



# YORK HARBOUR METALS

Well Structured Critical Element Explorer Focused on Copper Zinc and Rare Earth Elements Exploration in Western Newfoundland

July 2023

# Forward-Looking Statements

## Disclosure & Disclaimers



This presentation contains forward-looking statements regarding York Harbour Metals Inc. ("YORK") and its affiliates, including future operations, plans, acquisitions, mine development, costs, market demand, and industry outlook. These statements involve known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from the implied forward-looking statements. Factors include market prices for metals and rare earth elements, economic conditions, YORK's exploration and development abilities, resource estimation, delays, accidents, labor disputes, metal price fluctuations, exchange rate fluctuations, and business risks.

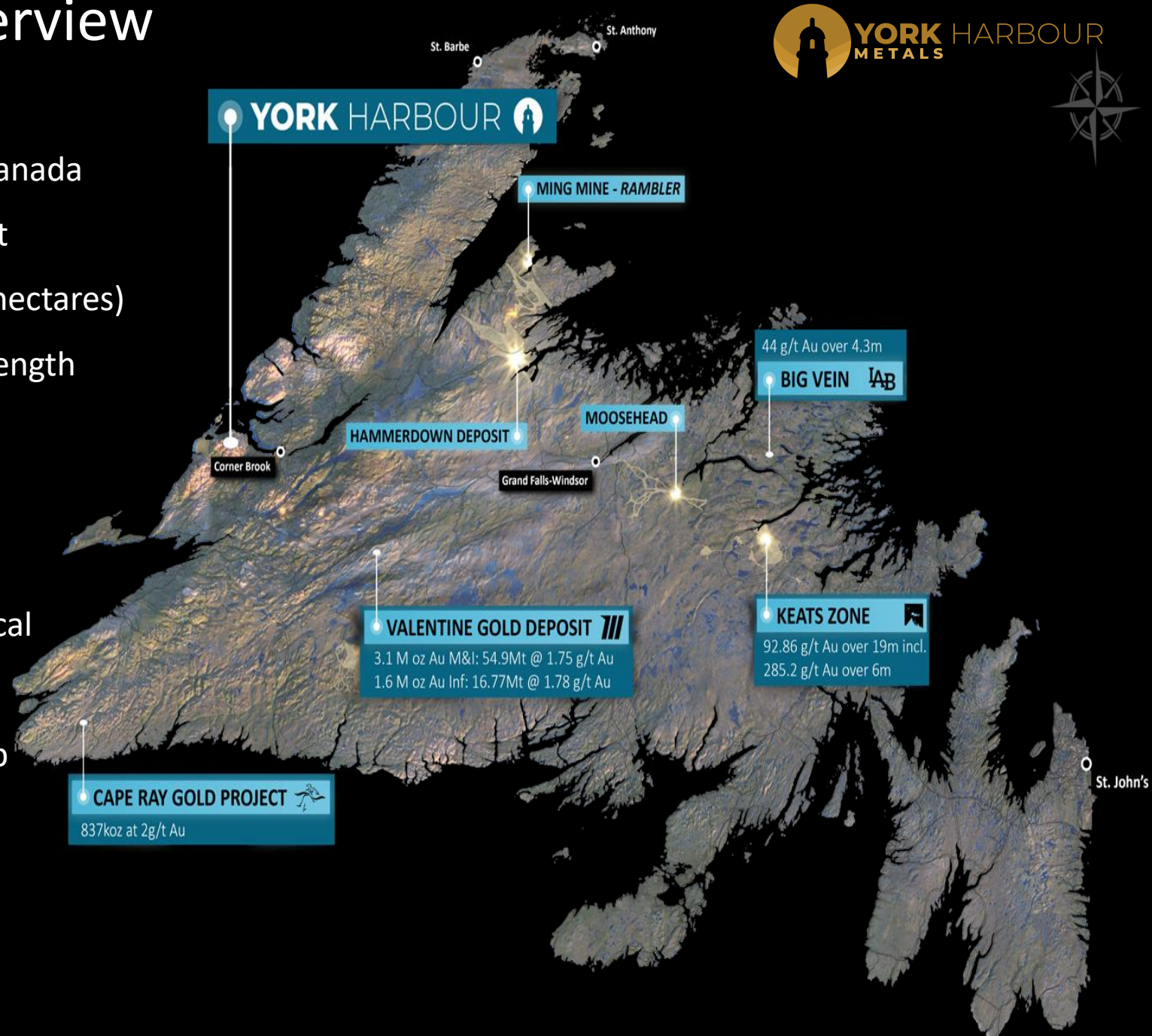
The presentation also discusses rare earth elements, their forecasts, usage, and related information. Such information is based on estimates and assumptions, and actual results may vary. No forward-looking statement, financial outlook, or rare earth elements information guarantees future performance. YORK assumes no obligation to update these statements, except as required by law.

Qualified Person/s: Doug Blanchflower, P. Geo., a Director and Qualified Person for the Company as defined by National Instrument 43-101 Standards for Disclosure of Mineral Projects, has reviewed and approved the scientific and technical information relating to the York Harbour Copper-Zinc Project and rare earth elements in this presentation.

# York Harbour Project – Overview

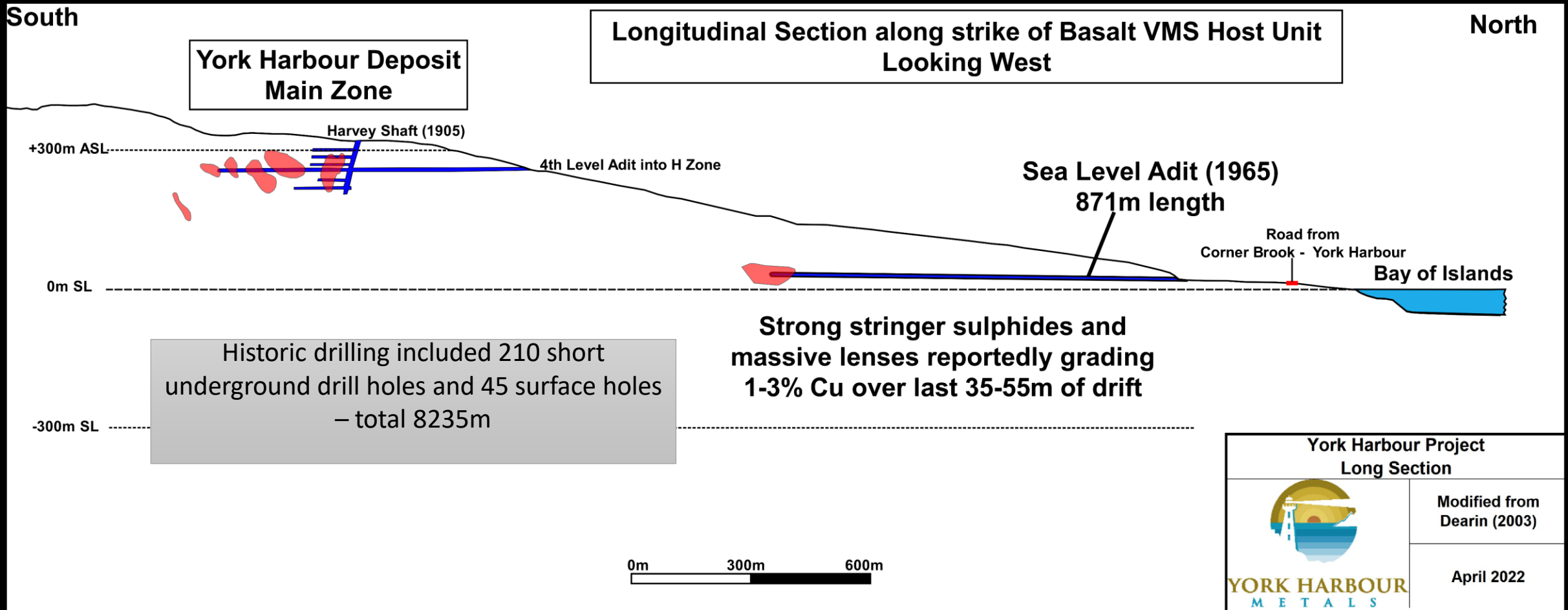
## Copper, Zinc, Silver

- 100% owned in Newfoundland & Labrador, Canada
- Volcanogenic Massive Sulphide (VMS) deposit
- 4,725-hectare land package (historically 650 hectares)
- Historical work focused on 400-metre strike length (first mined in 1890's ore shipped to UK)
- Prior drilling depth limited to 150 metres
- Limited modern exploration conducted
- Proximity to tidal water, power, roads, and local communities
- Mineralization open along strike and downdip
- Recent drilling results confirm high-grade mineralization



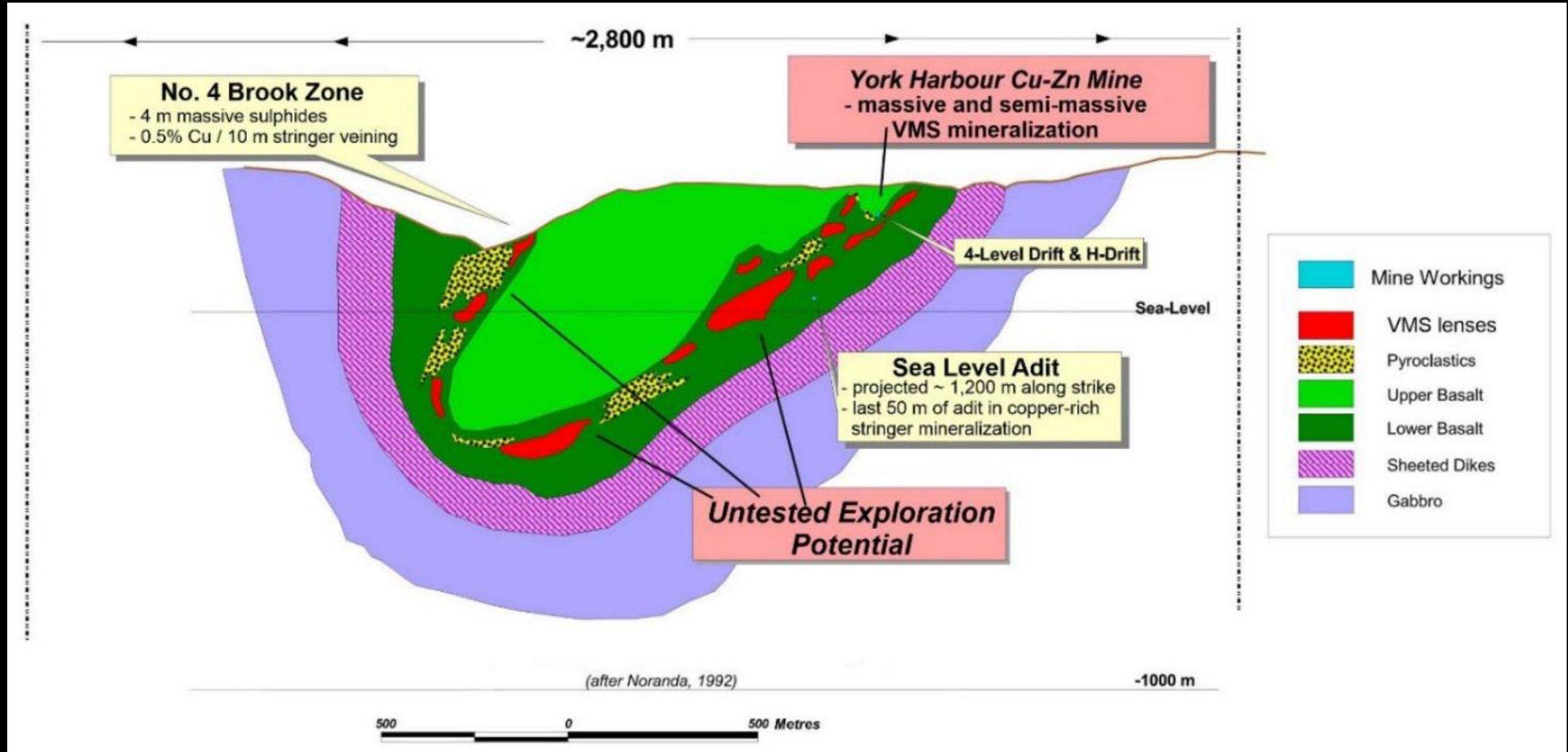
# Long Section of Mine Workings

Known VMS Mineralization Looking West (Source: Modified Dearin, 2003)



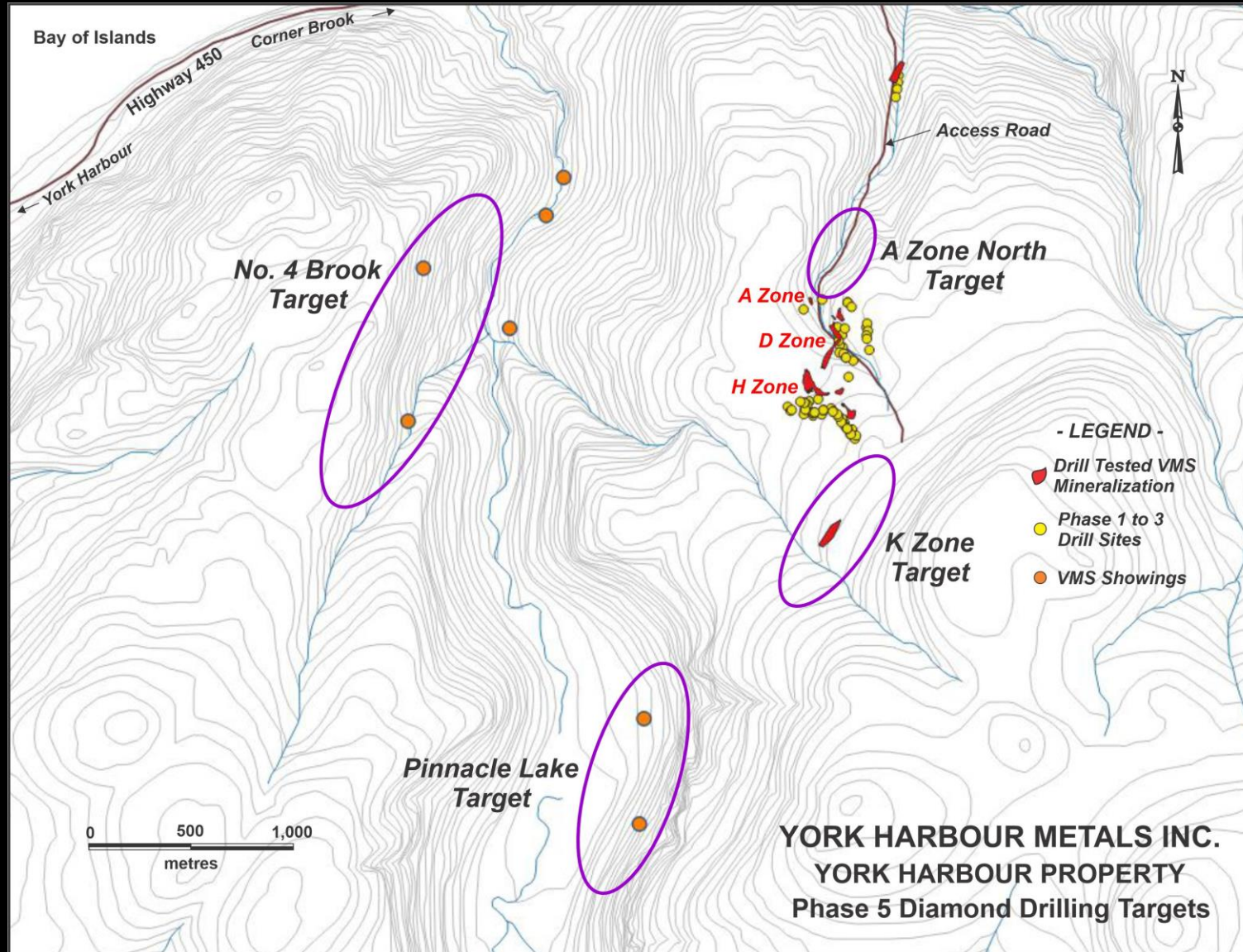
# Inferred Distribution

VMS Mineralization within Folded Volcanic Sequence (Source: Modified after Dearin, 2003)



# York Harbour Project

## Phase 5 Drill Targets



# York Harbour Project

## Exploring High-Grade Copper & Zinc VMS Potential

- High-grade copper and zinc intersections found in drilling to date
- Mineralization encountered in 75% of drill holes
- Application submitted for underground drilling and exploration drilling at #4 Brook Adit
- Completed Induced Polarization (IP) program interpretation
- Drill testing of some new targets beyond the historic mine area completed but incomplete
- Mineralization remains open along strike and downdip
- Looking for new HIGH GRADE COPPER ZINC mineralized zones going forward

# Bottom Brook REE -A 'Very Rare' Opportunity



- China is the “OPEC” of Rare Earths
- The next “GOLD RUSH” is going to be North American Rare Earths because they are ESSENTIAL to everything in the Electrification movement and projects outside China are now critical
- In the 1970s, the USA was the largest producer of Rare Earth Elements (REEs), but over the past 50 years, China has strategically dominated the market, both in mining and processing
- Currently China mines more than 60% of the worlds REE and processes nearly 90% of the worlds REE
- China exercised its market power in the 2010-2014 period, forcing Rare Earth prices to skyrocket before agreeing to stop export restrictions. (Neodymium traded as high as \$300/kg in 2011)
- The US tariffs on REEs in 2018 led to China cutting off supply, causing another price spike and highlighting the world's vulnerability to China's control over these critical materials
- Prices of REEs dropped during the COVID-19 pandemic on weak demand but have since rebounded, with **some REE's experiencing a 400% increase**
- The global community now recognizes the urgent need to find new sources of REEs and develop new refining capacity



# Electrification requires massive investment in mining and processing of Critical Elements – Cu, Ni, Li, REE, Graphite



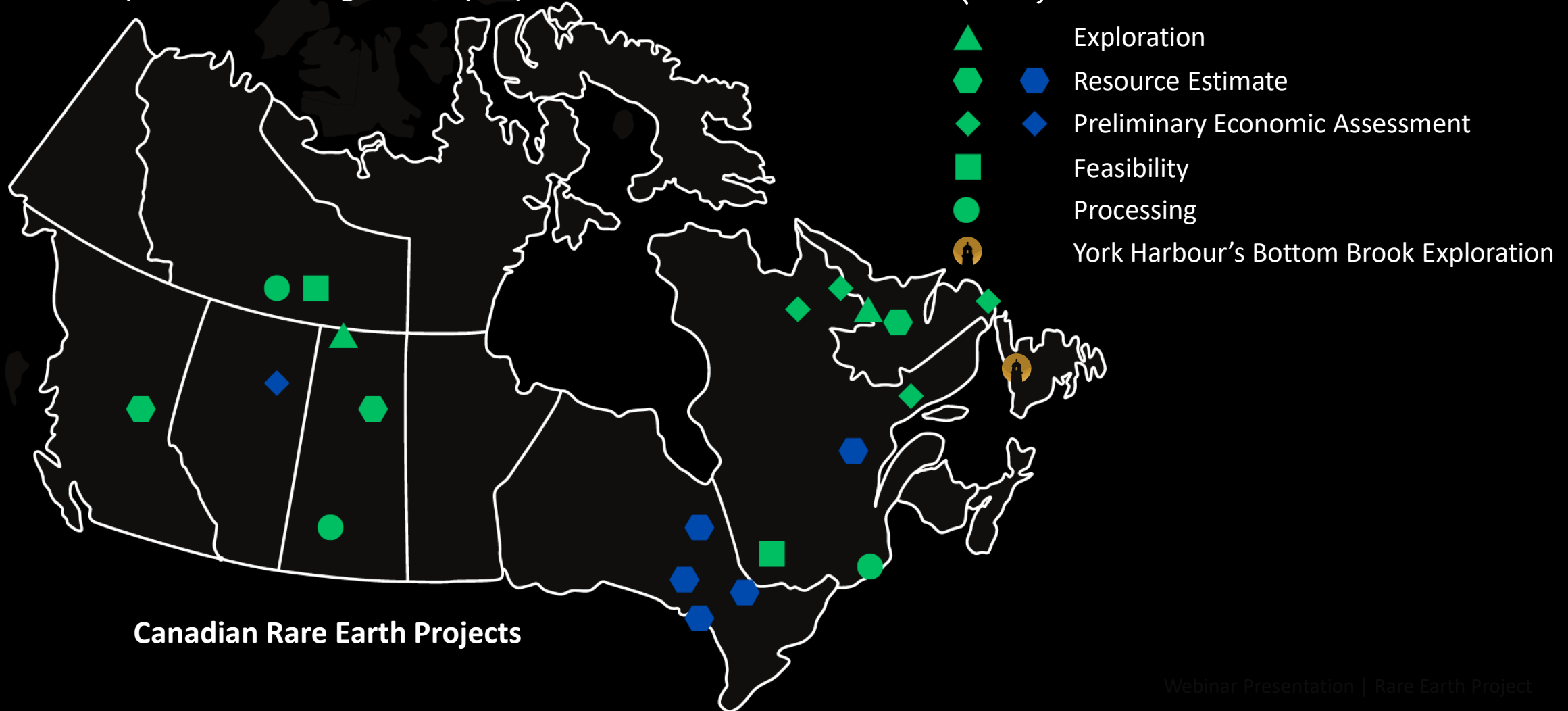
The increasing involvement and urgency of governments worldwide to support mining illustrates the critical state of the supply and demand metrics for critical metals, including REE'S.

- **US Government** – Green tech funding, support for new Rare Earth Element processing facilities, and policy initiatives to encourage domestic production and reduce reliance on foreign sources.
- **Canada** - New incentives for critical minerals flow through, streamlining project development programs, support for pilot plants and technology advancements, and even considering acquiring equity in companies (Globe & Mail, March 10-23). New programs - \$3.8 billion Canadian over 8 years so far.
- **European Union** - Launching the European Raw Materials Alliance (ERMA) to secure access to sustainable raw materials, advanced materials, and processing know-how, while also fostering investments in resource exploration and production within Europe.
- **Australia** - The Critical Minerals Facilitation Office (CMFO) was established to coordinate a national strategy, attract investment, and promote international partnerships in the critical minerals sector.
- **Governments and large mining companies are now funding projects and smaller companies.**



# Canada's Rare Earth Production Potential

Most Canadian projects have significant issues with a lack of supporting infrastructure that would have to be developed prior to production, a very time consuming and very expensive



Canadian Rare Earth Projects

# Newfoundland & Labrador

## Bottom Brook is an Enviably Location for Rare Earth Production

### Newfoundland

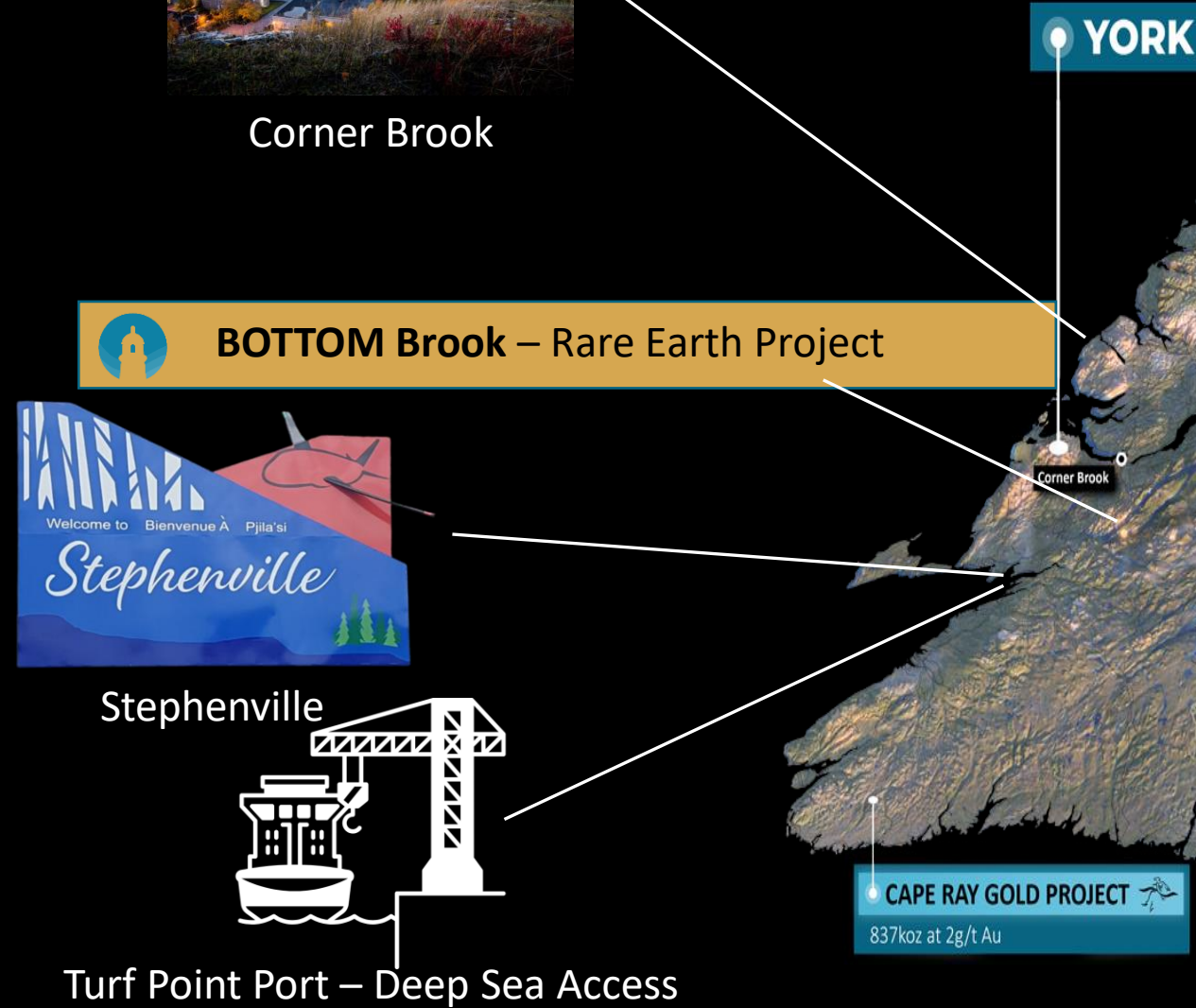
- Abundant 'green' renewable power
- Numerous industrial Brownfield sites available
- History of successful large project development (Muskrat Falls, Voiseys' Bay, Hibernia)
- Hardworking, available, and supportive work force

### Stephenville, Newfoundland

- Proximity to Bottom Brook project (27km)
- Previous industrial plant experience – historic pulp mill
- Well equipped infrastructure (hospital, schools, retail)
- Fully operational deep-sea port
- Availability of coastal brownfield industrial sites
- Access to excess renewable energy for processing
- Commercial Airport



Corner Brook





Corner Brook

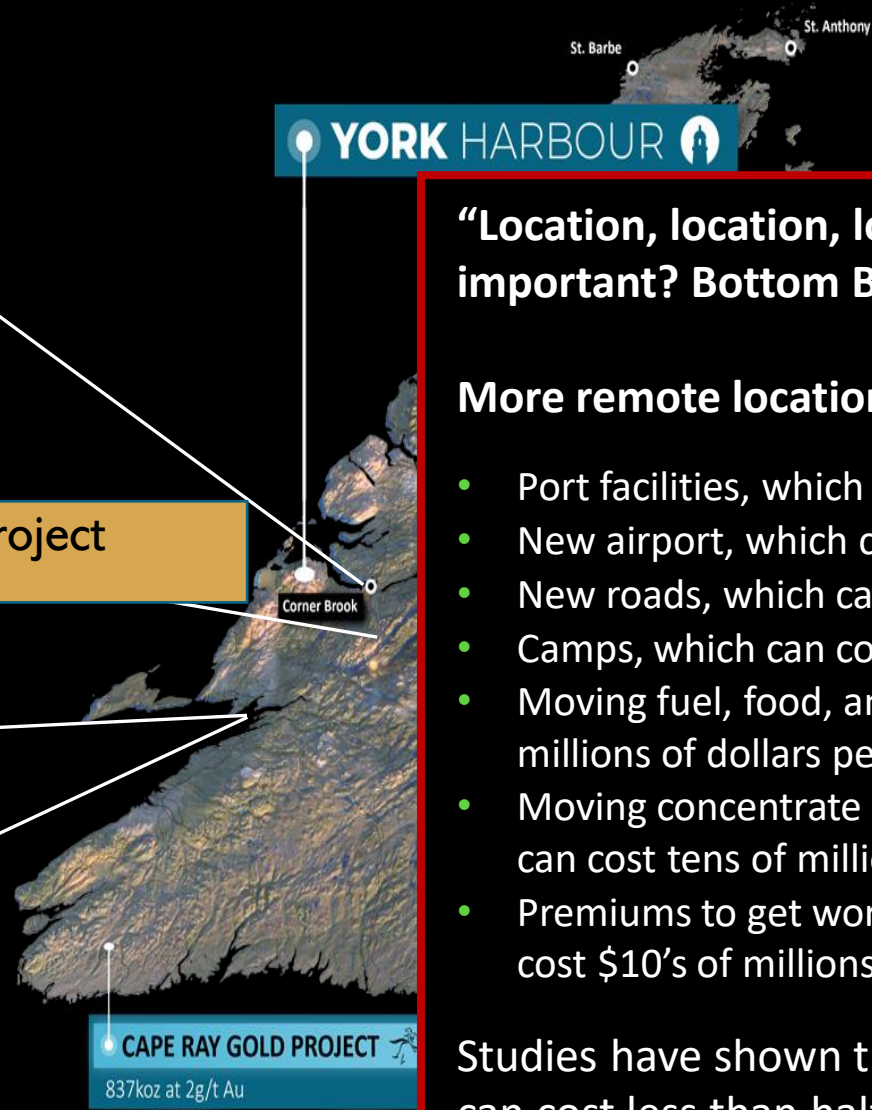
**BOTTOM Brook – Rare Earth Project**



Stephenville



Turf Point Port – Deep Sea Access



**YORK HARBOUR**

**“Location, location, location”**: Why is it so important? Bottom Brook has it all!

**More remote locations come with tremendous costs;**

- Port facilities, which could cost up to \$100 million
- New airport, which could cost up to \$50 million
- New roads, which can cost up to \$1 million per km
- Camps, which can cost \$10's of millions
- Moving fuel, food, and people, which can easily cost millions of dollars per year
- Moving concentrate from a mine site to the coast, which can cost tens of millions of dollars per year
- Premiums to get workers to 'fly in fly out' jobs, which can cost \$10's of millions per year

Studies have shown that projects with great logistics can cost less than half and be much more profitable.

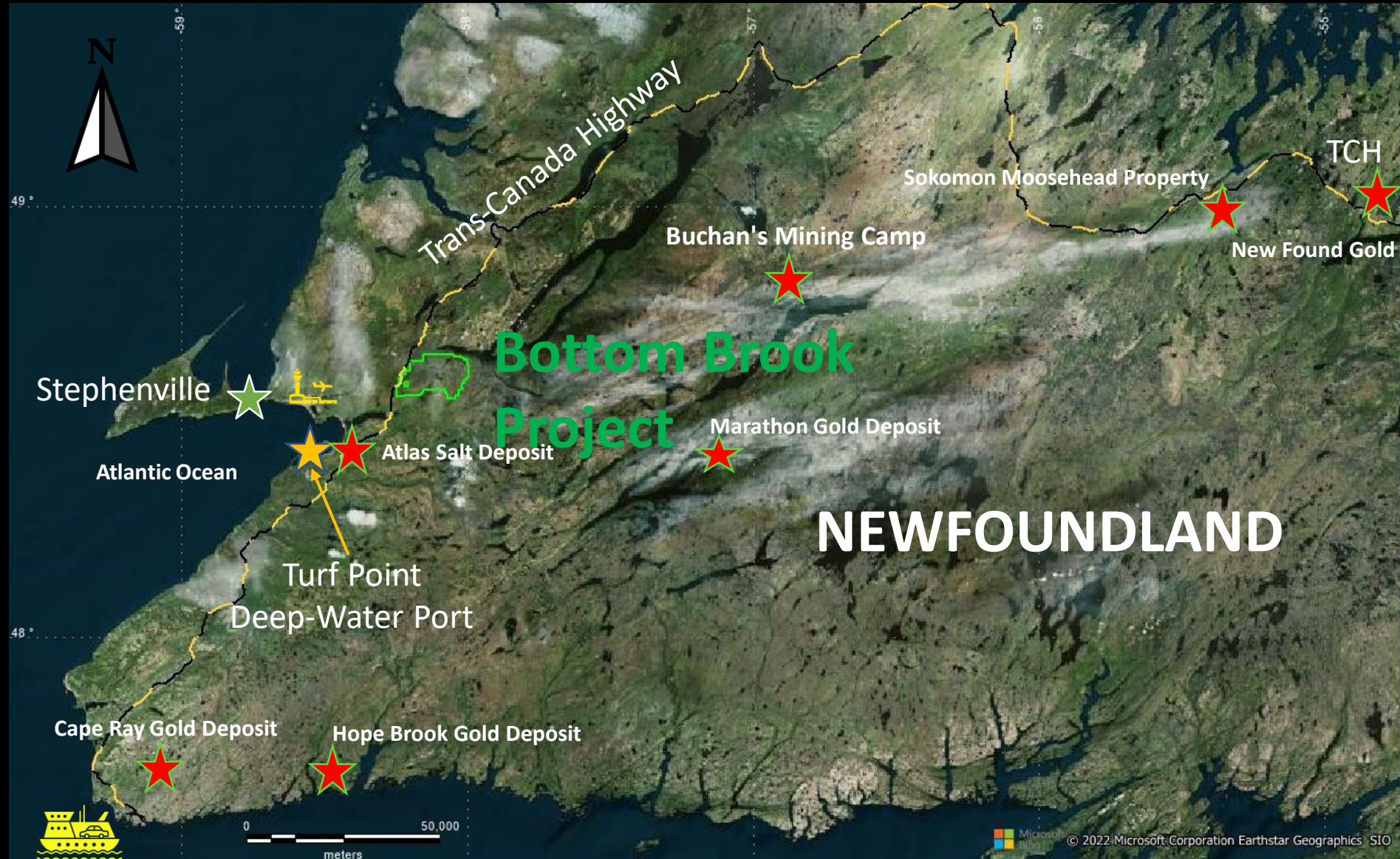
**Bottom Brook has all of the above available already**



# Bottom Brook Project – Excellent Untapped Potential



- Resource roads throughout the property
- Large underexplored land position with numerous targets already outlined
- Unsourced High grade REE mineralization discovered in local boulders
- High grade REE discovered and trenched
- High grade REE in historic drill holes



# Bottom Brook Project – Extensive Land Holdings



- Extensive 15,150-hectare property with many exploration opportunities
- Excellent access via Trans-Canada Highway and all-weather roads
- On-site power grid for reliable electricity supply
- 27km to deep seaport
- High grade REE values in unsourced boulders, trenches and in historic drill core
- Historic REE work was cut short by markets, falling REE prices
- Exploration to date mainly limited to the red star on the map

# Bottom Brook Project – U3 Trench

High-Grade Rare Earth Elements Discovery

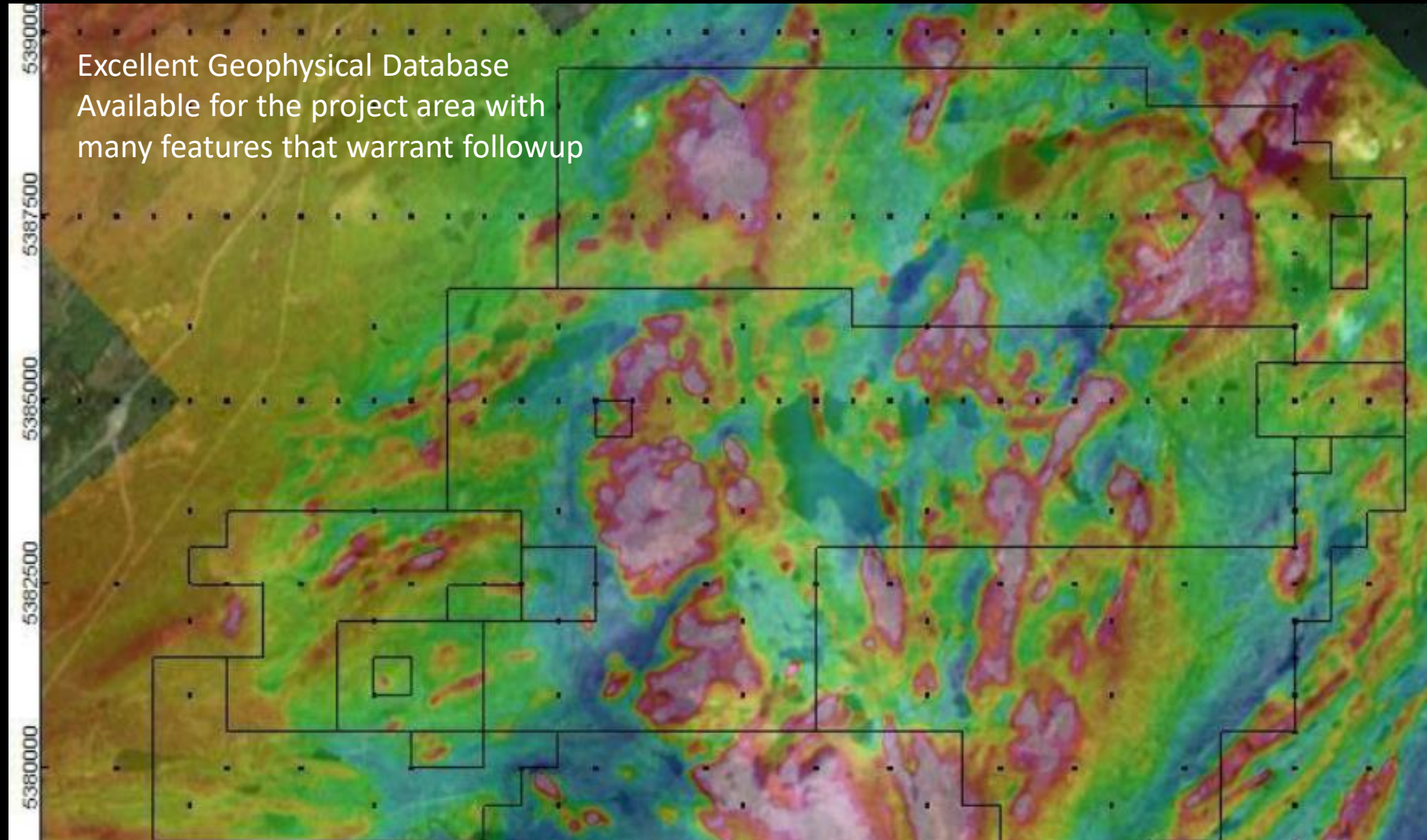


Trench E with up to **19.82%** Total Rare Earth Oxides (“TREO”)



High-Grade Rare Earth Mineralization

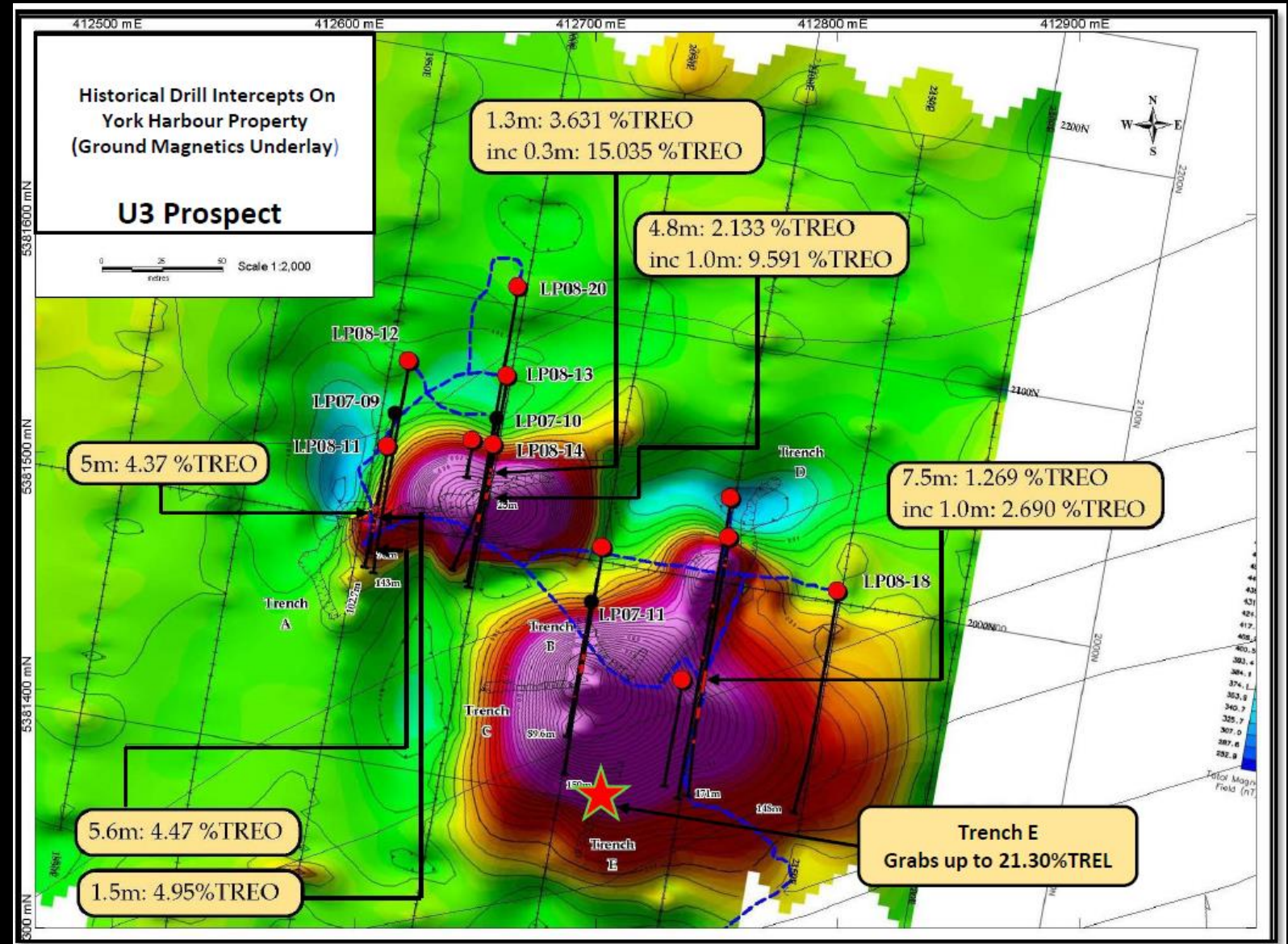
# Bottom Brook Project – Regional Magnetics





# Bottom Brook Project – Historical Drill Intercepts

- Historic work very much focused on small isolated magnetic high features
- This resulted in the discovery of high grade mineralization in bedrock then drilling
- More recent work discovered high grade REE mineralization outside the magnetic high features
- Geology still not investigated in any detail
- Potential to discover significant areas of mineralization elsewhere on the property

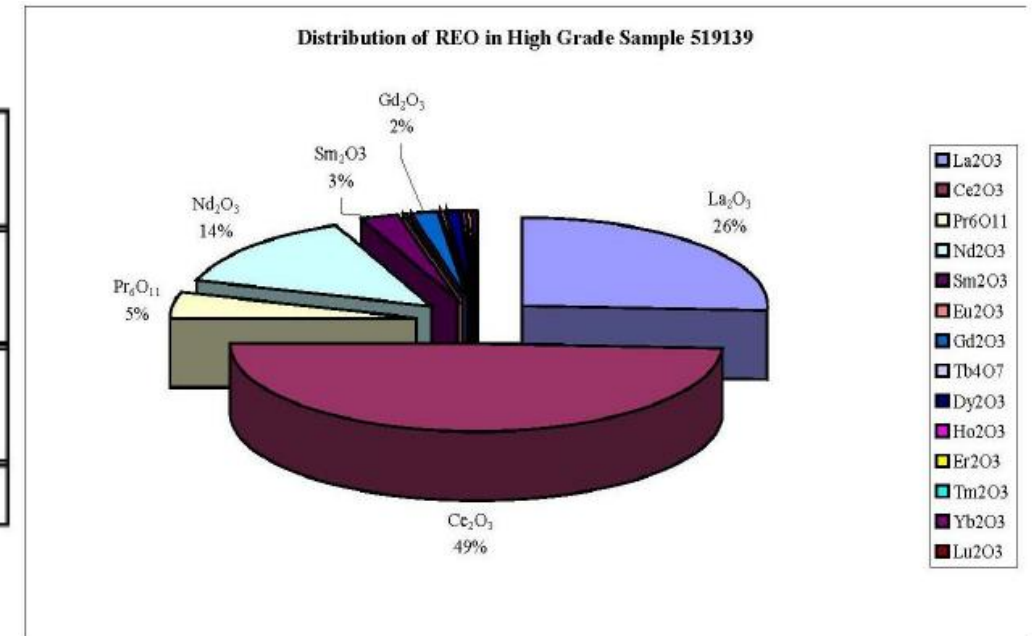


# Bottom Brook Project – Distribution of REE

High-Grade Drill Core Sample 51939



Sample Number	La <sub>2</sub> O <sub>3</sub> (%)	Ce <sub>2</sub> O <sub>3</sub> (%)	Pr <sub>6</sub> O <sub>11</sub> (%)	Nd <sub>2</sub> O <sub>3</sub> (%)	Sm <sub>2</sub> O <sub>3</sub> (%)	Eu <sub>2</sub> O <sub>3</sub> (%)	Gd <sub>2</sub> O <sub>3</sub> (%)	Tb <sub>4</sub> O <sub>7</sub> (%)
519139	3.87	7.42	0.69	2.10	0.39	0.01	0.27	0.03
	Dy <sub>2</sub> O <sub>3</sub> (%)	Ho <sub>2</sub> O <sub>3</sub> (%)	Er <sub>2</sub> O <sub>3</sub> (%)	Tm <sub>2</sub> O <sub>3</sub> (%)	Yb <sub>2</sub> O <sub>3</sub> (%)	Lu <sub>2</sub> O <sub>3</sub> (%)	Total REO (%)	
	0.15	0.02	0.05	0.01	0.02	0.00	15.04	



The distribution of REO in high-grade sample 51939 is consistent with all samples with greater than 1% TREO  
**High value magnet rare earths (Pr, Nd, Tb, Dy) accounting for about 20% of TREO**

# Bottom Brook Project – Mineralogy & Metallogeny



- Rare Earth Elements (REEs) are often found in low concentrations mixed with various minerals which can make mineral separation challenging.
- REEs are typically found in minerals such as carbonates, phosphates, oxides, or other minerals that can make metal extraction a complex process.
- At the early exploration stage, mineral department and mineralogy are generally not a primary concern for explorers.
- Bottom Brook is an early-stage project; however, recognizing the potential challenges of metallogeny and mineral department, previous operators took the initiative to conduct preliminary investigations on mineralogy and mineral department at SGS Laboratories in Ontario.
- Results were encouraging, given the limited number of samples, with results indicating monazite to be the primary host mineral for the rare earths and concentration deemed completely doable.
- Significant further exploration and mineralogical work are clearly warranted and not expected to be significantly hindered by unusually complex mineralogy.

# Rare Earth Element Pricing



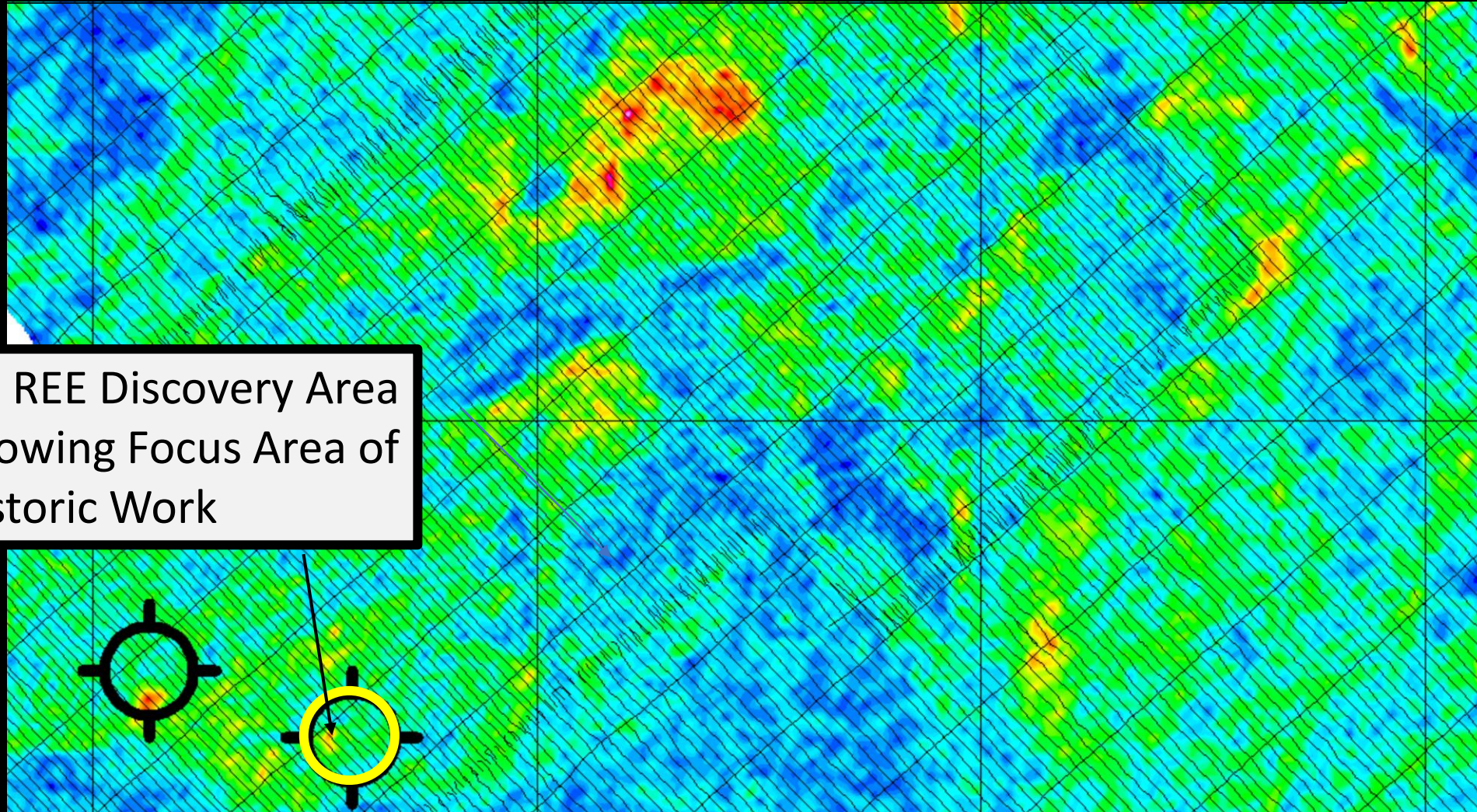
- REE pricing dynamics differ from common elements and are less transparent
- Neodymium, Praseodymium, Dysprosium, and Terbium provide most value in TREO mineral pricing
- Demand for REEs projected to grow between 5-12% annually
- **AdamasResearch forecasts magnet rare earth consumption to increase from \$3.8 billion to over \$36 billion in 2035**
- Prices of some of these elements surged by 400% in the past two years
- Long-term price forecasts for Nd, Pr, Dy, and Tb estimated at \$212/kg, \$201/kg, \$587/kg, and \$2,493/kg (USD) (Adamas)
- **Magnet rare earths(Nd, Pr, Dy and Tb) account for about 20% of TREO in Bottom Brook project mineralization**

# Bottom Brook Project – Exploration Highlights

## Project Radiometrics

U3 signature within the right black/yellow circle

Larger unexplored signatures to be tested



# Bottom Brook Project – Rare Earth Prospects



Geochem has potential to define new areas of mineralization

Main Showing: U3

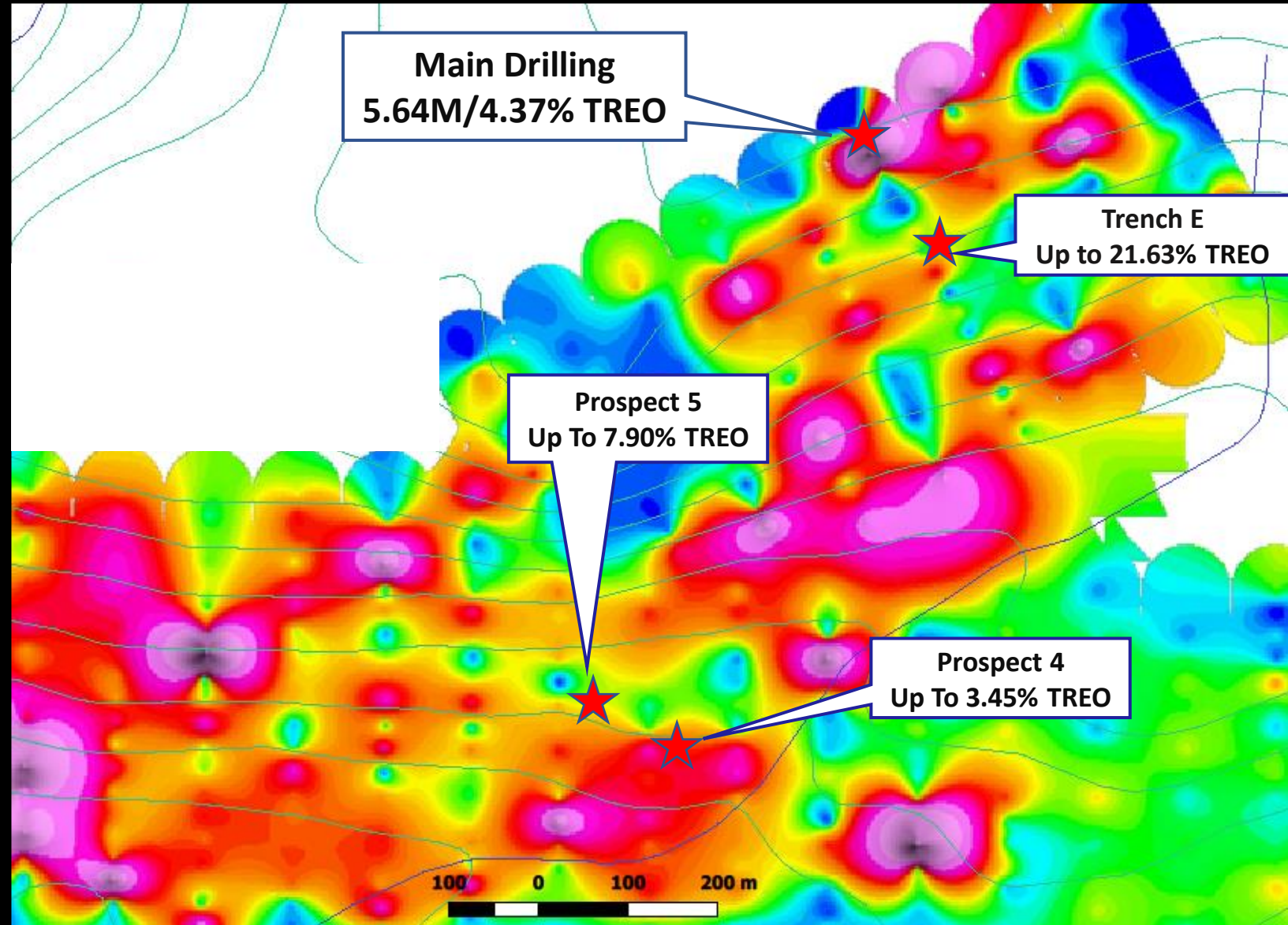
Drill hole LP-07-0 5.64M/4.47% TREO

Trench E Prospect: Three grab samples: 21.63%, 12.63%, 12.30% TREO

Prospect 5:  
Grab samples up to 7.90% TREO

Prospect 4:  
Grab Samples up to 3.45% TREO

TREO = Total Rare Earth Oxide



# Bottom Brook Project – Rare Earth Prospects



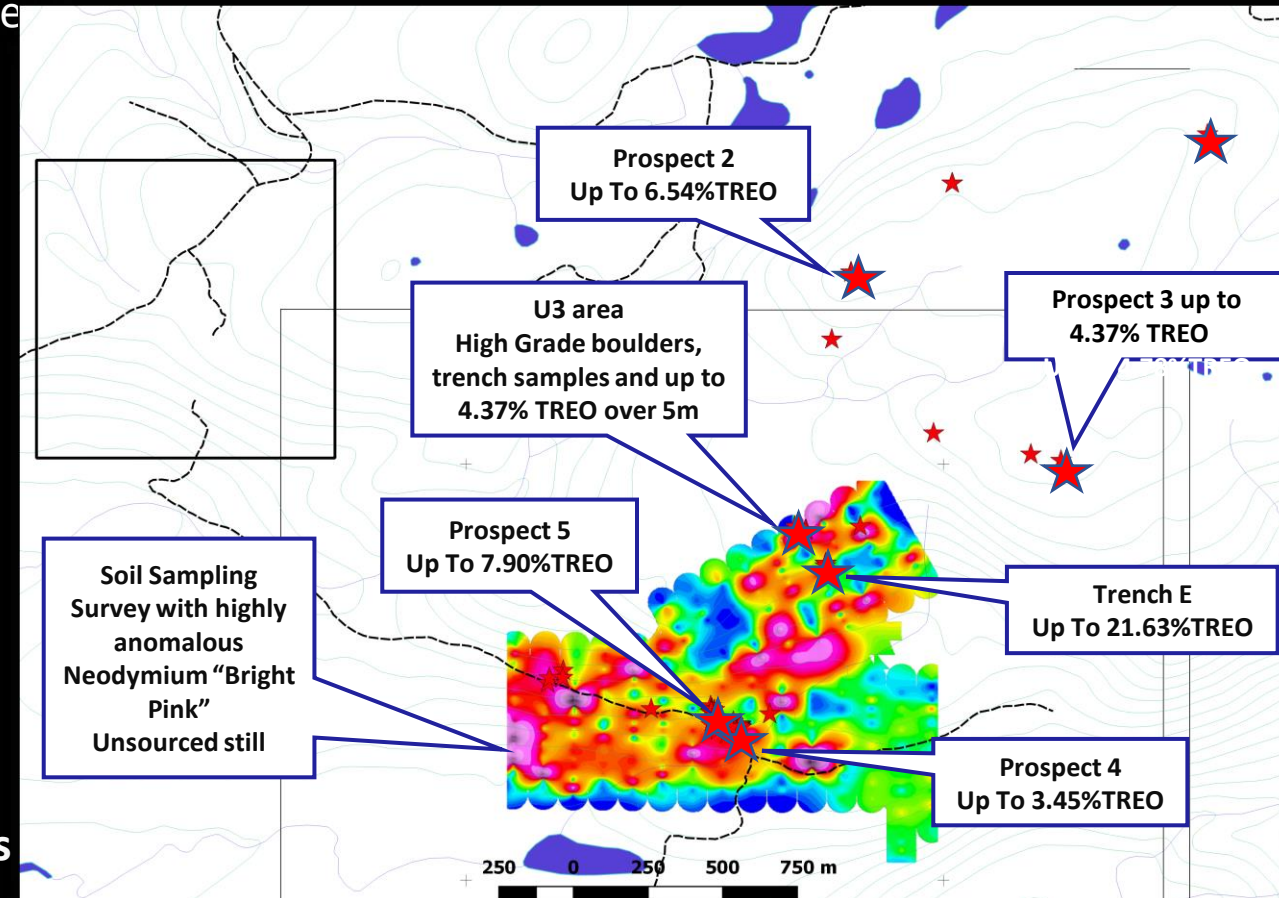
## Prospect 2: Grab sample up to 6.54% TREO

- The highest-grade sample (717183) returned an assay value of 6.54% TREO
- Neodymium Values up to 0.80% equivalent to (7.25 kg)
- Praseodymium Values up to 0.27% equivalent to (2.44kg)
- Dysprosium Values up to 0.06% equivalent to (0.54kg)

## Prospect 3: Grab sample up to 4.78% TREO

- The highest-grade sample (71785) returned an assay value of 4.78% TREO
- Neodymium Values up to 0.84% equivalent to (7.43kg)
- Praseodymium Values up to 0.23% equivalent to (2.08kg)
- Dysprosium Values up to 0.06% equivalent to (0.54kg)

Geochem coverage limited to a small part of the property  
New showings discovered outside the Geochem survey limits



TREO = Total Rare Earth Oxide

# The Bottom Brook 'Blue Sky' Opportunity



- 100% ownership of a large, dominant land position
- Numerous high-grade light and heavy Rare Earth mineralized areas
- Uncertain geological controls and setting – Largely only 1:50,000 geological mapping available
- Undefined limits on mineralization
- Possibility of other styles of mineralization and potential to find other commodities on the project
- **Only a small fraction of the property evaluated to date**
- Magnet Rare Earths comprise at least 20% of TREO
- Exploration strategy in place for efficient identification of high-priority drill targets
- Thin overburden and easily identifiable mineralization with basic field equipment
- Proven effectiveness of radiometrics, prospecting, till sampling, and soil geochemistry techniques



# How We Will Make NEW Discoveries QUICKLY?

Available Data Review and Re-Evaluation

Underway

Magnetics

Modelling and review ongoing

Radiometrics

Modelling and review ongoing

Prospecting

Underway – results pending

Geological Mapping

Underway – results pending

Trenching

Phase 1 complete – Assays pending

Drilling

When targets are ready, August-September

# Share Structure

as of July 28<sup>th</sup>, 2023



**TSXV : YORK | OTC : YORKF**

SHARES OUTSTANDING

**68,529,041**

SHARE PRICE

**\$0.16**

YEAR HIGH/YEAR LOW

**\$0.84/\$0.14**

MARKET CAPITALIZATION

**\$11.3M**

CASH

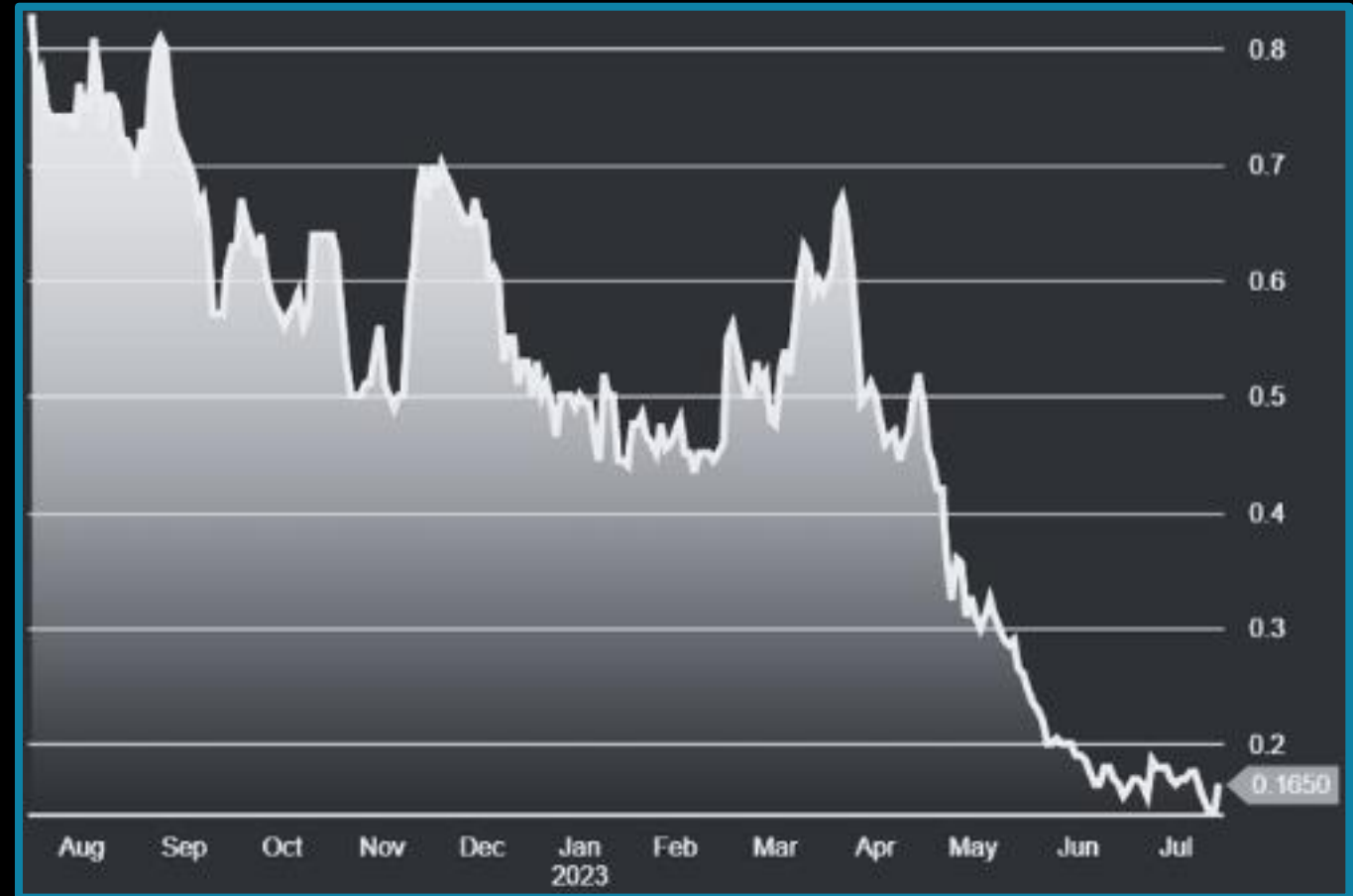
**~\$1.5M**

OPTIONS

**3,000,000**

WARRANTS

**14,362,684**



# Seasoned Management Team



**MICHAEL WILLIAMS**  
CHAIRMAN

With over **25 years** in the mining industry, Michael Williams has held senior roles in successful public companies like **Underworld Resources** and has extensive experience in administration, capital raising, and marketing. He is the Founder and Executive Chairman of **Aftermath Silver** and currently serves as Director, President & CEO of **Vendetta Mining**.



**BRUCE DURHAM**  
PRESIDENT & CEO

Bruce Durham, P.Geo., has over **45 years** of experience in the junior resource industry, focusing on corporate management, project development, and exploration management. He recently served as President and CEO of **Nevada Zinc**, Executive Chairman of **Rockcliff Metals**, and COO of **Norvista Capital**. He is a director of **Minera Alamos** and VP Exploration for BTU Metals. Bruce was also an original **Hemlo Gold Mine** team member.



**SEAN CHOI**  
CFO

Sean Choi has **16 years** of experience in public accounting and the mining industry, serving as CFO for **Ecuador Gold and Copper**, **Northern Sun Mining**, and **Osino Resources**. He is a Chartered Professional Accountant and Chartered Accountant with a Bachelor's degree from the University of Western Ontario.



**ANDREW LEE**  
MANAGING DIRECTOR

With **16 years** in the junior mining industry, Andrew Lee has served on the **boards of several companies** listed on the TSX Venture and CSE. He **led York Harbour Metals as President & CEO** from 2020 to Nov 2022 and remains as Managing Director. Andrew holds a Bachelor of Science degree from the University of British Columbia.



**LEO POWER**  
DIRECTOR

Leo Power has significant experience in the mining sector, holding two graduate degrees, an **MBA and a Master of Oil and Gas Studies**. He has worked at senior levels within the **Canadian government** and recently held Chair & Interim-CEO positions at **Search Minerals**, and holds directorships at **Q2 Metals**, and **LNG Newfoundland and Labrador**.



**ROGER BAER**  
DIRECTOR

Roger Baer, CPA, CMA, has **over 30 years** of accounting and financial management experience in multinational mining companies, oil & gas, and construction industries. His expertise includes roles at **Newmont**, **Rio Tinto**, **Alacer Gold**, **Thompson Creek Metals**, **Excelsior Mining**, and **Cyprus Amax**.



**DOUG BLANCHFLOWER**  
QP & DIRECTOR

With **52 years** of mineral exploration experience, Doug Blanchflower is a Professional Geologist and **founder of Minorex Consulting**. He has managed gold-silver, uranium, and base metal **exploration programs across North and South America and Asia**.



# YORK HARBOUR METALS

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