

STRATEGIC METALS FOR THE ENERGY TRANSITION



# THUNDER BAY NORTH CRITICAL MINERALS PROJECT

JULY 2023

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TSXV AIR OTCQB CLRMF FRA CKU | [CLEANAIRMETALS.CA](https://CLEANAIRMETALS.CA)

# FORWARD LOOKING STATEMENTS

Information set forth in this presentation may contain forward-looking statements. Forward-looking statements are statements that relate to future, not past events. In this context, forward-looking statements often address a company's expected future business and financial performance, and often contain words such as "anticipate", "believe", "plan", "estimate", "expect", and "intend", statements that an action or event "may", "might", "could", "should", or "will" be taken or occur, or other similar expressions. By their nature, forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or other future events, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such factors include, among others, risks associated with project development; the need for additional financing; operational risks associated with mining and mineral processing; fluctuations in commodity prices; title matters; environmental liability claims and insurance; reliance on key personnel; the absence of dividends; competition; dilution; the volatility of our common share price and volume; and tax consequences to U.S. Shareholders. Forward-looking statements are made based on management's beliefs, estimates and opinions on the date that statements are made and the Company undertakes no obligation to update forward-looking statements if these beliefs, estimates and opinions or other circumstances should change. Investors are cautioned against attributing undue certainty to forward-looking statements.

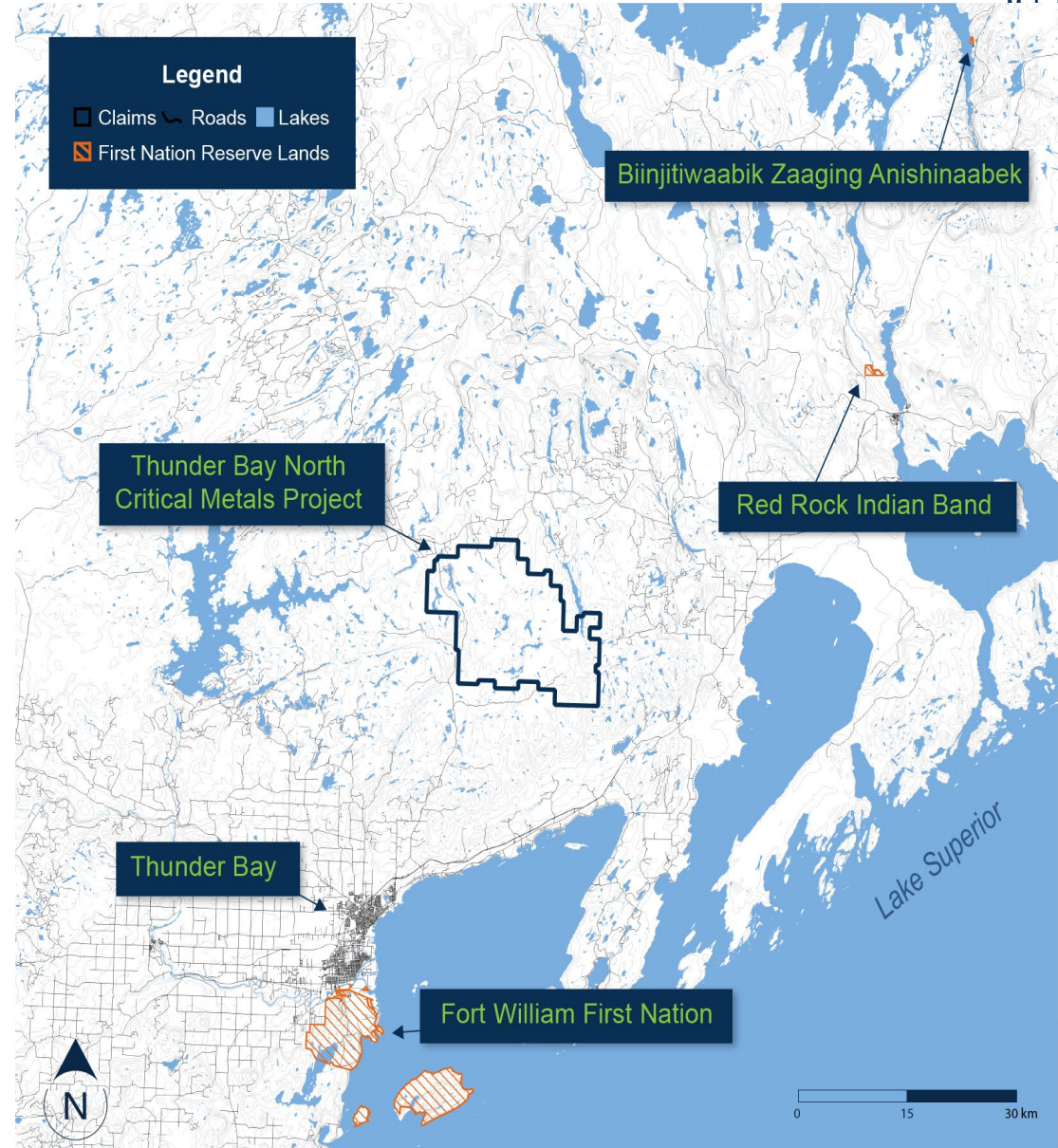
**Mike Garbutt, P.Eng.** a Qualified Person under NI 43-101, has reviewed and approved dissemination of the technical content herein.



# LAND RECOGNITION



Clean Air Metals Inc. and its wholly owned subsidiary Panoramic PGMs (Canada) Ltd. acknowledge that the Thunder Bay North Critical Minerals Project is on the traditional territories of the Fort William First Nation, Red Rock Indian Band and Biinjitiwabik Zaaging Anishinabek. The parties together are the Cooperating Participants in a Memorandum of Agreement dated January 9, 2021 (press release January 11, 2021) and Exploration Agreement signed April 13, 2022 (press release April 14, 2022).



# THE VALUE PROPOSITION

- ✓ An Indicated Mineral Resource of **14 million tonnes** containing significant values of **4 Critical Minerals**.
- ✓ A **rare** PGM deposit
  - One of the few high grade **Platinum** deposits outside of South Africa with significant Palladium and Copper.
- ✓ Exploration potential
  - Two adjacent deposits both **open at depth**
- ✓ An **accomplished team (Jim Gallagher and Mike Garbutt)** that can build the project.
- ✓ **Well financed** into late 2024 with just under \$9 million cash.
- ✓ **Good jurisdiction** with easy access to infrastructure and workforce.
- ✓ Established relationships with **First Nations** and other indigenous communities.
- ✓ **Significantly undervalued vs peers.**

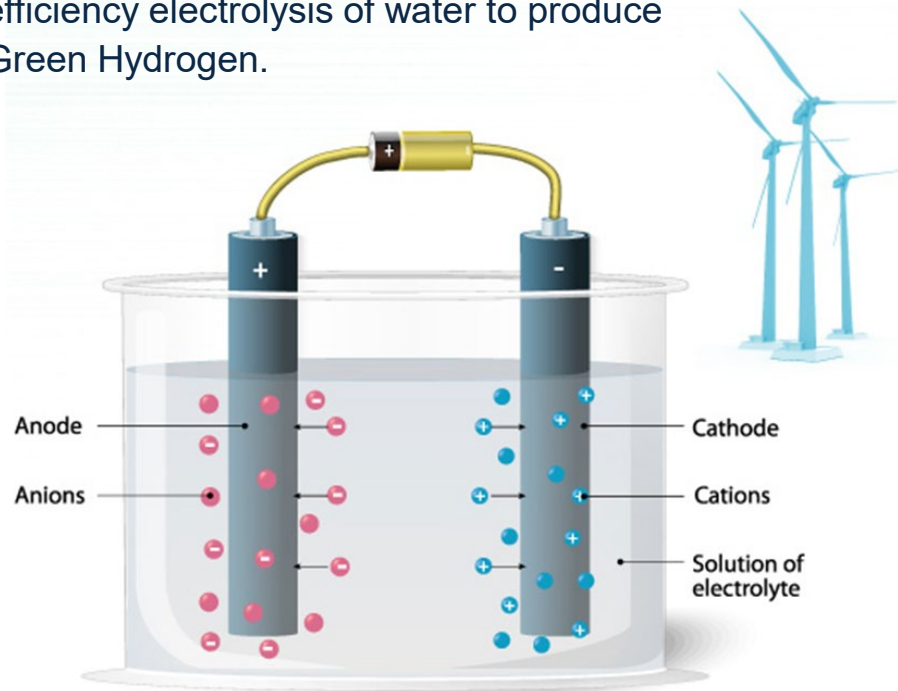


# PLATINUM AND PALLADIUM

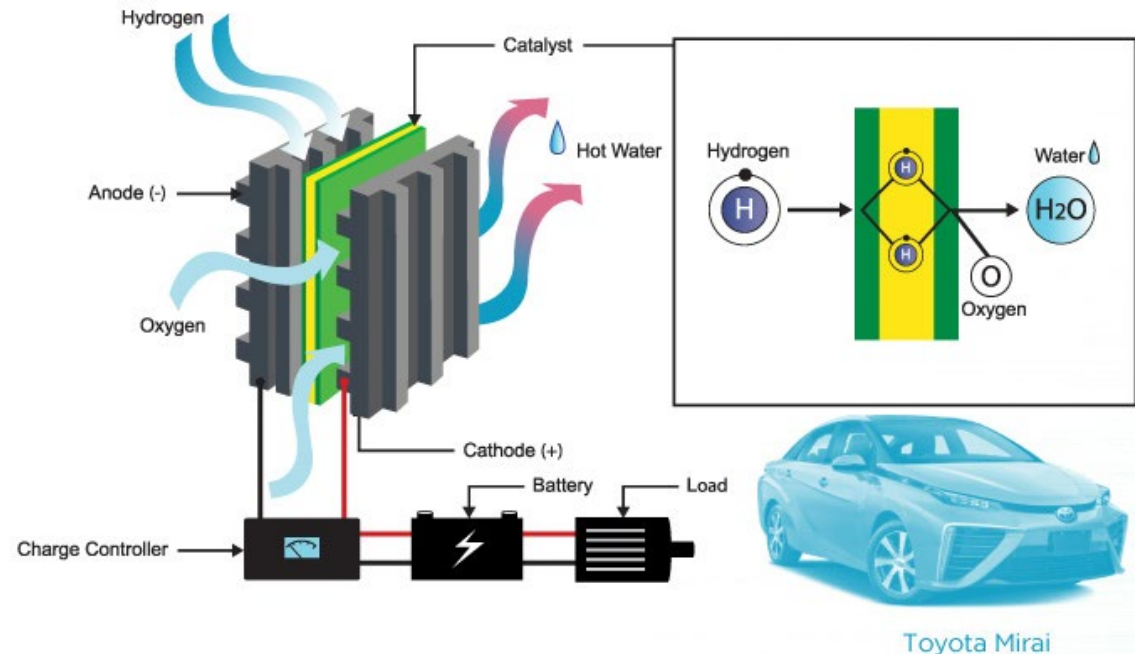
## PLATINUM GROUP ELEMENTS ARE CRITICAL TO ACHIEVING NET ZERO

Automobiles only account for 10% of global CO2 loadings.  
To achieve *Net Zero*, coal and natural gas must be replaced in electricity generation and industry.  
Key to achieving this is Green Hydrogen.

- PGE anodes and cathodes are critical to high efficiency electrolysis of water to produce Green Hydrogen.



- PGE's (primarily platinum) are key catalysts in Fuel Cell membranes.



JIM GALLAGHER, P.ENG **CEO**



Most recently the CEO of North American Palladium (TSX:PDL), which operated the Lac Des Iles mine, at the sale to Impala Platinum Holdings (JSE:IMP) in December 2019 for approximately \$1 Billion.

MIKE GARBUTT, P.ENG **CHIEF OPERATING OFFICER**



Most recently Deputy General Manager of IAMGOLD (XTSE:IMG) at the Côté Gold Project and General Manager, Sudbury at KGHM International.

GEOFF HEGGIE, P.GEO **VP EXPLORATION**



Most recently Exploration Manager with Clean Air Metals, Senior Geologist for Noront Resources exploring in the Ring of Fire, and Special Project Geologist with Panoramic PGMs Canada and Magma Metals.

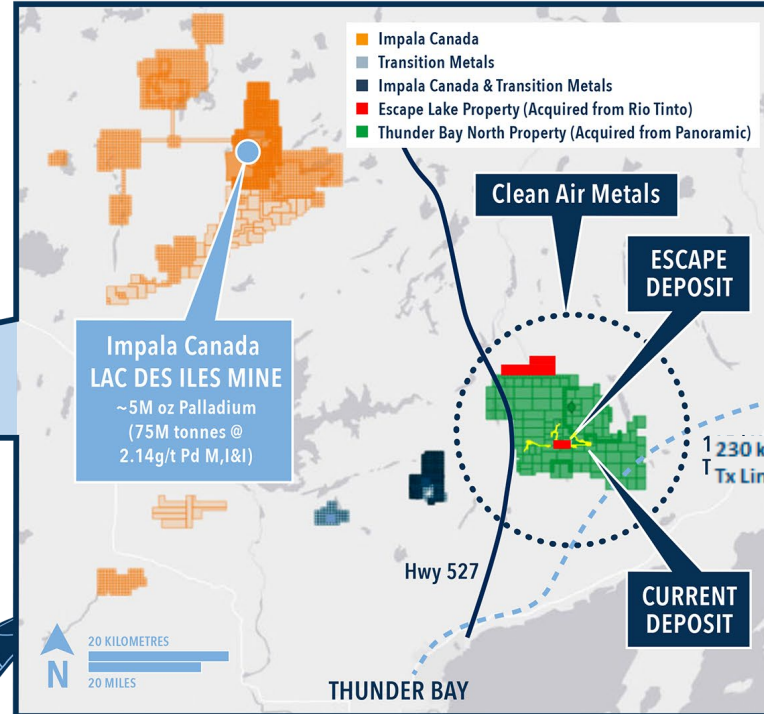
Pt:Pd Ratio 1:1 geologically, lending perfect optionality on price trend

CLEAN AIR  
METALS INC



# PROJECT LOCATION

## INFRASTRUCTURE ON OUR DOORSTEP



- 40 km North of Thunder Bay
- 65 km South of Lac des Iles Mine
- Paved provincial Hwy thru NW corner of claims
- 230 KVA tx line through SE corner of claims
- Natural Gas 20 km north

Favorable Mining Jurisdiction + proximity to major mining centre + key infrastructure on doorstep = **Low Risk**

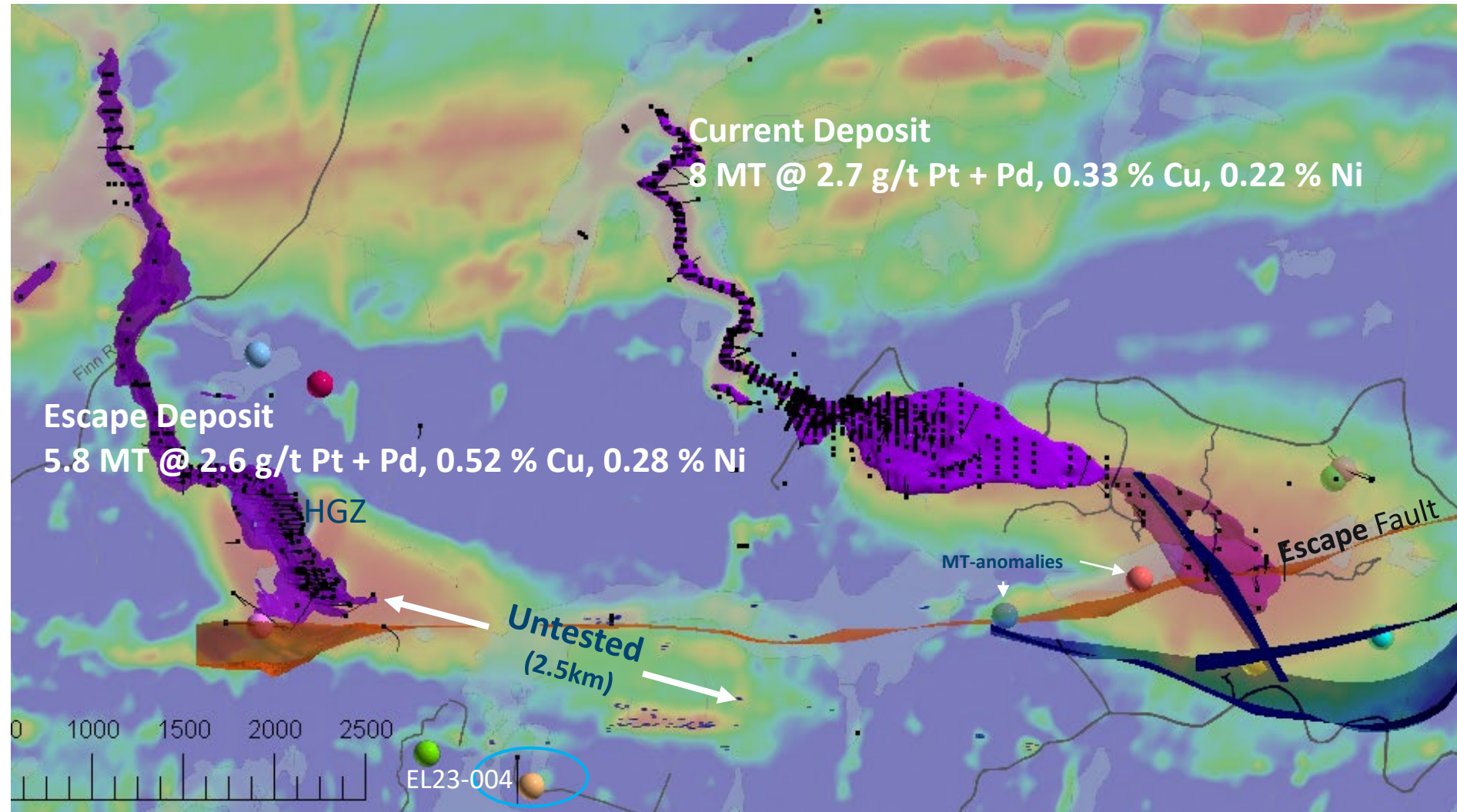


# WELL DEFINED UNDERGROUND MINERAL RESOURCE

TWO DEPOSITS OPEN AT DEPTH

May 4, 2023  
Indicated Mineral  
Resource

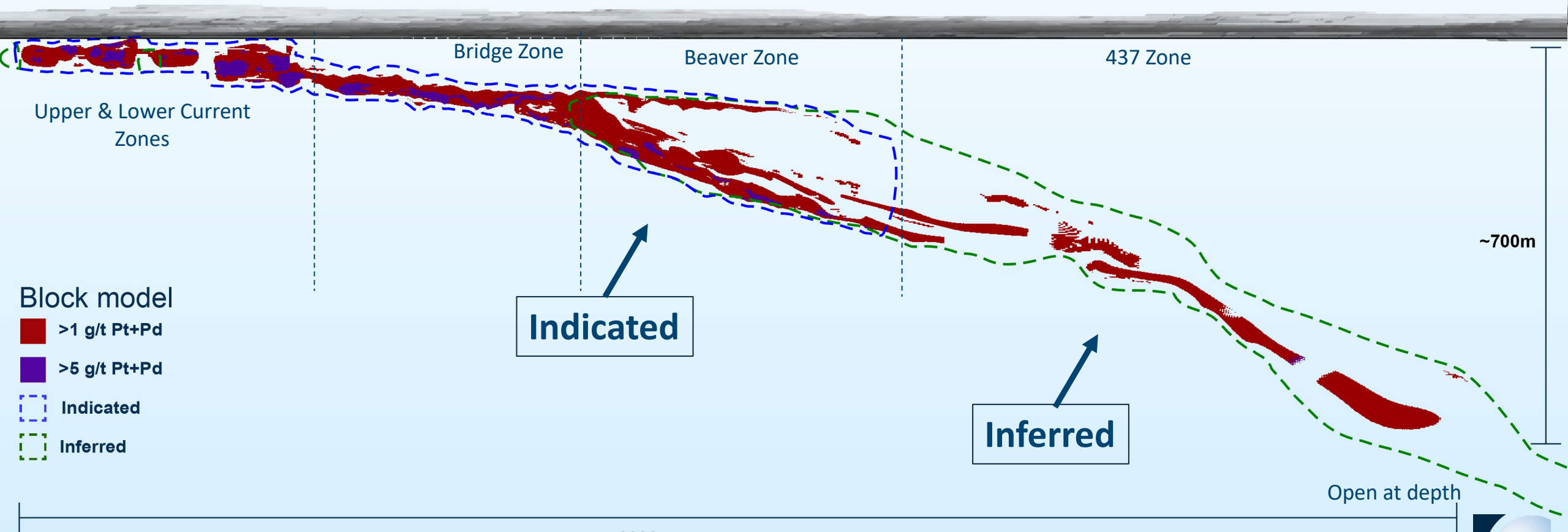
- 14.0 million tonnes
- 1.2 million ounces of 2PGE (Pt + Pd)
- 57,500 tonnes Cu
- 34,300 tonnes Ni





# CURRENT DEPOSIT

NEAR SURFACE, HIGH GRADE, INDICATED RESOURCE



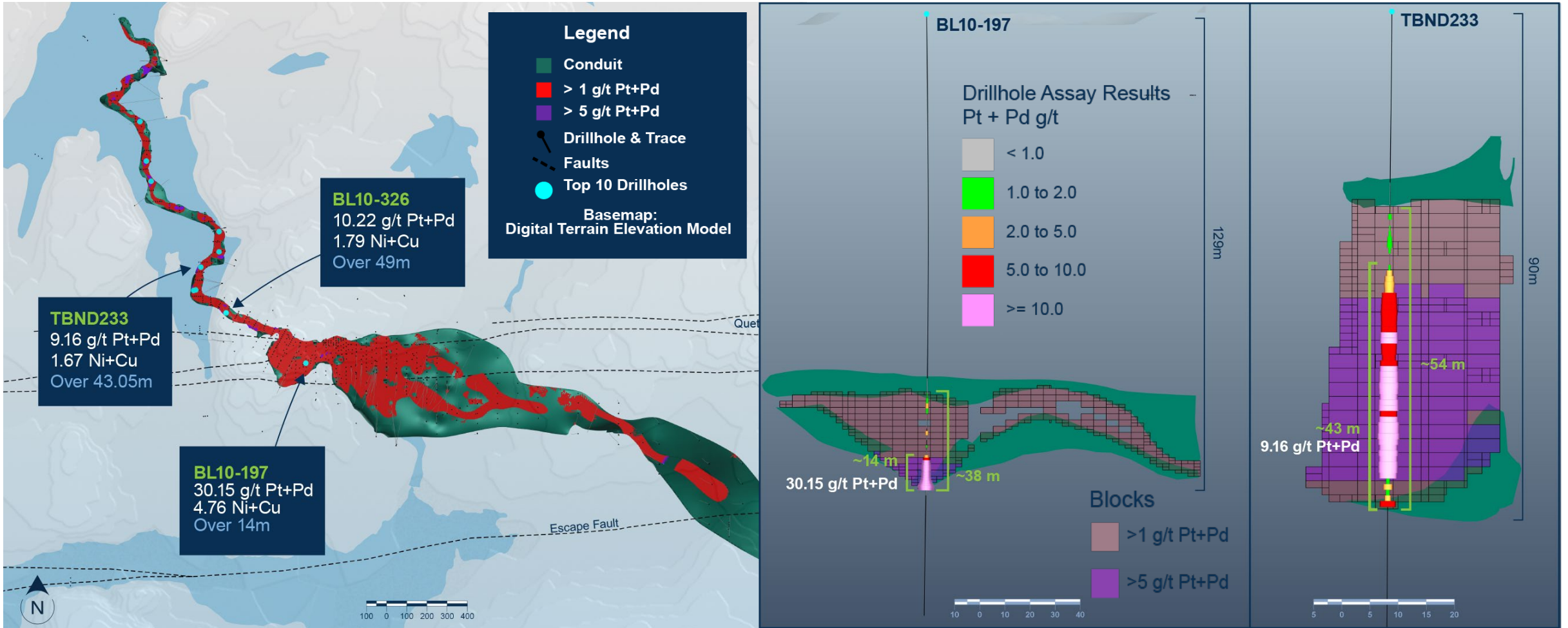
## Block model

- >1 g/t Pt+Pd
- >5 g/t Pt+Pd
- Indicated
- Inferred



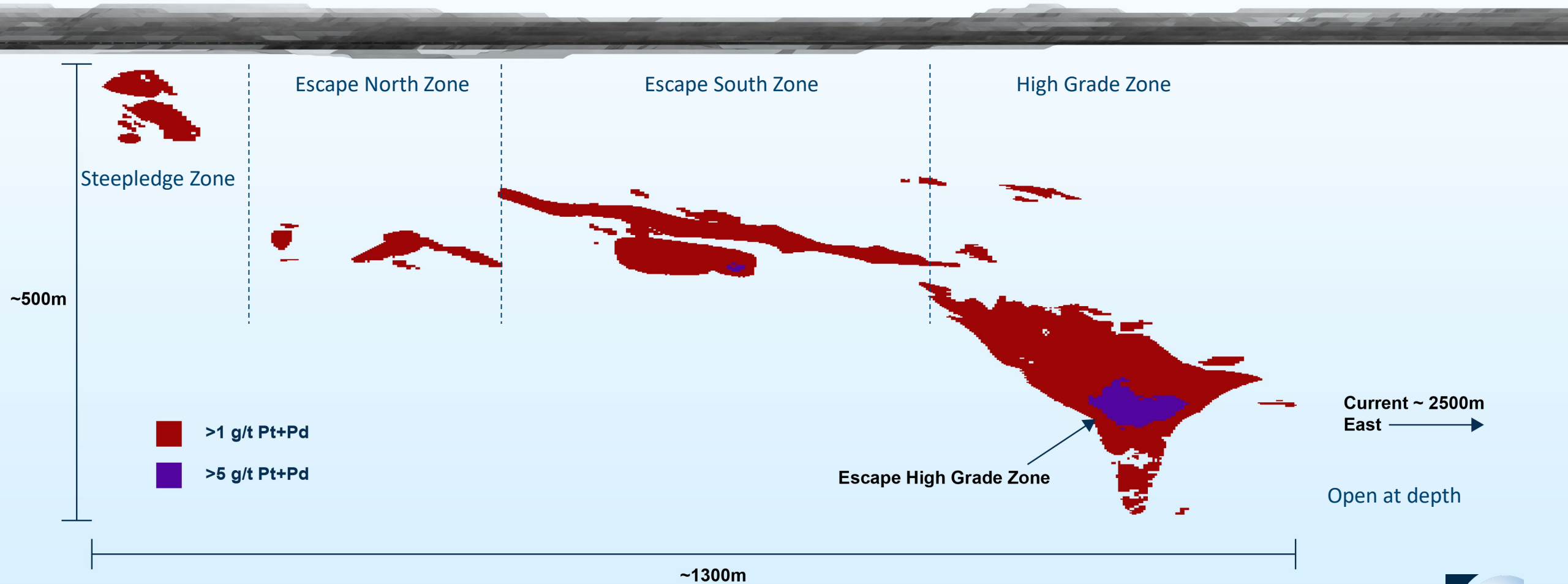
# SIGNIFICANT HIGH-GRADE INTERSECTIONS

## CURRENT DEPOSIT



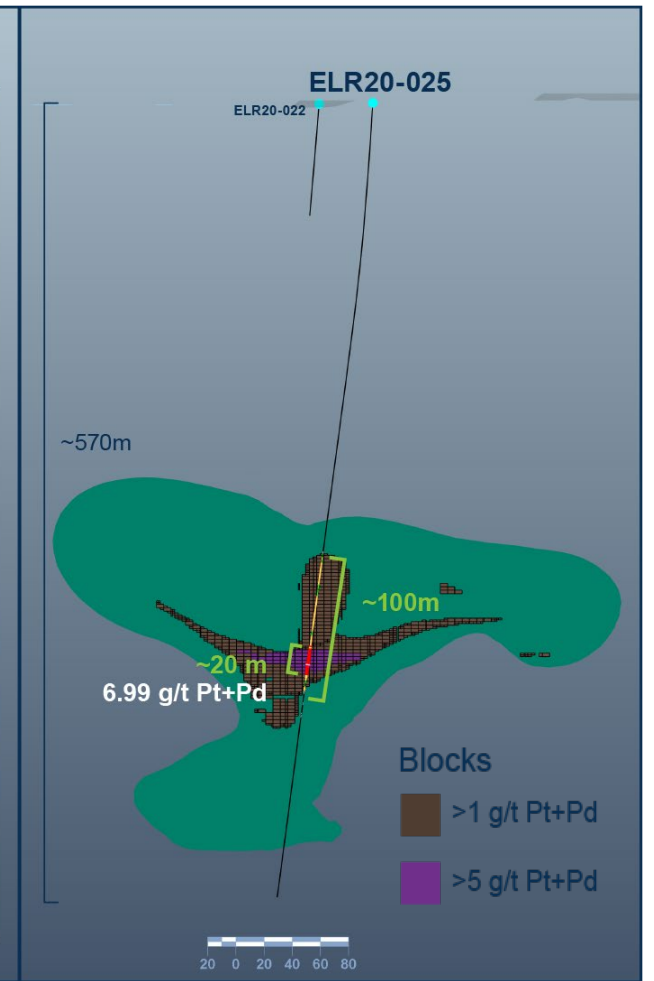
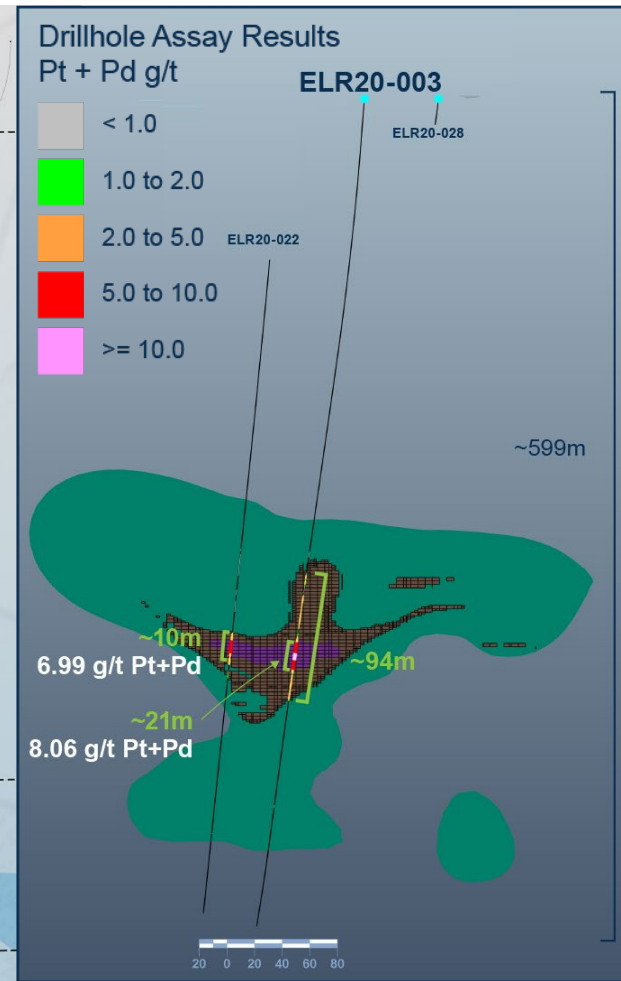
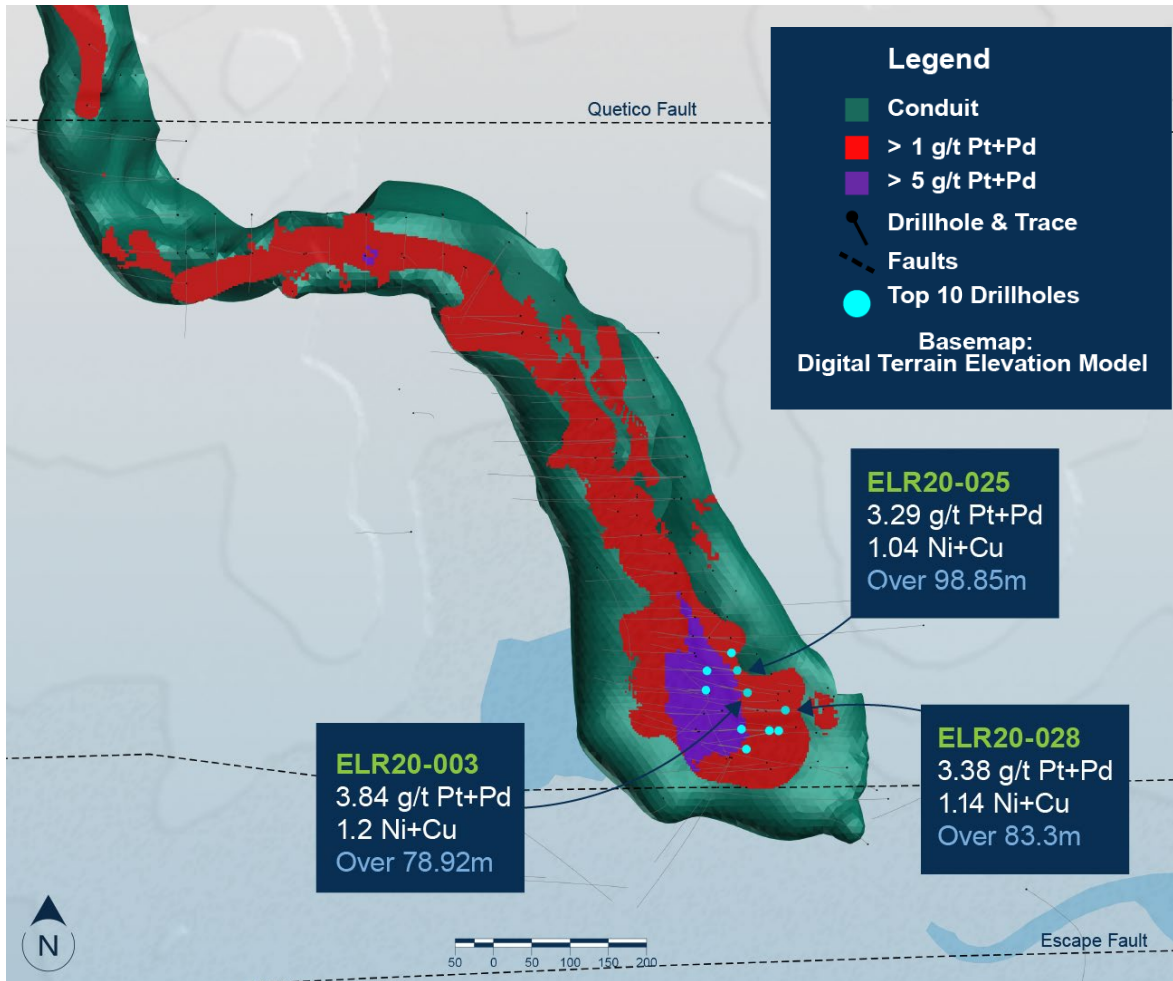
# ESCAPE DEPOSIT

## UNDERGROUND



# SIGNIFICANT HIGH-GRADE INTERSECTIONS

## ESCAPE DEPOSIT



# MINERAL POTENTIAL IN CURRENT AND ESCAPE

## SULFIDE ACCUMULATIONS

MASSIVE SULPHIDES IN ESCAPE DEPOSIT  
(HOLE ELR21-041)



Escape South Zone  
0.7m @ 20.5gpt Pd+Pt+Au +7.3% Cu+Ni



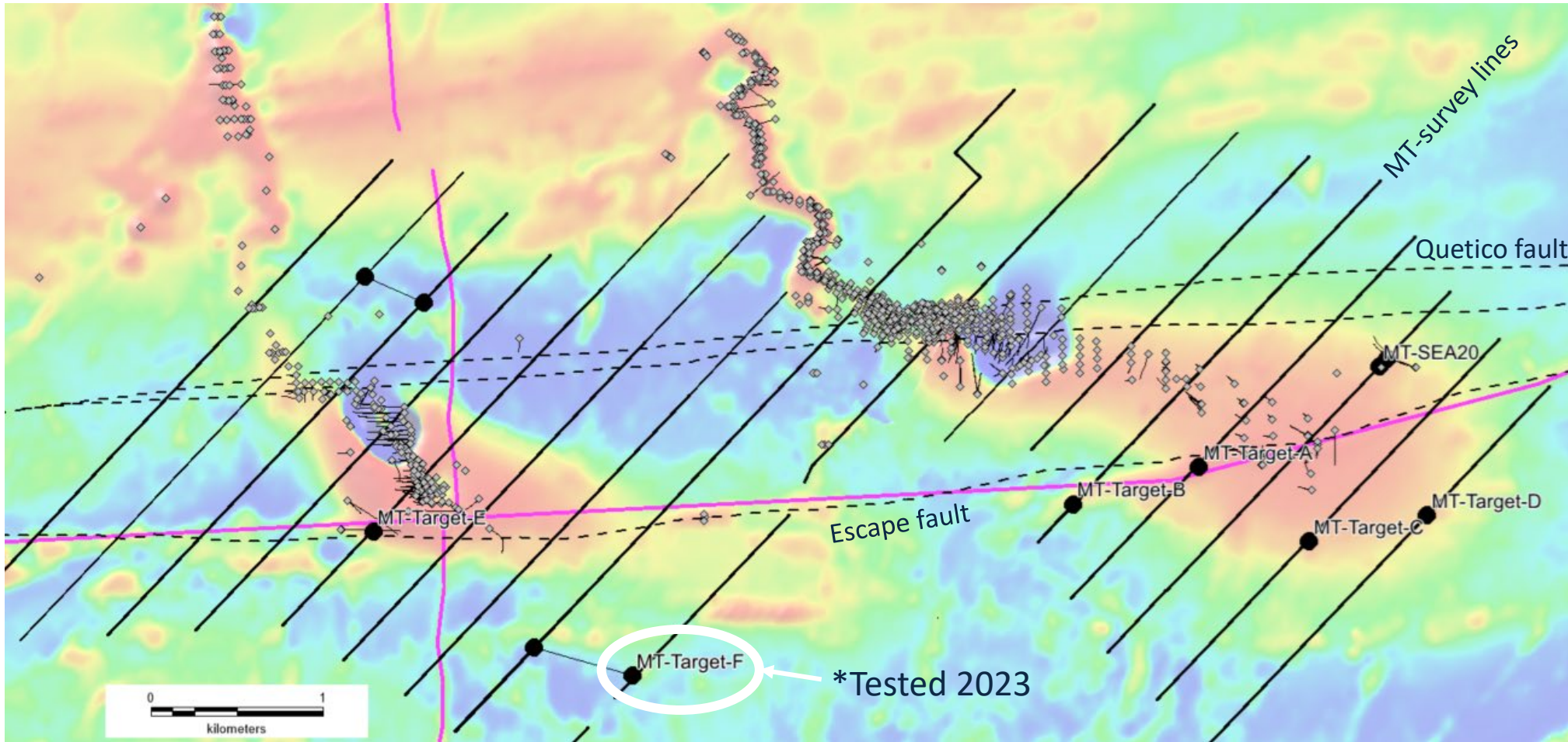
Beaver Lake Zone  
2.6m @ 97.98gpt Pd+Pt+Au +14.9% Cu+Ni

MASSIVE SULPHIDES IN CURRENT DEPOSIT  
(HOLE BL10-197)



# UNDERSTANDING THE MINERAL POTENTIAL

## MT CONDUCTIVE TARGETS



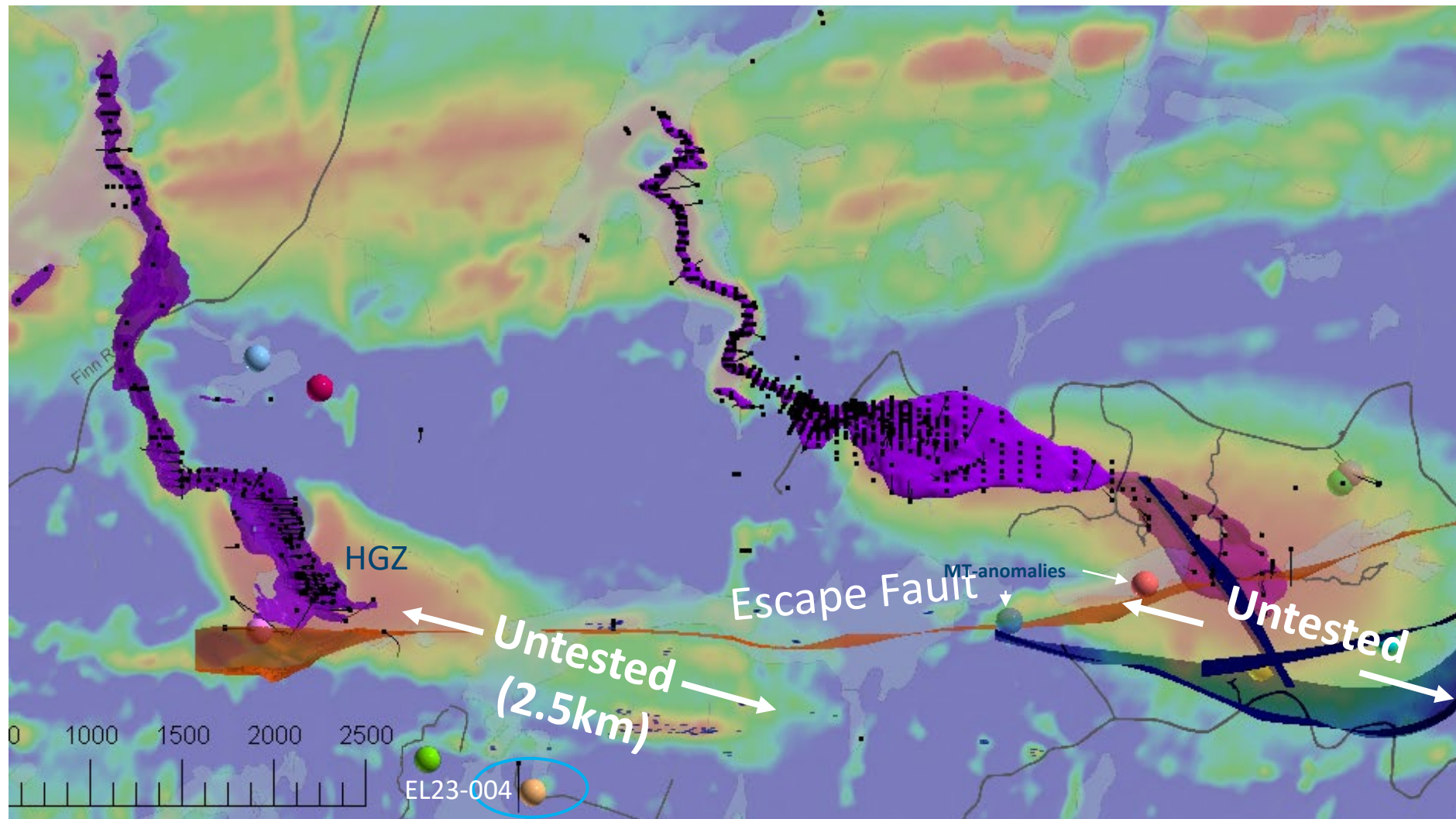
## UNDERSTANDING THE MINERAL EXPLORATION POTENTIAL MT CONDUCTIVE TARGETS



# EVOLVING MINERAL EXPLORATION POTENTIAL

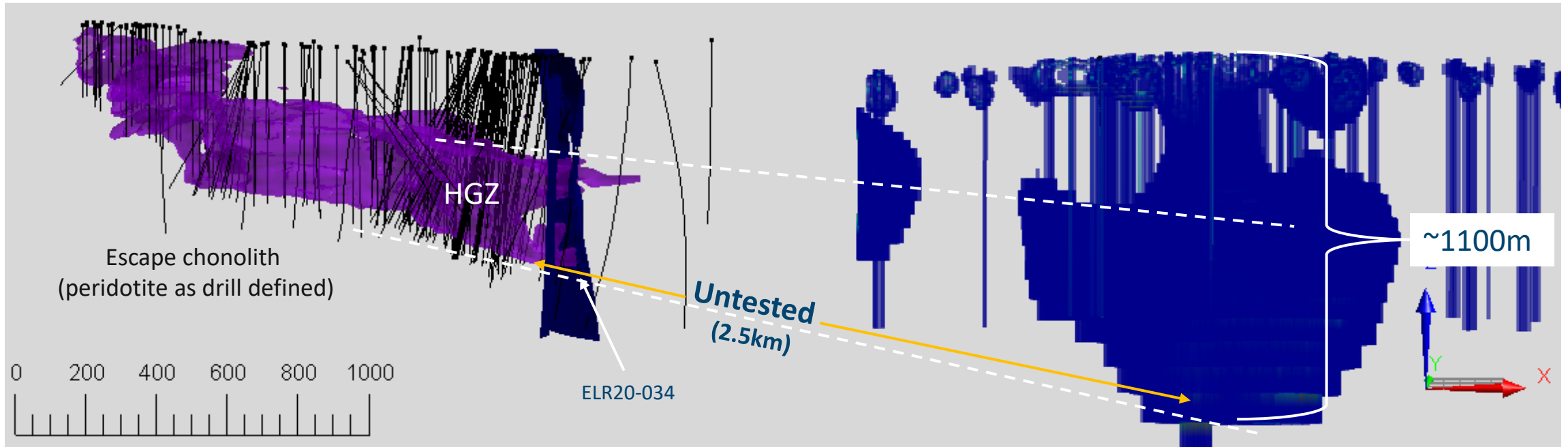
## DOWN PLUNGE

- Both deposits open at depth and across the Escape Fault
- Significant magnetic anomaly extending to depth to SE of Escape High Grade Zone (HGZ)



# ESCAPE DEPOSIT DOWN PLUNGE

## LARGE UNTESTED ANOMALY



Long section through Escape chonolith as defined by drilling with HGZ shown. Magnetic inversion model shown on right hand side in blue. Looking NE.

- Preliminary magnetic inversion estimates base at ~1100m
- Dynamic magma flow rock types: peridotite & red hybrid as observed in mineralizing environment in both Current and Escape chonoliths identified in ELR20-034 @ ~550m





# CURRENT DEPOSIT DOWN PLUNGE

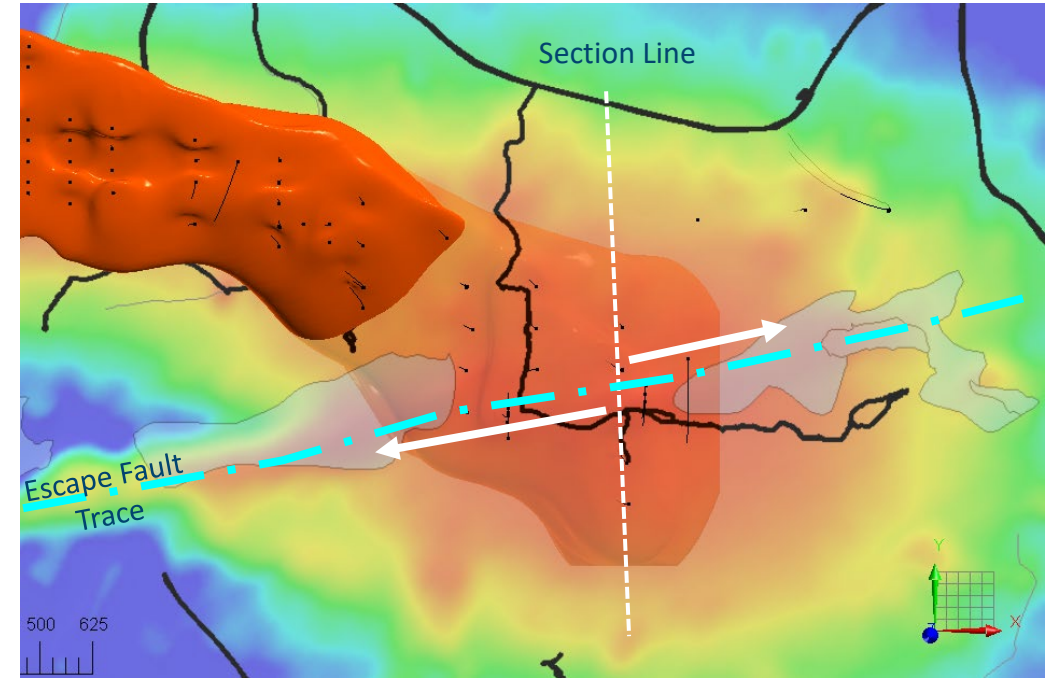
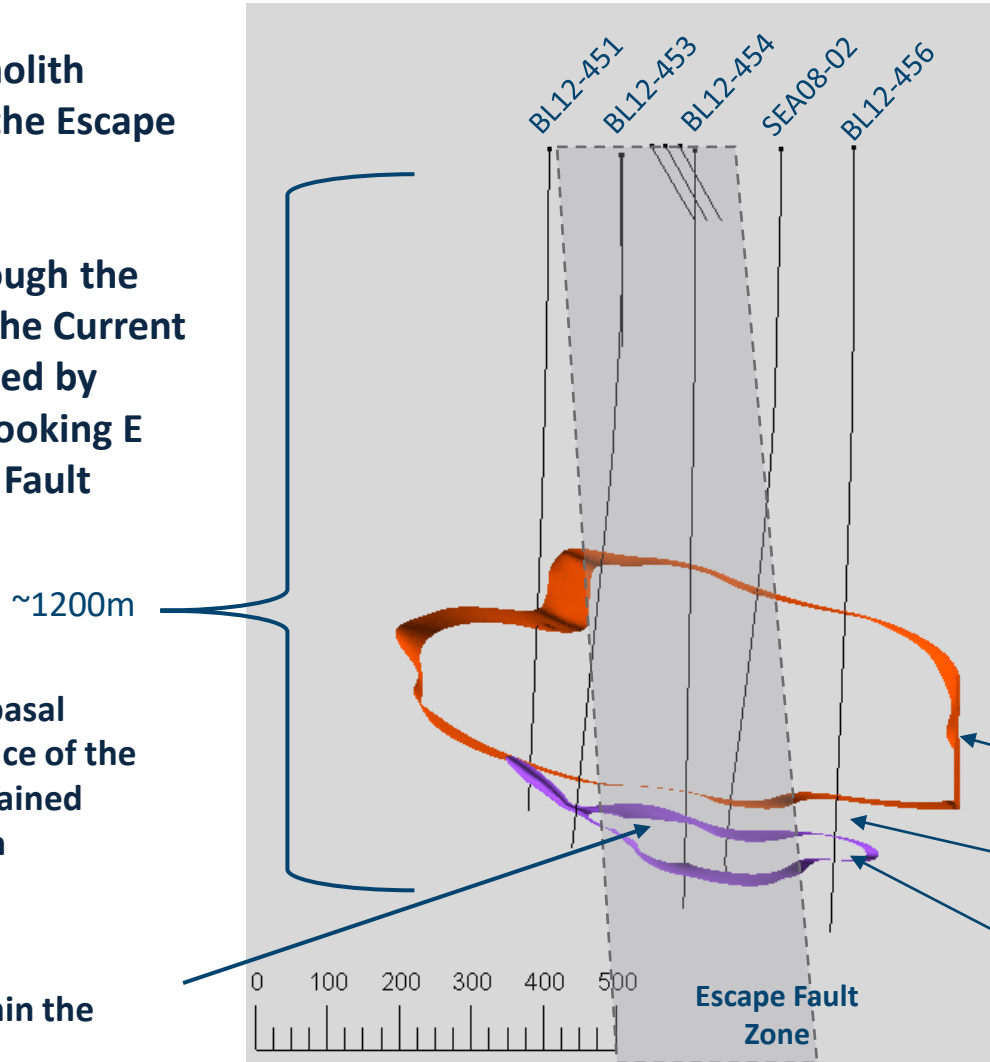
## STRUCTURAL GEOLOGY TARGET

Drill defined Chonolith continues across the Escape Fault

Cross-section through the southern part of the Current chonolith as defined by drilling showing Looking E (along the Escape Fault zone).

Potential along the basal contact along the trace of the Escape Fault for sustained magma flow through

Thickening of basal peridotite unit within the Escape Fault zone



Upper Gabbro  
(Grey & Red Hybrid)

Ferro-gabbro  
(oxide gabbro)

Peridotite



# TECHNICAL STUDIES

## NEAR-TERM PROJECT UPDATES USING NEW RESOURCE



- Completed the updated resource estimate
- Filed on June 19<sup>th</sup>



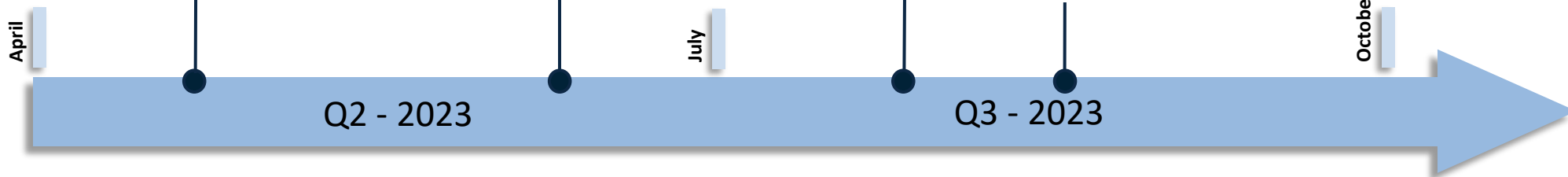
- Metallurgical test program is near completion.



- Assist in update to base-case project economics
- Development of selective, higher grade mine plan and relative economics



- Determine level of updated study and supporting assessments



# METALLURGY

## 2022-2023 TEST PROGRAM RESULTS

Early Mining (yrs 1-5)

Estimated Feed Grade (Early mining)		Cu	Ni	Pt	Pd	Au	Ag	Co	Rh	
		%	%	g/t	g/t	g/t	g/t	%	g/t	
		0.45	0.24	1.58	1.61	0.11	2.20	0.02	0.04	
Cu/Ni Separation		Grade								
		Mass %	Cu %	Ni %	Pt g/t	Pd g/t	Au g/t	Ag g/t	Co %	Rh g/t
Cu Concentrate		1.75	22.4	0.9	20.4	21.6	2.8	51.7	0.1	0.2
Ni/PGE Concentrate		3.60	1.2	3.5	25.4	28.2	1.3	25.4	0.2	0.3
Recoveries		95.9%	57.0%	80.6%	86.2%	85.0%	65.2%	54.9%	37.3%	

Remainder

Estimated Feed Grade (Remaining Resource)		Cu	Ni	Pt	Pd	Au	Ag	Co	Rh	
		%	%	g/t	g/t	g/t	g/t	%	g/t	
		0.41	0.23	1.18	1.3	0.10	2.52	0.02	0.04	
Cu/Ni Separation		Grade								
		Mass %	Cu %	Ni %	Pt g/t	Pd g/t	Au g/t	Ag g/t	Co %	Rh g/t
Cu Concentrate		1.59	21.2	0.8	15.3	17.5	2.4	50.9	0.1	0.3
Ni/PGE Concentrate		2.68	1.86	4.4	26.2	31.9	1.6	31.3	0.3	0.4
Recoveries		95.4%	55.5%	77.6%	85.0%	85.0%	65.2%	54.9%	37.3%	

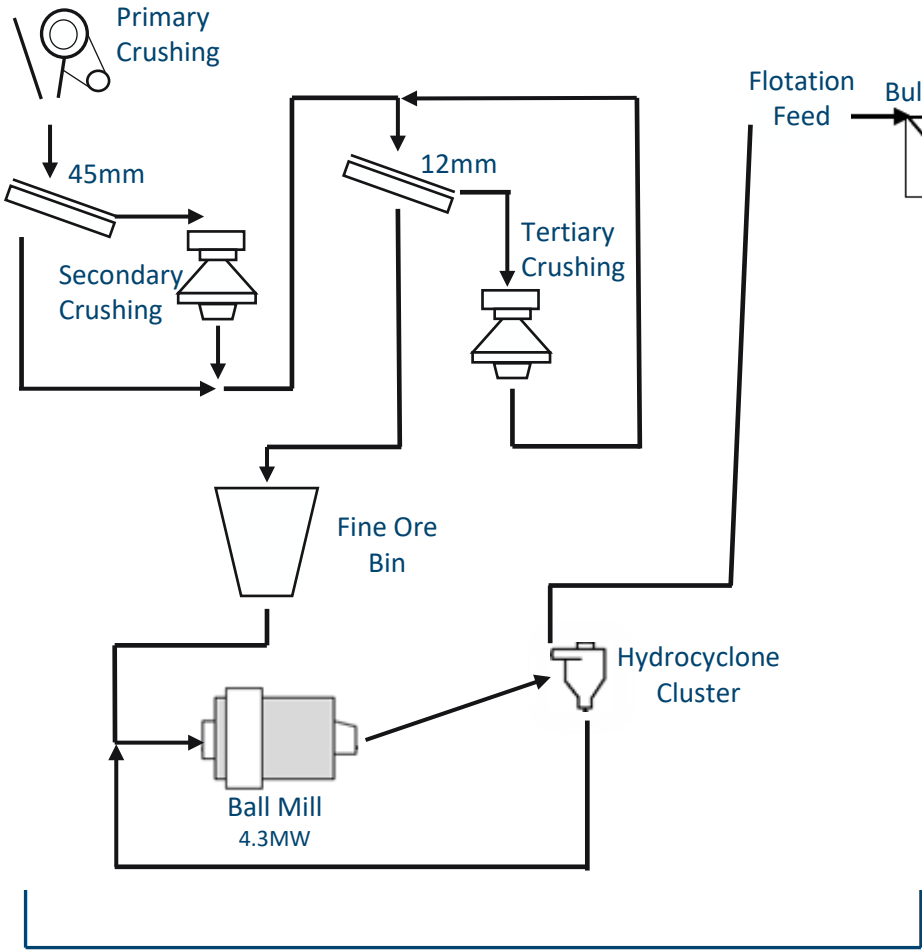
## Highlights

- Confirmation of phase 1 metallurgical test program
- Two saleable concentrates with indicative terms from domestic and international smelters.
- 6 payable metals.
- High recoveries with conventional flotation technology.



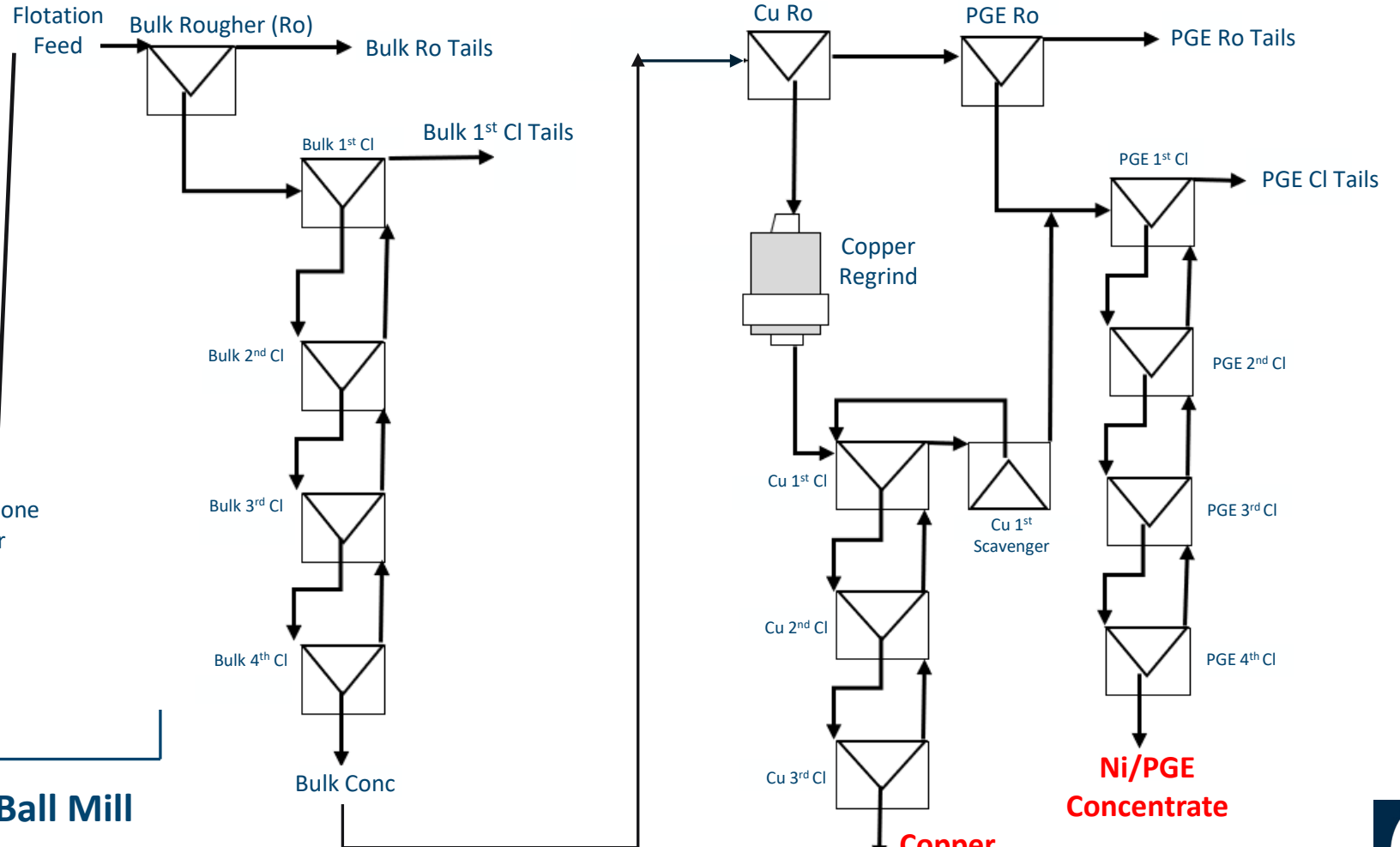
# STANDARD CRUSH AND GRIND FLOWSHEET

## WITH COPPER NICKEL SEPARATION



**Front-End: 3-Stage Crushing and Ball Mill**

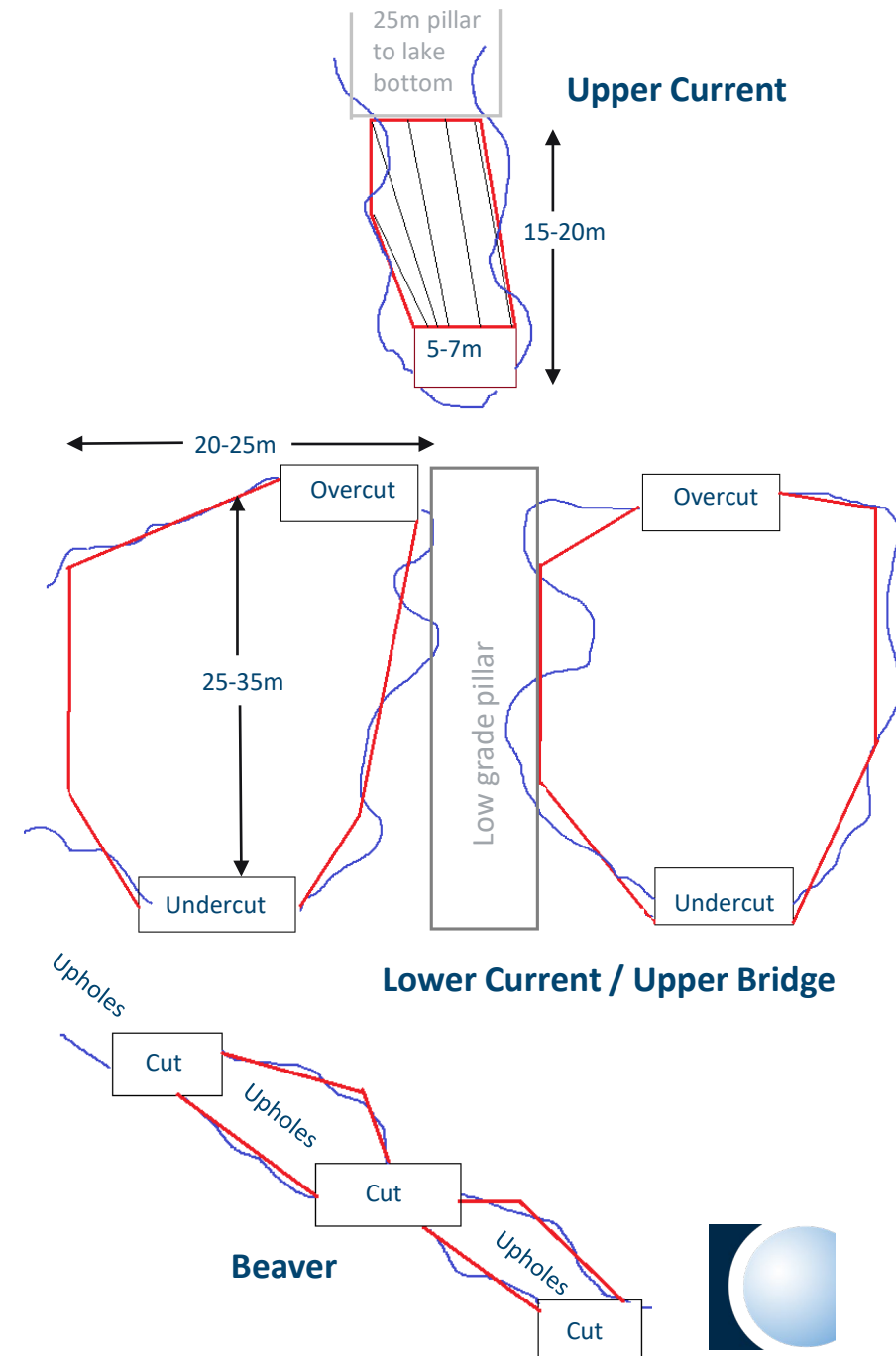
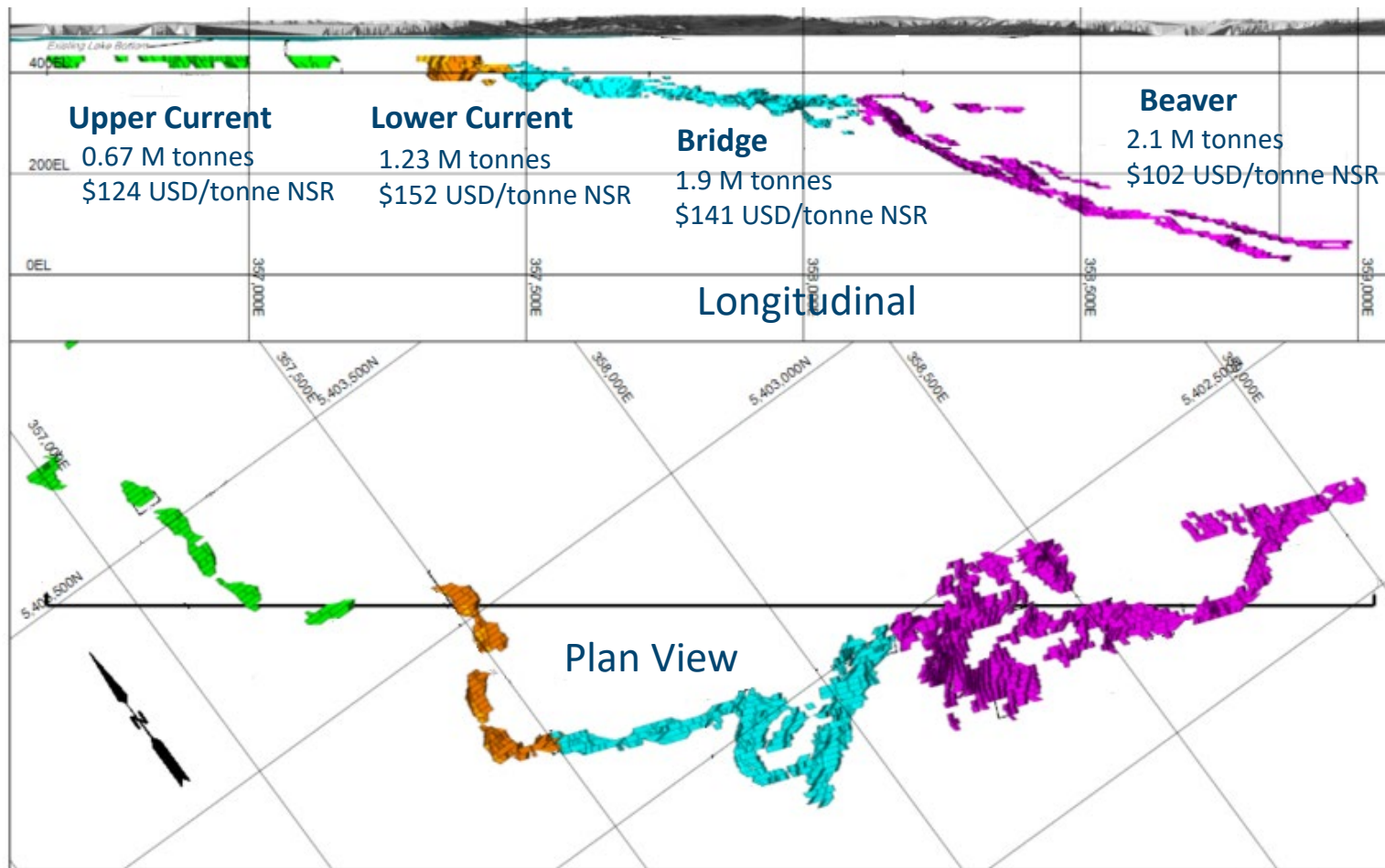
### Back End: Bulk Concentrate to Copper/Nickel Separation



# MINING

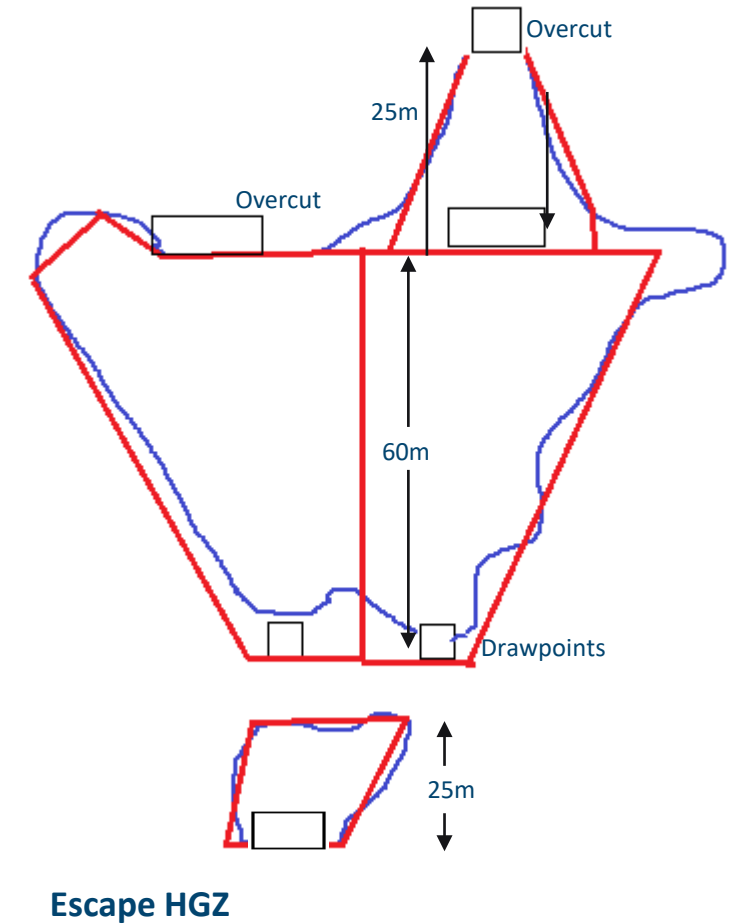
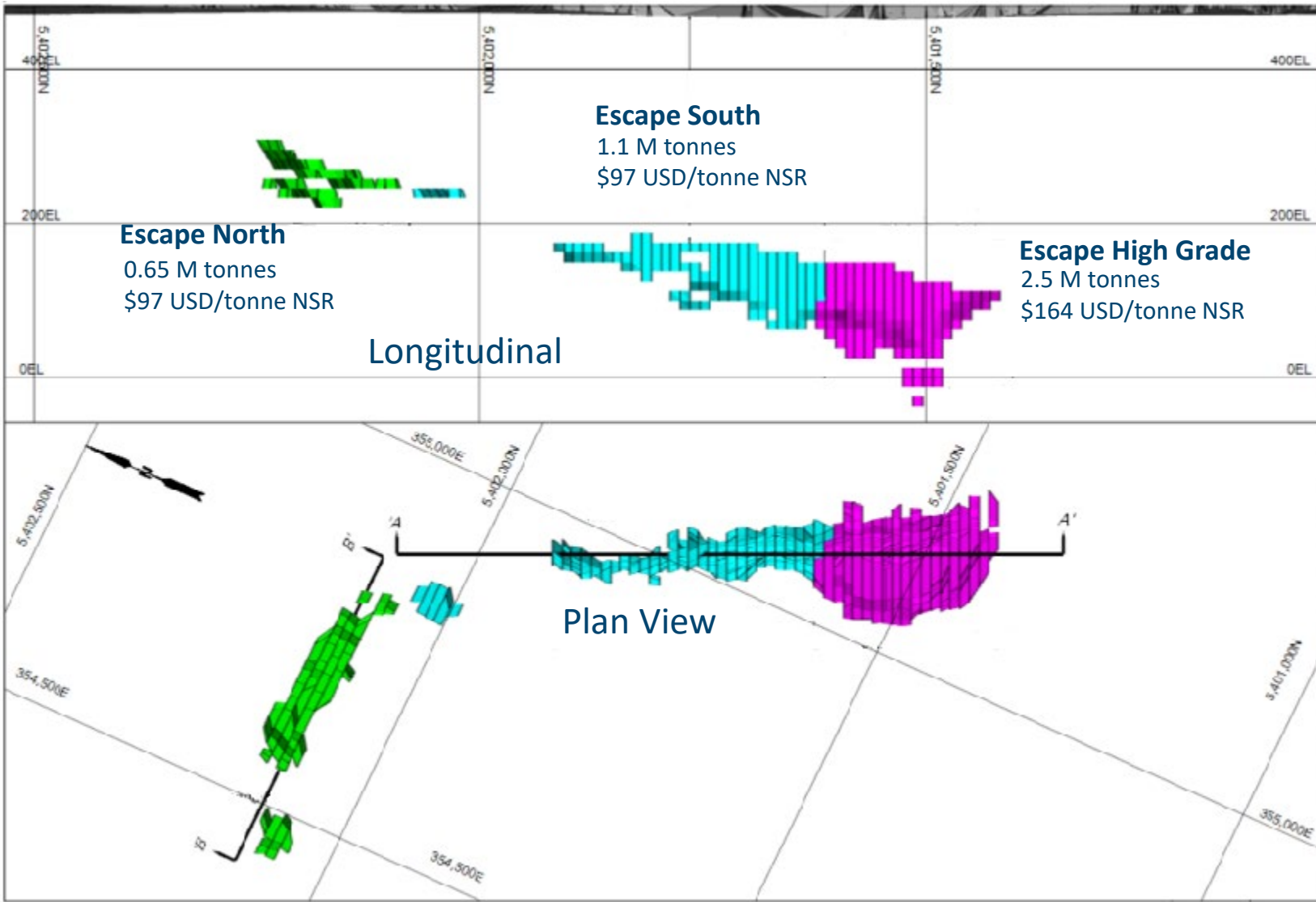
## PROPOSED MINING APPROACH – CURRENT DEPOSIT

- Highly selective approach with a focus on margin
- Rock Mass Quality = very good. Maximize opening size where possible. Spans > 25m
- Eliminate use of backfill.



# MINING

## PROPOSED MINING APPROACH – ESCAPE DEPOSIT



# CAPITAL STRUCTURE

July 2023

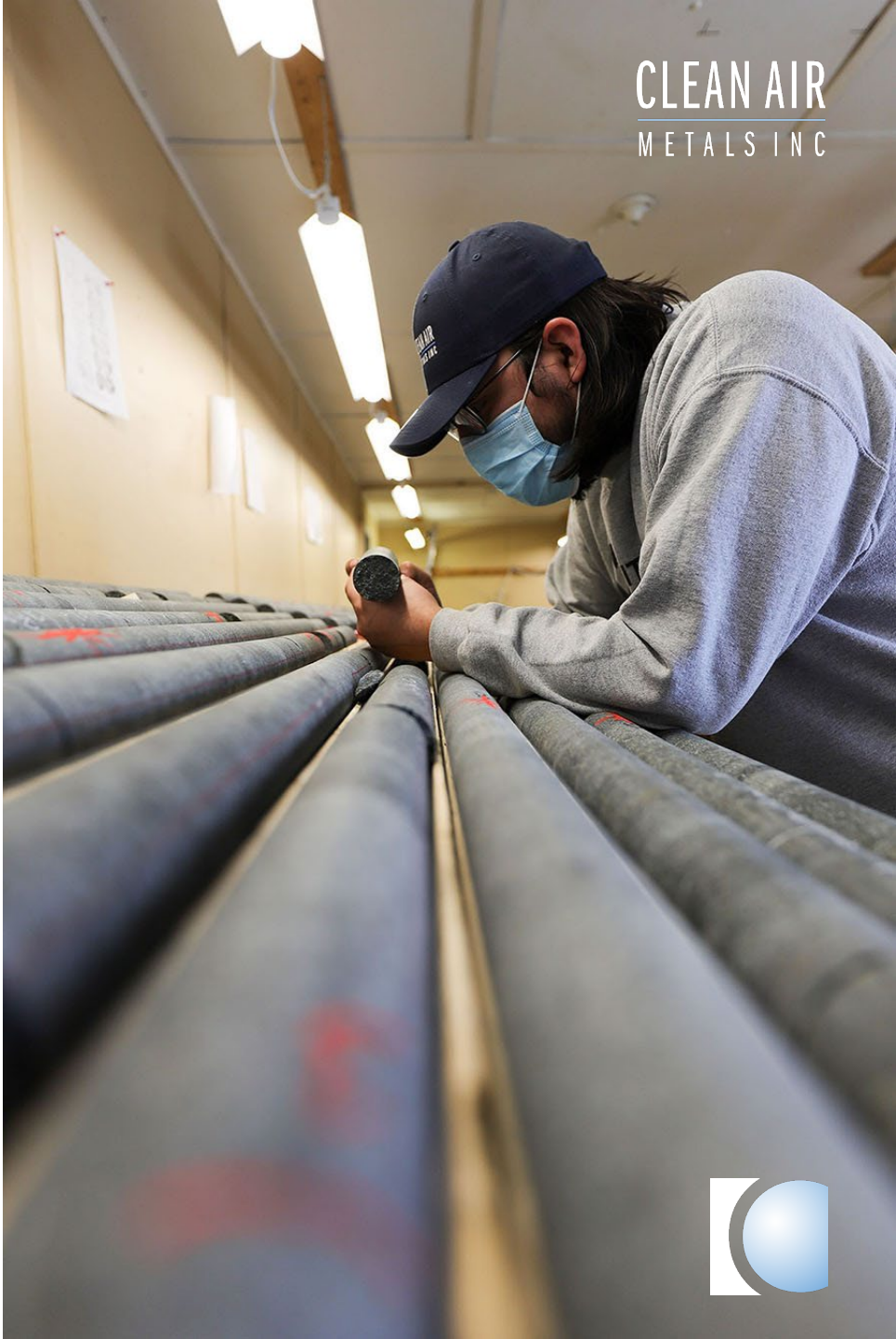
<b>Shares Issued</b>	<b>224,000,000</b>
<b>Warrants (\$0.25/sh.) Feb 22/24</b>	<b>55,410,400</b>
<b>Warrants (\$0.55/sh.) Feb 22/23</b>	<b>6,372,550</b>
<b>Cash</b>	<b>\$9 million</b>

**Management ~ 5%**

**Benton Resources (BEX: TSXV) ~11%**

**Market Cap ~ \$13.5 M**

**Share Price ~ \$ 0.06**



# BOARD



**Dean Chambers, P.Eng. ICD.D Chair**

Mr. Chambers is a professional engineer and financial executive with over 35 years of business, technical and financial experience. In 2017, Mr. Chambers retired as Executive Vice President and Chief Financial Officer at Sherritt International Corporation, a major international resource company. Mr. Chambers' career as a senior executive in the mining and chemical industries also includes progressive positions with The Dow Chemical Company, Falconbridge Limited and Dynatec Corporation. Most recently, Mr. Chambers served four years on the Board of Directors and chaired the Audit Committee of North American Palladium Ltd. leading up to its successful sale to Impala Platinum in 2019. Mr. Chambers holds the ICD.D designation from the Institute of Corporate Directors. Mr. Chambers also serves on the Industrial Advisory Committee for the Engineering and Management program at McMaster University.



**MaryAnn Crichton, P.Eng. MBA Independent Director**

Ms. Crichton is a Professional Engineer and senior executive with over 30 years of international business experience in financing; project development; environmental, social and governance (“ESG”)/Corporate Social Responsibility (“CSR”) and strategy. Ms. Crichton holds B.Sc. (Chemical Engineering) from the University of Alberta and an MBA from the Ivey Business School at Western University. She spent most of her career as Global Director of Management Consulting for Hatch Ltd. (“Hatch”), a global engineering, advisory and construction firm working in the mining, metals, and infrastructure and energy industries. Prior to joining Hatch, she worked in private equity and the resource and chemical industries. In 2017 and again in 2020, Ms. Crichton was elected to the Board of the Prospectors and Developers Association of Canada (“PDAC”) and is currently a member of both their Governance and Nominations Committee and CSR/Diversity and Inclusion Working Group. In 2018, she was elected to serve as PDAC’s representative on the Board of Mining Matters.



**Shannin Metatawabin Independent Director**

Mr. Metatawabin is currently the CEO of the National Aboriginal Capital Corporations Association (NACCA) which is an umbrella organization for a network of 59 Aboriginal Financial Institutions (AFIs) across Canada. Over the last 30 years the AFI network has provided nearly \$3 billion to support economic development and the unique and specific needs of 50,000 small and medium size loans to First Nation, Metis and Inuit across Canada. Mr. Metatawabin is Cree / Inninow from Fort Albany (Pethtabek) First Nation of the Mushkegowuk Cree Nation. He holds a Bachelor of Arts in Political Science from Carleton University and an Aboriginal Economic Development Certificate from the University of Waterloo. He previously served as the Manager of Aboriginal Affairs and Sustainability with De Beers Canada and as the Executive Director of the Ontario First Nations Technical Services Corporation.





## STRATEGY MOVING FORWARD

- ✓ Finalize 3-year exploration plan. Complete fall 2023.
- ✓ Progress permitting for drill plan. Drilling in Jan 24.
- ✓ Complete internal technical studies on optimized business case for the new resource. September 23.
- ✓ Engage with potential strategic investors who could support the project through the next phases of exploration and technical studies.
- ✓ No dilutive equity financing anticipated in 2023.
- ✓ Maintain cash position of > \$8 million into 2024.





**Jim Gallagher, P.Eng. CEO**

705.690.7997 [jgallagher@cleanairmetals.ca](mailto:jgallagher@cleanairmetals.ca)

**Mike Garbutt, MBA P.Eng. COO**

705.207.2111 [mgarbutt@cleanairmetals.ca](mailto:mgarbutt@cleanairmetals.ca)

**Geoff Heggie, PhD P.Geo. VP Exploration**

807.631.4654 [gheggie@cleanairmetals.ca](mailto:gheggie@cleanairmetals.ca)

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