

TSX-V: MZN

METALLUM

R E S O U R C E S I N C

ADVANCING THE HIGH-GRADE SUPERIOR
Zn - Cu - Ag - Au PROJECT

DISCOVERING AND BUILDING MINES
DELIVERING VALUE TO SHAREHOLDERS

September 2021

Cautionary Notes



Certain statements contained in this presentation constitute forward-looking statements within the meaning of Canadian securities legislation. All statements included herein, other than statements of historical fact, are forward-looking statements which may include, without limitation, statements about the Company's plans for its investments and properties; the Company's business strategy, plans and outlook; the merit of the Company's investments and properties; timelines; the future financial performance of the Company; expenditures; approvals and other matters. Often, but not always, these forward looking statements can be identified by the use of words such as "estimate", "estimates", "estimated", "potential", "open", "future", "assumed", "projected", "used", "detailed", "has been", "gain", "upgraded", "offset", "limited", "contained", "reflecting", "containing", "remaining", "to be", "periodically", or statements that events, "could" or "should" occur or be achieved and similar expressions, including negative variations.

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 results, performance or achievements expressed or implied by forward-looking statements. Such uncertainties and factors include, among others, changes in general economic conditions and financial markets; the Company or any joint venture partner not having the financial ability to meet its exploration and development goals; risks associated with the results of exploration and development activities, estimation of mineral resources and the geology, grade and continuity of mineral deposits; unanticipated costs and expenses; and such other risks detailed from time to time in the Company's quarterly and annual filings with securities regulators and available under the Company's profile on SEDAR at www.sedar.com. 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 to differ from those anticipated, estimated or intended.

Forward-looking statements contained herein are based on the assumptions, beliefs, expectations and opinions of management, including but not limited to expectations that the Company's activities will be in accordance with its public statements and stated goals; that all required approvals will be obtained; that there will be no material adverse change affecting the Company, its investments or properties; and such other assumptions as set out herein. Forward-looking statements are made as of the date hereof and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by law. 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, investors should not place undue reliance on forward-looking statements.

Under the terms of NI43-101, Andrew Tims, P.Geo., is Metallum's Qualified Person. Mr. Tims has 30 years experience working in all aspects of mine discoveries and, mine development, and he has reviewed and approved the technical information contained in this presentation.

Superior Zn-Cu Polymetallic Project

Highest Grade Zinc Development Resource in North America (2nd Globally)



Excellent exploration potential

- ▶ 5 advanced target zones within 2 km of ore body
- ▶ 17,500 regional hectares, 5 project areas
- ▶ 7 VTEM targets & 5 Geochemical Targets within on Project's Claim Blocks
- ▶ VMS deposits generally occur in clusters.
- ▶ No Exploration in camp for 20 years
- ▶ Underexplored, high-grade Deposit, with project and district scale upside potential



Feasibility Study 2021

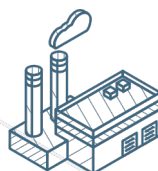
Updated by DRA Global, September 2021

- ▶ 8.5-year mine life with current reserve/resources
- ▶ 3rd year positive cash flow



Brownfields Project with current NI 43-101 Resource

- ▶ 2.07 Million Indicated Tonnes @ 18% Zn



Infrastructure in place

- ▶ Dams, power, labour, transport and underground development
- ▶ Grid Power, Transformer on site
- ▶ 20 km from Trans-Canada Highway, Smelters along Transport Route

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Superior Zn-Cu Polymetallic Project

SUPERIOR ZN-CU POLYMETALIC PROJECT

Ind: 2.07 Mt @ 17.9% Zn, 0.8% Cu, 0.4 g/t Au & 33.6 g/t Ag
Ind: 0.27 Mt @ 16.2% Zn, 1.0% Cu, 0.3 g/t Au & 37.2 g/t Ag

PICK LAKE

WINSTON LAKE

ELLIS LAKE

VICTORIA LAKE

TUURI TWP

NORTHSHORE

Ind: 391,000 Moz @ 0.99 g/t Au
Inf: 824,000 Moz @ 0.87 g/t Au

MARATHON PALLADIUM

M+I: 8.67 Moz Pd Eq
Inf: 915,000 oz Pd Eq

HEMLO WILLIAM'S MINE

P+P: 1.5 Moz Au
M+I: 3.3 Moz Au

Greenstone

Zinc Mineral Occurrence

Gold Mineral Occurrence

Advanced Resource

Producing Mine / Mill

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0 25 km

PICK LAKE AND WINSTON LAKE PROJECTS

- Metallum Project Area
- Zinc Smelter
- Great Lakes / St. Lawrence Seaway

CANADA

Flin Flon

ONTARIO

QUEBEC

USA

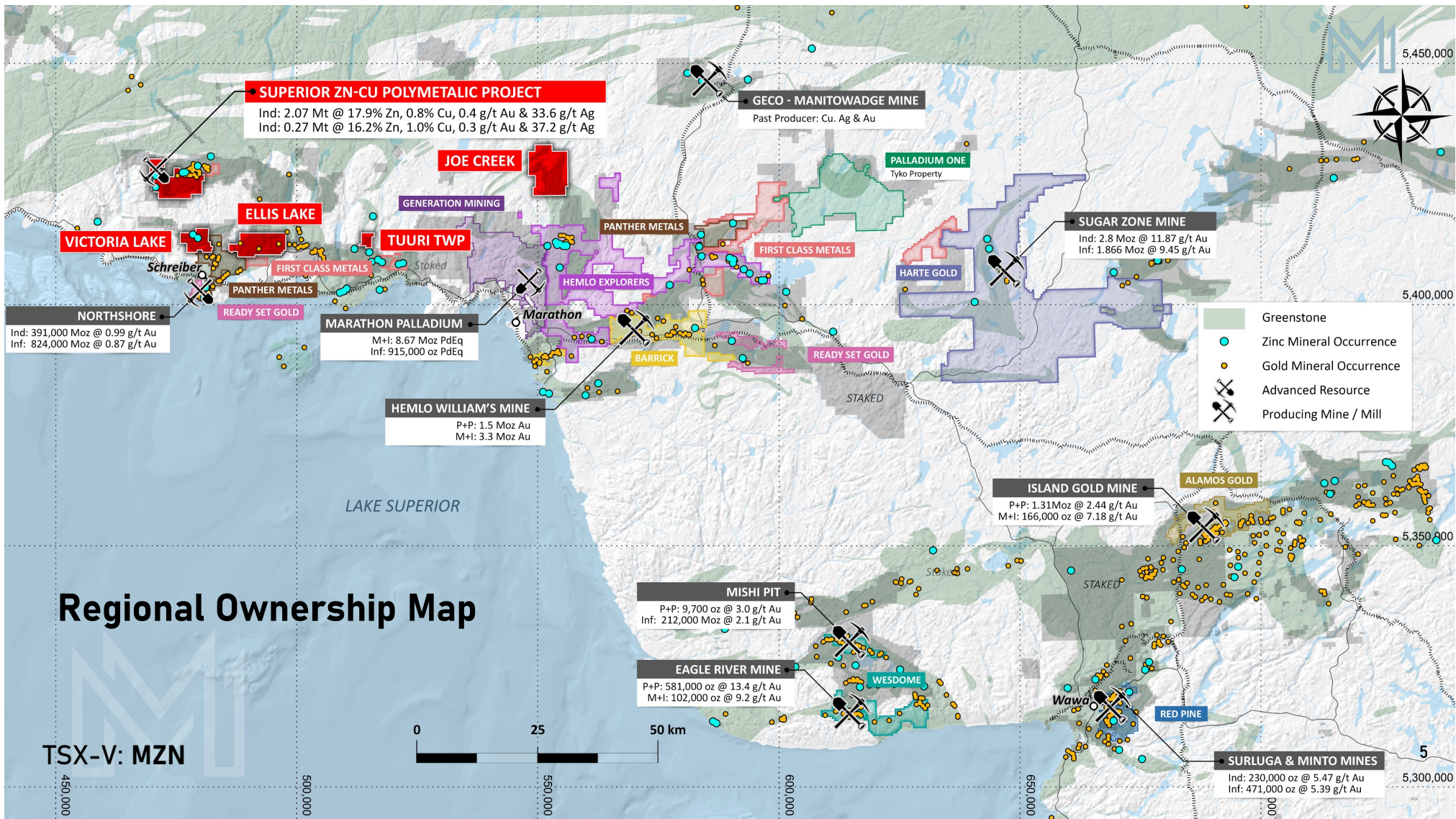
Timmins

Ottawa

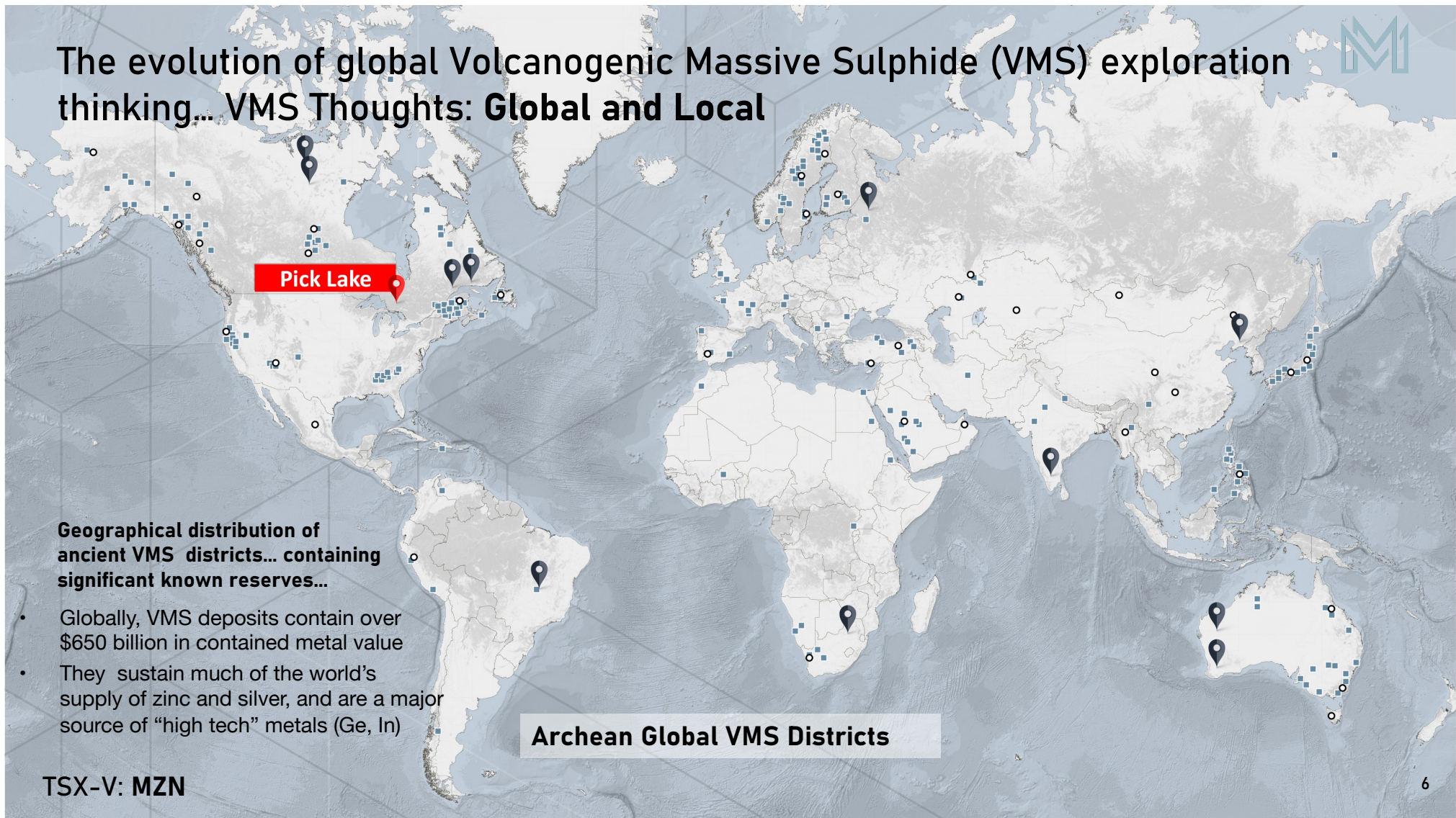
Toronto

Valleyfield





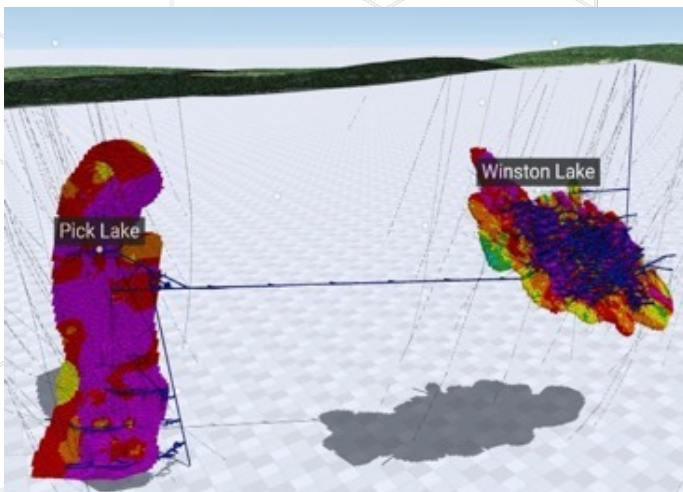
The evolution of global Volcanogenic Massive Sulphide (VMS) exploration thinking... VMS Thoughts: Global and Local



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NI 43-101 Resource

Published January 2021

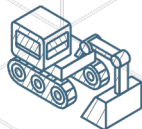


Mineral Resources of the Winston Lake and Pick Lake Properties⁽¹⁾

	Tonnes (Mt)	Zn Grade (%)	Cu Grade (%)	Au Grade (g/t)	Ag Grade (g/t)
Pick Lake					
Indicated	1.78	19.20%	0.90%	0.3	36.1
Inferred	0.27	16.40%	1.00%	0.3	38
Winston Lake					
Indicated	0.29	10.40%	0.70%	0.9	18.4
Inferred	0.01	8.90%	0.60%	0.5	11.9
Total Indicated	2.07	17.90%	0.80%	0.4	33.6
Total inferred	0.27	16.20%	1.00%	0.3	37.2



Four major, near-mine conductors identified, to be followed up for potential additional horizons



Surface sampling and geophysical data indicate separate lenses and potential continuation of Pick Lake



Exploration Target: Two Horizons discovered to date



Previous production: 3.3 Mil tonnes @ 14% Zn, 1% Cu, 32 g/t Ag, 1.4 g/t Au

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(1) Resources estimated applying zinc cut-off grade of 3%

Feasibility Study (NI 43-101) – CAD Figures



\$126.3

million
NPV 8%



23%

After-tax
IRR



3

Year
Payback
Period



\$145.1 million
Initial CAPEX



\$0.55

/lb AISC
(\$1,221/t)

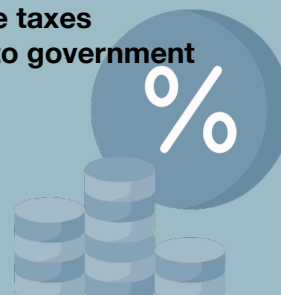


8.5 year
Mine Life



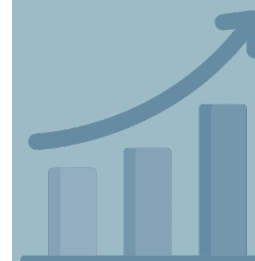
\$94.2 million

Projected direct
corporate taxes
+ duties to government



Zinc/Copper

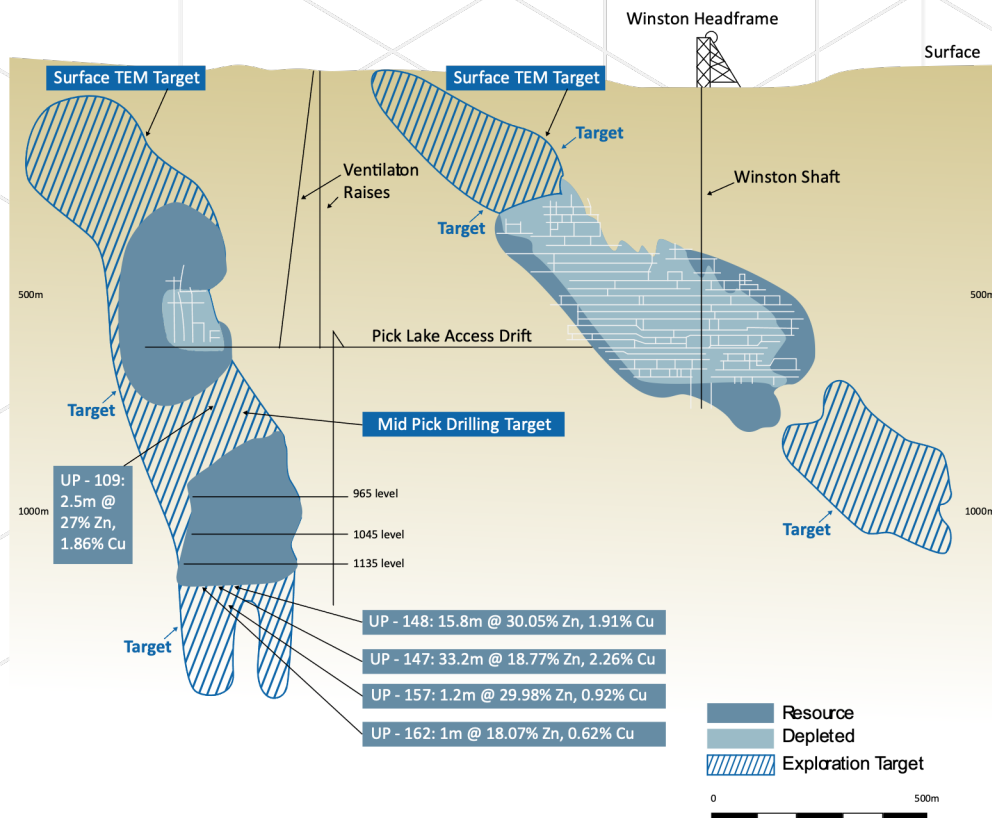
Supply projected to
remain in global deficit



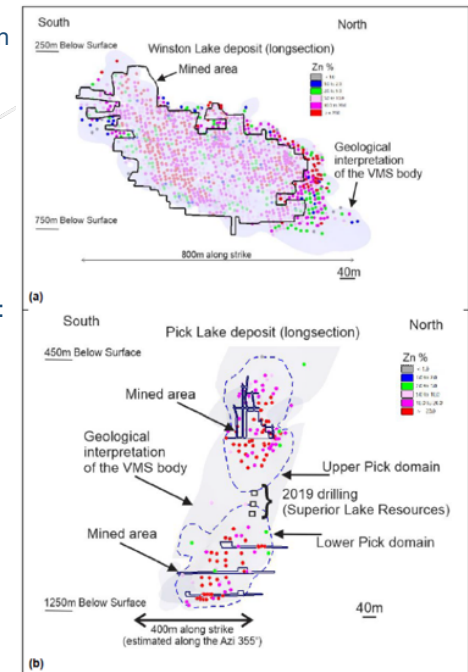
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US\$1.22/lb for Zinc, US\$3.31/lb for Copper, US\$1,635/oz for Gold and US\$21/oz for Silver

WINSTON LAKE RESOURCE TARGETS



- An unmined portion of the Winston Lake Indicated Resource with a 3% Zn cut-off remains:
 - ✓ 290 kt @ 10.4% Zn, 0.7% Cu, 0.9 g/t Au and 18.4 g/t Ag
- Pillars can also be mined
- Historic recoveries at Winston are:
 - ✓ Zinc 93.7%
 - ✓ Copper 78.3%
 - ✓ Silver 37%
- Historic annual production was avg 100 Mlbs Zn, 6Mlbs Cu, 130koz Ag, and 5.7koz of Au



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PICK LAKE RESOURCE TARGETS



Selected drilling results from Pick Lake lower Zone:

UP-0154

13.4m @ 30.47% Zn, 1.44% Cu, 57.7 g/t Ag, 0.22 g/t Au

UP-0178

3.5m @ 36.35% Zn, 1.25% Cu, 64.4 g/t Ag, 0.33 g/t Au

UP-0015

1.4m @ 40.6% Zn, 0.35% Cu, 16.2 g/t Ag, 0.16 g/t Au

Only small areas of Pick Lake have been mined.

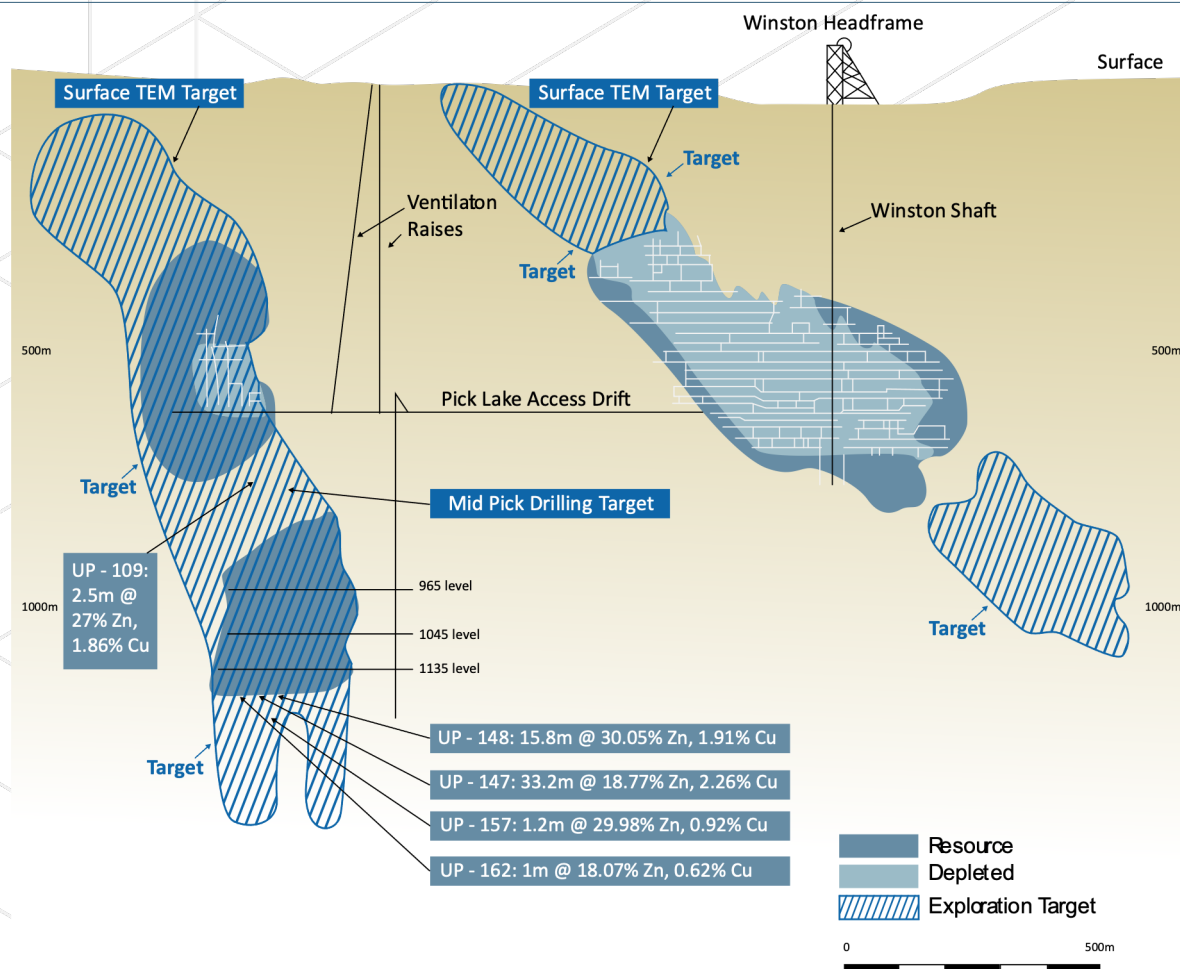
The calculated remaining Resource is:

1.78 Mt @ 19.2% Zn, 0.9% Cu, 0.3 g/t Au and 36.1 g/t Ag
270 kt @ 16.4% Zn, 1.0% Cu, 0.3 g/t Au
and 38.0 g/t Ag

Large conductor defined – not fully tested

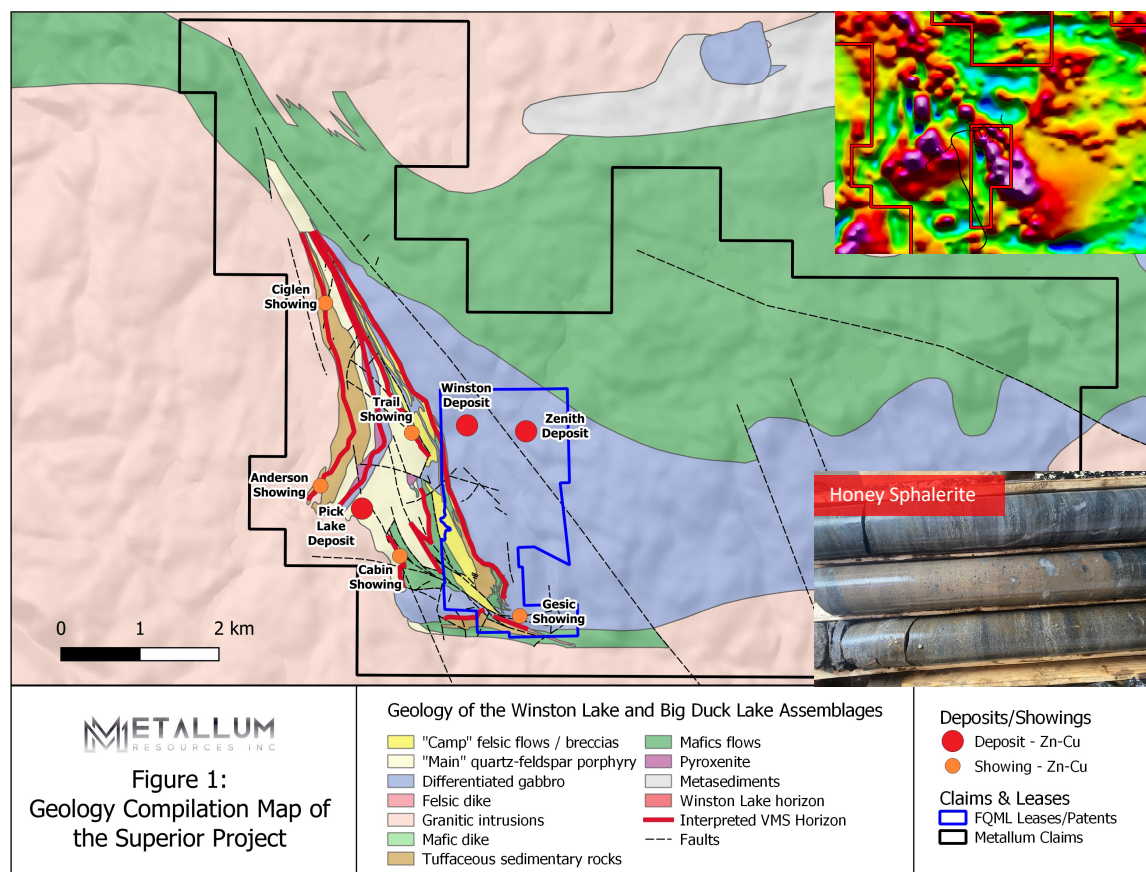
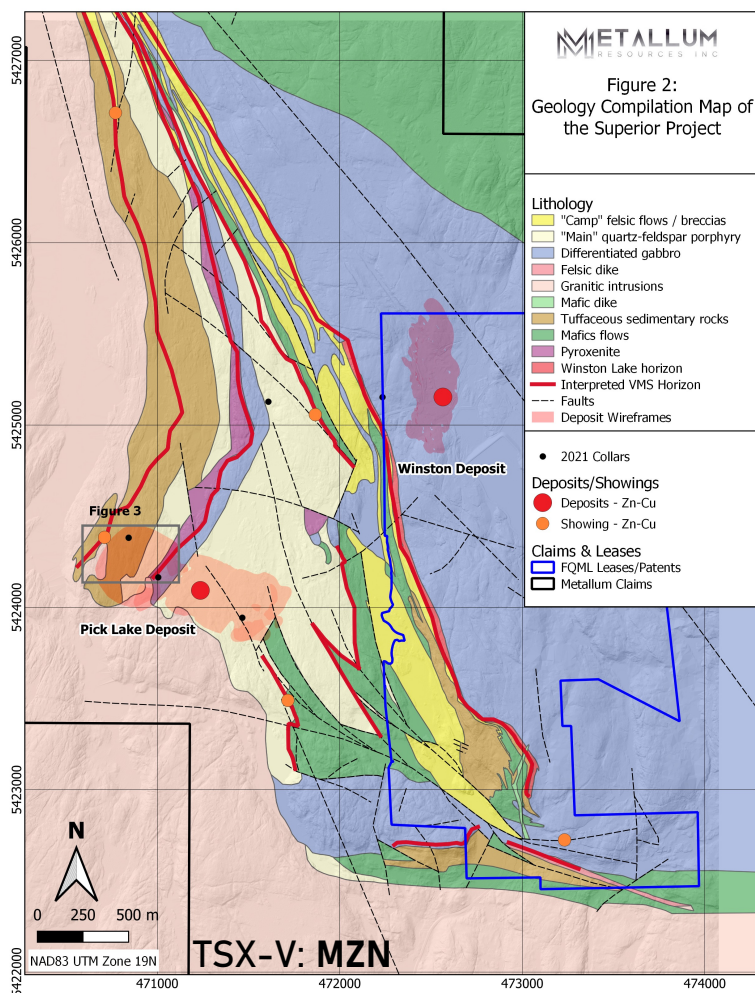
Stratigraphy between Winston Zenith and Pick Lake not fully tested

VMS – Pinch and swell, found in lenses, Multiple horizons typically, two main horizons PL and WL but VMS deposit come in multiple horizons.



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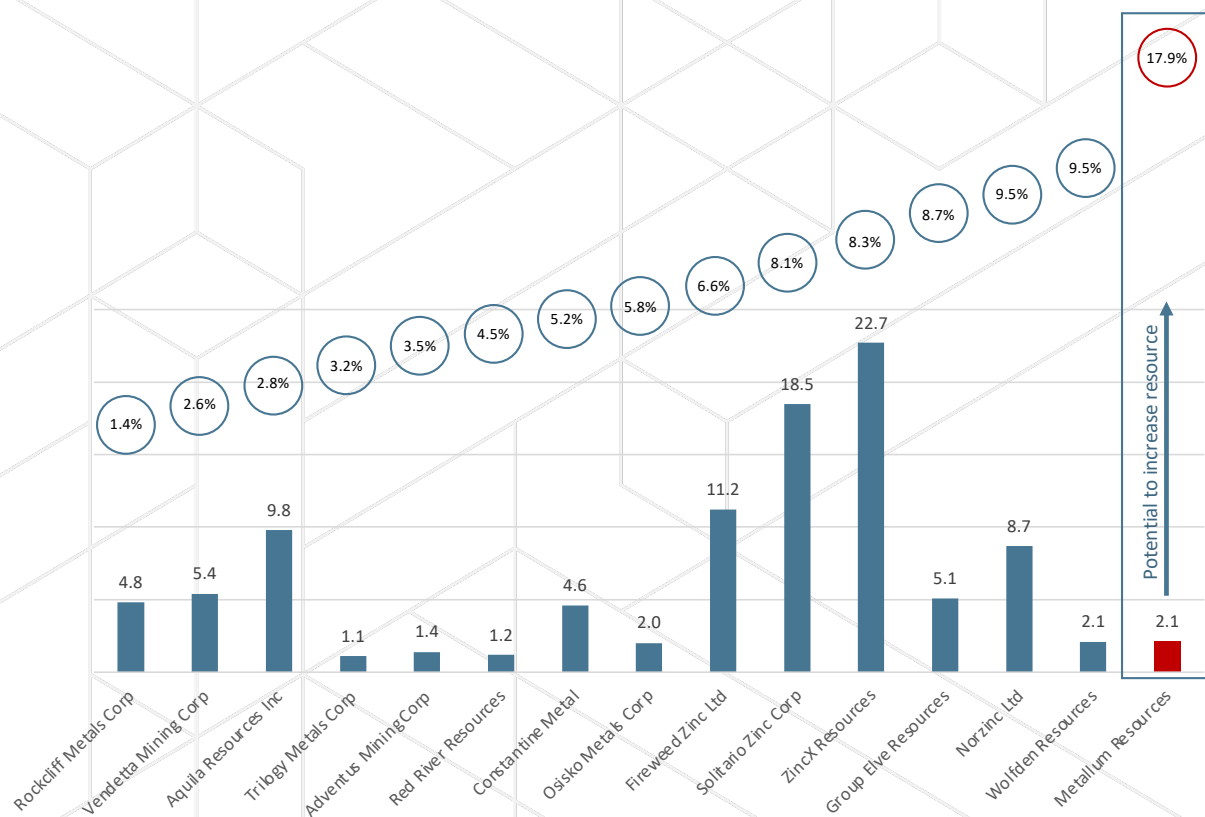
GEOLOGY COMPILATION MAP



RESOURCE AND GRADE COMPARISON



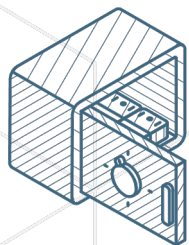
Zinc Developer Mineral Resource & Grade Comparison



- Current Resource is based on two known Horizons
- Highest grade deposit close to production
- Infrastructure in place
- Multiple ready-to-drill targets to increase resources
- No exploration over last 20 years
- Great technical team to advance the project
- Proven team with financial discipline and management

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FEASIBILITY STUDY METRICS

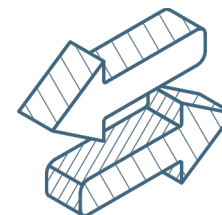


EBITDA Average
CAD\$67.6M



Robust Financial Returns:
**CAD\$126.3M NPV, 23%
IRR (after tax), 3 Year
payback, CAD\$145.1M
initial CAPEX**

including owner's costs & Pre-production



Free Cash Flow for
first 3 years of production:
CAD\$91.1M

ZINC DEVELOPMENT PROJECT COMPARISON



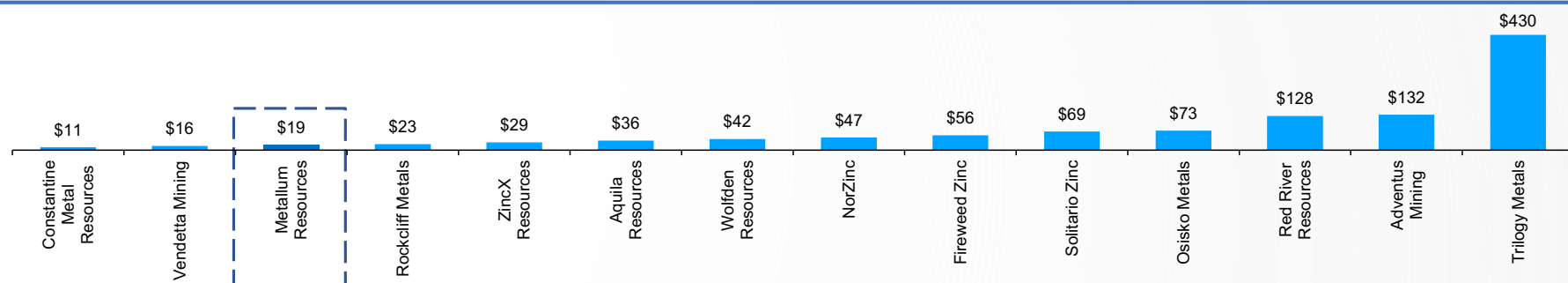
Project Comparison	Superior Lake	Florida Canyon	Prairie Creek	Halfmile-stratmat	Lik	Murray Brook	Kudz Ze Kayah
Commodities	Cu, Au, Ag	Pb, Ag	Pb, Ag	Pb, Ag, Cu	Pb, Ag	Cu, Pb, Ag	Pb, Ag
Development Stage	Feasibility Complete	Prefeas/Scoping	Feasibility Complete	Prefeas/Scoping	Prefeas/Scoping	Prefeas/Scoping	Feasibility Complete
Owner / Operator							
Country	Canada	Peru	Canada	Canada	USA	Canada	Canada
Region	Ontario	Amazonas	Northwest Territories	New Brunswick	Alaska	New Brunswick	Yukon Territory
Resource (Mt)	Zinc	Zinc	Zinc	Zinc	Zinc	Zinc	Zinc
Grade Zn Eq (%)	21%	12%	22%	10%	12%	11%	17%
Contained Zn Eq (Mt)	0.5	1.5	3.4	2.1	2.8	0.7	3.4
Grade - Zn (%)	17.9%	10.7%	10.3%	5.9%	8.2%	5.1%	6.2%
Initial Capex (US\$M)	116.5	214	279	156	325	261	381
Cash Costs (US\$/lb Zn)	35¢	29¢	128¢	34¢	63¢	50¢	25¢
NPV (US\$M)	105.4	198	188	116	25	96	527
IRR (%)	23%	25%	18%	25%	10%	11%	40%
Mine Life (Years)	8.5	13	15	13	9	10	9

Project Rank	Superior Lake	Florida Canyon	Prairie Creek	Halfmile-Stratmat	Lik	Murray Brook	Kudz Ze Kayah
Contained Zn Eq (Mt)	7	5	2	4	3	6	1
Grade Zn Eq (%)	2	4	1	7	5	6	3
Grade - Zn (%)	1	2	3	6	4	7	5
NPV	5	2	3	4	7	6	1
IRR	2	4	5	3	7	6	1
Mine Life	5	3	1	2	5	4	5
Cash Costs (US\$/lb Zn)	4	2	7	3	6	5	1
Initial Capex (US\$M)	1	2	5	3	6	4	7

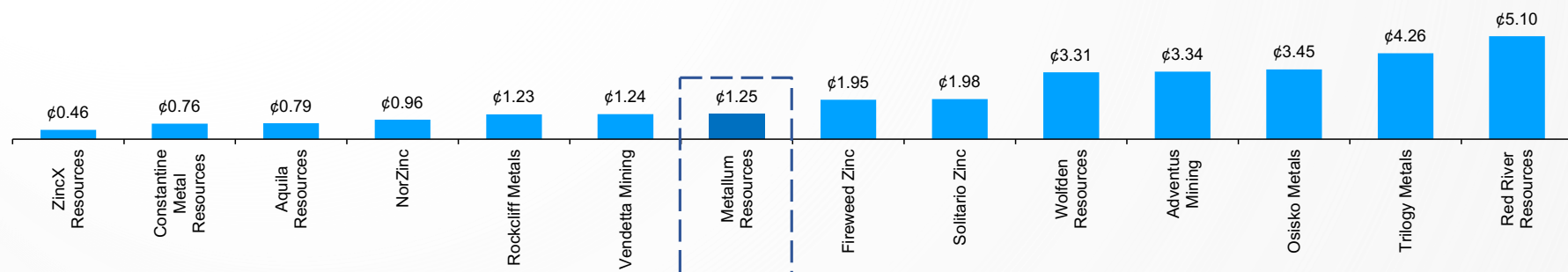
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ZINC DEVELOPER VALUATION COMPARISON

Market Capitalization (C\$mm)



EV/Resource (US¢/lb ZnEq.)



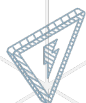
TIMELINE AND PLANS



Short Term



Publish the Feasibility Study
under NI43-101 requirements.
September 2021



Borehole EM
Sept 2021



Phase 2 Drilling
Oct-Dec 2021



Results from Phase 2, po-
tential to increase Resource
Q4 2021 & Q1 2022



Start Dewatering
Pick Lake Mine
H1 2022

August

September

October

November

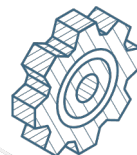
December

January

Long Term



Advance the Pick Lake Project through
continued exploration and refresh the
existing definitive feasibility study



Review other advanced and highly
prospective base metal projects as part
of a contrarian consolidation and
development strategy.



Open Underground Mine for exploration
and development

Management – A Canadian Team of Mine Builders



KEREM USENMEZ, P.Eng

President and CEO

Kerem is a Geological Engineer and a mining entrepreneur with over 20 years of global experience and has worked in various technical and leadership roles. After working with various VMS deposits and discoveries while working with Inco, Vale and Amec, he managed a drilling company, where the company grew during the downturn. He worked in numerous VMS deposits in Canada, such as Duck Pond NFLD, Bathurst in New Brunswick, and in Northern Manitoba, mainly in base metals, such as Zinc. He co-owns Atom Bits, a rapidly growing diamond drilling bit manufacturer in Canada. He is a member of the Board of Directors of the PDAC, he is the chair of Securities and the Co-Chair of Public Affairs Committees.

KEVIN BALES

CFO

Mr. Bales has 20 years of financial reporting experience in mining and information technology industries. He currently serves as CFO for several public exploration companies with operations in Canada, the U.S., Latin America, and Europe. Mr. Bales holds a Bachelor of Management degree with a major in accounting.

ANDREW TIMS, P.Geo

Exploration Manager

Mr. Tims is a seasoned exploration geologist with more than 30 years of experience. He has worked in the gold camps of Geraldton, Kirkland Lake-Timmins, and Red Lake including 8 years with Rainy River Resources in northwestern Ontario. Mr. Tims has led and managed a number of successful exploration projects including platinum exploration in the far north of Ontario, kimberlite (diamond) exploration in the Timiskaming structural zone, and volcanogenic massive sulphide exploration in the Abitibi and Wabigoon greenstone belts. Andrew recently worked for the Ontario Geological Survey as the Regional Land-Use Geologist, Mineral Deposits Compilation Geoscientist for northwestern Ontario, and as a Mineral Exploration and Development Consultant dealing with Exploration Plan and Permit applications.

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Management – A Canadian Team of Mine Builders

SIMON RIDGWAY

Board Chairman

Mr. Ridgway is a mining entrepreneur and financier who has had significant success in precious metal exploration, financing and leading teams that have gone from grassroots discoveries through to production. Simon is a founder of Fortuna Silver Mines , Radius Gold, Volcanic Gold Inc and is the founder and Chairman of Metallum Resources.

KEREM USENMEZ

Director

Mr. Usenmez is a Geological Engineer and a mining entrepreneur with over 20 years of global experience and has worked in various technical and leadership roles. He worked in numerous VMS deposits in Canada, such as Duck Pond NFLD, Bathurst in New Brunswick, and in Northern Manitoba, mainly in base metals, such as Zinc. He co-owns Atom Bits, a rapidly growing diamond drilling bit manufacturer in Canada. He is a member of the Board of Directors of the PDAC, he is the chair of Securities and the Co-Chair of Public Affairs Committees.

GORDON TANTON

Director

Mr. Tainton has over 25 years of experience in senior management levels in variety of sectors. He has financed and developed port/terminal projects for bulk liquid and solid products in the Americas, Asia and Oceania. Mr. Tainton has held various executive and non-executive board positions in both public and private companies, and the current CEO of Azarga Metals.

RALPH RUSHTON

Director

Mr. Rushton holds a B.Sc. in Geology and M.Sc. in Economic Geology, and a university certificate in business communications. He has significant exploration and mining experience in a number of geological settings with Anglo American PLC and Rio Tinto. He is the President and CEO of Aftermath Silver Ltd., and a director or advisor of several other publicly traded companies.

DAVID CASS

Director

Mr. Cass is a geologist with over 25 years of international experience in mineral exploration and mining for precious and base metals. He is the Vice President of Exploration for Bluestone Resources and is a board and audit committee member for two public companies. David was a key member and Exploration Manager of Anglo American Plc, where he was responsible for Zinc and other metal projects in the Americas, Eastern Europe and the Middle East. He is a practicing member Professional Geoscientist in British Colombia and a Fellow of the Society of Economic Geologists.

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Advisory Board



DAVID LAING, P.Eng.

Technical Advisor – Engineering and Production

Mr. Laing is a mining engineer and independent mining consultant with global experience. He was formerly Chief Operating Officer for Equinox Gold, True Gold Mining, and COO and EVP of Quintana Resources Capital. David was an original executive of Endeavour Mining, a gold producer in West Africa. He is the Chairman of Fortuna Silver Mines and has previously held senior positions in mining investment banking and debt advisory at Endeavour Financial, Standard Bank, MRDI and Bema Gold Corp.

DR. MARK CRUISE

Special Advisor – Strategy and Mine Building

Dr. Mark Cruise is an exploration and mining professional with in excess of 25-years global experience having discovered, developed or operated mines in Europe, South America, Canada and Africa. Mark founded Trevali Mining where he grew the company from an initial discovery to a global top-ten zinc producer, with a market cap in excess of \$1.5B. Mark has held a variety of professional and executive positions with Anglo American and various TSX / TSX-V listed exploration and development companies. Mark holds a Bachelor of Geology and a Doctorate of Geology from the University of Dublin, Trinity College. He is a professional member of the Institute of Geologists of Ireland and the European Federation of Geologists. He is the CEO of New Pacific Metals and the Chairman of Whitehorse Gold Corp.

JAMES R. PICKELL, P.Geo.

Consulting Geologist – VMS Resource Expansion

Mr. Pickell is a professional geoscientist and President of Orca Geosciences Ltd., which provides technical consulting services to the global mining industry. Mr. Pickell has over 45 years of exploration and mining experience primarily with Anglo American plc and Orca Geosciences Ltd internationally, throughout North America, Africa, Europe and South America. Mr. Pickell has initiated and directed the work responsible for the discovery of several economic and near economic volcanogenic massive sulphide (VMS) and magmatic Ni-Cu-PGE deposits within Canada. Mr. Pickell is a recipient of the PDAC Bill Dennis Prospector of the Year Award (2001) for the discovery of VMS deposits in the Flin-Flon – Snow Lake Greenstone Belt, Manitoba Canada.

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