

# Defense Metals Pre-Pilot Hydrometallurgy Testing Yields 97.3% Rare Earth Element Extraction From Wicheada Flotation Concentrate

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VANCOUVER, Feb. 16, 2021 - [Defense Metals Corp.](#) ("Defense Metals") (TSX-V: DEFN) (OTCQB: DFMTF) (FSE: 35D) to announce that it has received additional pre-pilot hydrometallurgical test work utilizing high-grade rare earth element mineral concentrate produced during Defense Metals' highly successful 26-tonne flotation pilot-plant that yielded a mineral concentrate averaging 7.4% NdPr oxide (neodymium-praseodymium)<sup>1</sup>.

The road accessible Wicheada REE Property is located close to infrastructure approximately 80 kilometres northeast of George, British Columbia (BC). The Wicheada project has indicated mineral resources of 4,890,000 tonnes averaging 3.0% (Light Rare Earth Elements) and inferred mineral resources of 12,100,000 tonnes averaging 2.90% LREO<sup>2</sup>.

Highlights of the additional infill hydrometallurgical test results conducted at SGS Canada Inc. ("SGS") Lakefield Site are:

- Increased REE extraction from 91.5% to 97.3% from flotation concentrate (~75% from bulk sample feed) into a clean leach solution compared to initial testing<sup>3</sup> (CC-21, Table 1)
- Decreased REE losses via milder gangue leach compared to the base-case flowsheet<sup>[3]</sup>
- Simplification of flowsheet by removing re-grind step and reducing caustic dosage on re-crack (CC-20) yielded complete REE extraction of 95.8% from flotation concentrate (~74% from bulk sample feed)

Craig Taylor, CEO of Defense Metals, stated: "Our decision to conduct additional infill hydrometallurgical test-work has resulted in significant REE recovery gains approaching 100% REE extraction from the flotation concentrate. Perhaps more importantly, the additional testing has advanced the Wicheada REE separation flowsheet such that we are able to "tune" process variables (e.g. grind size, acid, and caustic concentrations) to achieve a balance of minimizing REE leach losses and maximizing impurity removal. This level of process control will de-risk our planned hydrometallurgical pilot plant and contribute to greater flexibility in the design of a future commercial-scale hydrometallurgical plant."

<sup>1</sup> See Defense Metals News Release dated September 23, 2020

<sup>2</sup> Technical Report on the Wicheada Property, British Columbia, effective June 27, 2020 and prepared by APEX Geoscience Ltd. (Steven J. Nicholls, B.A. Sc., MAIG and Kristopher J. Raffle, B.Sc., P.Geo) is available under [Defense Metals Corp.](#)'s profile on SEDAR ([www.sedar.com](http://www.sedar.com))

<sup>3</sup> See Defense Metals News Release dated February 18, 2020

Table 1. Comparison of 2019/2020 and 2021 Hydrometallurgical Nd Recoveries

Initial Bench Program (2019-2020)	Stage Extraction (Nd)	Nd Recovery from Bulk Sample Feed	Nd Recovery from Conc.
Ore			
Flotation Conc.	86%	85.7%	100%
Gangue Leach	8%		
Caustic Crack 1	100%		
Acid Leach 1	91%	71.7%	83.7%
Caustic Crack 2	100%		
Acid Leach 2	86%	77.8%	91.5%
Second Bench Program (2020-2021) CC21 Data Set	Stage Extraction (Nd)	Nd Recovery from Bulk Sample Feed	Nd Recovery from Conc.
Ore			
Flotation Conc.	77%	77.3%	100%
Gangue Leach	0%		
Caustic Crack 1	0%		
Acid Leach 1	89%	68.6%	88.7%
Caustic Crack 2	0%		
Acid Leach 2	76%	75.2%	97.3%

#### About the Wicheada REE Property

The 1,708 hectare Wicheada REE Property, located approximately 80 km northeast of the city of Prince George, British Columbia, is readily accessible by all-weather gravel roads and is nearby to infrastructure, including power transmission lines, the CN railway and major highways.

Geologically, the property is situated in the Foreland Belt and within the Rocky Mountain Trench, a major continental geologic feature. The Foreland Belt contains part of a large alkaline igneous province, stretching from the Canadian Cordillera to the southwestern United States, which includes several carbonatite and alkaline intrusive complexes hosting the Aley (niobium), Rock Canyon (REE), and Wicheada (REE) deposits.

#### Qualified Person

The scientific and technical information contained in this news release as it relates to the Wicheada REE Property has been reviewed and approved by Kristopher J. Raffle, P.Geo. (BC) Principal and Consultant of APEX Geoscience Ltd. of Edmonton, AB, a director of Defense Metals and a "Qualified Person" as defined in National Instrument 43-101 - Standards of Disclosure for Mineral Projects. Mr. Raffle verified the data disclosed which includes a review of the analytical and test data underlying the information and opinions contained therein.

#### Methodology and QA/QC

Hydrometallurgical product assays for neodymium was determined via lithium-borate fusion of a 0.5-gram

sample analyzed via wavelength dispersion X-ray fluorescence (WD-XRF). The remaining rare earth elements for the head sample were determined via 0.5-gram sodium-peroxide fusion multi-element ICP-MS.

The SGS analyses included a quality assurance / quality control (QA/QC) program including the insertion of rare earth element standard and blank samples. Defense Metals detected no significant QA/QC issues during review of the data. Defense Metals is not aware of any drilling, sampling, recovery or other factors that could materially affect the accuracy or reliability of the data referred to herein. SGS is an ISO/IEC 17025 and ISO9001:2015 accredited laboratory. SGS is independent of [Defense Metals Corp.](#) and the Qualified Person.

#### About Defense Metals Corp.

[Defense Metals Corp.](#) is a mineral exploration company focused on the acquisition of mineral deposits containing metals and elements commonly used in the electric power market, military, national security and the production of "GREEN" energy technologies, such as, high strength alloys and rare earth magnets. Defense Metals has an option to acquire 100% of the 1,708 hectare Wicheada Rare Earth Element Property located near Prince George, British Columbia, Canada. [Defense Metals Corp.](#) trades in Canada under the symbol "DEFN" on the TSX Venture Exchange, in the United States, under "DFMTF" on the OTCQB and in Germany on the Frankfurt Exchange under "35D".

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this news release.

#### Cautionary Statement Regarding "Forward-Looking" Information

This news release contains "forward-looking information or statements" within the meaning of applicable securities laws, which may include, without limitation, statements relating to the planned hydrometallurgical pilot plant and the expected outcomes therefrom, a future commercial-scale hydrometallurgical plant, plans for its Wicheada Property, the advancement and development of the Wicheada Property, the technical, financial and business prospects of the Company, its project and other matters. All statements in this news release, other than statements of historical facts, that address events or developments that the Company expects to occur, are forward-looking statements. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results may differ materially from those in the forward-looking statements. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which the Company will operate in the future, including the price of rare earth elements, the ability to achieve its goals, that general business and economic conditions will not change in a material adverse manner, that financing will be available if and when needed and on reasonable terms. Such forward-looking information reflects the Company's views with respect to future events and is subject to risks, uncertainties and assumptions, including those filed under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com). While such estimates and assumptions are considered reasonable by the management of the Company, they are inherently subject to significant business, economic, competitive and regulatory uncertainties and risks. Factors that could cause actual results to differ materially from those in forward looking statements include, but are not limited to, continued availability of capital and financing and general economic, market or business conditions, adverse weather conditions, failure to maintain or obtain all necessary government permits, approvals and authorizations, failure to maintain community acceptance (including First Nations), decrease in the price of rare earth elements, the impact of Covid-19 or other viruses and diseases on the Company's ability to operate increase in costs, litigation, and failure of counterparties to perform their contractual obligations. The Company does not undertake to update forward-looking statements or forward-looking information, except as required by law.

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