimated to be: 2.9kt of Nd, 0.9kt of Pr with less than 100 tons each of Dy and Tb.**
- **Further infill drilling should increase the size and confidence of the resource supporting a longer LOM and thereby expanding project economics.**
- **Pit design targets a daily production of 14,000 tpd (approx. 3,000,000 tpa) with a very low 0.3:1 stripping ratio.**
- **Capital cost estimated at US$291 million (A$455 million), including a 35% contingency of US$68M; operating cost estimated at US$24/dry metric tonne mined (includes a 20% contingency).**
- **The Study states that building a Canadian supply chain will be preferred for the project's success. The Canadian Rare Earth Supply Chain Consortium, in which Vital plays a founding role, will foster the collaboration between industry, government and technical partners to expedite the timeline from lab, and pilot work and demonstration plant to be ready to scale to commercial production of separated metals, permanent magnets and wind turbines.**
- **To potentially improve the project's economics, the Study recommends advancing to a prefeasibility Study (PFS) with additional extensive metallurgical testing to:**
  - **Optimize TREO and niobium recoveries;**
  - **Prove the payability of niobium; and**
  - **Test the recovery of zircon.**

CAUTIONARY STATEMENTS

The Scoping Study referred to in this ASX release has been undertaken for the purpose of initial evaluation of a potential development of the Tardiff Rare Earth deposit at Nechalacho, NWT, Canada. It is a preliminary technical and economic Study of the potential viability of the project.

The Scoping Study outcomes, production target and forecast financial information referred to in this release are based on low-level technical and economic assessments that are insufficient to support estimation of Ore Reserves. Further exploration and evaluation work and appropriate studies are required before VML will be able to estimate any Ore Reserves or to provide any assurance of an economic development case.

Of the Mineral Resources scheduled for extraction in the Scoping Study production plan, approximately 19% are classified as Measured, 49% Indicated and 32% as Inferred. The Company has concluded that it has reasonable grounds for disclosing a production target which includes an amount of Inferred Mineral Resources. However, there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of additional Indicated Mineral Resources or that the production target itself will be realised. VML is satisfied that the respective proportion of inferred mineral resources is not the determining factor in project viability and that the inferred mineral resource does not feature as a significant portion early in the mine plan

The Scoping Study is based on material assumptions as outlined in this announcement. These include assumptions about the availability of funding. While VML considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

To achieve the range of outcomes indicated in the Scoping Study, pre-production funding in the order of US$291M or AU$455M may be required. There is no certainty that VML will be able to source that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of VML's shares. It is also possible that VML could pursue other value realisation strategies such as a sale, partial sale or joint venture of the Project.

Statements in this release regarding VML's business or proposed business, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource estimates, market prices of rare earths, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe VML's future plans, objectives or goals, including words to the effect that VML or management expects a stated condition or result to occur. Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by VML, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

VML believes that this release includes a fair and balanced summary of the Study. VML has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this release. This includes a reasonable basis to expect that it will be able to fund the development of the Project upon successful delivery of key development milestones and when required. While VML considers all material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Study will be achieved and are considered preliminary in nature. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of this Study.

Vital Metals Limited (ASX: **VML**) ("**Vital**", "**Vital Metals**" or "the **Company**"), an advanced-stage rare earths exploration and development company, is pleased to announce the completion of a Scoping Study ("Study") for the 100%-owned Tardiff Deposit ("the **Project**"), 100km east of Yellowknife, Northwest Territories, Canada.

Vital Metals' Managing Director Lisa Riley said: *"The Study is an essential step towards moving the Project forward. It is a first step towards Vital playing a key role in building critical minerals supply chain in Canada. The Study has outlined the potential to build a viable, long-term rare earths and niobium project at Tardiff. Recommended next steps will aim to capture further economic upside by optimizing REE and Nb recoveries, lifting concentrate grades and delivering higher payability for the economic commodities."*

Figure 1: Vital Metals' Nechalacho Project, Canada

Table 1: Scoping Study Key Metrics

Category	Unit	Study Estimate
NPV $_{8\%}$ (ungeared) (Pre-tax / Post-tax)	US$M	776 / 445
IRR (ungeared) (Pre-tax / Post-tax)	%	32 / 25.5
Net cashflow (undiscounted, ungeared)	US$BN	1.6
Payback from first production	months	39
TREO concentrate Value Base Case (26.4% TREO shipped value)	US$ /Tonne Conc.	8500
Payability of total TREO Concentrate Value Base Case	%	50
Forecast average LOM Opex (including Sustaining Capital)	US$/Tonne Conc.	1,115
Pre-production capital costs (start-up)	US$M	291

Project Sensitivities

Table 2: Net Present Value and Internal Rate of Return Sensitivity (Post Tax)

Revenue	Post-tax NPV (US$M)	Opex	Post-tax NPV (US$M)	Capex	Post-tax NPV (US$M)	Payable	Post-tax NPV (US$M)
-20%	243	-20%	506	-20%	497	60%	647
Base Case	445	Base Case	445	Base Case	445	Base Case	445
20%	647	20%	383	20%	393	40%	243

Revenue	Post-tax IRR	Opex	Post-tax IRR	Capex	Post-tax IRR	Payable	Post-tax IRR
-20%	18%	-20%	28%	-20%	30%	60%	32%
Base Case	26%	Base Case	26%	Base Case	26%	Base Case	26%
20%	32%	20%	23%	20%	22%	40%	18%

Notes:
% = percent; Capex = capital expenditures; IRR = internal rate of return; NPV = net present value; Opex = operating expenses

Scoping Study Executive Summary

Vital Metals commissioned ERM Consultants Canada Ltd. (ERM) to provide a Scoping Study within guidelines and reporting standards established by the Australian Securities Exchange (ASX) and Joint Ore Reserves Committee (JORC) for its Tardiff Project ("Tardiff" or "Project").

The Tardiff project is owned by Nechalacho Resources Corporation, a Canadian-based company in Yellowknife, Northwest Territories (NWT) and a wholly-owned subsidiary of ASX-listed Vital Metals Ltd (ASX: VML).

The Tardiff deposit is a near-surface light-rare-earth-elements-enriched mineralization that has been defined to a depth of approximately 100 metres (m) below surface.

The Study Objectives that were addressed are as follows:

- Vital Metals has reviewed a range of development options, has confirmed a robust project with the risk/reward profile now outlined, and considered the key value drivers, material risks and uncertainties.
- The technical and economic viability of the Project has been confirmed.
- Several mining, processing, power and infrastructure options were evaluated.
- Identified the need for REE and niobium metallurgical optimisation through additional testwork as an area for greater upside.

During the work program, specific metallurgical reports were completed by specialist consultant groups. The REE recovery data from this test work directly informs the production and economic modelling of the Tardiff project.

The financial model demonstrates the economic viability of the Project based on the physical and technical assumptions used in the Study. The financial model was developed on a Project basis, is ungeared and reported in United States Dollars. All site-related costs, royalties, income tax and sustaining capital have been included.

The financial model outcomes are reported using pre- and post-tax cashflows and NPV, IRR have been modelled.

The Study was based on relevant scientific and technical advancements made on the Project. It also analyzed information related to data verification of exploration information and ownership. The primary scientific and technical advancements made on Tardiff include:

- An updated JORC-compliant mineral resource estimate (MRE) effective 18 December 2024;
- Improving scientific understanding of the potential ore feed variability on metallurgical results. Recovery and concentrate grade results are based on previous laboratory testing by SGS and Corem.
- Further testing the SGS developed flowsheet and reagent scheme by Corem (2022) on ore from the Tardiff zone (2025) to better determine the TREO concentrate grade and recovery of a LOM average grade sample.
- Corem used a flowsheet of crushing and coarser grinding to -75 micrometres (µm) (compared to -45 micrometers at SGS), gravity preconcentration, LIMS, and flotation to determine the TREO concentrate grade and recovery. Coarser grinding requires less

energy. The Corem Test 5 cleaner stage (using the LOM average grade feed) delivered a 3.6Wt.% with 14.0% TREO and a 37.1% global recovery, while the SGS Test BF2 (using selected higher than average grade LOM feed composite sample) reached a 3.3Wt.% with 39.9% TREO and 53.1% global recovery. Further work on the Corem rougher concentrates is recommended to deliver increased cleaner concentrate TREO grade and recovery.

- Concentrate production was calculated as an average of the SGS test BF2 and Corem Test 5 concentrates, approximately 26.4% TREO and 3.3% Nb_2O_5 concentrate, which has been assumed as saleable with a 50% payability of REE and assumed 0% payability of Niobium until further downstream testing is undertaken.
- Enhancing understanding of the potential viability of concentrate shipment by barge and train to market. The concentrate can be transported to a third-party mid-stream processing facility located and modelled to be up to 1,000 kilometres (km) by train south of the project.
- Identification of next steps and actions to improve the scientific understanding of this mineral project. Further metallurgical test-work is recommended, aiming to:
    - improve recoveries;
    - confirm payability of niobium; and
    - establish payability of zirconium.
- Conversion of Inferred Resources to Measured and Indicated would support a longer mine life.

The Study further considered order-of-magnitude technical economic factors, such as defining the saleable product, as well as capital and operating costs for mining, processing and infrastructure.

The Net Present Value (NPV) for this Study of the Tardiff Upper Zone is pre-tax US$776 million (IRR of 32%), and post-tax US$445 (IRR of 25.5%) using an 8% discount rate over an 11-year LOM. This is informed by a base case commodity price deck of US$90/kg of neodymium (Nd) and praseodymium (Pr), US$1322/kg for terbium (Tb) and US$338/Kg for dysprosium (Dy). The breakeven price for NdPr using all other prices from the base case is US$33.68/ kg.

To test the robustness of the project, the NPV for this Study is also estimated using current market prices (circa US$60/kg for neodymium (Nd) and praseodymium (Pr), US$881/kg for terbium (Tb) and US$225/kg for dysprosium (Dy)). The pre-tax result is US$383 million (IRR of 22%), and post-tax US$176 (IRR of 15.8%) using an 8% discount rate over an 11-year LOM.

The qualified persons involved in this Study are competent persons (CPs) David Williams and Paul Ténière, who are professional geologists, Richard Wagner, who is a professional metallurgist, and James Gardner, who is a professional mining engineer.

At this stage, the results of the Study do not provide assurance of an economic development case and are insufficient to support an Ore Reserve estimate. To reflect the order-of-magnitude assumptions, the economic results have been provided as a range in this report.

Property Description and Location

The Tardiff Project (part of the Upper Nechalacho Project) is in NWT, Canada, approximately 100km east of Yellowknife near Great Slave Lake and centred on coordinates 416,400 m E / 6,887,000 m N or 112° 36' 6" W / 62° 6' 20" N.

The Tardiff deposit is located on Lease NT-3178. In addition to this mineral lease, there are leases NT-3179, NT- 3265, NT-3266, NT-3267, NT-5534, NT-5535, and NT-5561. A co-ownership agreement exists dividing the Nechalacho Project. Nechalacho Resources Ltd. has ownership above 150 relative level (RL) in the "Upper Zone" and Avalon Advanced Materials Ltd (Avalon) has ownership below 150 relative level (RL) in the "Basal Zone". The 150 RL is approximately 100 metres (m) from surface topography.

There are two individual royalties in place on these mining leases, namely:

- A 3% net smelter return royalty (leases NT3178, NT3179, NT3265, NT3266, and NT3267):
    - The royalty holder has agreed to waive their right to the royalty for the first 5 years following commencement of commercial production at the Tardiff Project; and
    - The royalty holder has also agreed to grant an option to buy out the royalty for 2.0 million Canadian dollar (CDN$) at any time during the 8-year period following the acquisition of the Tardiff Project.
- The Murphy Royalty, (which applies to the same leases as above) which is a 2.5% net smelter return royalty held by a third party. Vital Metals holds an option to purchase the royalty for an inflation-adjusted fixed amount currently estimated to be CDN$1.5 million.

In addition to these two royalties are the sliding-scale royalty that is collected by the Government of the Northwest Territories which is applied to net revenue on a scale ranging from 0-14%.

The two individual royalties and the government royalty have been added to the financial model, along with taxes that are applied to net revenue once the accumulated tax-loss carry-forwards from exploration and capital expenditure have been applied.

In November 2024, Vital Metals staked the M11875, M11876, and M11877 leases, totalling approximately 25km. These are new leases and are 100% owned by Nechalacho Resources, including at depth, and do not carry royalties.

ERM's CPs have confirmed the active status of Vital Metals' mining leases on the mining recorder's office mineral tenure web map. No environmental liabilities attached to the property were found while reviewing the documents for the project.

ERM observed that Vital Metals has discussed opportunities for collaboration with community stakeholders and that there is community interest in partnerships for barging, as well as in community uses of the project as a remote refuge for travellers. Vital Metals is engaged with community stakeholders and actively participating with the local community with regards to decisions related to the Tardiff project. ERM did not find any evidence to show that Vital Metals was not compliant with NWT approvals and authorizations issued to date.

Accessibility, Climate, and Infrastructure

The Tardiff Project is within the Arctic tundra biome. The general landscape onsite is exposed rock with sparse soil collected on top of rock basins. The soil above the mineral project is discontinuous permafrost. It was observed that there is very little soil on the property, which is typical in this area. The NWT government mandates preservation of the nutrients of the soil because they are not abundant enough to support the sparse flora and fauna (Environment Canada and NWT 2012). Additionally, the climate demands that northern building practices are used for any structures in the territory (NWT Department of Infrastructure 2021).

The Tardiff Project does not have land access to public utilities, and there is no direct road access to and from Yellowknife, NWT, Canada. The Project is located on the north shore of Great Slave Lake and can be accessed by boat during a 90-day summer shipping season when the ice has melted, or by ice road when the lake is frozen. It is a large lake and connects many small communities on its shoreline. The site can be accessed by air, by plane or helicopter, with a travel time of approximately 30 minutes from Yellowknife. Onsite, there is a helicopter pad, as well as an airstrip for fixed-wing aircraft to land.

There is a 40-person exploration camp onsite, as well as several exploration projects, including North T, South T, S Zone and R Zone, that are not incorporated in this Study nor the MRE. The North T project includes a small open pit from which a bulk sample was removed. The sites rely on diesel-generated power. The camp has Starlink internet service, and other camp amenities such as a kitchen, heating, and outhouses. The camp is used for exploration activities and was used while the North T trial pit was in operation. The North T area of the property includes an open pit, a dewatering pond, a large vehicle maintenance shed, a TOMRA ore sorter, and a cap and powder magazine.

The site is connected to the Great Slave Lake shoreline by a 5km-graded road from camp. This road leads to a natural shoreline, which can be used for loading and barging materials or equipment to and from the Tardiff Project.

Geology and Deposit Styles

The Tardiff deposit of the Tardiff Project is hosted near the top of a nepheline syenite intrusion, which is part of an anorogenic alkaline intrusive complex known as the Paleoproterozoic Blatchford Lake Igneous Complex. The rare earth element (REE) mineralization is hosted in hydrothermally-altered eudialyte syenite collectively referred to as the Upper and Basal zones, and the REE's are mainly contained in the minerals bastnaesite-(cerium [Ce]), synchysite-(Ce), parasite-(Ce), fergusonite-(yttrium [Y]), samarskite-(Y), allanite-(Ce), and monazite-(Ce). Niobium (Nb) mineralization occurs within the REE Mineral Resource and is predominantly hosted in ferrocolumbite and fergusonite-(Y).

There are multiple identified exploration zones (North T, South T, R zone, S Zone and Tardiff) within the mining leases of the Nechalacho Project. The Tardiff project currently only considers the Tardiff deposit, but it could expand to include the other geological zones with additional work. There is a defined geological subdivision between the predominantly LREO zone at the top (Tardiff, owned by Nechalacho Resources) and a mixture of light and heavy REO mineralization in the lower part (Nechalacho Basal Zone, owned by Avalon Advanced Materials). Tardiff is a polymetallic (REE, Nb, and zirconium [Zr]) deposit hosted by the Thor Lake Syenite. It is a large magmatic deposit with extensive overprinting alteration.

Mineral Resource Estimate

In December 2024, an MRE for the Tardiff deposit was updated and reported in accordance with the JORC Code (JORC 2012)[1]. The MRE was based on 484 diamond core drill holes, reported above a cut-off grade of 0.7% TREO, and includes reporting of neodymium (Nd_2O_3) and praseodymium (Pr_6O_{11}), a mixture of neodymium (Nd) and praseodymium (Pr; NdPr; Nd_2O_3 plus Pr_6O_{11}), and (niobium pentoxide (Nb_2O_5; Table 3).

[1] Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

Table 3: Tardiff Mineral Resource estimate, Total Rare Earth Oxide ≥0.7% and above 150RL

JORC Resource Classification	Tonnage	Average Grade (%)				Contained Oxide (kt)	
	Mt	TREO	Nd_2O_3	Pr_6O_{11}	Nb_2O_5	TREO	NdPr
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
Total	**192.7**	**1.31**	**0.26**	**0.07**	**0.30**	**2,523**	**636**

Notes:
≥ = greater than or equal to; % = percent; JORC = The Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy; kt = kilotonne; Mt = megatonne; Nb_2O_5 = niobium pentoxide; Nd_2O_3 = neodymium (III) oxide; NdPr = Nd_2O_3 + Pr_6O_{11}; Pr_6O_{11} = praseodymium oxide; TREO = total rare earth oxide
Due to effects of rounding, the total may not represent the sum of all components.
TREO (ppm) includes light rare earth oxides, namely lanthanum oxide (La_2O_3), cerium oxide (CeO_2), praseodymium oxide (Pr_6O_{11}), neodymium(III) oxide (Nd_2O_3), and samarium oxide (Sm_2O_3), as well as heavy rare earth oxides, namely terbium oxide (Tb_4O_7), dysprosium oxide (Dy_2O_3), holmium oxide (Ho_2O_3), erbium oxide (Er_2O_3), thulium oxide (Tm_2O_3), ytterbium oxide (Yb_2O_3), lutetium oxide (Lu_2O_3), europium oxide (Eu_2O_3), gadolinium oxide (Gd_2O_3), yttrium oxide (Y_2O_3).
Mineral resources are reported from blocks at or above the 150 m RL and within unconstrained optimized open-pit shell "Optimized_Pits_2_Pit_85_100tr/pt."
Revenue in cut-off grade calculation is attributable to Nd_2O_3 and Pr_6O_{11}.

Mineral Resources that are not Ore Reserves do not have demonstrated economic viability. The MRE features a total Resource tonnage (across all categories) of 192.7 Mt grading, 1.3% TREO, and 0.3% niobium pentoxide (Nb_2O_5), containing 2,523 kt TREO, including 636 kt of NdPr. The MRE is reported within an optimized open-pit shell using Studio NPVS from the mining software package Datamine Suite. The optimized pit shell was generated using a 45-degree maximum final pit wall, and a 150m RL lower pit limit.

The current MRE represents a significant increase in reported tonnes in the Indicated Mineral Resource category in comparison to the historical MRE completed in April 2024[2] (SLR 2024) and a decrease in reported tonnes in the Inferred Mineral Resource category. The MRE is now reported above a 0.7% TREO cut-off grade instead of a metal equivalent value, as previously used (April 2024).

REO mineralization domains were interpreted based on geological understanding of the deposit and using a lower TREO cut-off grade of 0.7%. A block model was constructed, and all blocks inside the mineralization domains were interpolated with the REO and Nb_2O_5 using ordinary kriging. TREO is calculated as the sum of all REO. Bulk density values were also interpolated based on 8,865 density measurements from competent diamond core.

The MRE was prepared by a Competent Person and classified in accordance with the JORC Code. The Competent Person classified the Tardiff Mineral Resource as Measured, Indicated, and Inferred, based on drill hole spacing, the quality assurance of the data, geological confidence in the continuity of grade, quality of the local block grade estimates, and quantity and quality of density measurement data.

The MRE is reported above a cut-off grade of 0.7% TREO, which is a break-even cut-off grade

[2] Vital Metals Ltd., ASX announcement, 4 April 2024

calculated using REO market prices at the date of the resource, and recoveries for the individual REOs. The MRE is reported within an optimized open-pit shell, which extends to the north and south beneath two lakes. The CPs are of the opinion that the Tardiff deposit is of sufficient grade, quantity, and coherence to have reasonable prospects for eventual economic extraction.

Mineral Resource Quality, Assurance and Quality Control, and Site Visit

The drill hole database supporting the current MRE has been thoroughly reviewed and verified by CPs David Williams and Paul Ténière. This process included a validation of data during geological modelling and an internal peer review conducted by ERM, which involved presentations to Vital Metals and ERM personnel.

The originating data that were reviewed includes the assay certificates, drill and core logging logs, standard and blanks check samples. Additionally, the hole collars surveys were compared with topographic survey information and satellite photographs. Detailed checks were performed on the quality assurance, looking at the process of collecting data as well as control security procedures for handling samples and comparing them against best practise. ERM verifies that the 2021 to 2023 database provided by Avalon is acceptable and that the drill hole database used for Mineral Resource Estimation is sufficiently robust and representative of the originally collected data, such as ALS Global certificates of standard samples or of field samples. When compared against original ALS Global certificates, a review showed there were minimal to no conversion errors, transcription errors, survey and location discrepancies, irregular values, or intercept intervals errors.

On 11 September 2024, CP Paul Ténière (P.Geo.) and ERM Principal Mining Engineer James Gardner (P.Eng.) in collaboration with Natalie Pietrzak-Renaud, then Vital Metals Vice President of Exploration, conducted a site visit to the Tardiff Project and its exploration camp. During the visit, the CP assessed mineralized intervals from Vital Metals' drilling programs between 2021 and 2023 and verified drill hole GPS collar coordinates. Eight quarter core check samples were collected for laboratory testing to ensure the consistency of REE mineralization grades with prior assay results. These samples were sent to Activation Laboratories Ltd. for analysis. The results confirmed REE presence and closely matched previous results from ALS Global. Gardner, alongside mining consultant Eric Vinet (P.Eng.), conducted a heliborne survey to document key infrastructure onsite and the site's general arrangement. This survey also addressed infrastructure components and logistics for proposed mining operations, including a barge transport link to the Hay River Marine Terminal, connected by rail to broader North American processing facilities.

Mining

The open pit mine design and production schedule are the result of conservative inputs. The primary drivers affecting technical direction for the open pit are:

- A conservative mine-scheduling approach, with approximately 32% of Inferred MRE tonnes into the design;
- The exclusion of Mineral Resources that are adjacent to the overlying fish-bearing Thor Lake and Long Lake. An environment offset plan is necessary for permitting in NWT (Environment Canada and NWT 2012);
- A production rate that considered offsite transportation logistics of a concentrate product and the capacity of barges and trains to and from the Hay River Terminal.

The preferred pit delivers a consistent daily production schedule of 14,000 tonnes of ore per day (tpd) or 3Mtpa. The annual barging schedule is an average of 56kt of concentrate for the

life-of-mine (LOM) of 11 years.

The mine operation and metallurgical facility have been both optimised to run on a seven-month operating season. This is scaled to match with the barge and tugboat equipment to run for a summer barging season of approximately 90 days. A standard contracted fleet of primary equipment is listed in Table 4. This operating strategy focuses on operational spending during the same time that concentrate is being shipped on Great Slave Lake. Additionally, it will reduce cost inefficiencies related to maintaining and operating the site for extended periods. Closing the Plant and camp during the coldest and darkest part of the year allows for a greater dependence on more cost-effective solar energy and batteries than traditional generators. The Project can be operated for a longer duration (10-12 months per year) if the scale is increased, however this would require additional capital cost and arguably a larger inventory of Measured and Indicated Resources to maintain a +10-year mine life.

Table 4: Primary equipment fleet

Activity	Equipment Name	Units
Loading	CAT 6030	2
Hauling	100-tonne truck	6
Drilling and blasting	Sandvik D75KX Rotary Blasthole Drill	3
Pushing	D11T Track-Type Tractor	2
Auxiliary	Grader	1

The mine schedule is generated from cut-backs within the optimized pit shell is as shown on Figure 2. The Mineral Resource tonnes are predominantly in the Indicated MRE category.

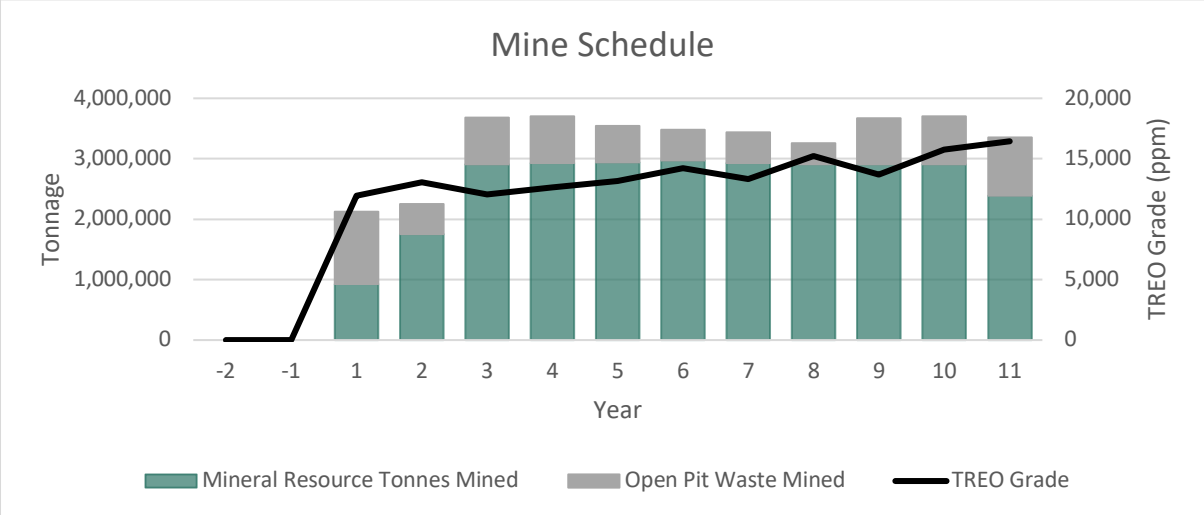

Figure 2: Mine Schedule

Notes:
ppm = parts per million; TREO = total rare earth oxide

Table 5: Mine Production Schedule (kt)

Year	Rock	Total Ore (In-Situ)	Strip Ratio	Total Waste	Measured	Indicated	Inferred	Total Ore (In-Situ)
1	2,138	938	1.28	1,200	307	469	162	938
2	2,266	1,767	0.28	499	534	1,157	76	1,767
3	3,715	2,938	0.26	777	598	1,535	805	2,938
4	3,729	2,956	0.26	773	491	1,712	753	2,956
5	3,569	2,965	0.20	604	659	1,504	802	2,965
6	3,511	3,001	0.17	510	753	1,457	791	3,001
7	3,462	2,956	0.17	506	172	1,377	1,407	2,956
8	3,287	2,942	0.12	345	151	1,756	1,035	2,942
9	3,698	2,940	0.26	758	370	964	1,606	2,940
10	3,727	2,939	0.27	788	818	1,094	1,027	2,939
11	3,380	2,412	0.40	968	509	1,131	772	2,412
Total	**36,482**	**28,755**		**7,727**	**5,362**	**14,157**	**9,236**	**28,755**

There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

The production schedule shown on Figure 2 will require the displacement of South Tardiff and North Tardiff Lakes. These Lakes are non-fish-bearing and shallow, as identified by Stantec Inc. (Stantec) in their baseline aquatics and fisheries Study (Stantec 2010). The schedule outlined in Figure 2 above does not displace Thor Lake and Long Lake, which were identified in the same Study as a habitat for fish. Fisheries and Oceans Canada (DFO) requires permits and offset plans for displacing fish from their habitat (Environment Canada and NWT, 2012). This option may be considered in future studies to extend the life of the project.

The hydrogeological and geotechnical understanding of the rock properties in the pit zone remain to be fully tested. According to the Stantec (2010) hydrogeology Study, there is a range of hydraulic conductivity of the shallow aquifer and deep aquifer. More testing is required to define how much water is expected to drain into the open pit, and to determine subsequent pumping requirements. Additionally, geotechnical logging performed onsite is at depth for Avalon's part of the project below the Project are not reasonably representative of rock mechanics characteristics of Tardiff. The production schedule above is generated with an assumed final wall angle not exceeding 45 degrees and standard dewatering requirements.

A conceptual design was developed for the dry stack where the dry material is encapsulated in waste rock material. The choice of dry stack as opposed to slurried tailings, mitigates geochemical problems with waste, as well as stability issues. (The University of Queensland, The University of Western Australia, Andrew Minns, O'Kane Consultants, Trajectory, GHD, Earth Systems, Gary Bentel, and Golder Associates 2016). The proposed dry-stack facility designed has the capacity to hold 12Mt of waste and 35Mt of dry-stack tailings.

Total REE concentrate production is 612kt over the initial 11-year mine life from low strip ratio, hard rock open pit mining. The production profile is delivered from ~19.5Mt of Measured and Indicated Resource (68% of feed) and ~9.2Mt of Inferred Resource (32% of feed).

Average annual mixed REE concentrate production is 56Kt/yr (dry tonnes) delivered from an onsite processing facility operating for seven months per year, with concentrate to be transported from site by barge in a three-month per year window.

The Study outcomes are to be further supported by anticipated additional geological, mining, processing test work and environmental studies – providing a pathway to project optimisation.

Geological and metallurgical understanding of Tardiff has continued to grow providing improved modelling of the controls on mineralisation related to alteration and structure – and helping to guide representative sample selection for metallurgical test work.

Mineral Processing and Metallurgical Testing

The objective of the most recent (Corem, August 2024) testing was to repeat the previous metallurgy results (SGS 2022) on lower LOM average grade samples from Tardiff. Vital Metals selected approximately 300kg of drill core typical of the early years of mining from the Tardiff deposit as a Phase 2 sample for metallurgical testing. This metallurgical sample was shipped to the Corem laboratory in Quebec City, Canada. The sample was selected from two drill holes within the 2023 drill program area and represents material anticipated for extraction from the projected open pit during the initial years of mining operations. The metallurgical sample composite head grade averaged 1.44% TREO and was used to test the SGS flowsheet developed in 2022, to recover TREO.

There have been multiple metallurgical test work phases since 2022, focused on REE recoveries. The current test work phases from 2022 to 2025 have focused on multi-stage processes to concentrate REEs. The test work began with ore sorting, crushing, grinding and sizing to achieve finer than 75 µm material followed by physical gravity separation to remove fine light tailings and gravity concentrate heavy minerals. The gravity concentrate was first processed through the Low-Intensity Magnetic Separator (LIMS), followed by the rougher flotation circuit, which included: four rougher stages to recover REEs, with the concentrate further cleaned by three cleaner flotation stages. The process produced final outputs of REE flotation concentrate and REE flotation tailings. Several exploratory flotation tests Niobium (Nb), specifically pyrochlore, were included in the most recent 2025 phase. However, additional test work is needed to develop an effective flotation strategy for other niobium-bearing minerals, such as columbite. Phase 1 Metallurgy work was performed by SGS in 2022 and reported in 2023, while Phase 2 metallurgical test work was performed in 2024 (Sample 1) and 2025 (Sample 2) by the Corem laboratory. The samples that were tested by both SGS and Corem both demonstrated successful TREO enrichment.

Vital Metals selected approximately 300 kilograms (kg) of drill core for metallurgical testing by Corem to determine the response of the Tardiff zone flowsheet developed by SGS for TREO recovery and to perform exploratory Nb_2O_5 flotation tests. The Phase 2 Tardiff Zone Sample 1 material was classified as hard and medium abrasive, with a TREO head assay grade of 1.44% to 1.47%. From the test results on Sample 1, a potential final concentrate from mixing the flotation cleaner concentrate produced from the gravity concentrate and tailings flotation would deliver a grade of 5.01% TREO and 61.9% global TREO recovery in 17.5% of the mass.

The Phase 2 Tardiff Zone Sample 2 was tested using the metallurgical flowsheet (Figure 2) designed to promote TREO flotation and explore Nb_2O_5 mineral flotation. Figure 3 shows the overall flotation scheme using Sample 2.

Five tests were conducted on Sample 2 using the flowsheet in Figure 3. Tests 1 and 2 were conducted without the Nb cleaner stage. Test 3 followed the full flotation scheme. Tests 4 and

5 included a LIMS step before REE flotation to remove magnetite from the sample. In this report, the results from Test 5 are presented for comparison with the higher-grade BF2 SGS sample, as shown in Table 6 and Figure 4.

This Scoping Study incorporates the calculated average and combined results from the higher-grade SGS (North Tardiff) feed, the lower-grade Corem (Tardiff) sample by blending both feeds 50:50 for mill processing. This delivered approximately 26.4% TREO concentrate product (Table 6).

Table 6: Average of Combined (BF2+ TEST 5) Sample

Stream	Weight %	TREO Grade %	TREO Global Recovery %
3rd Cleaner Concentrate Corem + 2nd Cleaner Concentrate SGS	3.5	**26.4**	45.1
2nd Cleaner Concentrate Corem+ 1st Cleaner Concentrate SGS	6.0	17.4	54.1
1st Cleaner Concentrate Corem + Rougher 1-5 SGS	7.4	14.7	56.2
Rougher Concentrate Corem + Rougher 1-6 SGS	12.5	9.4	61.1
Rougher Tailings Corem+ Rougher Tailings SGS	32.9	1.1	17.7
LIMS Concentrate Corem+ LIMS Concentrate SGS	1.8	1.1	0.7
Feed Corem + Feed SGS	47.2	3.3	79.5
Gravity concentrate	47.3	3.3	79.5
Gravity Tailings	52.75	0.7	20.6
Head Feed	100	2.0	100.0

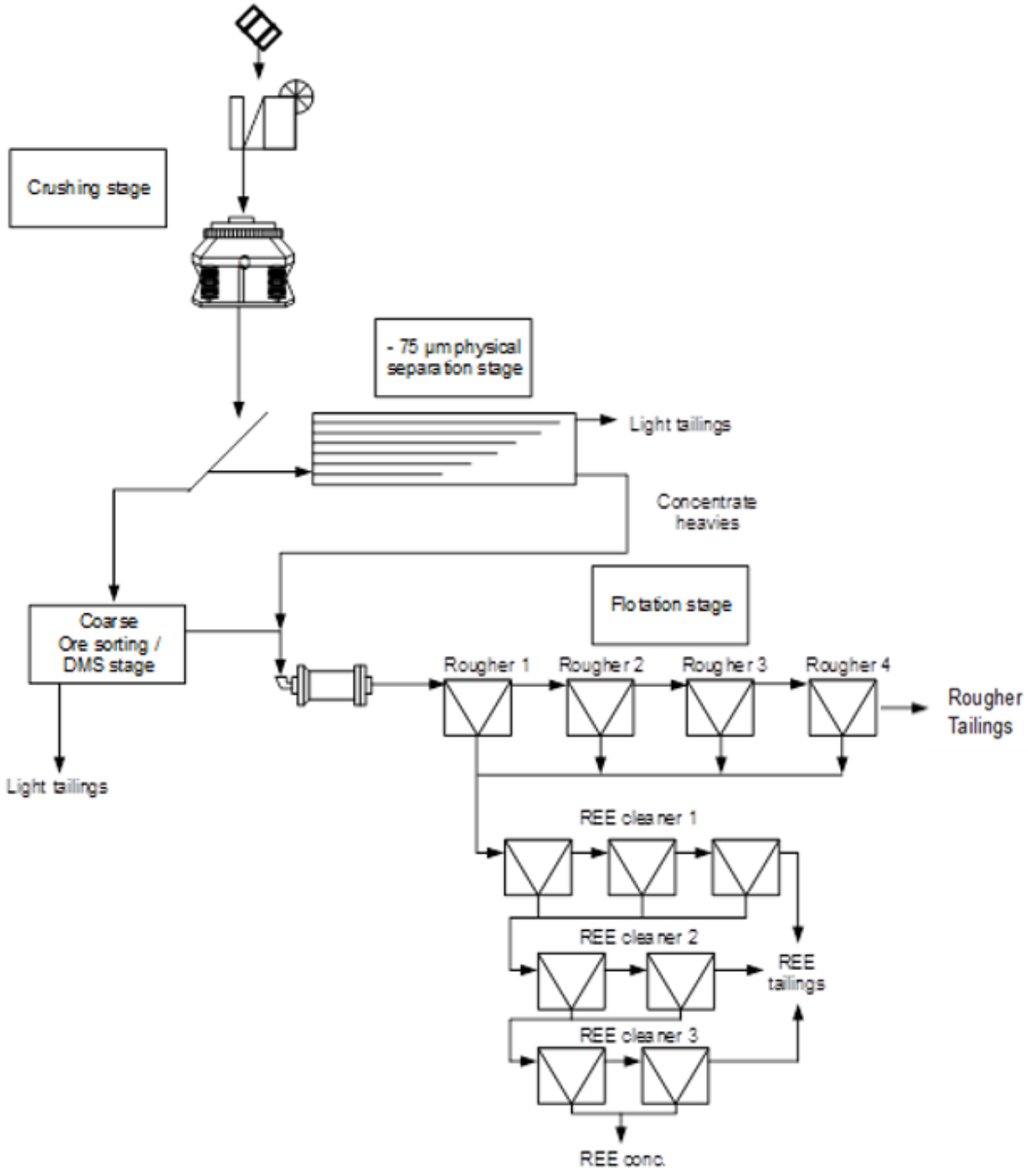

Figure 3: Overall flowsheet for Sample 2

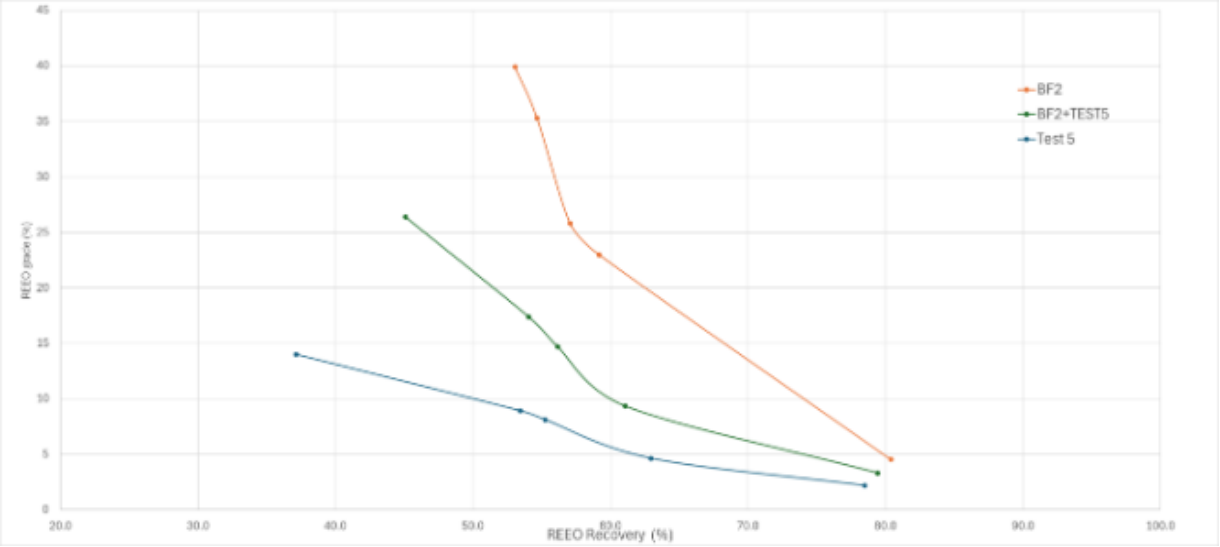

Figure 4: BF2, Test 5, and Average Comparison for Grade/Recovery

In Table 7, the tonnage per day (tpd) and TREO concentrate grade percentage were calculated based on ore dilution feed grade and plant design, while the mass pull and global recoveries are an average estimated from the testing by SGS (2022) and COREM (2025).

Table 7: Metallurgical test results

Category	Result
Tonnes per day (tpd)	14,000
TREO grade (%)	26.4
Mass pull (%)	3.5
Global recovery (%)	45.1
Neodymium Nd_2O_3 recovery (%)	46.4
Praseodymium Pr_6O_{11} recovery (%)	48.3
Terbium Tb_4O_7 recovery (%)	22.8
Dysprosium Dy_2O_3 recovery (%)	17.3
Niobium pentoxide Nb_2O_5 flotation recovery (%)	30.7

Notes:
% = percent; tpd = tonnes per day; TREO = total rare earth oxide

Onsite Infrastructure

There is current infrastructure in place at the project site including a 40-person camp, the North T pit, a waste rock dump, the main road, a tarmac, a helipad, an explosives magazine, and a water retention facility.

The Tardiff Project focuses on the development and management of infrastructure related to a mining operation and ore sorting operation to supply consistent feed grade to the processing plant. It emphasizes inert waste products used for road base and efficient water management. The North T pit can initially be used as a quarry, by providing waste rock material that can be repurposed for road construction. This is contingent upon geochemical studies confirming its non-acid-generating properties. After this has been completed, the North T pit may be used as a larger water retention pond for contact water prior to being pumped into the current water retention facility.

The general site arrangement is shown in Figure 5. Plans for a camp expansion and barge loading point are integral to the Project's infrastructure and are shown in Figure 6. The proposed camp site, which overlooks Great Slave Lake, will be equipped with a solar power system and battery storage to facilitate sustainable energy use, alongside traditional power sources. The barge loading point will facilitate the shipment of concentrate material, requiring a concentrate stockpile pad and efficient logistics management to handle the materials during the barging off-season. The barge loading point is connected to the mill via the main road and will be widened for two-way truck traffic. The locations of concentrate stockpile pad barge loading point, are also shown on Figure 5 on the northern shore of Great Slave Lake.

Offsite Infrastructure

The Tardiff Scoping Study focuses on the efficient transportation of 56kt (dry) of mineral concentrate annually. A specialized logistics plan for the Project was developed in collaboration with ERM. This plan emphasizes the use of barging from the Tardiff Project site to Hay River during a limited 90-day barging season. The Great Slave Lake operating season limits the amount of concentrate transported, and efforts to maximize shipping efficiency are considered. Vital Metals aims to establish community partnerships for barging capacity, avoiding the need for significant capital investment in its own shipping fleet.

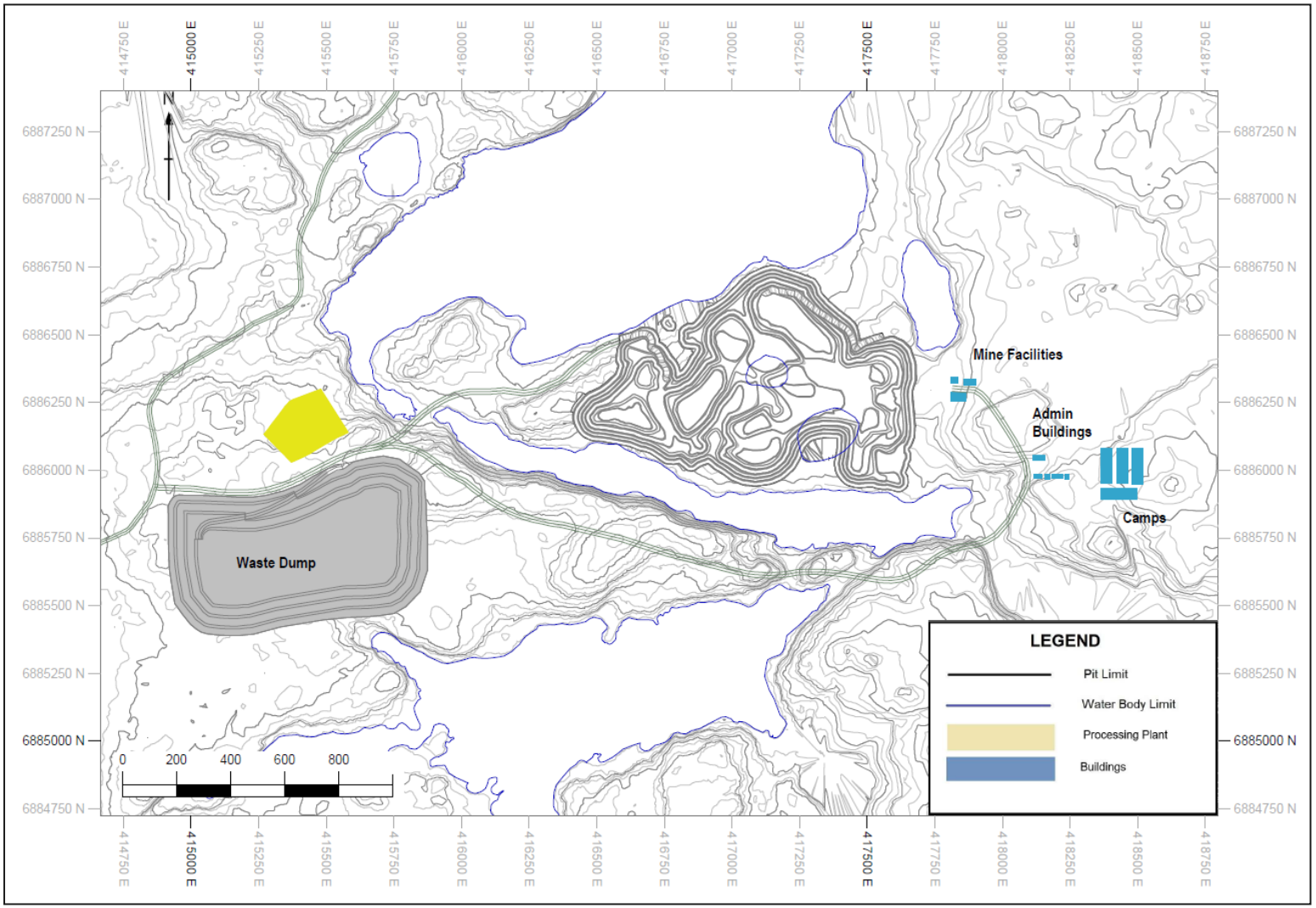

Figure 5: Site General Arrangement

Figure 6: Proposed camp expansion plans

To optimize logistics, the Project employs a detailed calculation of transport capacity based on the use of barges and tugboats on the Great Slave Lake. Each barge can carry up to 3,000 dry tonnes; 3300 wet tonnes with 10% moisture content. A tugboat can tow up to three barges, two of which will be used to transport bulk commodities, and one used for local communities for reprovisioning, potentially moving a maximum of 6,000 dry tonnes of bulk commodities per trip. Essentially, with each tugboat performing 10 roundtrips (30 round-trips possible at full utilisation) in a 90-day season, it is possible for one tugboat to easily move 56,000 dry tonnes of concentrate annually.

The Project's operational strategy hinges on the integration of marine transport logistics and rail connections through the Canadian National Railway Network (CN), which can facilitate broader distribution across North America. The working season for mining operations is tailored to the shipping capacity, with production phases designed to meet the seasonal limits. As the Project progresses, ongoing evaluations of logistical performance will be crucial for achieving operational goals while ensuring safety and compliance with regulations in the challenging Northern environment.

Capital and Operating Costs

The capital cost estimate for the Project is structured around several key assumptions regarding equipment ownership and infrastructure requirements. The plan specifies that mining equipment will not be purchased by the owner but will rather be provided by community or contractor resources during operation. The capital estimate includes the development of a solar/battery and traditional power plant, the establishment of a dry stack facility for waste management. The estimate does not include the ownership of tugboats and barges, which will be supplied by third-party providers. Additionally, the estimate assumes the rail head at Hay River will be reconnected with the rest of the CN Rail network and those necessary repairs to the CN rail line will be funded by CN or another third party.

The overall capital cost estimate is categorized as an AACE Class 5 estimate, which indicates a nominal accuracy of ±40%. This estimate is derived from a general assessment of the required infrastructure and informed by previous experience on other similar projects. For Tardiff, a contingency of 35% has been applied alongside an owner’s cost of 15% of all capital, excluding the plant capital. This owner's cost is crucial in ensuring that all anticipated expenses, including those related to project management and unforeseen circumstances, are adequately covered.

The total capital cost for the Tardiff Project is estimated at US$291 million or A$455 million capital provided in Table 8 which should be completed within 24 months.

Table 8: Capital Cost by Cost Centre

Category	A$ Millions	US$ Millions
Mining	$23	$14
Processing	$269	$172
Filter Press	$17	$11
Pumping	$5	$3
Transport	$6	$4
Site buildings	$7	$4
Camp	$14	$9
Owner's cost 15%	$9	$6
Contingency 35%	$106	$68
Total	**$455**	**$291**

Notes:
% = percent; A$ = Australian Dollar

Sustaining Capital is estimated at US$250,000 a year for the 11 years and an additional US$5 million in year 6 for replacement parts.

The Tardiff Project's operating expenses (Opex) estimate is structured around an AACE Class 5 estimate—a nominal accuracy of ±40%. This estimate outlines the annual operating costs associated with various aspects of the Project onsite, including mining, processing, general and administrative expenses, and camp services. It also includes an estimate for offsite concentrate transport by barge and on the CN rail network to a process facility. A contingency of 20% has been included to account for unforeseen expenses.

The total operating cost is estimated at US$24/tonne or US$10 million per month on average. The operating cost provided assumes that each tonne has cost applied at the time it is mined.

Table 9: Operating Costs

Category	US$ per DMT Feed	US$ Million per Month
Mining	$3.5	$1.5
Processing	$14.2	$6
Transport	$1	$0.4
Infrastructure and Support Services	$1.8	$0.8
Water Management	$0.6	$0.2
General administrative expenses	$2.7	$1.1
Total	**$24**	**$10**

Notes:
% = percent; US$ = United States dollar; DMT = dry metric tonne Numbers may not, due to rounding.

Market Studies and Contracts

Base case commodity price assumptions were calculated using peer studies released in the last 12 months (Meteoric, Brazilian Critical minerals and Defense Metals) and current Shanghai metals market prices. Nd and Pr are US$90 per kg, while terbium (Tb) is significantly higher at US$1321 per kg, and dysprosium (Dy) at US$337 per kg. These base case domestic prices are greater than current Shanghai metals market prices.

Increasing geopolitical pressures to develop an ex-Chinese supply chain makes prices more elastic, and prices are forecast to increase longer-term (Adamus Intelligence, 2025). The financial model was run using both the base case and the current market price case to show how robust the project economics are.

REEs are critical for electric motors, wind turbines, humanoid robots, high-tech applications, and defense technologies. As North America develops its rare earth supply chain, new processing facilities are being established, yet challenges remain in securing buyers for concentrates in North America. The ongoing investment in critical minerals aims to enhance domestic processing capabilities and address supply chain issues. The Canadian government has stated that it plans to focus on fostering the development of critical mineral supply chains. Vital Metals is a founding member of the Canadian Rare Earth Supply Chain Consortium which includes other industry and technical partners. The Consortium is in active conversations with various levels of Canadian federal, provincial, and territorial governments to provide funding to shorten the timelines from lab testing, through piloting to demonstration plant for the rare earth supply chain.

The Tardiff Scoping Study highlights production of key REEs such as Nd, Pr, Dy, and Tb, as well as Niobium. It assumes a 50% payability by a 3rd party mid-stream processing facility for rare earths. The market for Niobium reporting to the rare earth concentrate was not tested and this Study assumes 0% Nb is payable. This will be addressed in future studies. As the demand for green technology materials and renewable energy solutions increases, a reliable domestic rare earth supply chain becomes essential.

The North American supply chain is being bolstered by the establishment of new downstream processing facilities in the United States, notably MP Materials Corp. in California, Lynas Rare Earths Ltd. in Texas, Ucore Rare Metals, Inc. in Louisiana, and Energy Fuels in Utah. However, there are currently no commercial operational facilities in Canada. As the Tardiff Project advances, the company will need to find or build commercial facilities that can accommodate the proposed production rate of the Project of 56 kt concentrate per annum.

Investment in critical mineral processing is essential to secure the future of the North American supply chain. Recent announcements of Canadian government funding to enhance processing capabilities demonstrates a commitment to develop domestic production. As the market navigates supply chain challenges, vertical integration and off-take contracts are becoming more prevalent. This landscape suggests that a robust North American supply chain for REEs is not only vital for meeting current demands but also for ensuring future technological advancements and energy solutions.

Environmental Studies, Permitting, and Social Community Impact

Avalon Advanced Materials Inc. performed thorough baseline environmental studies conducted by Stantec, focussing on baseline conditions from 2010 and 2011. This foundational data will be reviewed carefully and updated as required in future feasibility studies to reflect any changes in site conditions, mine design, or regulatory requirements. Vital Metals is committed to adhering to all necessary approvals from the NWT and to engaging with local communities and First Nations to ensure transparency and collaboration throughout the process.

Vital Metals is actively working with community rightsholders to discuss potential operational collaborations, including the use of their airstrip and camp for remote transport and barging services. The Tardiff Project design considers NWT regulations, particularly in relation to permafrost and extreme climate conditions, which require specific infrastructure and safety measures. Waste management is a crucial element for future environmental impact assessment, with plans for geochemical assessments to evaluate the chemistry of the mineral project and enhance understanding for metallurgical process feed and byproducts. Engagement with local and Indigenous communities is a priority, emphasizing the Project's social and economic benefits.

Vital Metals aims to enhance its environmental, social, and governance (ESG) initiatives by building on the baseline studies completed, potentially including water quality monitoring, fisheries assessments, hydrology data collection, and other testing after a thorough gap analysis. By addressing these key areas, the Tardiff Project seeks to ensure sustainable management and mitigation of environmental impacts while fostering strong community relationships and complying with regulatory frameworks.

The Tardiff Project represents potential sustainable economic development in the NWT. It is characterized by a commitment to regulatory compliance and stakeholder engagement. By prioritizing collaboration with Indigenous communities and adhering to permitting requirements, Vital Metals aims to ensure that the Tardiff Project not only meets economic goals but also respects the cultural and environmental priorities of the local communities.

Vital Metals currently holds mineral tenure, permits and authorizations issued by the government of NWT’s regulatory bodies. These comprise MV2025-C0002, a 5-year Land Use Permit (LUP) renewed this year (expiry May 26, 2030) and MV2020L2-0010, a Water License that expires on November 29, 2027. These current permits and approvals support existing and ongoing plans. The LUP renewal process, which reviewed project plans, potential

bulk sampling, site expansions, and community engagement, took less than three months. While not all construction permits are secured yet, continued engagement with communities and authorities is expected to facilitate timely approvals. Many elements already have environmental assessment approval from when the project was owned by Avalon Advanced Materials. All permits are held by the NWT Rare Earths joint venture and are accessible to both Vital Metals and Avalon Advanced Materials.

Economic Analysis

The Tardiff Project's economic analysis outlines a financial model over an 11-year LOM based on projected annual revenues derived from mining physicals and market value assumptions, as well as royalties. Key market value assumptions include a conservative processing payability at 50% of market value for REEs and 0% payable for Nb. As North America develops its rare earth supply chain, new processing facilities are being established in the United States, which may result in improved payabilities. The exchange rate used is (1 Australian Dollar = 0.64 US Dollar). All figures in US$ unless otherwise stated.

The cost assumptions incorporate capital and operational costs alongside contingencies and owners' costs. These considerations were used to calculate the Project's net present value (NPV) and internal rate of return (IRR) as well as the payback period.

The Project's physical production details show an average output of 56kt of concentrate per year, at a grade of 26.4% TREO and 3.3% Nb_2O_5. The total project concentrate output is estimated to be 612kt dry metric tonnes (DMT) of concentrate, containing 31.7kt of Nd, 9.1kt of Pr, 0.6kt of Dy, 0.2kt of Tb over the initial 11-year life of mine. The estimated concentrate production is based on metallurgical recovery rates being applied to the mine production schedule plus ore sorting operation, and a yield of 3.5% weight of feed to concentrate.

The capital costs are estimated at A$455 million or US$291 million, while operating costs are projected to be on average US$24/tonne mill feed or US$10 million month on average for the seven-month production season.

The Scoping Study has AACE Class 5 estimate with nominal accuracy of ±40% as well as scientific assumptions and does not confirm a viable economic development case at this point and is inadequate to support an Ore Reserve classification.

Key profit outputs are as follows (operating profit at steady state):

Table 10: Key Profit Outputs

Category	Base Case	SMM
Operating Profit Margin (US$ Million)	$175-250 pa	$125-175 pa
Operating Profit Margin (%)	75%-85%	65%-80%
Free cash Flow (US$ Billion)	$1.6	$0.95
Free cash flow (A$ Billion)	$2.5	$1.45

Base case commodity price assumptions were guided by a combination of market expert forecasters (Adamas Intelligence, Project Blue, Argus Media, Fastmarkets) along with peer studies released in the last 12 months (Meteoric Resources, Brazilian Critical Minerals and

Defense Metals) and current Shanghai Metals Market (SMM) prices. Nd and Pr are US$90 per kg in the base case financial model, while terbium (Tb) is significantly higher at US$1321 per kg, and dysprosium (Dy) at US$337 per kg. Vital Metals has utilised Industry forecasts for 2030–2040 which indicate that magnet rare earth demand will accelerate, creating persistent supply shortages and upward price pressure for these key REEs.

Table 11: Key Rare Earth Element Prices by Base Case and Current Shanghai Metals Market

Rare Earth Oxide	Base Case (US$/kg)	SMM (US$/kg)
Pr_6O_{11}	$90	$60
Nd_2O_3	$90	$60
Tb_4O_7	$1,321	$770
Dy_2O_3	$337	$225

Increasing geopolitical pressures to develop an ex-Chinese supply chain make REE demand more inelastic (buyers care less about price and more about availability), and prices are forecast to increase longer-term (Adamas Intelligence, 2025).

The US Department of Defence signed, in July 2025, a 10-year offtake agreement with US-based MP Materials to establish a floor price of US$110 per kg of NdPr to accelerate American supply chain independence. This new price set, by the DoD, is almost double the current SMM price for these commodities and Adamas calls this a “new center of gravity” for global pricing.

Table 12: Rare Earth Price Forecasts by Element and Source

Element	2025 Price Forecast	2030 Price Forecast	2040 Price Forecast	Source	Notes
NdPr Oxide	$US50-US$100/kg	~US$200/kg	~US$300 - US$350/kg	Adamas Intelligence	Driven by EVs, wind turbines, robotics; US DoD floor price at US$110/kg
	<US$100/kg	US$75-US$105/kg	-	Project Blue	Price band needed to support non-Chinese production
Dysprosium Oxide	US$220-US$280/kg	~US$300/kg	~US$400 - US$450/kg	Fastmarkets	Supply risks due to Myanmar disruptions; demand from high-temp magnets
Terbium Oxide	US$730-US$795/kg	~US$850/kg	~US$1,000/kg	Fastmarkets	Used in green tech and electronics; tight supply
Magnet REOs (Total)	~US$10.8B market value	~US$30B+	~US$56.7B market value	Adamas Intelligence	Market expected to grow 5x by 2040; CAGR of 3.3-5.2% for prices

The financial model was run using both the base case and the current market price case to test how robust the project economics are. Although there is currently clear upward pressure on rare earth commodity prices outside of China, it does not mean that those prices will remain for the long term. Base case and current SMM price assumptions used in the financial model are shown in Table 11 and sensitivities are shown in Table 13.

The advancement of the Project has been supported by studies undertaken by appropriately qualified and experienced consultants and subject matter experts. Study metrics include those set out in Table 1.

The Net Present Value (NPV) Base Case for this Study uses an 8% discount rate over the 11-year LOM, the pretax cashflow is US$776 million, with an internal rate of return (IRR) of 32% pretax. After applying the NWT tax, federal tax, and royalites, the post-tax discounted cash flow is US$445 million and the IRR is reduced to 25.5% (Table 12), the payback occurs in Year 4. The base case assumes neodymium (Nd) and praseodymium (Pr) prices of US$90/kg each. It also assumes terbium (Tb) is US$1322/kg and dysprosium (Dy) is US$338/kg and that niobium isn't payable.

Table 13: Net Present Value and Internal Rate of Return sensitivity (Post-tax)

Revenue	Post-tax NPV (US$M)	Opex	Post-tax NPV (US$M)	Capex	Post-tax NPV (US$M)	Payable	Post-tax NPV (US$M)
-20%	243	-20%	506	-20%	497	60%	647
Base Case	445	Base Case	445	Base Case	445	Base Case	445
20%	647	20%	383	20%	393	40%	243

Revenue	Post-tax IRR	Opex	Post-tax IRR	Capex	Post-tax IRR	Payable	Post-tax IRR
-20%	18%	-20%	28%	-20%	30%	60%	32%
Base Case	25.5%	Base Case	25.5%	Base Case	25.5%	Base Case	25.5%
20%	32%	20%	23%	20%	22%	40%	18%

Notes:
% = percent; Capex = capital expenditures; IRR = internal rate of return; NPV = net present value; Opex = operating expenses

Testing the robustness of the project using current (June 2025) Shanghai metals market prices for neodymium (Nd) and praseodymium (Pr) of US$60/kg each, terbium (Tb) price of US$881 and dysprosium of US$225, the pretax cashflow is US$383 million, with an internal rate of return (IRR) of 22% pretax. After applying taxes and royalties the project would have a discounted cash flow of US$176 million and an IRR of 15.8%.

The analysis highlights the robustness of the project economics despite the inherent risks associated with fluctuating commodity prices. There is also a material assumption that there is demand enough to absorb the Tardiff Upper Zone concentrate. Regular sensitivity assessments will be essential as the Project develops to ensure that it aligns with market demands and maintains a pathway to sustainable profitability in a competitive industry

landscape. Continuing to advance the project by doing additional metallurgical test work (to potentially improve recovery and prove up payability for niobium) and resource upgrading (to extend the life of mine beyond the current 11 years) will play an essential role in realizing the Project's full potential.

Annual returns estimated for the project are set out as follows:

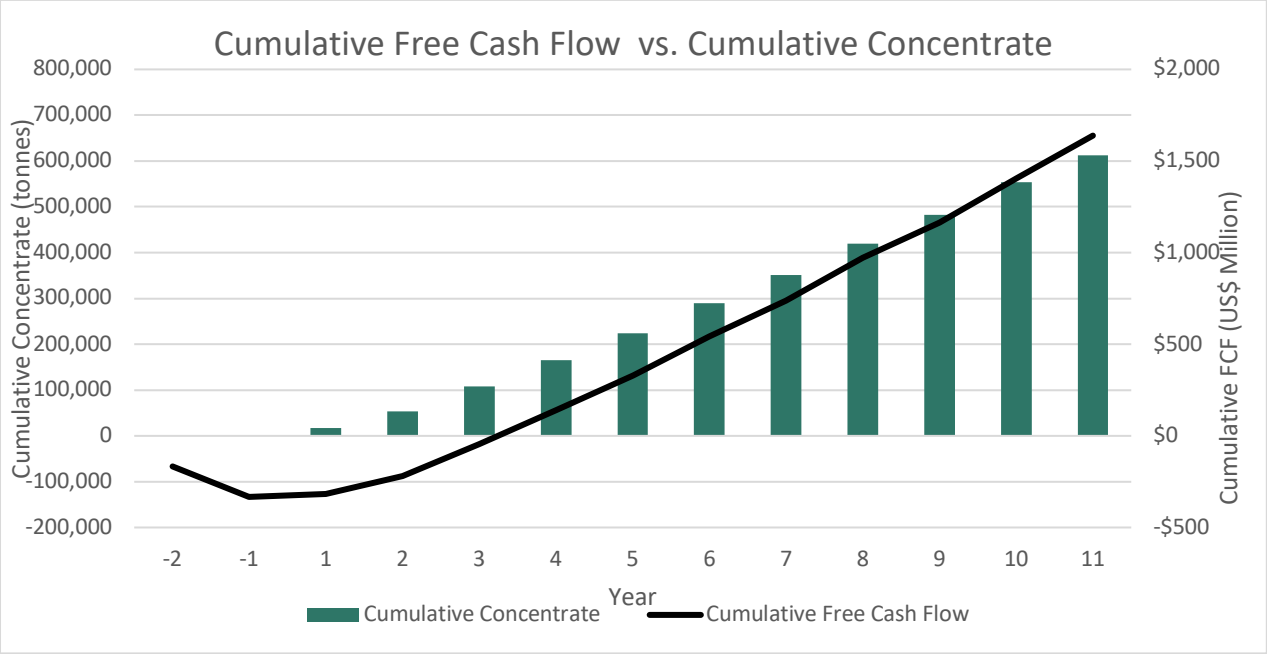

Figure 7: Annual and Cumulative REE Concentrate Production and Net Free Cash Flow

Funding

The project will need upwards of US$291 million in pre-production funding to complete the pre-production site clearing and preparation, new camp, road works, infrastructure building, processing facility, electricity generation facilities, and capital equipment purchases to be ready to start operations in 24 months. The first and most common source of funding for mining projects is straight equity. There is the possibility of selling some material that has been stockpiled on site and the Canadian government, led by the Export Development Canada, has offered significant funding to similar projects. Vital Metals and the Canadian Rare Earth Supply Chain Consortium are meeting with The Ministry of Innovation, Science and Economic Development (ISED) and The Ministry of Natural Resources Canada (NRCan) in the coming months in order to keep advancing this funding prospect. The Company is hopeful to have advanced conversations to a conclusion by mid-next year.

There are also options to have processing plants that engineering firms will build, own, and operate for a portion of the economics as well as options to sign offtake agreements, with Vital Metals recently approached by two parties (and confidentiality agreements signed) to send samples to be analysed to advance discussions towards potential offtake agreements. Further, equity or debt funding or selling some streaming revenues to certain funds is also possible. Although there are many potential funding options available there is no guarantee they will be available when they are necessary.

Identified Risks

The Project financial model has inputs of production and financial metrics based on assumptions, many of which the company cannot directly influence or control. The Company believes it has taken a balanced and fair assessment of these risks. Below is a list of the risks that were contemplated in the financial model: REE Commodity Pricing; Marketing and Offtake Risk for REE Concentrates; Exchange Rate C$/US$ fluctuations; Government Environmental, Health and Safety, and regulatory changes; inflation risk to Capex and Opex; Natural Disasters and Climate Change Impact; Community and Stakeholder Risk; Exploration and Mineral Resource risk of lower conversion from inferred; Project Construction and Execution risk.

The Project is remote and susceptible to weather-impacted delays and disruptions for transport of product and inbound supplies, equipment and consumables.

Key Risks include the following:

1. ***Commodity Prices***

Base case commodity price assumptions were calculated using peer studies released in the last 12 months (Meteoric, Brazilian Critical minerals and Defense Metals) and current Shanghai metals market prices. Vital Metals believes that these assumptions are a reasonable representation of pricing. There is a risk that commodity prices could move to adversely affect project economics. The sensitivity analysis section shows that the project remains robust over a +20% / -20% fluctuation in revenue.

2. ***Metallurgical Recovery***

During the work program, specific metallurgical reports were completed by specialist consultant groups. The REE recovery data from this test work directly informs the production and economic modelling of the Tardiff project. Vital Metals believes these are reasonable assumptions. However, it has been identified that the Company will undertake further metallurgical test work to further enhance REE recoveries to concentrate and to increase concentrate grade, as well as to improve recoveries of niobium adding value to the concentrate. Until further work is carried out there is a risk associated with the metallurgical recovery assumption.

3. ***Funding***

The Study assumes that Vital Metals obtains funding to; (a) progress the project to a development decision; and (b) construct the project. There is no certainty that this funding will be available to Vital Metals in a timely manner for the project.

Future Targets for Positive Economic outcomes

This Study defines a robust project with compelling economics, also highlighting many opportunities to reduce risk and further enhance the Project returns to its owners, through the completion of additional technical work. ERM recommends that Vital Metals proceeds to complete a Pre-Feasibility Study (“PFS”).

A PFS will aim to determine whether a proposed mining project at Tardiff is technically and economically viable before committing additional resources to a full Feasibility Study or construction. The PFS will:

- **Identify the best development option**: Further evaluation and optimisation of mining methods, mining sequencing, processing techniques, and infrastructure layouts to select a “best case” for further development.
- **Estimate costs and returns**: Better definition of estimates of capital and operating costs, as well as potential revenues, with an accuracy of about ±25%.
- **Assess risks and challenges**: Definition of potential environmental, social, technical, and regulatory hurdles that could impact the project, with proposed mitigation strategies.
- **Support investment decisions**: The results will help justify whether to invest more into detailed studies, permitting, and eventual construction.
- **Establish a REE Market:** Engagement with potential offtake groups or partners to develop relationships to increase appetite for offtake agreements for concentrate within North America and potentially build a Canadian Rare Earth Supply Chain that would be able to absorb that concentrate.

Reliance on Other Experts

Experts and management within the Vital Metals organization have detailed their local and Indigenous community engagement plans in the Community and Sustainability section of the full Scoping Study report. Vital Metals’ plans and commitment to community engagement has been verified by the CPs through conversations with ERM during this Scoping Study.

Conclusions and Recommendations

This Scoping Study for Tardiff defines a robust project with compelling economics, also highlighting many opportunities to reduce risk and further enhance the Project returns to its owners, through the completion of additional technical work.

ERM recommends that Vital Metals proceeds to complete a Pre-Feasibility Study (“PFS”). A PFS will aim to determine whether a proposed mining project at Tardiff is technically and economically viable before committing additional resources to a full Feasibility Study or construction.

ERM recommends taking steps to enhance the Tardiff Project, focusing on improving niobium recovery, expanding the Mineral Resource Estimate, and transitioning from a mini pit to a multi-decade operation. Key suggestions include conducting more extensive metallurgical testing to optimize REE recovery and to complete variability metallurgical test work. Technical focus can be applied to refining pit designs through geotechnical and hydrogeological studies, which will inform water management and pit slope stability. Ongoing evaluations of engineered waste products such as dry stack tailings, waste rock, and water management are crucial to mitigate environmental impacts. A gap analysis of historical baseline environmental studies will help identify knowledge gaps that must be addressed for effective impact assessments and permitting processes. These efforts collectively contribute to a robust framework for the Project’s environmental compliance and success.

Trade-off studies are recommended to evaluate and assist with establishing preferred scenarios and to identify pathways for project improvement and planning. Trade-off studies

should address ESG factors, logistical and economic scenarios. Trade off Study outcomes should assist with outlining permitting and environmental assessment requirements, as well as determination of offsite scenarios for additional downstream processing.

The Scoping Study emphasizes the importance of supply chain partnerships, and the success of the Project hinges on it. The Project can produce significant quantities of TREO concentrate; however, the North American market or supply chain needs to be further developed. The emergence of new processing facilities downstream for REE processing is necessary for the project business plan. Also, fostering community collaboration for transport and other business opportunities is a priority so that the communities surrounding the Project benefit from its development in a sustainable manner.

To further develop the MRE of Tardiff, additional drilling is planned to enhance Resource confidence and increase reported tonnage in the Measured and Indicated categories, by converting much of the substantial Inferred Resource. Growing the resource confidence and size will extend the life-of-mine schedule and should improve the overall NPV and IRR.

The exploration of co-generation power plant options could provide independent energy solutions for both local and regional stakeholders, enhancing the overall sustainability of the Project.

The PFS will look to build improvements to the economic returns for the Project and will include further aspects not included in this Scoping Study. In addition to the four economic key rare earth elements recovered, the Tardiff concentrate contains considerable quantities of Zr and Nb, valuable elements in rare earth projects. Hydrometallurgical high temperature cracking, acidic or alkaline leaching test work has not yet been undertaken to explore the potential for Zr or Nb leaching from concentrate and should be investigated in future. Zr and Nb represent a potential additional revenue source. Optimizing Zr and Nb recovery would enhance the Tardiff Project's economic viability.

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

Contact
Lisa Riley
Managing Director and CEO
Vital Metals Limited
Phone: +1 (581) 624 4833
Email: lriley@vitalmetals.com

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 announcements reported previously and published on the ASX platform on 20 January 2025 and titled "MRE Delivers 56% increase in Measured and Indicated Resource". 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 that all material assumptions and technical parameters underpinning the

estimates in the original market announcements 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.

This announcement contains testwork results extracted from an ASX market announcement dated 9 June 2022, "Vital's North Tardiff Testwork Results Exceed Expectations" and reported in accordance with the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" ("2012 JORC Code"). Vital Metals confirms that it is not aware of any new information or data that materially affects the information included in the original ASX market announcement.

Competent Persons Statement

The information in this announcement that relates to the current Mineral Resource estimate is based on, and fairly reflects, information compiled by Mr David Williams and Mr Paul Teniere. Mr. David Williams (B. Sc. Hons) is a full-time employee of ERM and is a Member of the Australian Institute of Geoscientists (RPGeo). Mr. Paul Teniere, M.Sc., P.Geo. is the Owner and President of Teniere Geoconsulting Services and a Member of the Association of Professional Engineers & Geoscientists of New Brunswick (APEGNB) and Professional Engineers and Geoscientists of Newfoundland & Labrador (PEGNL), both considered recognized overseas professional organizations (ROPO) under JORC. Mr David Williams and Mr Paul Teniere are independent of Vital Metals and have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr David Williams and Mr Paul Teniere consent to the disclosure of the information in this announcement in the form and context in which it appears.

The information in this announcement that relates to Metallurgical Test Work Results is based on, and fairly represents, information and supporting documentation prepared by Corem, and reviewed and overseen by Richard Wagner. Richard Wagner is a Mining Engineer, with specialty in Mineral Processing, and a member of Professional Engineer Ontario, number 48460505, a Recognized Professional Organization has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration 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 (the JORC Code). Richard Wagner has reviewed the Metallurgical contents of this news release and consents to the inclusion in this announcement of results in the form and context in which they appear.

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.

JORC Code, 2012 Edition – Table 1 report – Nechalacho Upper Zone Metallurgy Test Work

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.*	• Samples collected and used for the scoping level metallurgy test work were whole core of typical rare earth oxide mineralisation representative of the Tardiff deposit. • Samples were collected from core available from holes drilled by Vital Metals in 2023. The core used was mineralogically typical of the rare earth mineralisation in the Tardiff deposit. • A total of 300 kg of core with typical rare earth minerlisation was collected and sent to Corem and homogenized and assayed grades of 1.44% TREO, 0.32% Nb2O5 and 2.38% ZrO2. Half of the core, 150kg of -40 +19 mm rock fragments were prepared for ore sorting tests and later recombined for other mineral processing tests. The products of the ore sorting material and the remaining 150 kg of material were used to evaluate the material's amenability for beneficiation using Wilfley table separation, Knelson Concentrator, magnetic, and flotation separation unit operations.
Drilling techniques	• *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).*	• All core used in the metallurgical test work was whole core.
Drill sample recovery	• *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*	• Vital noted good core recovery in the holes used in this testwork.

Criteria	JORC Code explanation	Commentary
	fine/coarse material.	
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Geological drill logs completed by an experienced professional geoscientist were produced to a standard to support a mineral resource estimation. • All the core used in the metallurgical test work was logged and photographed.
Sub-sampling techniques and sample preparation	• *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.*	• A total of 300 kg of core with typical rare earth mineralisation was collected and sent to Corem and homogenized with a TREO grade of 1.44% TREO, 0.32% Nb2O5 and 2.38% ZrO2. Of the 300 kg, 150 kg was manually hammered to reach the size of +19mm/-40mm rock fragments and was used for ore sorting tests. The remaining 150 kg was crushed in a jaw crusher until all material passed 19mm. The output of that material and the remaining 150 kg of material were used to evaluate the material's amenability for beneficiation including Wilfley table separation, Knelson Concentrator, magnetic separation, and flotation technologies. • The whole core was of sufficient size to enable the various test-work programs to be carried out.
Quality of assay data and laboratory tests	• *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.*	• The assay methods for the REE include lithium borate fusion followed by ICP-MS and are thus considered total.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *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.*	• The metallurgical test-work was reviewed by Richard Wagner and Mr Wagner is of the view the test work was done to a high standard. • Further test-work is to be carried out to enhance and verify the test work being reported on in this ASX release.
Location of data points	• *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.*	• The grid system used is UTM NAD83 Zone 12 N, currently the standard system used in the area. • All Vital drill holes have been surveyed by professional surveyors.
Data spacing and distribution	• *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.*	• Not applicable as exploration results are not reported
Orientation of data in relation to geological structure	• *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.*	• Work undertaken by COREM is of an initial scoping nature and further work is required and planned to provide further representative metallurgical characteristics.
Sample security	• *The measures taken to ensure sample security.*	• The 300kg sample sent to Corem was securely packaged.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• As the metallurgical test-work is only recent no audits have been carried out.

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	• *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.*	• Tardiff is located on Mining Lease NT-3178 registered to NWT rare Earths 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 Upper Zone (see Avalon News Release NR 19-04). On October 30, 2019, it was announced that Avalon received the full payment from Cheetah Resources Pty Ltd. for the near-surface resources on the Nechalacho rare earth elements property at Thor Lake (see Avalon News Release NR 19-04). On February 6, 2020, the completion of a co-ownership agreement was announced, under which Cheetah Resources Pty Ltd. acquired ownership of the near-surface resources on the property, including the Upper Zone, and a jointly-owned special purpose vehicle to hold and manage the permits and authorizations to operate at the site was created (see Avalon News Release NR 20-01). • 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	• *Acknowledgment and appraisal of exploration by other parties.*	• The historic resource development drilling was carried out by Avalon Materials Inc with the bulk of this drilling carried out between 2007 and 2013. • The geologist who supervised the historic work, J.C. Pedersen, P. Geo, is an experienced geologist in the rare earths field and is well known as a reliable geoscientist to the present parties. He also supervised the 2021 drilling program.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Tardiff deposit is a polymetallic (REE, Nb, Zr) deposit hosted by the Thor Lake Syenite. It is a large layered magmatic deposit. • REO mineralization in the Lake Zone is layered in separate zones of light rare earths at the top of the deposit (Upper Zone) and a mixture of light and heavy REO mineralisation in the lower part of the deposit (Basal Zone).

Criteria	JORC Code explanation	Commentary

Drill hole Information	• *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:*
	  ○ *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.*
		• Not applicable as exploration results are not reported.

Data aggregation methods	• *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.*	• Not applicable as exploration results are not reported.
Relationship between mineralisation widths and intercept lengths	• *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').*	• Not applicable as exploration results are not reported.

Criteria	JORC Code explanation	Commentary
Diagrams	• *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.*	• Not applicable as exploration results are not reported.
Balanced reporting	• *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.*	• The results of all metallurgical tests performed have been reported on. No results have been excluded.
Other substantive exploration data	• *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.*	• All metallurgical test work results are outlined in the text of this report.
Further work	• *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.*	• A larger more representative sample from the 2025-2026 drilling campaigns will go through a more detailed metallurgical program.