TROY MINERALS

Uncovering a potentially large-scale U.S. based Vanadium-Titanium property to help fuel the American energy transition

Investor Presentation Q2 2024

CSE: **TROY**

OTC: **TROYF**

FSE: **VJ3**

DISCLAIMER

Certain statements contained in this presentation constitute “forward-looking statements” within the meaning of applicable Canadian securities legislation. Such forward-looking statements herein may include but are not limited to: interpretations of exploration results; strategic plans and expectations for the development of the Company’s properties; costs, financial information including budgets, metal price assumptions, cash flow forecasts, internal rate of return, projected capital and operating costs; technical results and assumptions including metal recoveries, mine life and production rates; and intended use of proceeds.

Such forward-looking statements and related information are based on a number of assumptions which may prove to be incorrect. Assumptions have been made regarding, among other things: conditions in general economic and financial markets; availability to realize historical technical data and develop and finance the projects; accuracy of the interpretations and assumptions used; availability of mining or exploration equipment; availability of skilled labour; timing and amount of capital expenditures; laboratory and other related services are available and perform as contracted; effects of regulation by governmental agencies; and delays caused by the Covid-19 pandemic and any related local or international protocols and travel restrictions.

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No securities commission or regulatory authority has reviewed the accuracy or adequacy of the information presented.
The reader is cautioned that when reference to any mineral deposit or historic or existing mining district is made in this presentation, this is to help place the properties into geologic context and is for reference purposes only. There is no evidence to date that similar mineral resources occur on Trpy Minerals’ properties.

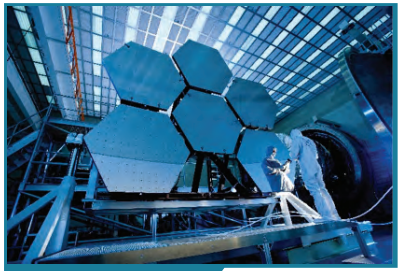
QUALIFIED PERSON. under National Instrument (NI 43-101) Standards of Disclosure for Mineral Projects, the Qualified Person for this presentation is Ted VanderWart, P.Geo., for Troy Minerals Inc., who has reviewed and approved its contents.

The Most Important Green Metal

23 50.9415
V
[Ar]3d³4s²
vanadium

Emerging Battery technology: Vanadium Redox Flow Battery (VRFB's) to consume over 70% of vanadium demand by 2040. [1]

Vanadium is used in many industries and applications, from automobiles, power generation, and hand tools, to ships, industrial tools and airplanes.


High-Tech

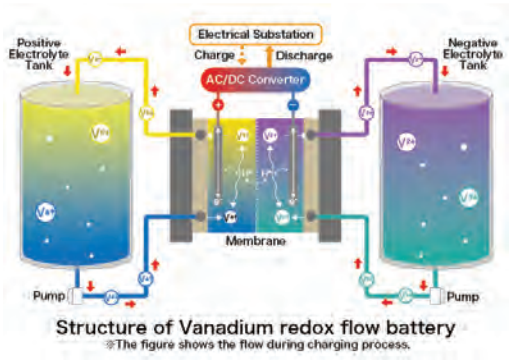

Construction


Renewable Energy


Automotive


Power Plants


Transmission Towers



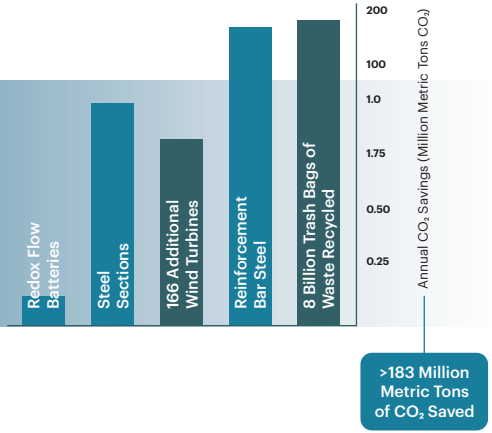
Structure of Vanadium redox flow battery
※The figure shows the flow during charging process.

Vanadium Redox Flow Batteries (VRFBs)

1. CRU/ Technology Metals

Troy Minerals: Uncovering America's Vanadium

- The energy transition and deep decarbonization hinges on strategic minerals
- Vanadium plays a crucial role in decarbonizing construction and facilitating the energy transition in flow batteries for grid-level storage (wind & solar)
- We believe the vanadium global market will see significant growth due to the global push to Net-Zero

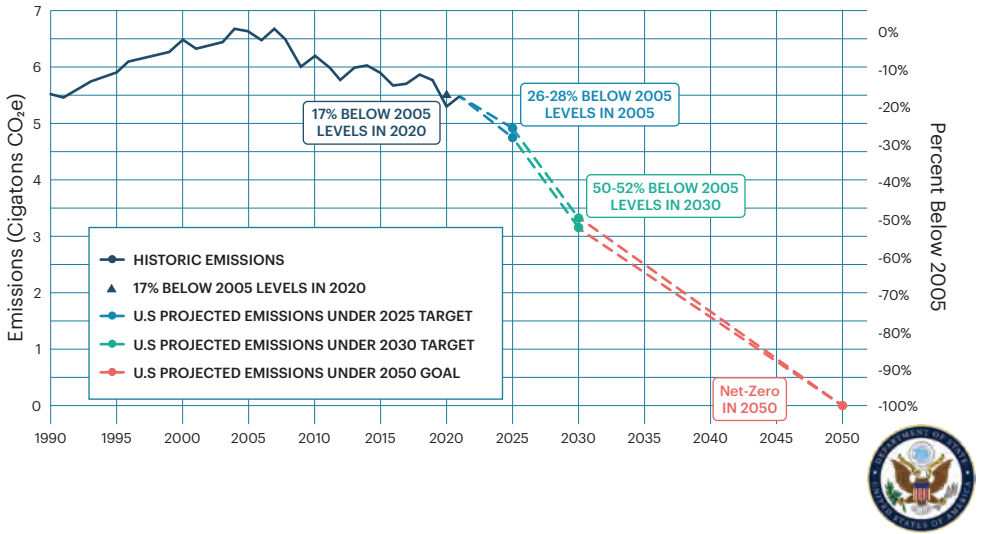


MISSION

Unlocking significant shareholder value through the successful discovery of a large-scale & high-grade Vanadium-Titanium project in Wyoming, USA

VISION

Delineating a Tier-1 Vanadium-Titanium resource to increase US independence for green metals required in the energy transition



Corporate Overview

Troy Minerals (CSE:**TROY** – OTC:**TROYF** – FSE:**VJ3**)

Troy Minerals is a discovery-driven company focused on delineating a high-grade, large-scale vanadium-titanium (+PGE) resource in Wyoming, USA

Corporate Capital Structure

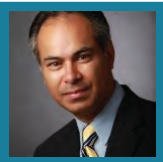
59,445,336	5,400,000	1,100,000	65,945,336
Shares Issued & Outstanding	Warrants	Options & RSUs	Shares Fully Diluted

Investment Highlights

- The flagship Lake Owen project demonstrates significant potential for large-scale vanadium and titanium discovery, with a large potential of surface mineable oxide cumulates based on preliminary appraisal and sample analyses. A mineral resource estimate has yet to be completed by a QP and reported in accordance with NI 43-101. [1]
- Vanadium is classified as a critical mineral by the US Energy Act of 2020, with less than 5% of the utilized amount being mined and processed in the United States. [2]
- The Lake Owen project will benefit from the "Large-scale Earth MRI" program conducted by the US Geological Survey (USGS) as part of the US Energy Act mandate, providing valuable geological insights and cost savings in exploration expenses. The USGS and Wyoming geological survey will also have “boots on the ground” at Lake Owen.
- The global vanadium market is expected to grow significantly, projected to reach $81.8 billion by 2030, driven by the ongoing energy transition.[3]
- The experienced management team is committed to maximizing shareholder value through strategic acquisition, exploration, and development of mineral properties, with a successful track record of previous exits.

1. Sutherland, W.M., and Hausel, W.D., 2005; Preliminary Digital Geologic Map of the Saratoga 1:100,000 - Scale Quadrangle, Albany and Carbon Country Wyoming, 3p
2. US Department of Commerce : "The Effect of Imports of Vanadium on the National Security", 2021
3. Reportlinker.com: "Global Vanadium Industry", 2023

Our Team



RANA VIG
PRESIDENT & CEO / DIRECTOR

30+ years of successful business experience.

Key roles in publicly traded companies, including President of Musgrove Minerals and Chairman & CEO of Continental Precious Minerals.

Entrepreneurial expertise in transformative acquisitions and strategic re-structuring, driving growth and success.

NORMAN BREWSTER
DIRECTOR

Mr. Brewster's mineral industry career includes serving on various company boards, financing, and developing the Aguas Tenidas Mine in Spain, and negotiating the purchase of the Condestable Mine in Peru.

He also led the committee in reviewing the successful acquisition of Iberian Minerals Corp. by Trafigura Group Pte. Ltd. in an all-cash takeover valued at around $497.8 million.

GURDEEP BAINS
DIRECTOR

Mr. Bains: Chartered Professional Accountant (CPA, CA) with expertise in finance and business administration.

Significant experience in auditing and assurance services during his tenure at KPMG from 2000 to 2005.

Demonstrated leadership as CFO at OK Tire Stores Inc. and Zenabis Ltd., contributing to financial management and business development in respective roles.

REGINA LARA YUNES, CPA
CHIEF FINANCIAL OFFICER

Lara Yunes is a Chartered Professional Accountant with a Bachelor's of Technology in Accounting from the British Columbia Institute of Technology.

She is currently a Financial Reporting Manager at Treewalk, providing accounting, financial reporting, and compliance services to publicly listed firms. Prior to this, she worked at Smythe LLP as an accountant, offering audit and tax services to both private and public companies.

Vanadium - The Most Sustainable Metal?

Vanadium in long-duration grid-level energy storage

Vanadium is also a key ingredient in vanadium redox flow batteries (VRFBs), which are used as long-duration, utility-scale energy storage solutions to store intermittent renewable energy

A VRBF produces 27 to 37% less cradle-to-grave CO2 emissions compared to lithium-ion technologies [1]

The use of VRFBs contributes to SDGs 7 and 13 through its recyclability, reusability, long life, and low carbon footprint, acting against climate change and providing affordable and clean energy

Stronger & Lighter Steel: Vanadium as a steel strengthener

The increased strength of vanadium micro alloyed steel reduces the total global fossil carbon footprint by as much as 0.385%

The addition of vanadium to steel and reinforcing bar for use in the construction of buildings, bridges, tunnels, and other critical infrastructure has significant sustainability benefits

The application of vanadium to steel and reinforcing bar to infrastructure means that less steel is required which contributes to the reduction of carbon emissions, contributing to SDGs 9 and 11 in building sustainable cities and communities

1. Vanitec.org: Sustainability

AFFORDABLE AND CLEAN ENERGY

CLIMATE ACTION

INDUSTRY, INNOVATION AND INFRASTRUCTURE

SUSTAINABLE CITIES AND COMMUNITIES

Vanadium Demand Drivers

Key Demand Drivers:

Battery Technologies: High-purity vanadium is gaining interest in battery technologies, particularly in vanadium redox-flow batteries (VRFB's)

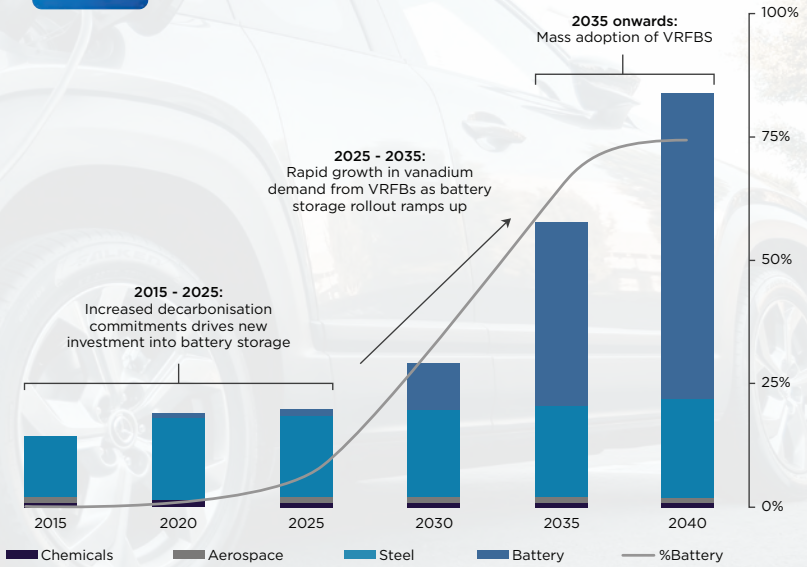
The forecast annual demand for VRFB's alone is between 127.5kt and 173.8kt by 2031 – current annual production is 115kt total with only 8.2kt of VRFB demand in 2022 [1]

Steel Demand: Vanadium usage in cars has increased from zero to approximately 45% over the past twenty years. By 2025, it's estimated that 85% of all automobiles will incorporate vanadium alloy to enhance fuel efficiency and meet stringent EPA fuel economy standards [3]

Steel demand is projected to double by 2050 with potential for a greater proportion to be micro-alloyed steel [2]

Battery market to consume over 70% of vanadium demand by 2040

CRU forecasts vanadium demand to double by 2032

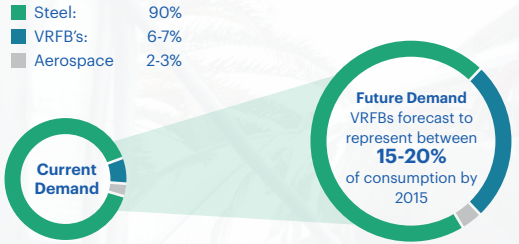


Source: CRU, January 2023

*European Commission: A Green Deal Industrial Plan for Net-Zero Age, 2023

1. Terry Perles 2022, Vanadium is a key steel additive for sustainable, decarbonisedconstruction: Vanitec(referencing International Energy Agency)
2. Vanadium set for "disruptive" demand growth as battery energy storage boom gains momentum: Vanitec(Based off GuidehouseInsights forecast)
3. Capital10x.com:"Green-metals-in-focus-vanadium"

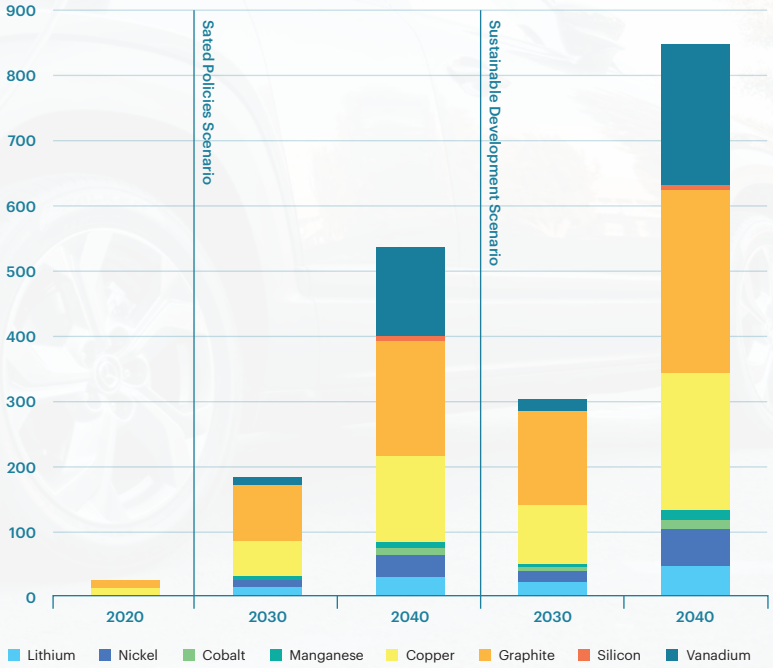
VRFB's Growing Adoption & Vanadium Demand



Source: Vanitec & TTP Squared Inc

"We believe the electrification of the world economy is inevitable. We think there's a revolution coming in Vanadium redox flow batteries. Larger-scale deployment over the ensuing five years in China will result in vanadium flow batteries revolutionizing modern electricity grids."
- Robert Friedland

Annual Installed VRFB Energy Capacity by Region

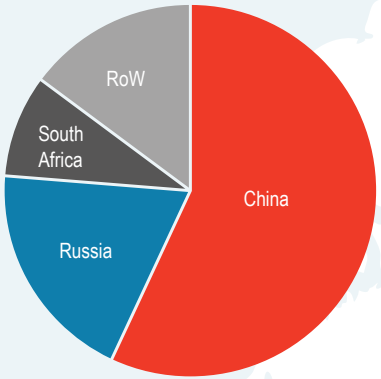


Vanadium - A Critical Mineral in the U.S

- **The Energy Act of 2020** defines Vanadium as a "critical mineral" - with less than 5% of the amount utilized, mined and processed in the United States
- With U.S. consumption of vanadium increasing by 11% in 2022 The U.S. vanadium market is valued at US$ 11.7 billion in 2023[1]
- Sections of the Energy Act focused on critical minerals required the development of a RD&D program to develop critical minerals and rare earth elements - $127 million was authorized to complete these tasks
- This includes, Earth MRI (aerial survey) programs focused on regions in the United States with potential for hosting critical mineral resources
- **Troy Mineral's flagship Lake Owen project is in one of these regions, commencing in 2023 aerial surveys will be conducted along the Wyoming-Colorado border and include full coverage of the Lake Owen Project.**

1. USGS: Vanadium 2023

Vanadium Mine Production Globally



China & Russia continue to be the world's top vanadium producers

Lake Owen Project

Location and size:

50Km Southwest of Laramie Wyoming USA. 100 unpatented lode mining claims/ 1,600 acres (648 hectares).

Implementing Earth MRI Program

Low-level helicopter flights along Colorado-Wyoming border will study mineral potential

The survey data will be collected using a helicopter and will fly over parts of the central Colorado-Wyoming border

→ As of November 2023, the survey was completed with results expected in the Q1 of 2024

"The area has seen mineral exploration and mining in the past, and there are several known mineral systems that are of high interest for their critical-mineral potential"
-USGS

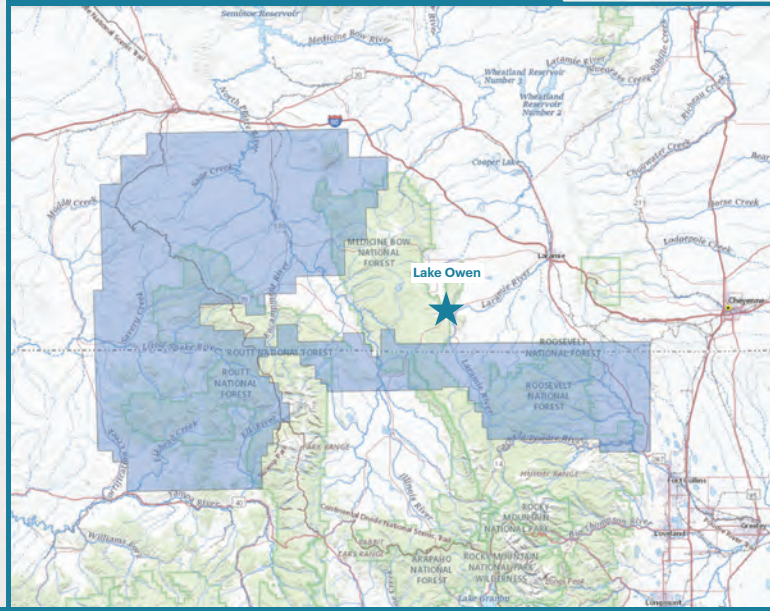
Covering more than 5000 square miles (13,000 square kilometers)

→ New geophysical survey will use the latest technological developments will allow scientists to develop high-resolution three-dimensional representations of geology to depths over 3280 feet (1 kilometer) below the surface

→ The 3D models and maps produced from the survey will help understand the distribution of groundwater, mineral and energy resources, as well as the potential for natural hazards

USGS
science for a changing world

Colorado-Wyoming Border Earth MRI Survey Area



Project Highlights

Target:

Proterozoic Lake Owen mafic to ultramafic layered intrusive complex (LOC). The LOC occurs as a steeply-dipping, layered intrusive near the margin of the Wyoming Craton (Archean); thick, tabular, magnetite-rich (titano-magnetite) cumulates with accompanying V/Ti and, Pt/Pd/Au/Rh-bearing sulfide horizons

Mineralization Model:[1,2,3,4,5,7,9,10]

- Massive to semi massive titano-magnetite with Vanadium and Ti2O
- PGE-Bearing sulfide layers with similarities to Stillwater and Merensky Reef
- Basal massive sulfide accumulations similar to those of the Mouat Deposit in the Stillwater Complex

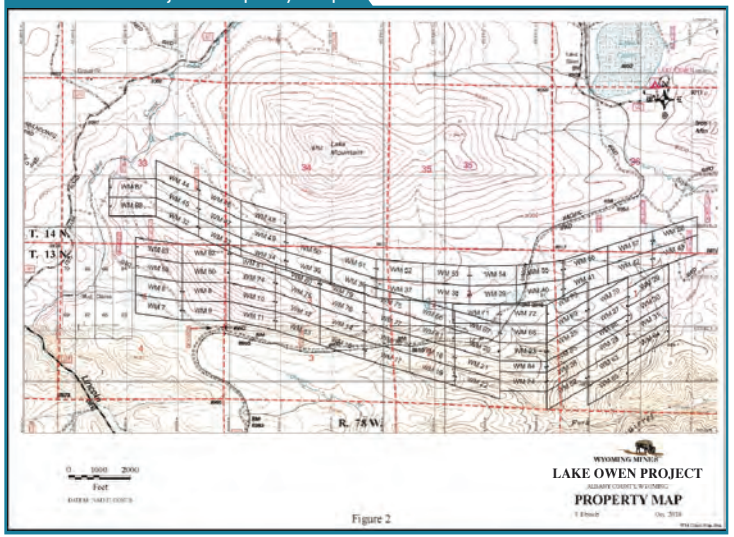
Blue Sky Potential:[1,7,9,10]

Large potential of semi massive to massive titanomagnetite with V2O5 and Ti2O. The tops of cumulates (Reefs) has anomalous PGE +- Au. Stillwater PGE Reef potential. Basal zones offer massive sulfide potential.

PGE Mineralization:[1,2,3,5,8,9,10]

Limited drilling (9 drill holes/1148 meters; 127.4 m average depth) by Chevron shows strong PGE mineralization in several of the drill holes.

Lake Owen Project Property Map



1.Ebisch, J., 2021; Technical Report: Geology of the SW2 Polymetallic Project (Fe/V/Ti/PGE/Ni/Cu/Co) Lake Owen Intrusive Complex Albany County, Wyoming, USA, March 2021
2.Hausel, W.D., 1992: form, distribution and Geology of Gold, Platinum, Palladium and Silver in Wyoming; Wyoming Geologic Survey
3.Hennessey, B. Terrence, and Lewis, William, 2005, Technical Report on the Lake Owen Pt-Pd-Fe Project, Albany County, Wyoming: Micon International Limited, prepared for Trend Mining Company, 18 p.
4.Houston, R.S., and Orback, C.J., 1976, Geologic Map of the Lake Owen Quadrangle, Albany County, WY: US Geological Survey Map GQ-1304
5.Loucks, R.R. and Glasscock, J.W., 1990,: Petrology and PGE Mineralization of the Early Proterozoic Synorogenic Lake Owen Layered Intrusion, Southern Wyoming, USA; Geologic Survey Report Wyoming.
6.Loucks, Robert R., 1989, Lake Owen Layered Mafic Igneous Complex, Albany County, Wyoming: Geology, Vanadiferous Magnetite Deposits, and Platinum-Gold Mineralization, prepared for Chevron Resources, 29 p.
7.Sutherland, W.M., and Hausel, W.D., 2005; Preliminary Digital Geologic Map of the Saratoga 1:100,000 Scale Quadrangle, Albany and Carbon Country Wyoming, 3p
8.Wu, Ishiung J., undated, Lake Owen Platinum Prospect, Albany County, Wyoming, and World PGM Supply and Demand, internal company report, General Minerals Corporation, 14 p.
9.Wu, Ishiung J., 1992, Lake Owen Platinum Prospect Summary Report, Albany County, Wyoming, prepared for Pittsburg & Midway Coal Mining Company, 4 p.
10.Wu, Ishiung J., 1999, Lake Owen Platinum Prospect, Albany County, Wyoming, prepared for General Minerals Corp., 9 p.

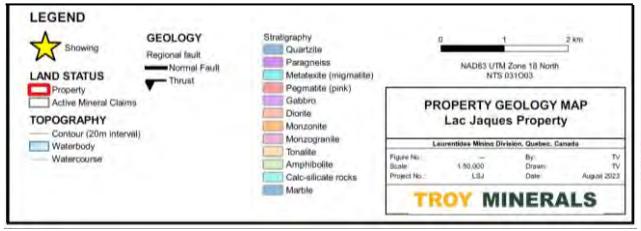
Lac St.Jaques Project

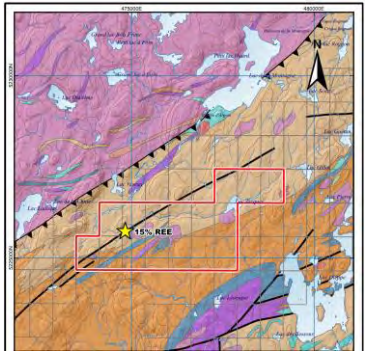
Location and size:

- The 2,300 Acre property is located 250 Km north of Montreal, or 3 hours driving distance, accessible via roads and 2 Km away from hydro Power Lines
- Exploration work on the property consisted of rock sampling on 3 separate occasions
- Currently mapped, the formation being sampled is estimated to consist of a 4 km strike length and 25m width
- A Carbonatite deposit which is highly fractionated, with light rare earth enrichment, including 500 to 2000 ppm Nd and Prat 1.06% [1]

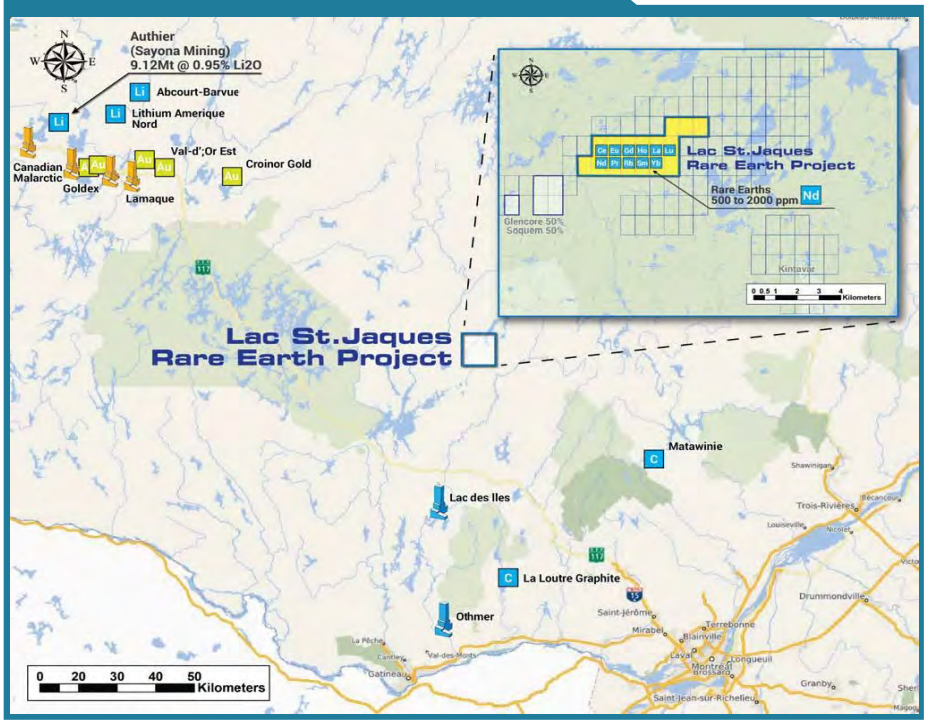
For additional exploration results and information see news releases of Jan 30, 2024; Feb 5, 2024 and Feb 20, 2024.

Total Rare Earth Element [2]	
La203	5.03%
Ce02	8.48%
Pr6011	0.50%
Nd203	1.06%
Y	274 PPM
La	4.29%
Ce	6.90%





Location & Access



1. Department des Sciences de la Terre-Laboratoire de Radiocristallographie, Montreal Canada; June 2011: FRX analysis report for samples MB210511-01 and MB210511-02
2. Activation Laboratories; 2011; Analysis report A11-6486

TROY MINERALS

CSE: **TROY** OTC: **TROYF** FSE: **VJ3**

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