

Volta Confirms Presence of High-Grade Gallium, Cesium, Tantalum and Lithium Mineralization at the Recently Acquired ZigZag Project in Ontario, Canada

Channel sample assays up to 78.1ppm Ga, 1,970ppm Cs, 457ppm Ta and 2.98% Li₂O at the Dempster East Pegmatite

Toronto, Ontario--(Newsfile Corp. - January 14, 2025) - **Volta Metals Ltd. (CSE: VLTA) (FSE: D0W) ("Volta" or the "Company")** is pleased to announce the results from the initial sampling of its recently acquired, wholly owned, ZigZag Property (the "Property"), that is contiguous to its Falcon West Lithium Project, located in the Thunder Bay Mining District of Northwest Ontario, Canada (**Figure 1**).

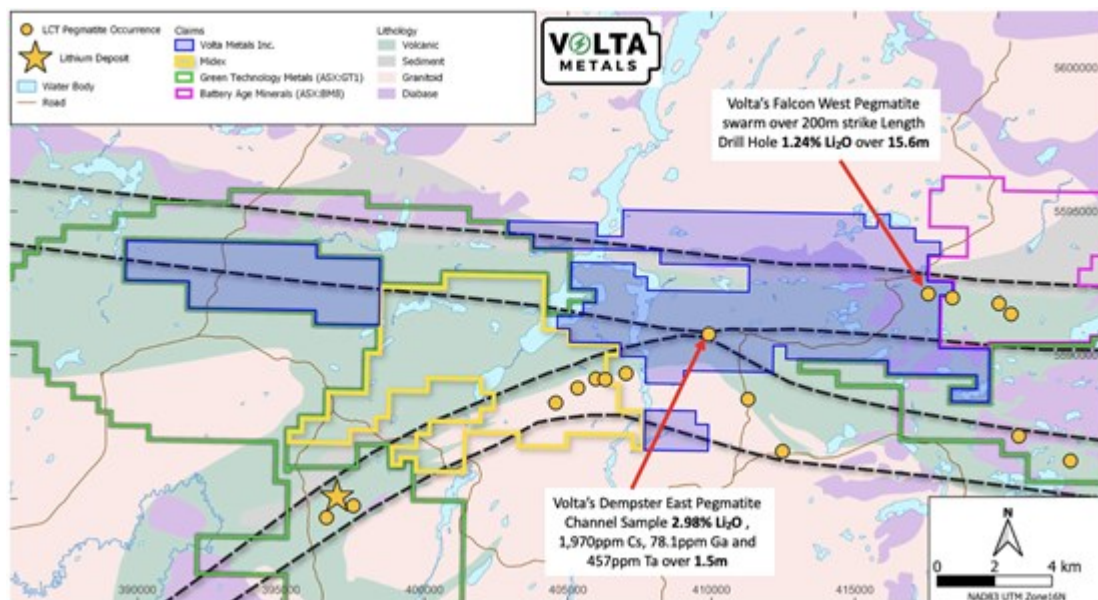


Figure 1. Dempster East Pegmatite and Falcon West Swarm mineralization trend in relation to the Company's large land package.

To view an enhanced version of this graphic, please visit:

https://images.newsfilecorp.com/files/9598/237073_9c94effd9443fb3d_001full.jpg

A total of 21 samples (six representative characterization samples and 15 channel samples) were collected immediately following the acquisition of the ZigZag Project in November 2024 (See Company's news release dated November 22, 2024). The assays from these samples confirm the presence of very high-grade Lithium, Tantalum, Cesium, Rubidium, and Gallium mineralization at the Dempster East pegmatite located 7 km west of the Company's Falcon West pegmatite swarm (**Table 1**).

Table 1. Channel composite and grab sample lab results from Dempster East pegmatite on Volta's ZigZag Property

	Li	Li ₂ O	Be	Cs	Rb	Nb	Ta	Ga	Sn	Nb/Ta	K/Rb
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Detection Limit	15		3	0.1	0.4	2.4	0.2	0.2	0.5		

C476301	Grab	5530	1.20	151	330	2910	60.7	78.8	63.1	86.9	0.77	9.6
C476302	Grab	6800	1.48	92	799	3980	32.8	239	50.5	58.8	0.14	9.0
C476303	Grab	10900	2.37	187	479	2650	43.2	110	57.7	106	0.39	11.7
C476304	Grab	15000	3.26	36	813	2340	30.8	216	67.4	208	0.14	10.3
C476305	Grab	6620	1.44	103	857	4540	41	361	43.9	197	0.11	8.8
C476306	Grab	2790	0.61	135	160	995	97.3	262	56.8	69.3	0.37	9.0
C476307	Channel	10700	2.33	148	573	2660	38.9	186	66.1	97.7	0.21	7.5
C476308	Channel	9560	2.08	143	468	2150	38.9	345	54.1	628	0.11	7.4
C476311	Channel	5580	1.21	231	404	3070	58.8	107	54.7	68.7	0.55	8.8
C476312	Channel	1020	0.22	210	287	1650	85	145	60.4	98.7	0.59	7.3
C476315	Channel	2920	0.63	271	802	4920	78.5	457	78.1	214	0.17	5.7
C476316	Channel	4470	0.97	216	844	3110	52.4	395	64	156	0.13	4.8
C476317	Channel	5480	1.19	59	1240	4610	43.5	421	57.6	152	0.10	4.8
C476318	Channel	13700	2.98	79	1130	3020	37.9	196	73.8	189	0.19	5.0
C476319	Channel	9140	1.99	188	746	1880	55	159	59.5	91.1	0.35	7.4
C476320	Channel	5150	1.12	112	206	3070	44.4	66.7	48.1	47.6	0.67	11.1
C476322	Channel	1130	0.25	66	1970	3550	30.5	153	32.5	74.3	0.20	5.4
MEAN		6852	1.49	143	712	3006	51	229	58	150	0.31	7.9

The Company's technical advisor, Dr. Fred Breaks, reviewed the data and commented, "*The initial bulk rock chemical data reveal significant pegmatite evolution that infers a transition from albite-spodumene-type into a complex-type pegmatite system. The elevated fractionation is highlighted by maximum values of Ta (457 ppm), Cs (1970 ppm), Rb (4920 ppm), Ga (78.1 ppm), and Sn (628 ppm), coupled with low, very evolved Nb/Ta and K/Rb ratios. Tantalum, a valuable specialty metal, ranges from 67 to 457 ppm. These data indicate their concentrations overlap the lower range of variation for these metals at the North Aubry and South Aubry pegmatites (Seymour Deposit 10.3Mt @ 1.03% Li₂O), situated 20 km to the southwest (Tindle, Selway, and Breaks 2002), and signify the potential presence of further evolved spodumene pegmatites proximal to the Dempster East pegmatite.*"

ZigZag Property Geological Setting

The ZigZag property is located within the Caribou Greenstone Belt, which trends east-northeast along the top of Lake Nipigon. The Caribou Lake Greenstone Belt extends eastward from the larger Onamon-Tashota Greenstone Belt, and lies along the northern margin of the Wabigoon Subprovince and associated granitoid intrusions.

Structurally, the ZigZag property is bisected by two major deep-seated crustal structural trends that are considered to control significant lithium pegmatite swarms at Falcon West and the Aubury Pegmatite systems (Figure 2). The property is unexplored, and the Company considers the potential for the discovery of Ta-rich Lithium pegmatites as good to excellent.

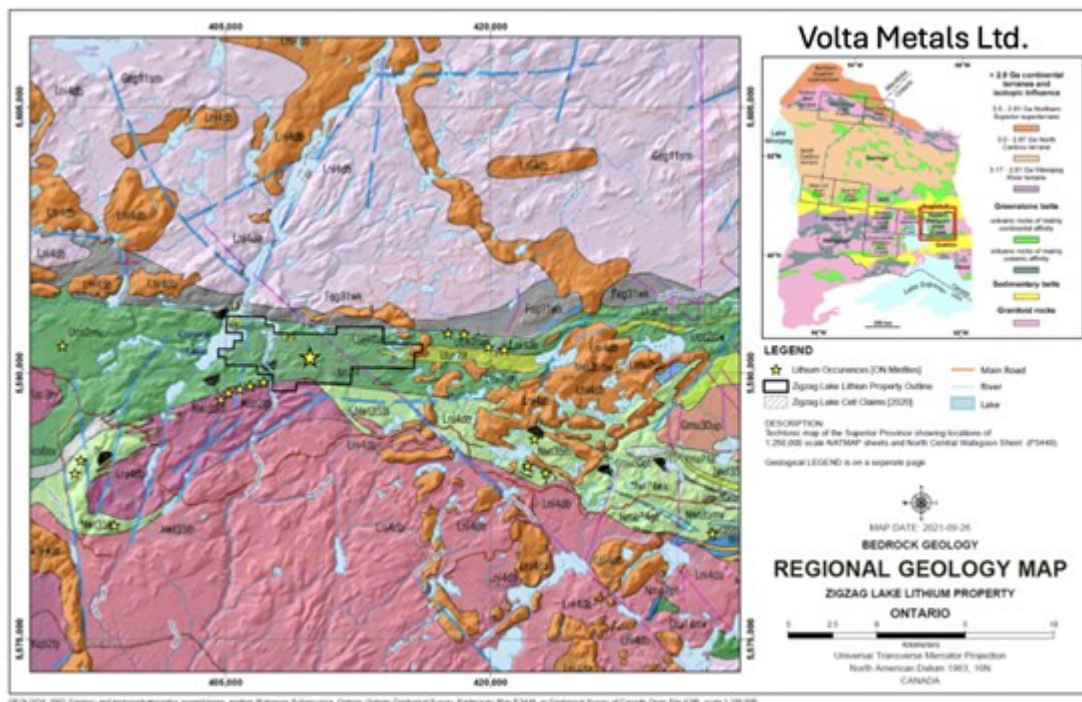


Figure 2. Regional Geology Map - ZigZag Property, NW Ontario

To view an enhanced version of this graphic, please visit:

https://images.newsfilecorp.com/files/9598/237073_9c94effd9443fb3d_002full.jpg

Dempster East Pegmatite

The Dempster East pegmatite was discovered in 1956 and initially explored by Dempster Explorations Ltd. The outcropping irregular pegmatite body has an inferred length of 56m. The dip of the pegmatite and its size are currently unknown. However, the outcrop lies on the side of a small hill, indicating the potential for a large size pegmatite body (**Photo 1**).

Six historic channel samples by Dempster Explorations Ltd. indicate an average grade of 1.88% Li_2O . The mineralogy comprises abundant potassic feldspar and fine-grained prismatic spodumene associated with quartz, albite, muscovite, accessory blue apatite, and black tourmaline. There is no record of any historical drilling.

The recent sampling by the Company indicates the presence of high grade rare elements such as Gallium, Tantalum, Cesium and Rubidium, in addition to high-grade Lithium. The data indicates that the Dempster East pegmatite is highly evolved, marking the transition from an albite-spodumene type to a complex type pegmatite system, as is the case with Green Technology Metals' North Aubry pegmatite deposit to the west.

The Dempster East pegmatite has not been fully exposed on surface. The next steps of exploration will include stripping, prospecting, mapping, structural and a geophysical study of the area.

ASSAY RESULTS

Lithium

The average Li_2O content in samples devoid of host rock enclaves is 1.49 wt.% Li_2O (range: 0.22 to 3.26 wt.%) which compares well with the historical average of 1.88 wt.% Li_2O .

Bulk rock analyses of the rare metals and fractionation indicator ratios (K/Rb and Nb/Ta) are presented in **Table 1**. A comparison of the Dempster East pegmatite with other lithium pegmatites in the Caribou Lake greenstone belt and elsewhere is given in **Table 2**. Calculation of the mean rare metal content for

the Dempster East pegmatite was undertaken by filtering out samples with obvious host rock contamination as evidenced by significantly higher Ca, Fe, and Mg contents, as marked by asterisks in **Table 1**.

The lithochemistry accrued from this early stage of exploration will greatly aid in continuing exploration of the larger mineralized system. The presence of more evolved pegmatites supports the exploration model that two pegmatites systems may coalesce in the larger land package, with significant discovery potential to the east of the Dempster East pegmatite, towards the Companies Falcon West property as well as to the southwest. The company plans to continue to explore these highly prospective areas and generate additional targets for initial discovery drill testing.

Table 2. Comparative data for Li, Cs, Rb, Be, Ta, Nb, and Ga and ratios K/Rb and Nb/Ta for the Dempster East pegmatite vs other lithium pegmatites from the Caribou Lake greenstone belt and elsewhere

	Lithium (ppm)		Beryllium (ppm)		Rubidium (ppm)		Cesium (ppm)		Gallium (ppm)		Niobium (ppm)		Tantalum (ppm)		K/Rb		Nb/Ta		n	Source
	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range		
Dempster East spodumene pegmatite	6852	1020-15000	143	36-271	3006	995-4920	712	160-1970	58	32.5-78.1	51.2	30.8-97.3	229	66.7-457	7.9	4.8-11.7	0.31	0.10-0.77	16	
Swole Lake complex-type, lepidolite-subtype pegmatite	615		272		843		41		41		77	327			21.1		0.23		1	1
North Aubry complex-type, spodumene-subtype Pegmatite	2296	12-15967	294	4-169	1894	34-10601	323	8-3284	75	37-247	396	9-9339	1197	47-10263	12.7	6-47.1	0.53	0.05-1.37	26	1
South Aubry complex-type, spodumene-subtype Pegmatite	2650	32-10140	186	13-411	1400	39-4310	268	19-916	42	31-46	36.2	24-72	97.6	7.4-300	13.2	12.8-13.3	0.63	0.12-1.44	5	1
AM albite-spodumene-type pegmatite, Falcon West (Volta Metals channel data)	5818	1560-7820	147	120-190	2576	2140-3220	210	118-267	58	47.9-68.1	64.1	53-73.8	65.6	29.7-79.4	8	7.7-9.0	1.3	0.4-2.0	7	
Tanco complex-type pegmatite, Manitoba (average)	3534		221		5300		4526		79		90		649		5.5		0.14		2	

n= number of samples

1. Tindle, A.G., Selway, J.B. and Breaks, F.W. 2006. Electron Microprobe and Bulk Rock and Mineral Compositions of Barren and Fertile Peraluminous Granitic Rocks and Rare-Element Pegmatites, North-Central and Northeastern Superior Province of Ontario, Miscellaneous Release Data 210.
2. Stilling, A. 1997. Bulk composition of the Tanco pegmatite at Bernic Lake, Manitoba, Canada. Unpublished MSc thesis, University of Manitoba, 76p.

Tantalum

Tantalum is significantly enriched in the Dempster East pegmatite. It has a mean value of 229 ppm and an overall range of 66.7 to 457 ppm, with 70% of analyses exceeding 100 ppm (**Table 1**). The Nb/Ta ratio has a mean upper continental crust average of 16 and reveals strong fractionation as ratios plunge to 0.10 - 0.67 (**Table 2**), which typically occurs in complex-type pegmatite systems such as the Tanco pegmatite deposit at Bernic Lake, Manitoba (**Table 2**).

As a reference, the average Ta at Greenbushes mine, Western Australia is 127ppm.

Cesium

The cesium contents of the Dempster East pegmatite are considerably elevated, with a mean of 712 ppm and a range of 160 to 1,970 ppm that infer a transition to a complex-type pegmatite system. Similar cesium values are documented from the adjacent North and South Aubry pegmatite deposits (323 and 268 ppm, respectively).

Furthermore, the mean cesium at Dempster East is considerably higher than the AM lithium pegmatite (210 ppm), 7km to the northeast that forms part of the Company's Falcon Lake pegmatite group, and supports an east-to-southwest direction of increasing fractionation for the ZigZag claim block. This supports previous data collected on Falcon West, that suggests the entire 7km unexplored structural

fairway has good to excellent potential to host increasingly evolved pegmatites, containing multi-element rare elements.

Rubidium

Rubidium is also enriched with a mean value of 3,006 ppm (ranging from 995 to 4,920 ppm) and broadly shows a positive correlation with cesium. A significant number of Rb anomalies (61%) exceed the 2,000 ppm level. The K/Rb ratio, a useful indicator of magmatic fractionation, has a mean of 8.3 in a restricted range of 4.1 to 11.7 that overlaps the average for the Tanco pegmatite deposit at 5.5 and the data population of the North Aubry pegmatite (**Table 2**).

Gallium

Gallium is enriched in all samples with a mean of 58 ppm and a range of 32.5 to 78.1 ppm.

Gallium, is a critical component in semiconductors, telecommunications, renewable energy sectors and may also be considered as a possible heat exchange medium in nuclear reactors. Canada and the U.S. rely on gallium for telecommunications, defense, and green energy. Gallium is also used in semiconductors, AI circuitry, radar and microchips.



Photo 1. Channel sampling along the Dempster East Pegmatite on the ZigZag Property

To view an enhanced version of this graphic, please visit:
https://images.newsfilecorp.com/files/9598/237073_photo1.jpg

Geopolitical Considerations:

On December 3, 2024, China announced an immediate ban on the export of multiple critical metals, including gallium, exacerbating supply chain challenges. These restrictions are part of a broader trade conflict over critical technologies. Countries like the U.S., Canada, and numerous European countries are ramping up efforts to develop domestic gallium and rare earth sources and processing capabilities to reduce reliance on China.

China currently accounts for 98% of worldwide primary low-purity gallium production.

Despite gallium's importance to today's and future technologies, the United States is reliant on imports for 100% of its supply of this avant-garde tech metal. Most of these supplies, come from China. Canada currently has partnerships for critical minerals with the U.K., U.S., Australia, and Japan (<https://www.canada.ca/en/campaign/critical-minerals-in-canada/our-critical-minerals-strategic-partnerships.html>).

For reference, the Codero Deposit in Nevada is one of the largest unmined primary gallium deposits in North America, and contains 15M tonnes at 47.7ppm, with a cut off grade at 30ppm.

Tantalum

In Canada, the Sinomine owned Tanco Mine in Manitoba, has the largest tantalum reserves in Canada, estimated reserves of 2.1M tonnes of ore grading 0.22% tantalum. The mine also has 7.3M tonnes of ore grading 2.76% lithium. Tantalum has not been mined in the U.S. since 1959.

The most important uses for tantalum are in electrolytic capacitors and corrosion-resistant chemical equipment. Tantalum capacitors have the highest capacitance per unit volume of any capacitors and are used extensively in miniaturized electrical circuitry.

Rubidium

Today most rubidium is obtained as a byproduct of lithium. Rubidium has a critical role in emerging technologies and its limited supply make it a valuable strategic resource in quantum research. Rubidium is also used in fiber optics night-vision technology and telecommunications.

Upcoming Events

The Company will be attending and exhibiting on site at the 2025 Prospectors & Developers Association of Canada event ("PDAC 2025") in Toronto, ON. Volta is exhibiting in the Investors Exchange from March 2-5, 2025 at booth number 2728.

Additionally, Volta is pleased to announce that the Company has been selected to present at the Investor Forum as part of the Electric Materials at PDAC 2025. More details for the presentations can be found at this link: <https://pdac.ca/convention-2025/programming-2025/corporate-presentation-forum-for-investors-2025/electric-materials-2-2025>.

For more information on PDAC 2025, please [click here](#).

Qualified Person

The technical content of this news release has been reviewed and approved by Andrew Tims, P.Geo., who is an independent Qualified Person (QP) as defined in National Instrument 43-101, Standards of Disclosure for Mineral Projects. The QP and the Company have not completed sufficient work to verify the historical information on the Properties, particularly regarding historical exploration, neighbouring companies, and government geological work.

For more information about the Company, view Volta's website at www.voltametals.ca.

ABOUT VOLTA METALS LTD.

Volta Metals Ltd. (CSE: VLTA) is a mineral exploration company focused on lithium, cesium, and tantalum and is based in Toronto, Ontario. It is currently exploring a critical minerals portfolio of lithium, cesium, tantalum and gallium projects in Northwestern Ontario, considered one of the most prolific emerging hard-rock lithium districts in the world. To find out more about Volta and its flagship Falcon West/ZigZag Project, please visit www.voltametals.ca.

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