# Defense Metals Updated Beneficiation Results Confirm the Production of a High Grade Flotation Concentrate at High Recovery

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VANCOUVER, Oct. 10, 2023 - Defense Metals Corp. ("Defense Metals" or the "Company") (TSX-V:DEFN) (OTCQB:DFMTF) (FSE:35D) is extremely pleased to report the most recent results of the extensive comminution and beneficiation test work that has been conducted by SGS Canada Inc. in Lakefield, Ontario ("SGS") on variability samples from the Wicheeda Rare Earth deposit.

Craig Taylor, CEO of Defense Metals, stated: "Our recent results shows that the Wicheeda feedstock can be crushed, ground and floated to produce a rare earth flotation product with similar or better recoveries and grades to the top producers globally. Our project has many favorable conditions for success: mineralogy, metallurgy, infrastructure, and community collaboration further supporting a path to production."

Beneficiation Results

- A total of 90 open-circuit flotation tests, using 1 or 2 kg of feed, were conducted on seventeen individual variability samples, various composites and blends. Considering all open-circuit flotation tests, at a feed grade of 3% TREO (Total Rare Earth Oxide), the best fit line indicated 80% recovery to a 45% TREO concentrate. Closed circuit operations, as practised in flotation plants, can be expected to deliver higher recovery and grade.
- In addition to the smaller-scale tests, 29 bulk flotation tests using 10 or 12 kg charges were completed to both further optimize parameters and generate 16 kg of 46% TREO content with a recovery of 78% for use as feed for hydrometallurgical tests.
- Very favourable results were obtained in a locked cycle test on a deposit composite giving a recovery rate of 85% of the rare earths at a concentrate grade of 50.7% TREO.

The beneficiation tests were aimed at confirming the reagent suite and operating parameters developed in earlier testwork and in the 2020 flotation pilot plant operated on a 26t bulk sample. The variability samples responded well to the flowsheet and the selected reagent suite and operating regimes (temperature, density). Details of the testwork are provided below.

Comminution Results

- SMC and Bond comminution tests were complete on all variability samples. The recent work confirms, and significantly expands on, the data obtained during the 2020 pilot plant work.
- The data indicate that grinding energy will be relatively low, in particular in the upper portions of the deposit when the softer dolomitic carbonatite (DC) material, with a Bond ball mill work index of 9 kWh/t, is the majority of the potential mill feed.
- Autogenous or semi-autogenous grinding system followed by a ball mill will be very satisfactory for the Wicheeda comminution plant.

John Goode, Consulting Metallurgist to the Company, commented: "SGS has performed a very thorough investigation of the comminution and beneficiation characteristics of a wide variety of samples from the Wicheeda deposit. The new results are close to those reported earlier and used in previous studies. Grinding energy requirements have been shown to be relatively low and flotation recovery and concentrate grades are high and very favourable."

Methodology

The three key rare earth-bearing lithologies in the Wicheeda deposit are, (1) the higher-grade dolomite carbonatite ("DC") which makes up 73% of the deposit, (2) the xenolithic carbonatite ("XE") that represents 24% of the deposit, and (3) the syenite ("SYN"). Based on its near surface location, the DC material is expected to comprise the majority of the mill feed and the XE and SYN lithologies deeper in the deposit

mined later. The primary rare earths minerals are monazite, bastnäsite and synchysite/parisite.

The comminution and beneficiation tests were done at SGS by a team headed by Dr. Jing Liu, Senior Metallurgist. Test material comprised a 260 kg Master Composite and seventeen variability samples, each nominally 36 kg, prepared from drill core and representing the three main lithologies in the Wicheeda deposit. The variability samples were selected to cover the three dominant lithologies, a range of grades (1.1% to 4.5% TREO), depths (7 m to 221 m down-hole), and locations in the deposit, (for additional results on different grades and lithologies please see news release dated October 11, 2022 and February 14, 2023). Extensive mineralogy was completed on the samples and test products to better define the deposit and process results.

A total of 90 open-circuit flotation tests, using 1 or 2 kg of feed, were conducted on a DC composite, xenolithic and syenite composites, the individual variability samples, the Master Composite and various other composites and blends. At a feed grade of 3%, the best fit line indicates 80% recovery to a 45% TREO concentrate. Closed circuit operations, as in a flotation plant, would deliver higher recovery and grade. The lower-grade XE and SYN material that are expected to be encountered late in potential mine life delivered somewhat lower concentrate grades and recoveries.

Three locked-cycle tests were completed, with LCT-3 operated on 12 kg batches of a New Master Composite made up from all variability samples blended according to the lithology distribution. The flowsheet, illustrated in Figure 1, was operated over seven cycles and showed good stability. The feed grade to LCT-3 was 2.9% TREO and the concentrate assayed 50.7% TREO with a recovery of 85.4%.

Comminution test work was completed by SGS using standard Bond comminution tests and the SMC test which measures the competence of primary grinding mill feed. The SMC results were provided to JKTech for interpretation. The Bond ball mill work indices were 9, 11, and 13 kWh/t for the DC, XE, and SYN samples respectively. The SMC report categorized the DC samples as being very soft and the XE samples as medium.

Qualified Persons

The scientific and technical information contained in this news release, as it relates to the Wicheeda Rare Earth Element project, has been reviewed and approved by John Goode, P. Eng., and Kris Raffle, P.Geo., a director of the Company, both of whom are Qualified Persons as defined by National Instrument 43-101 and Mr. Goode has provided the technical information relating to metallurgy in this news release.

About the Wicheeda Rare Earth Element Project

Defense Metals 100% owned, 6,759-hectare (~16,702-acre) Wicheeda Project is located approximately 80 km northeast of the city of Prince George, British Columbia; population 77,000. The Wicheeda deposit is readily accessible by all-weather gravel roads and is near infrastructure, including hydropower transmission lines and gas pipelines. The nearby Canadian National Railway and major highways allow easy access to the deep-water port facilities at Prince Rupert, the closest major North American port to Asia.

About Defense Metals Corp.

Defense Metals Corp. is a mineral exploration and development company focused on the development of its 100% owned Wicheeda Rare Earth Element project 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".

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