



MONUMENTAL MINERALS CORP. PROVIDES EXPLORATION UPDATE AND DEFINES DRILL TARGETS AT THE JEMI HEAVY RARE EARTH ELEMENT PROJECT, MEXICO

Results Include 2.4% Total Rare Earth Oxide And 0.94% Heavy Rare Earth Oxide

News Release - Vancouver, British Columbia – February 23, 2023: Monumental Minerals Corp. (“**Monumental**” or the “**Company**”) (TSX-V: **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. Rock sampling across a broad area has discovered high grades of the critical magnet metals dysprosium (Dy) and terbium (Tb) and defined a series of high priority drill targets.

Four months of exploration has been completed at Jemi, with the objective to delineate discreet drill targets. Recent work consisted of detailed geological mapping, regional stream sediment sampling, ground radiometric geophysical surveys, and lithochemical sampling. Exploration focused on the Jemi Dykes and Veladora North areas, which host peralkaline intrusion related REE mineralization.

To date, 188 assays from rocks collected at Jemi Dykes and Veladora North have been received while results for 177 samples from Veladora North are pending. Of the 188 samples with assay results, over one third (76 samples) returned values greater than 0.15% total rare earth oxide (TREO¹), including 5 samples that returned values greater than 1.0% TREO¹ to a maximum value of 2.4% TREO¹ (sample number 22309) (**Table 1**). The average TREO for all samples is 0.21%, and a minimum value of 9 parts per million (ppm), which was returned in an iron-oxide/calcite vein.

Dysprosium oxide (Dy₂O₃) and terbium oxide (Tb₂O₃) in samples classified as peralkaline range between 959 ppm and 3 ppm; and 147 ppm and 0.6 ppm, respectively. The average concentration for Dy₂O₃ is 83 ppm; and the average for Tb₂O₃ is 13 ppm. Light rare earth oxides, namely neodymium oxide (Nd₂O₃) and praseodymium oxide (Pr₂O₃), return values that range between 3173 ppm and 19 ppm; and 824 ppm and 5.5 ppm, respectively. The average concentration for Nd₂O₃ is 359 ppm; and for Pr₂O₃ it is 103 ppm.

Heavy rare earth oxide (HREO²) concentration greater than the 75th percentile is 1062 ppm in peralkaline-classified rocks (31 samples), including ten that exceed 2500 ppm. These values are in trend with LREO³ concentrations and the ratio of HREO² to LREO³ is consistently on average 1:2, suggesting similar REE-hosting phases in the peralkaline rock samples.

Dr. Jamil Sader, CEO and Director comments:

“Mapping, sampling and geophysics at Jemi Dykes and Veladora North has resulted in the definition of a new previously unknown zone of mineralized dykes. Of most significance, we have discovered what we believe to be some of the highest grades of HREO, including the magnet metals dysprosium and terbium, of any rocks in North America. We anticipate having drill locations mapped out at both the Jemi Dykes and Veladora North areas before Q2 2023.”

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.

³Light 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 deposits, rocks must be peralkaline in order for HREE bearing silicate minerals such as eudialyte to crystallize. Eudialyte is the dominant REE host mineral at Jemi, that can contain up to 10% RE₂O₃ (enriched in HREEs), and 12% ZrO₂.

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 975 ppm Ta₂O₅ and greater than (>) 3576 ppm Nb₂O₅, with an average concentration of Ta₂O₅ of 60 ppm and Nb₂O₅ of 665 ppm.

At the Jemi Dykes area, the highest REE concentrations are from eudialyte +/- aegirine rich dykes that are clustered in an approximately 150 m wide; 1600 m long zone oriented parallel to the La Vasca intrusive complex (**Figure 1**). These mineralized dykes are commonly between 0.5 to 2 m in width, with the higher grade ones situated in the southern part of the survey area. Three-dimensional airborne magnetics modeling suggests that magma sources for the mineralized dykes are at a shallow depth (less than 300 m), and that they are spatially associated with the 150 m wide zone of mineralized dykes observed at the surface. These zones of favourable dyke geology, lithochemistry, and geophysics will be the focus of drilling.

SAMPLE_ID	Location	TREO (%)	HREO (ppm)	LREO (ppm)	Nd ₂ O ₃ (ppm)	Pr ₂ O ₃ (ppm)	Tb ₂ O ₃ (ppm)	Dy ₂ O ₃ (ppm)	Ta ₂ O ₅ (ppm)	Nb ₂ O ₅ (ppm)	Rock Type
22309	La Veladora	2.4	9406	14413	3173	824	147	959	976	>3578	Peralkaline
22313	La Veladora	1.5	6179	8437	2030	496	97	607	676	2948	Peralkaline
22350	La Veladora	1.1	3663	6873	1487	405	57	356	374	>3578	Peralkaline
22339	La Veladora	1.0	2455	7594	1324	406	38	234	198	2032	Peralkaline
22295	Jemi Dykes	1.0	3228	6791	1121	334	41	303	335	>3578	Peralkaline
22344	La Veladora	0.9	2791	6607	1271	364	42	269	252	2390	Peralkaline
22256	Jemi Dykes	0.9	2559	6696	1149	362	37	250	223	>3578	Peralkaline
22248	Jemi Dykes	0.8	3538	4919	938	270	48	337	460	>3578	Peralkaline
22265	Jemi Dykes	0.8	2665	5555	907	264	36	236	241	2962	Peralkaline
22335	La Veladora	0.8	2595	5465	1095	295	42	262	221	1175	Peralkaline
22278	Jemi Dykes	0.8	2380	5673	974	279	33	217	212	2583	Peralkaline
22252	Jemi Dykes	0.7	2553	4692	850	256	35	249	236	2762	Peralkaline
22392	La Veladora	0.7	1769	5305	963	281	26	169	211	3077	Peralkaline
22258	Jemi Dykes	0.7	2062	4836	828	236	28	181	187	3449	Peralkaline
22322	La Veladora	0.7	2325	4399	961	243	37	226	324	2655	Peralkaline

Table 1. Top 15 assay results for rare earth elements and other critical metals from the Jemi Dykes and Veladora North area of the Jemi Project. Rock grab samples are selective samples by nature and as such are not necessarily representative of the mineralization hosted across the Jemi Project.

Rare Earth Element Value and Applications for the Energy Transformation

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 in less than 2 years, and it is expected that there will be a shortage of the metals until at least 2030² - dominantly due the increase in demand for neomagnets for EV motors, as well as other types of electric motors (e.g., wind turbines, water pumps). 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,

² Macquarie Rare Earth Market Research, December 9, 2021



dysprosium with praseodymium increases a magnet’s coercivity (the resistance of a magnetic material to change in magnetisation).

The four key REEs represent 94% of the REE market by value (Nd, Pr, Dy, and Tb), all of which are enriched at Jemi. Concentrations of Nb and Ta also meet the threshold to be considered potentially economically significant (**Table 2**).

Oxide Metal	Nd ₂ O ₃	Pr ₂ O ₃	Tb ₂ O ₃	Dy ₂ O ₃	Nb ₂ O ₃	Ta ₂ O ₃
Current Spot Price (USD/kg)	\$117.42	\$104.46	\$2,081.73	\$364.49	\$43.50	\$250.00
Spot Price Source	Ginger International Trade & Investment Pt				Institut Seltene Erden	

Table 2. Current spot prices for oxide Nd/Pr/Dy/Tb, Nb, and Ta.

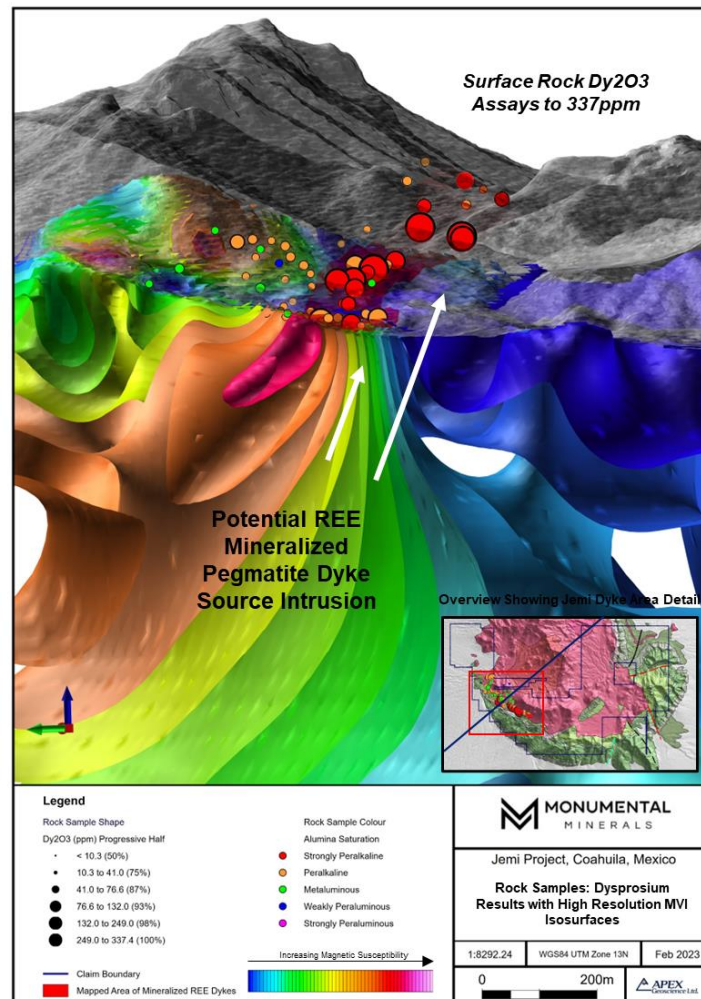


Figure 1. Map of 3D airborne geophysical anomaly (see Company’s news release dated May 3, 2022) interpreted to represent a magmatic intrusion at the Jemi Dykes area, which is likely the source of mineralized peralkaline dykes mapped at surface. Heavy rare earth oxides are as high as 3228 ppm in these rocks and present highly favourable drilling targets.



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Methodology and QA/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

Contact Information:

Email: jsader@monumentalminerals.com

Or

Max Sali, VP Corporate Development and Director

Email: msali@monumentalminerals.com

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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 assay 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.