

Monumental Minerals Corp. Completes Reconnaissance Exploration Program And Defines Drill Targets At The Jemi Heavy Rare Earth Element Project, Mexico

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Results Include 0.43% Total Rare Earth Oxide And 0.17% Heavy Rare Earth Oxide, with several sample results pending

VANCOUVER, Dec. 14, 2022 - [Monumental Minerals Corp.](#) ("Monumental" or the "Company") (TSXV: MNRL) (FSE: BE5) (OTCQB: MNMRF) is pleased to provide an update on exploration at the Jemi rare earth element (REE) project (the "Project") located in Coahuila, Mexico, about 40 km south of the Texas, USA border. Recent work has included mapping, lithogeochemistry, rock and stream sediment sampling.

A four-month exploration program was completed at Jemi from August 2022, with the objective to reduce the search space from approximately 800 hectares, as defined by an airborne radiometric and magnetic survey (see press release dated May 3, 2022), to the delineation of discrete drill targets. The program, which focused on the Jemi Dykes and Veladora North areas known to host peralkaline intrusion related REE mineralization, consisted of detailed geological mapping, regional stream sediment sampling, ground radiometric geophysical surveys, and lithogeochemical sampling.

To date, 37 whole-rock analytical results from rocks collected at the Jemi Dykes area have been received while results for 269 samples from Jemi Dykes and Veladora North areas are pending. Of the 37 samples, 11 (eleven) returned values greater than 0.15% total rare earth oxide (TREO¹), including 6 samples that returned values greater than 0.23% TREO¹ and up to 0.43% TREO¹ (22KRP004) (Table 1).

Heavy rare earth oxide (HREO²) values (include dysprosium (Dy) and terbium (Tb)), ranged between 1614 parts per million (ppm) and 39 ppm in peralkaline pegmatites, averaging 447 ppm. Six samples exceeded 680 ppm, including three that exceeded 830 ppm (Table 1).

Light rare earth oxides (LREO³) values including neodymium (Nd) and praseodymium (Pr), returned values up to 0.26% and 0.23%, with values in trend with HREO² concentrations suggesting similar REE-hosting phases in the peralkaline rock samples.

Dr. Jamil Sader, CEO and Director comments:

"Our exploration at the Jemi Dykes area of the Jemi Project has defined where Monumental will drill to delineate the rare earth, tantalum, and niobium bearing pegmatites. This program has de-risked the geological complexity and provides us with the confidence needed before moving to the next stage, which is drilling. We anticipate the pending results of analytical work will define further drill targets at the Veladora North area."

¹ Total Rare Earth Oxides (TREO) includes: La₂O₃, Ce₂O₃, Pr₂O₃, Nd₂O₃, Sm₂O₃, Eu₂O₃, Gd₂O₃, Tb₂O₃, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃.

² Heavy Rare Earth Oxides (HREO) includes: Eu₂O₃, Gd₂O₃, Tb₂O₃, Dy₂O₃, Ho₂O₃, Er₂O₃, Tm₂O₃, Yb₂O₃, Lu₂O₃, Y₂O₃.

³ Light Rare Earth Oxides (LREO) includes La₂O₃, Ce₂O₃, Pr₂O₃, Nd₂O₃, Sm₂O₃.

Rock samples with the highest REE content are those that are classified as peralkaline (sodium plus

potassium concentrations are greater than aluminum concentrations). In most hard rock HREE ore deposit mineral systems, rocks must be peralkaline in order for the crystallization of HREE bearing silicate minerals such as eudialyte to occur. Eudialyte is a highly complex Na, Ca, Fe/Mn, Zr silicate mineral that can contain up to 10% RE₂O₃ (enriched in HREEs), and 12% ZrO₂. Geological mapping has confirmed that samples with the highest TREO and HREO values are from pegmatitic bodies. Three-dimensional airborne magnetics modeling show that surface pegmatite bodies are spatially associated with a numerous larger magnetic anomalies at depth that may represent potential source intrusions (Figure 1). Specific drill locations will target these pegmatites.

In addition to being REE-mineralized, samples are also mineralized with respect to tantalum (Ta) and niobium (Nb). Laboratory determination of these critical elements in all samples from the Jemi project return values to 534 ppm Ta₂O₅ and greater than (>) 3576 ppm Nb₂O₅. Within the Jemi Dykes area specifically, laboratory determinations return values in 4 pegmatite samples that are greater than 68 ppm Ta₂O₅ and 919 ppm Nb₂O₅, and one sample that returned values of 170 ppm Ta₂O₅ and 2560 ppm Nb₂O₅. Concentrations of these elements meet the threshold to be considered potentially economically significant.

Rare Earth Element Applications

Because of their unusual physical and chemical properties, the REEs have diverse defense, energy, industrial, and military technology applications. Demand for REEs is expected to outstrip supply until at least 2030 dominantly due the increase in demand for neomagnets for EVs and other electric motors (e.g., wind turbines, water pumps). The four key REEs that represent 94% of the REE market by value are Nd, Pr, Dy, and Tb, all of which are enriched at Jemi. Neodymium-iron-boron magnets, which are the strongest known type of magnets, are used when space and weight are restrictions are present. The addition of HREEs terbium or dysprosium to magnets can double their optimal operating temperature from 80°C to 160°C. In addition, dysprosium with praseodymium increases a magnet's coercivity (the resistance of a magnetic material to change in magnetisation).

Methodology and QQA/QC

The analytical work reported on herein was performed by ALS Canada Ltd. (ALS) at Hermosillo, Mexico (sample preparation) and Vancouver, B.C. (ICP-MS fusion). ALS is an ISO-IEC 17025:2017 and ISO 9001:2015 accredited geoanalytical laboratory and is independent of Monumental Minerals and the QP. Rock samples were subject to crushing at a minimum of 70% passing 2 mm, followed by pulverizing of a 250-gram split to 85% passing 75 microns. A 0.1-gram sample pulp was then subject to multi-element ICP-MS analysis via lithium-borate fusion to determine individual REE content (ME-MS81). Monumental Minerals quality assurance/quality control (QA/QC) program for field rock samples includes the insertion of certified reference standards into the sample sequence to confirm the accuracy of the reported results. Monumental Minerals detected no significant QA/QC issues during review of the data, and is not aware of any sampling, or other factors that could materially affect the accuracy of the results.

Qualified Person

The scientific and technical information contained in this news release 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 the Company 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 sampling, analytical and test data underlying the information and opinions contained therein.

About Monumental Minerals Corp.

[Monumental Minerals Corp.](#) is a mineral exploration company focused on the acquisition, exploration, and development of mineral resource properties in the critical and electric metals sector. The Company's flagship asset is the Jemi HREE project located in Coahuila, Mexico near the Texas, USA border which the Company has an option to acquire 100% of the 3,650-hectare project. The Company has an option to acquire a 75% interest and title to the Laguna cesium-lithium brine project located in Chile and a 50.01% interest in the Salar De Turi lithium project in Chile.

On behalf of the Board of Directors,

/s/ "Jamil Sader"

Jamil Sader, Chief Executive Officer and Director

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Forward Looking Information

This news release contains "forward-looking information or statements" within the meaning of applicable securities laws, which may include, without limitation, the potential plans for the Company's projects, receipt of additional results from Jemi, the expected timing and completion of potential drilling at Jemi, other statements relating to the technical, financial and business prospects of the Company, its projects 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 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 metals, the ability to achieve its goals, that general business and economic conditions will not change in a material adverse manner and 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 the risks and uncertainties relating to the interpretation of exploration results, risks related to the inherent uncertainty of exploration and cost estimates and the potential for unexpected costs and expenses and those other risks filed under the Company's profile on SEDAR at 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, failure to secure personnel and equipment for work programs, adverse weather and climate conditions, risks relating to unanticipated operational difficulties (including failure of equipment or processes to operate in accordance with specifications or expectations, cost escalation, unavailability of materials and equipment, government action or delays in the receipt of government approvals, industrial disturbances or other job action, and unanticipated events related to health, safety and environmental matters), risks relating to inaccurate geological assumptions, failure to maintain all necessary government permits, approvals and authorizations, failure to obtain surface access agreements or understandings from local communities, land owners or indigenous groups, fluctuation in exchange rates, the impact of Covid-19 or other viruses and diseases on the Company's ability to operate, an inability to predict and counteract the effects of COVID-19 on the business of the Company, including but not limited to, the effects of COVID-19 on the price of commodities, capital market conditions, restriction on labour and international travel and supply chains, decrease in the price of rare earth elements, lithium, cesium and other metals, loss of key employees, consultants, or directors, failure to maintain community acceptance (including from the indigenous communities), 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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