NCM
Northern Critical Minerals

The Tharsis Property

Rare Earth Element-Niobium Carbonatite

Northwest Territories, Canada

Strengthening the Canadian Rare Earth Frontier

January 2024

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However, forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors may include, among others, actual results of current exploration activities; actual results of reclamation activities; future metal prices; accidents, labor disputes and other risks of the mining industry; delays in obtaining governmental or regulatory approvals or financing or in the completion of exploration activities, as well as those factors discussed in the section entitled "Risk Factors" in this presentation. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.

Accordingly, readers should not place undue reliance on forward-looking statements. Of note, historical results reported herein have not been verified by Northern Critical Minerals personnel. Surface grab samples are selective by nature and may not represent the whole of the unit sampled.

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Executive Summary

- Tharsis is an 8,750 hectare, greenfield mineral exploration project that was staked by Voyageur Exploration in 2021, and transferred to Northern Critical Minerals in 2022.
- The project is located in the Northwest Territories of Canada, 170 km northeast from the capital city of Yellowknife.
- Mineralization in outcrops at Tharsis include rare earth (neodymium and praseodymium) and high field strength (niobium and hafnium) oxides.
- Site access is by airplane or helicopter, with potential ground access from the winter road 50 km to the southeast.
- Situated 200 km north from Canada's only producing rare earth project, Tharsis has the potential to join the newly created rare earth supply chain and provide raw ore to local processing plants in Saskatchewan.

Total Rare Earth Oxides
Up to 2.78%

NdPr:TREO Ratio
Averages 24%

Niobium Oxide
Up to 1.93%

Hafnium Oxide
Up to 244 ppm

Introduction | About Us

The Northern Critical Minerals Corporation is a private Canadian company that delivers value through the focused and sustainable development of rare earth mineral projects in the Northwest Territories

Introduction | Management

Ryan Bachynski

CEO and Director

B.Sc., P.Geo.

- Bachelor of Science in Geology
- Nearly a decade working in northern Canada exploration for precious metals, base metals, diamonds, and REEs
- Senior roles on advanced exploration projects

Dr. Jared Suchan

COO and Director

Ph.D., P.Geo.

- Doctor of Environmental Engineering
- Bachelor of Science in Geology and Geography
- Nearly a decade working in Saskatchewan for uranium exploration, and northern Canada for diamond and precious metal prospecting

Introduction | Advisors

Gary Billingsley
Technical Expert

- 50+ years of global experience in the resource industry from exploration through to production
- Major roles in advancing a gold deposit to production, discovery of diamondiferous kimberlites, and development of rare earth projects

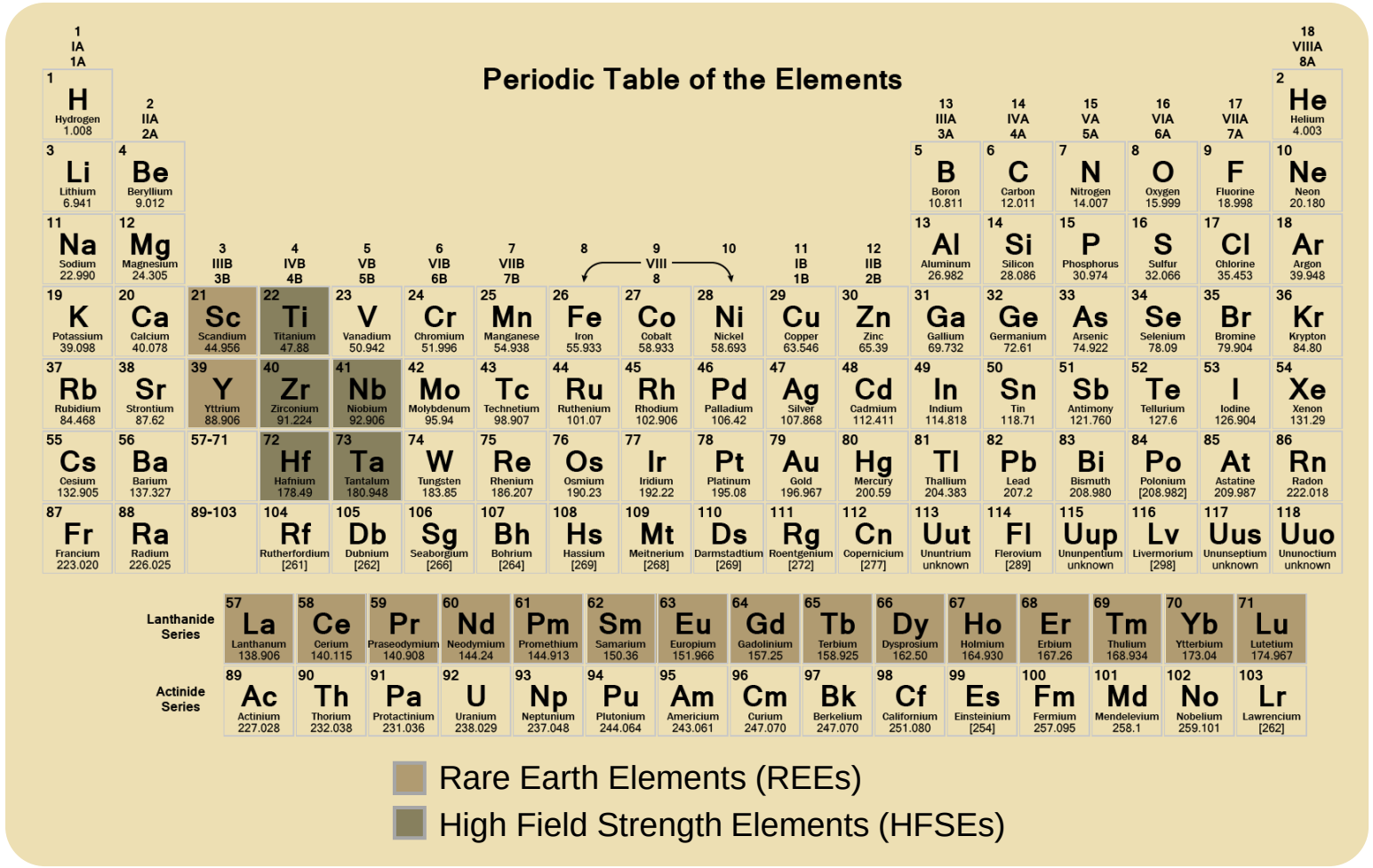
Albert Chong
Strategic Planning

- 30+ years of experience in exploration, development, mining, and consulting on base, precious, and rare earth projects
- Expertise in due diligence for precious metal streaming agreements

James Engdahl
Corporate Development

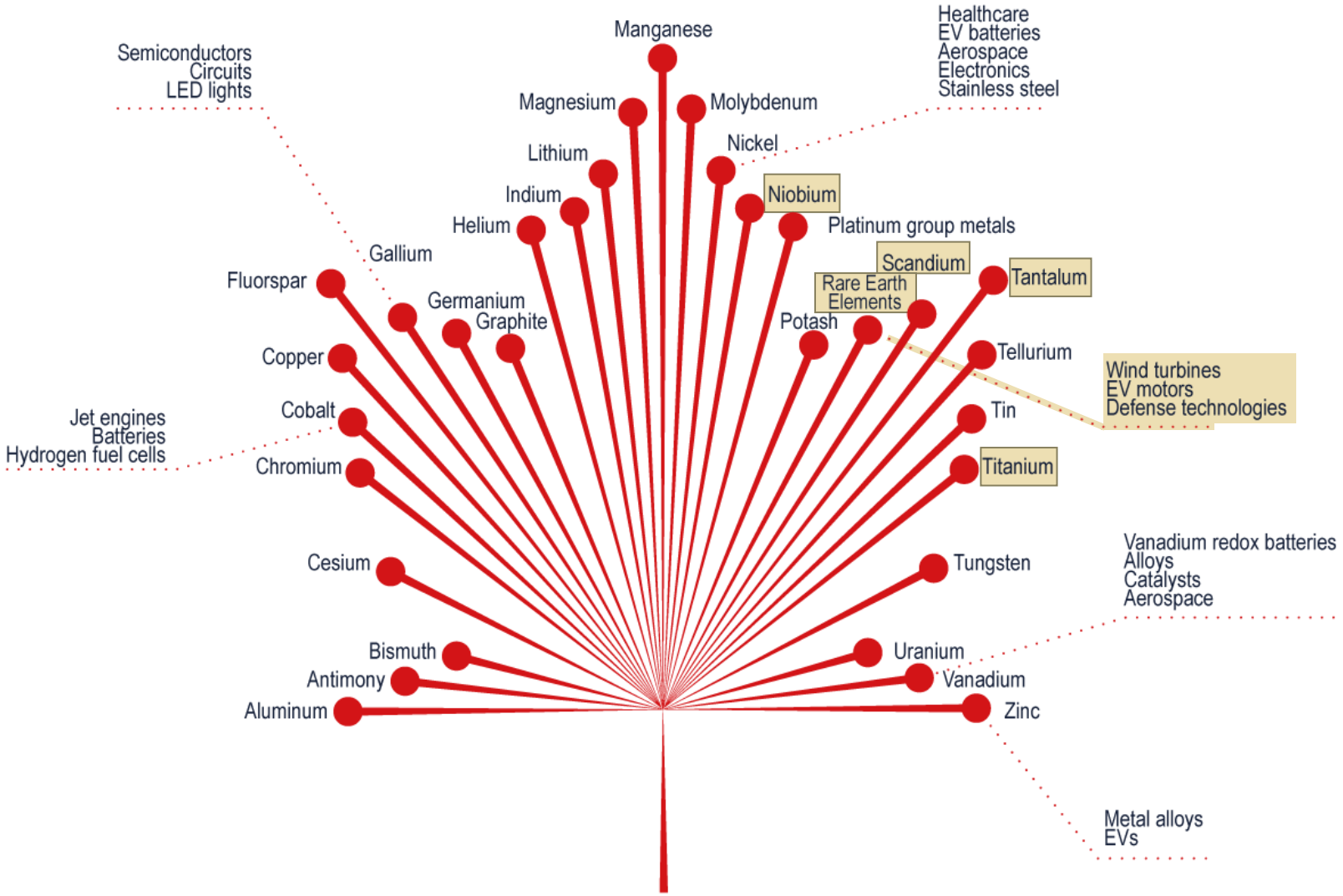
- Former President, CEO & Director of Great Western Mineral Group, raising over $150m and acquiring one of the highest-grade rare earth deposits in the world
- Advanced development of a rare earth deposit

Background | Rare Earth Elements



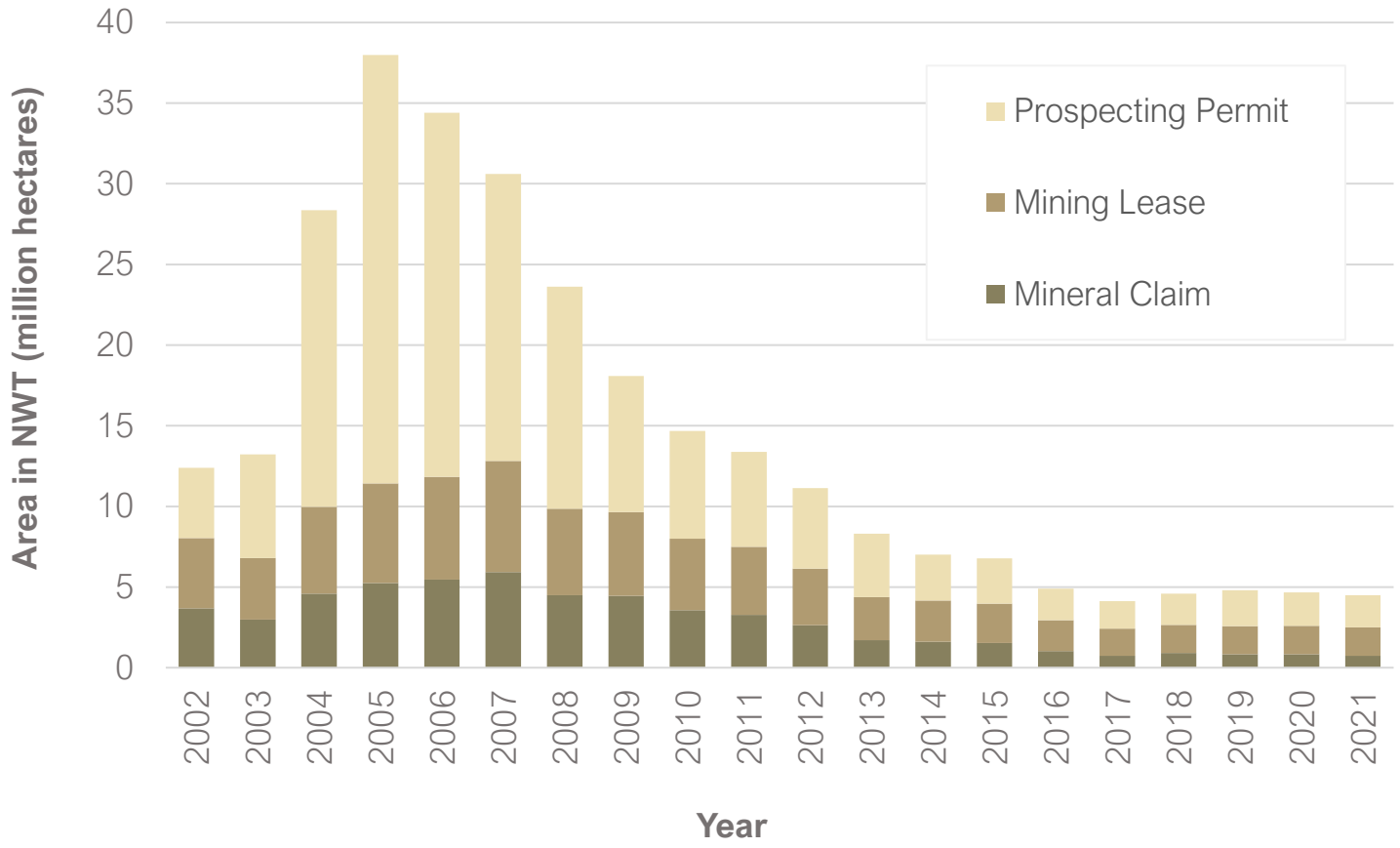
- Rare earth elements (REEs) are listed as critical minerals by the Canadian Government.
- REEs are a set of seventeen metallic elements, including the fifteen lanthanides plus scandium and yttrium.
- High field strength elements (HFSEs) are the elements hafnium, zirconium, titanium, niobium and tantalum.

Background | Market Opportunity



- In 2021, the Government of Canada released a list of critical minerals deemed necessary for domestic security and to support a global transition to low-carbon economies.
- Critical minerals are need for evolving and emerging technologies in the electronic, clean energy, aerospace, and automotive industries.
- New mineral deposit discoveries are needed in Canada to serve an undersupply of upstream raw materials, including rare earths elements, scandium, niobium, tantalum, and titanium.

Background | The NWT Advantage



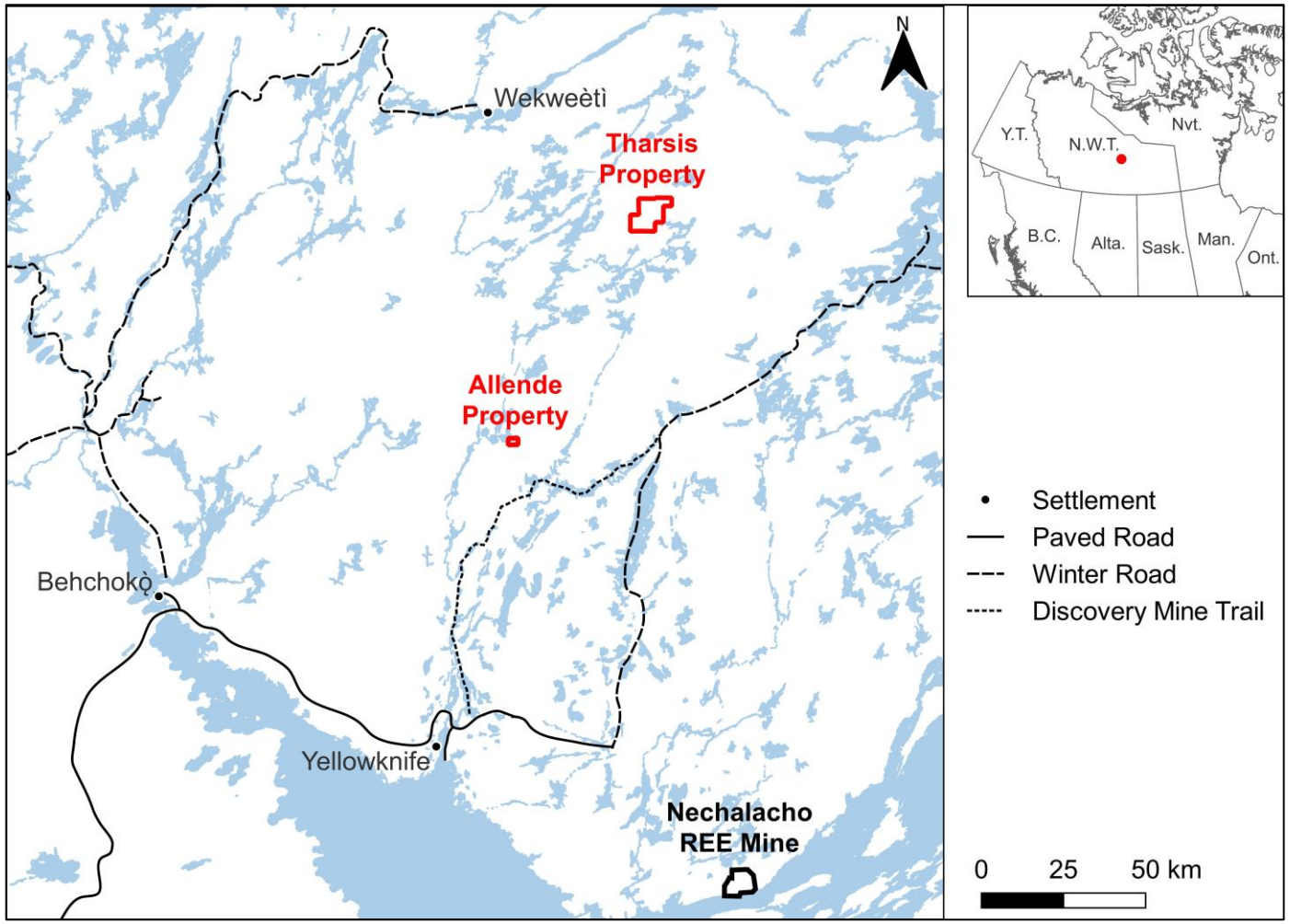
- Mineral exploration has drastically slowed in the Northwest Territories over the last two decades, presenting the opportunity to acquire mineral assets
- The Mining Incentive Program provides up to $500,000 in support of corporate-funded projects.
- The Work Credit Program allows projects to submit 1.25x the cost of work on eligible claim expenditures.

Background | Carbonatites

Country	Deposit Name	Deposit Type	Mineralization
Australia	Mount Weld	Weathered Carbonatite	REE
Brazil	Araxa Catalao	Weathered Carbonatite	REE
Brazil	Mrro do Ferro	Carbonatite	Th-REE
Burundi	Gakara	Carbonatite	REE
China	Bayan Obo	Igneous Carbonatite	REE-Nb-Fe
China	Maoniuping	Carbonatite	REE
China	Deposits in southern China	Weathered Crust Elution	HREE
Greenland	Tanbreez	Alkaline Igneous Rock	REE
India	Amba Dongar	Carbonatite	REE
Malawi	Kangankunde	Carbonatite	REE
Russia	Tomtor	Weathered Carbonatite	REE
Russia	Lovozero	Alkaline Igneous rock	REE-Nb
South Africa	Palabora	Carbonatite	REE
South Africa	Steenkampskraal	Alkaline Igneous rock	REE-Th-Cu
Sweden	Norra Klirr	Alkaline Igneous rock	REE
Turkey	Aksu Oiamas	Placer	REE
United States	Mountain Pass	Carbonatite	REE
Vietnam	Mau Sai	Carbonatite	REE

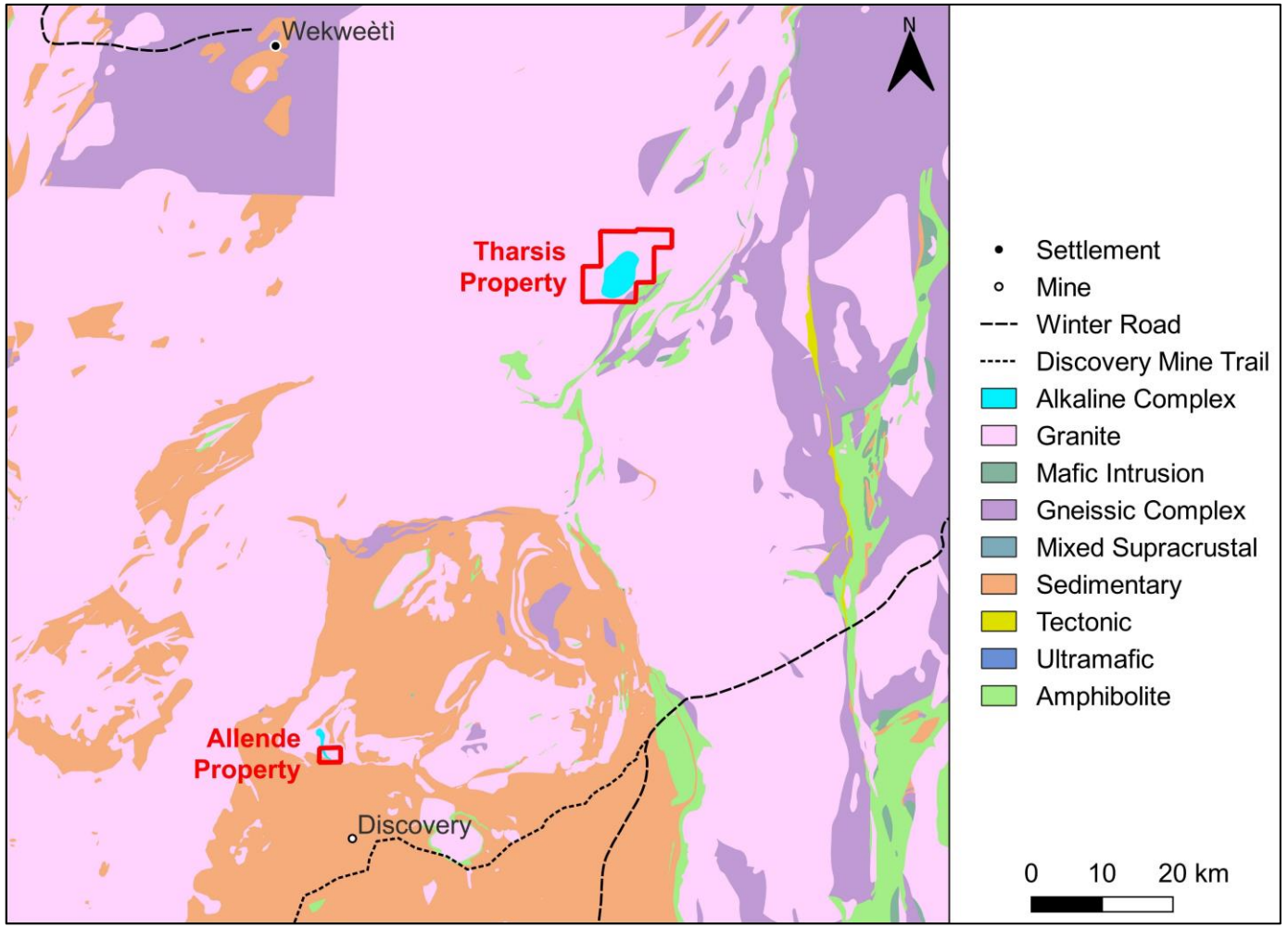
- Carbonatites are igneous rocks rich in carbonates that are typically preserved as intrusive plugs or pipes.
- Most rare earth element deposits around the world are related to carbonatite intrusions.
- Globally there are less than 700 known occurrences of carbonatite.

Regional | Location and Access



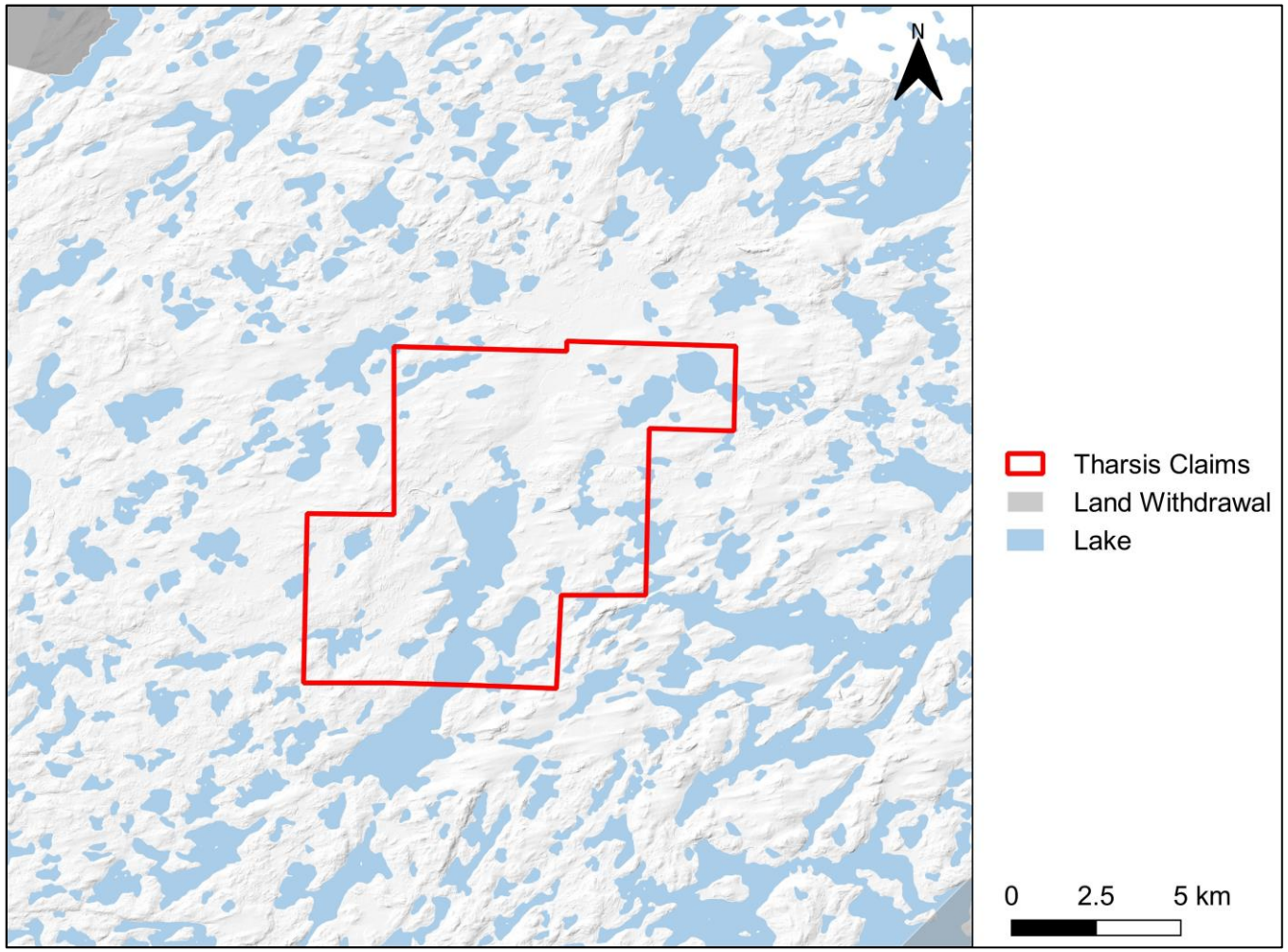
- The Tharsis project is located 170 kilometers northeast from the capital city of Yellowknife and 60 kilometers southeast from the remote community of Wekweètì.
- The Nechalacho rare earth element mine is approximately 200 km to the southeast.
- Access to the property is achieved by floatplane in the summer, by ski-plane in the winter, or by helicopter year-round.
- The Tibbitt-to-Contwoyto winter road 50 kilometers to the southeast.

Regional | Geology



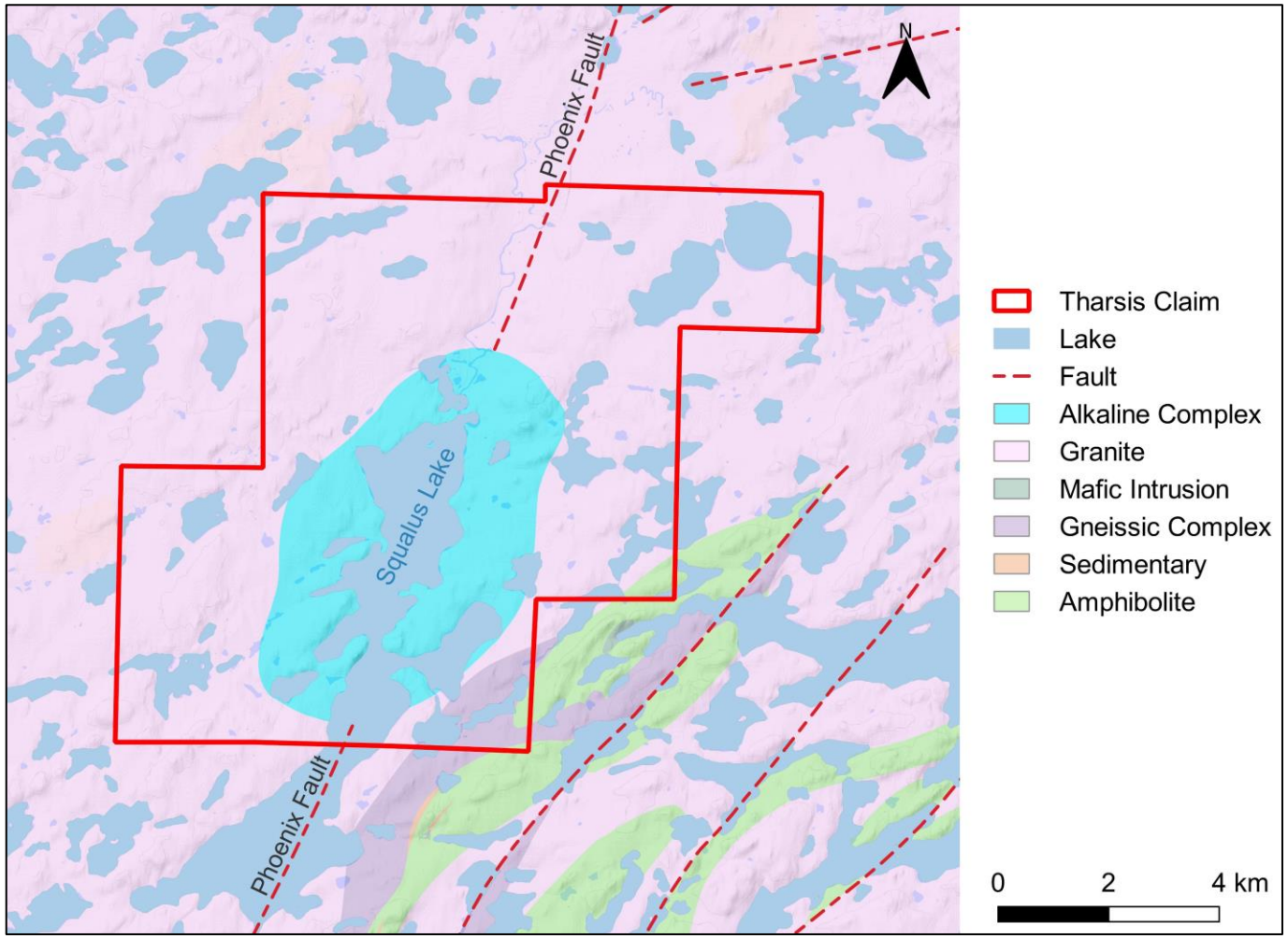
- The Slave Province is a rLate Archean craton in the northwestern Canadian Shield, spanning across the Northwest Territories and Nunavut.
- The geologic region is made up of a complex assemblage of several geologic terranes, including prevalent granitoid units and meta-sediments with enclaves of various volcanic packages.
- The regional geology hosts a variety of current and past producing mines, including the Nechalacho REE project.

Tharsis | Location



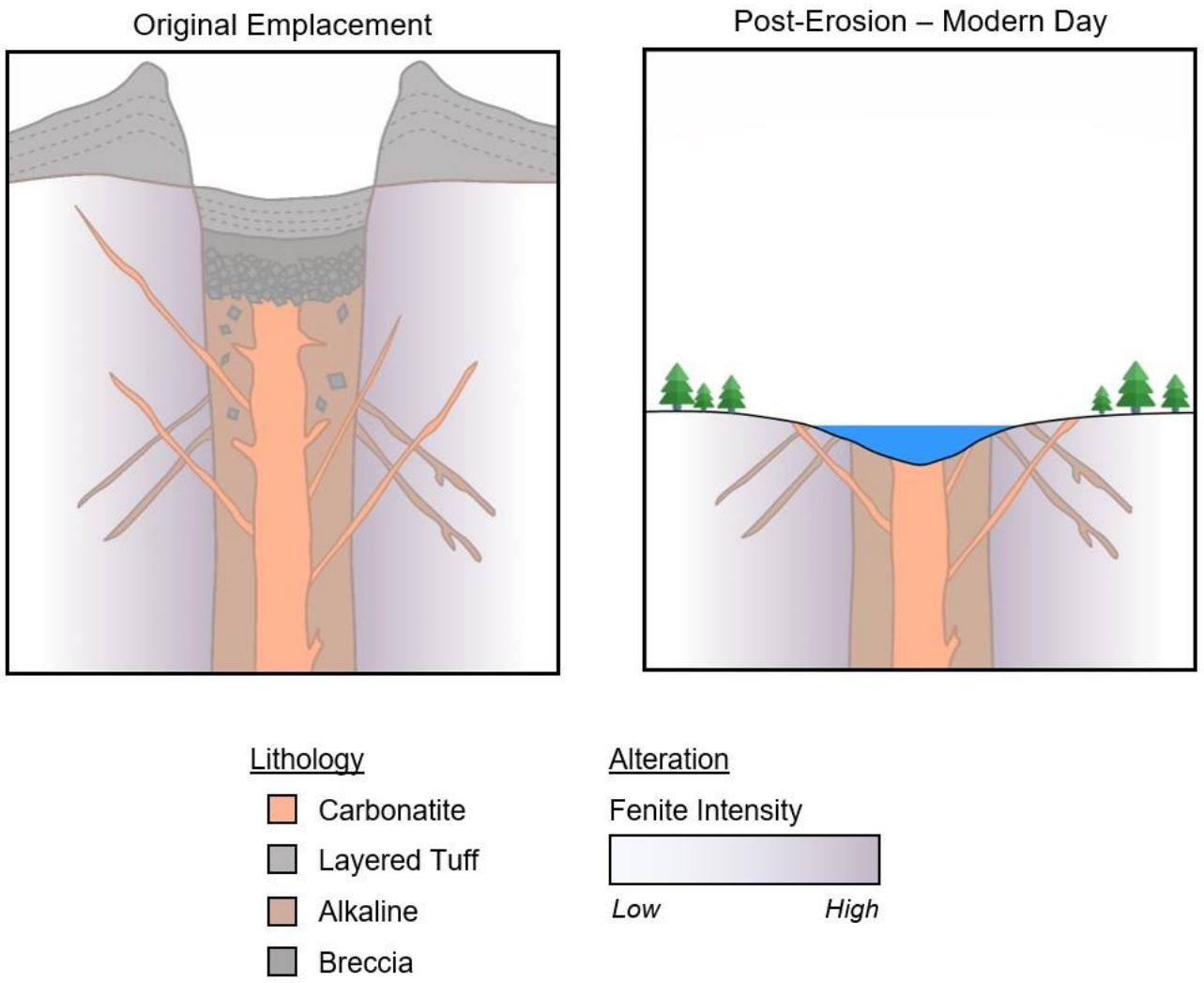
- The Tharsis project was acquired by Voyageur Exploration in 2021, and transferred to Northern Critical Minerals in 2023, where it remains 100% owned by the company.
- The site is located at 63°54'17.52”N and -113°10'46.62”W, in the Slave Geological Province of the Northwest Territories.
- The mineral claims currently cover 8,750 hectares of land.
- Situated on Commissioner's Land

Tharsis | Geology



- The *Squalus Lake Alkaline Complex* (SLAC) is a Proterozoic intrusion dated to be ~2,180 million years old.
- Carbonatite dykes are observed surrounding the shoreline of Squalus Lake
- The SLAC is situated along a prominent structural feature known as the Phoenix Fault.

Tharsis | Deposit Model



- During erosion, carbonatite rocks are more susceptible to erosion than surrounding granitic rocks, creating a water-filled depression on the modern landscape.
- Off-shooting carbonatite dikes can be found outcropping near the shoreline of the lake, presenting an opportunity to test mineralization that represents the underlying body.

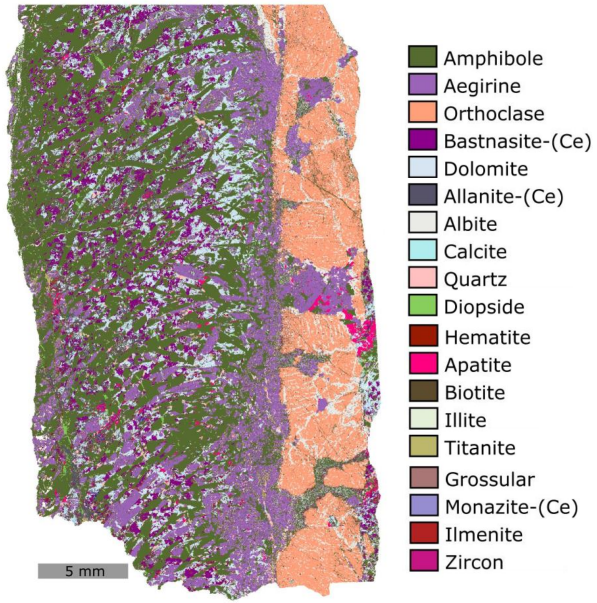
Carbonatite - Tharsis

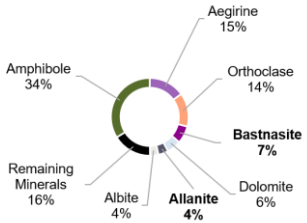
Total Rare Earth Oxides
Up to 2.78%

NdPr:TREO Ratio
Averages 24%

Niobium Oxide
Up to 1.93%

QEMSCAN





Carbonatite with fenite

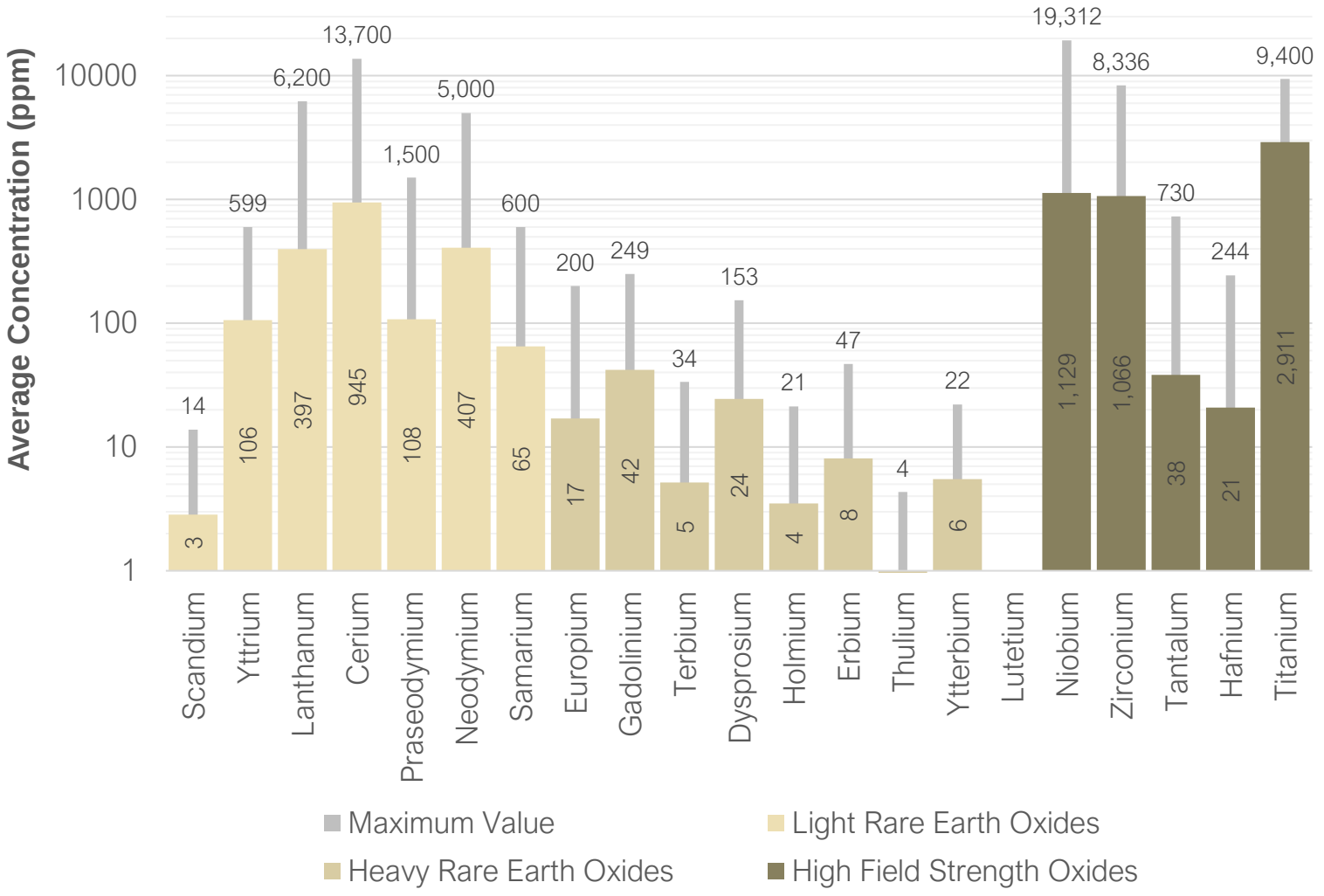
Carbonatite with quartz, hematite

Fenite alteration

REE in angular boulders

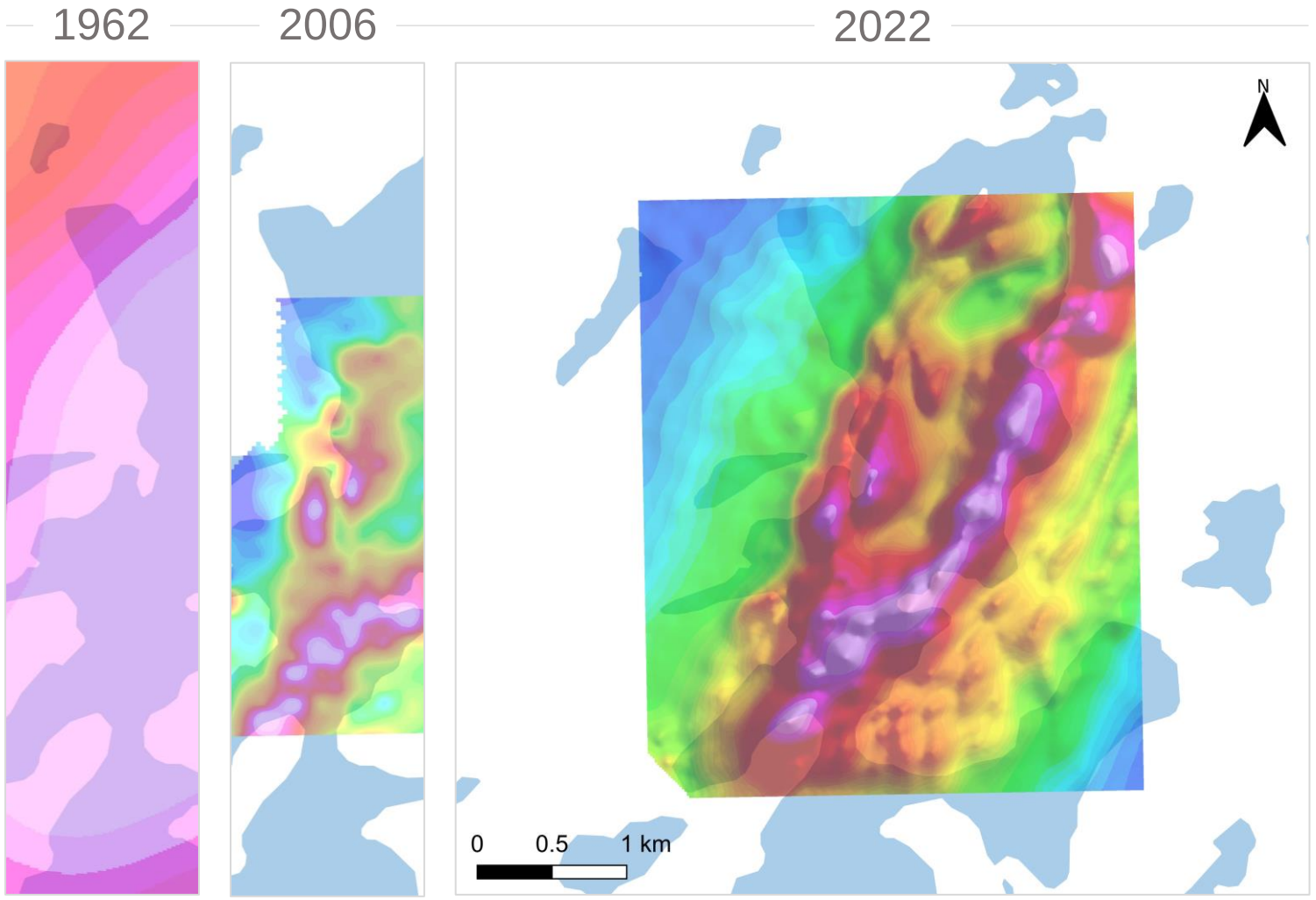
Northern Critical Minerals

Tharsis | Mineralization Distribution



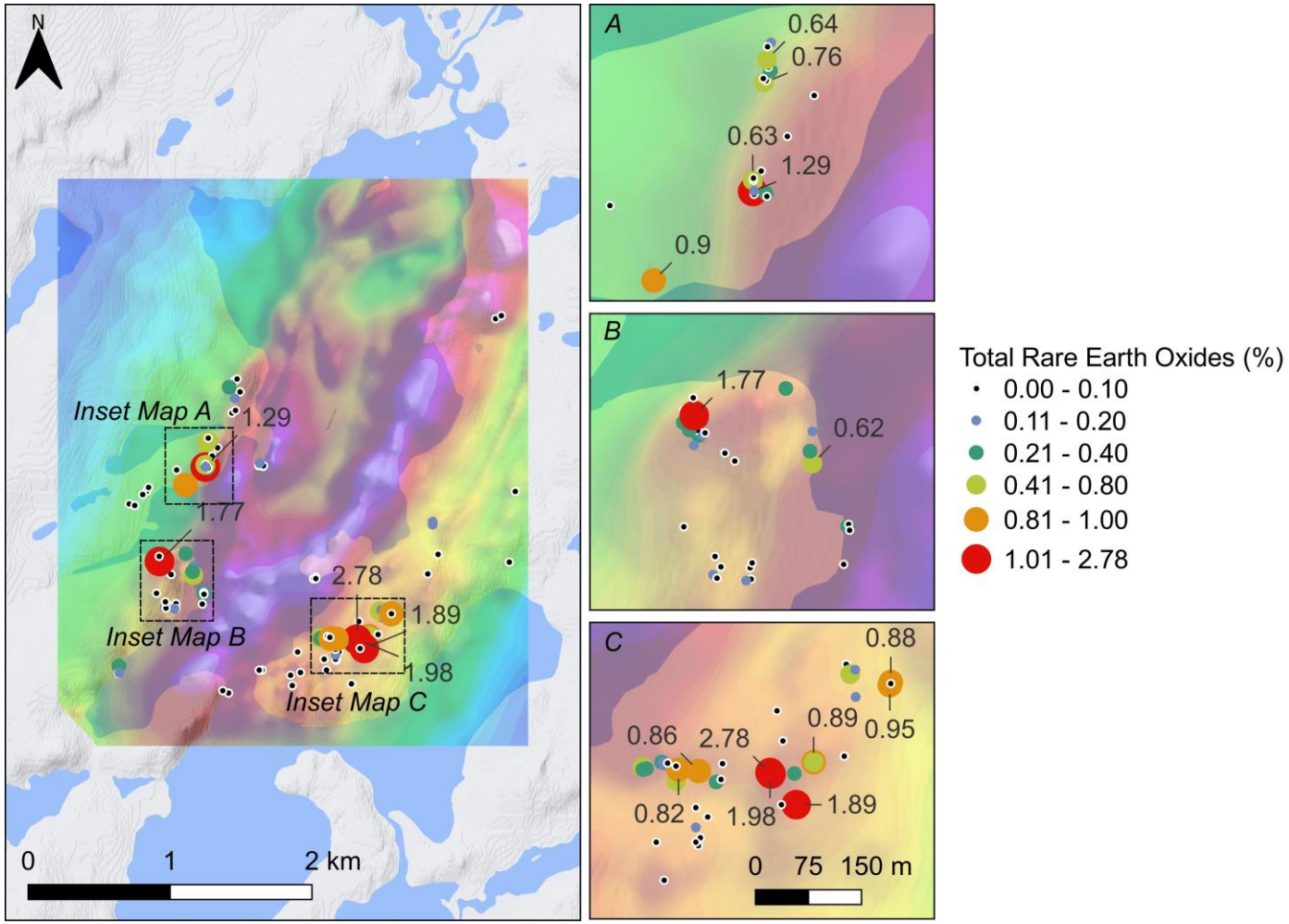
- Six field programs have been performed in the area between 2001 and 2021.
- A total of 168 hand samples have been collected around the Tharsis property.
- Carbonatite outcrops and boulders have been identified around the shorelines of Squalus Lake.
- Increasing mineralization is observed in proximity to the anomalous magnetism that is coincident with the waterbody.

Tharsis | Magnetic Signature



- Magnetic surveys performed in 1962, 2006, and 2022 confirm the presence of a magnetic ring structure beneath Squalus Lake.
- The magnetic ring is hypothesized to correspond with a magnetic ferro-carbonatite lithological unit.
- Rare earth mineralization often corresponds to the weaker magnetic cores in the middle of the structure, which are the units emplaced latest in the magmatic sequence.
- Niobium is theorized to correspond with the magnetic high ring structure.

Rare Earth | Grade



Considering rare earth grades >0.5% TREO in the database (*n* = 18):

- Total rare earth oxides (TREO)[1]

  Average sample has 1.09% TREO

  Best sample has 2.78% TREO

- Neodymium + praseodymium : TREO

  Average 2,429 ppm (24% NdPr:TREO)

  Best 6,500 ppm (24% NdPr:TREO)

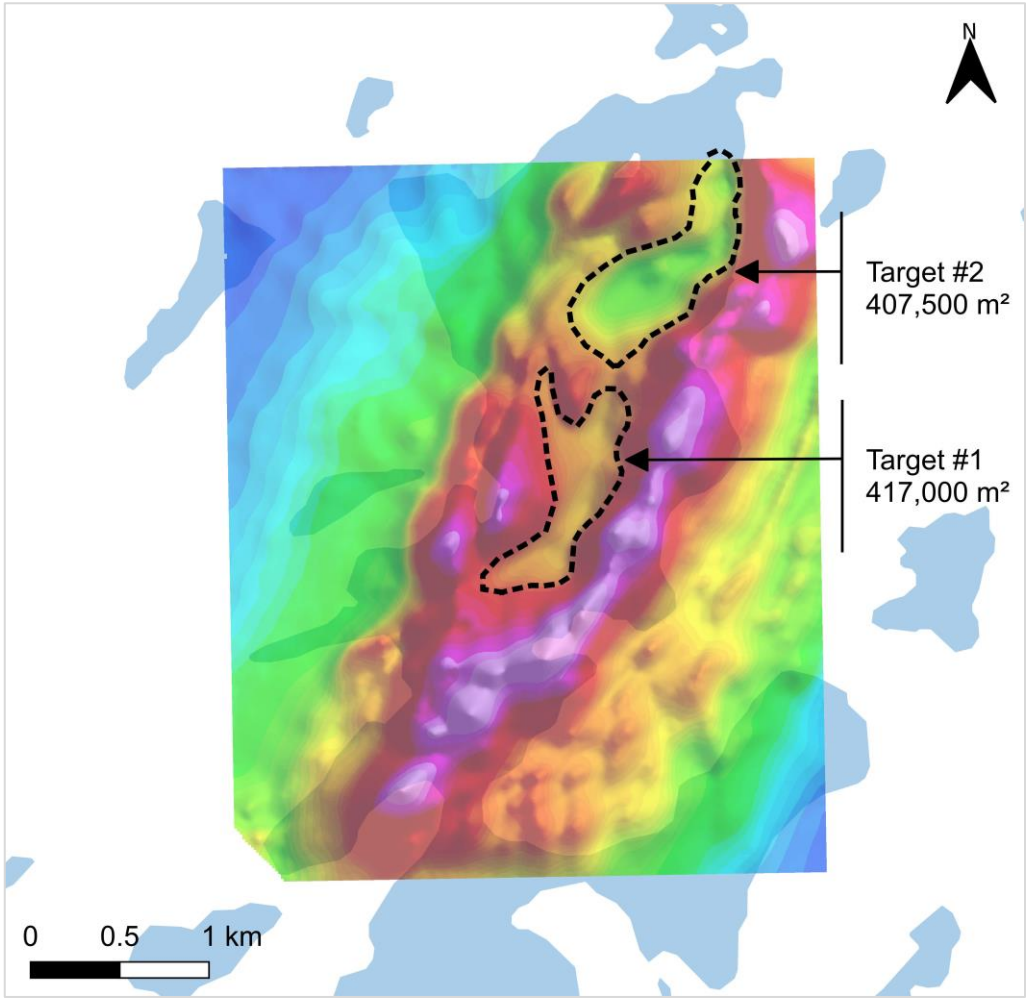
- Critical rare earth oxides (CREO)[2]

  Average 2,401 ppm (26.05% CREO:TREO)

  Best 5,568 ppm (20% CREO:TREO)

[1] Lanthanides plus scandium and yttrium
[2] Neodymium, terbium, dysprosium, europium and yttrium

Rare Earth | Tonnage Potential



- There is an estimated >200Mt of tonnage potential at the SLAC, based upon the following six assumptions:

1. Targets #1 and #2 are mineralized
2. Target #1's footprint is 417,000 m^2
3. Target #2's footprint is 407,500 m^2
4. Ore extends 200m below surface
5. 50% of each target contains ore grades
6. Average ore density is 2,700 kg/m^3

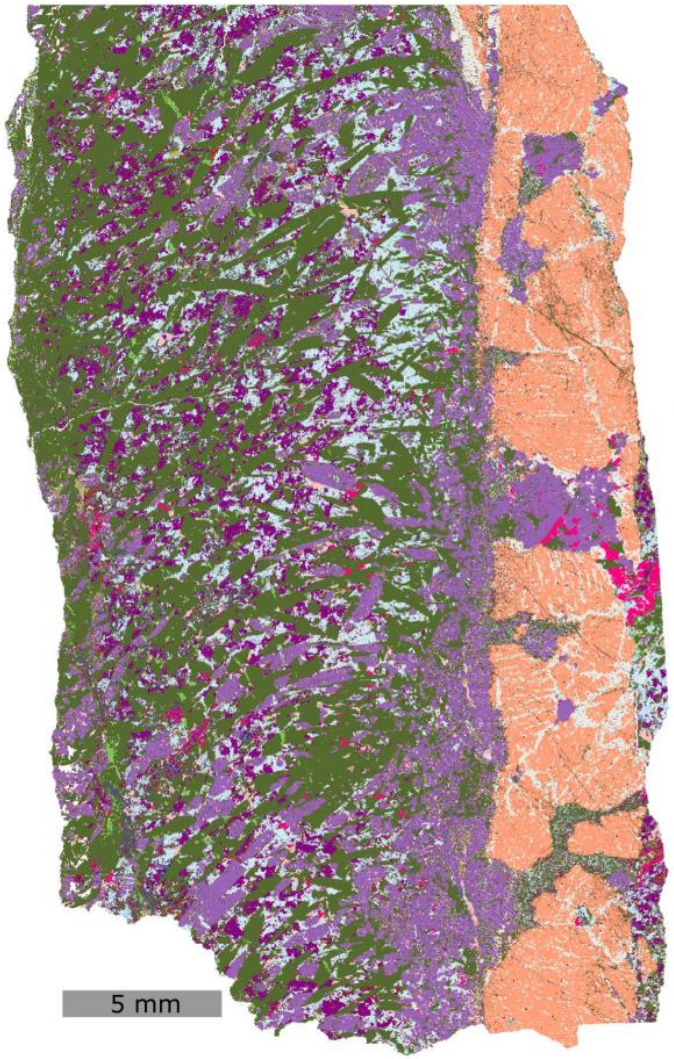
Rare Earth | Price Basket

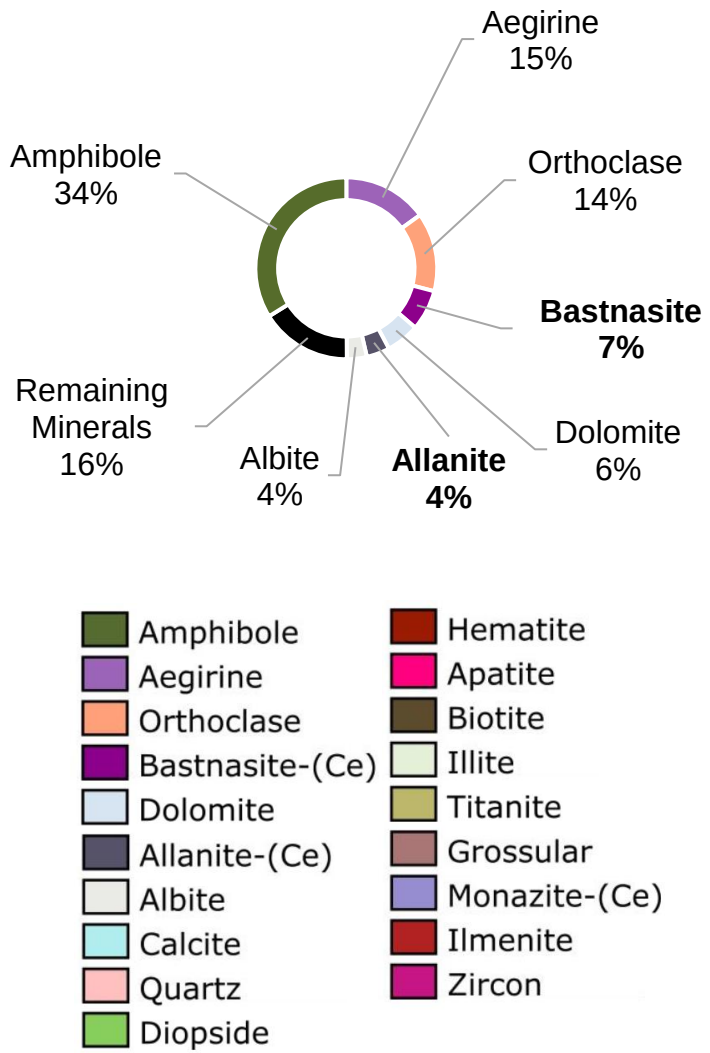
	REO	Market Price Deck (Q4-2022) (US$/kg)	Distribution (%)	Basket Price (US$/kg REO)	Ore Price (US$/tonne ore)
Light Rare Earths	Scandium	$879.05	0.04%	$0.35	$3.83
	Yttrium	$8.58	3.16%	$0.27	$2.96
	Lanthanum	$1.00	19.84%	$0.20	$2.16
	Cerium	$1.05	47.45%	$0.50	$5.43
	Praseodymium	$105.35	5.05%	$5.32	$57.99
	Neodymium	$106.04	17.98%	$19.07	$207.82
	Samarium	$2.30	2.66%	$0.06	$0.67
Heavy Rare Earths	Europium	$26.65	0.74%	$0.20	$2.15
	Gadolinium	$51.98	1.58%	$0.82	$8.95
	Terbium	$1,855.78	0.19%	$3.53	$38.43
	Dysprosium	$324.41	0.85%	$2.76	$30.06
	Holmium	-	0.11%	-	-
	Erbium	-	0.23%	-	-
	Thulium	-	0.02%	-	-
	Ytterbium	-	0.12%	-	-
	Lutetium	-	0.00%	-	-
	Total		**100.00%**	**$33.07**	**$360.45**

Estimated value of US$360.45/tonne of ore based upon the following assumptions:

1. Analyzed samples with >0.5% TREO that average 1.09% TREO (*n* = 18) represent the average ore grade
2. The material prices provided by SMM Information & Technology Co., Ltd. are applicable
3. Heavier rare earths (Ho through Lu) and the high field strength oxides (Nb, Zr, Ta, Ha, and Ti) are not included, and instead are considered a bonus to the overall basket value.

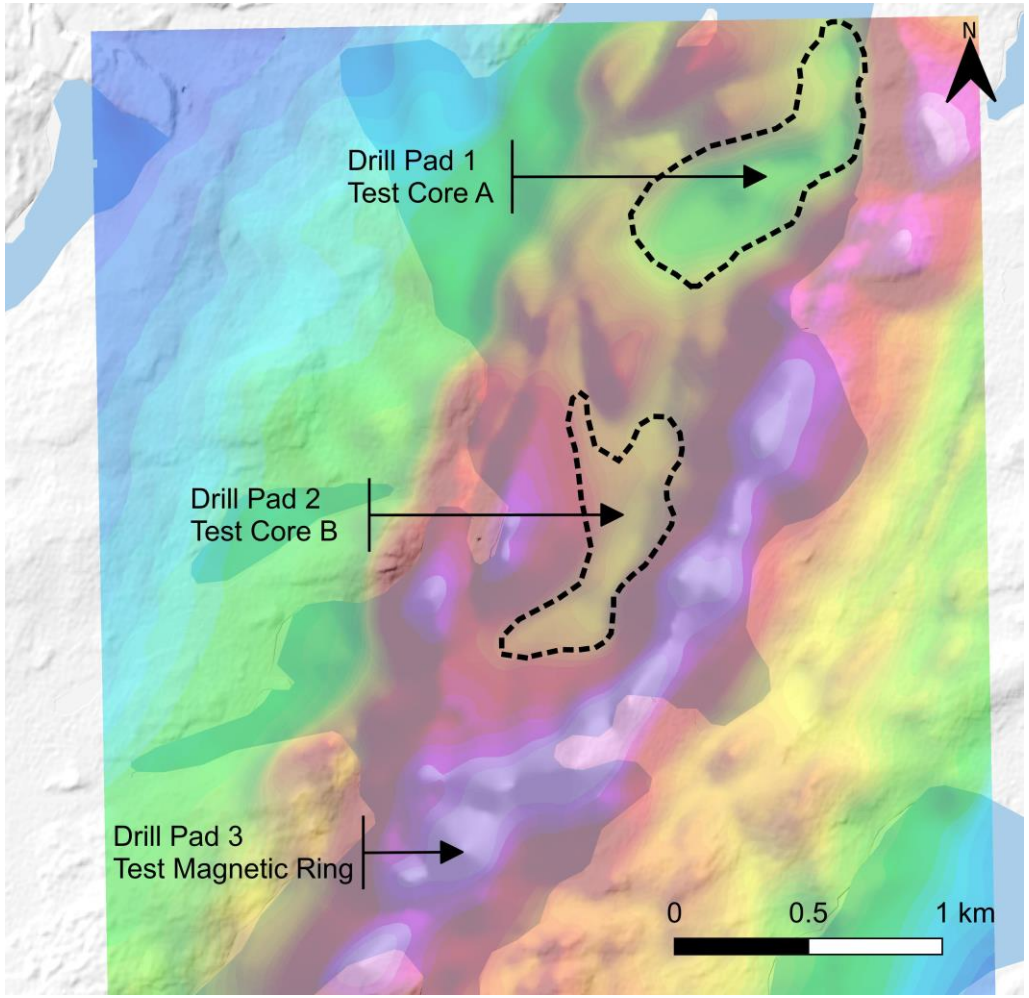
Rare Earth | Mineralogy





- Quantitative Mineralogy (QEMSCAN) analysis was performed on hand sample GC21-013, a calc-silicate rock that was acquired from a narrow dyke in an angular boulder that assayed 2.78% TREO (24% NdPr:TREO).
- The minerals hosting rare earth oxides accounted for 11.5% of the modal mineralogy, including bastnasite (7.3%), allanite (4.1%), and monazite (0.1%).

Future | Exploration Plan



- A 2,000 meter of drilling program is planned for the Q1-2024.
- The program has been designed using three ice-based targets, each with multiple drill holes that could range from 100-400 meters in depth.
- Pads 1 and 2 are designed to test the two intrusive cores for carbonatite and rare earth mineralization.
- Pad 3 is designed to test the magnetic ring for carbonatite and niobium mineralization.

Future | Development Timeline

2021

Field Program
Complete
- Staked original claims
- Confirmed hand sample grades
- Performed QEMSCAN analysis to examine host mineralogy

2022

Field Program
Complete
- Performed aeromagnetic survey to further reveal structure
- Staked additional claims to capture entire structure

Q1-2 2023

Program Planning
Complete
- Use magnetic survey results to plan drill holes
- Prepare exploration budgets

Q3 2023

Field Program
Pending
- Construct camp for drilling program
- Collect bathymetry data
- Map outcrops to begin detailed geologic model

Q1-2 2024

Drill Program
Pending
- Test the structure for mineralogy, grade, and metallurgical potential
- Produce an inferred mineral resource estimate (MRE)