



**EURO MANGANESE**

**Leading the Charge for Sustainable Mobility**

INVESTOR PRESENTATION

January 2025



# Forward-Looking Statements and Risks Notice

Certain statements in this presentation constitute "forward looking statements" or "forward looking information" within the meaning of applicable securities laws. Such statements and information involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company, its Chvaletice Project, its North American strategy, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements or information. Such statements can be identified by the use of words such as "may", "would", "could", "will", "expect", "believe", "plan", "anticipate", "estimate", "scheduled", "forecast", and other similar terminology, or state that certain actions, events or results "may", "could", "would", or be "taken, occur or be achieved".

Forward looking statements include, but are not limited to, statements regarding global supply shortage and projected deficit of HPMSM, the Company being well positioned to meet current and future demand of the EV battery supply chain; medium and long outlook for high purity manganese being robust; trend to secure supply outside of China and the Company's ability to be a potential solution; timelines and ability to achieve material and near-term catalysts including for the demonstration plant, financing and final investment decision, offtake term sheets and agreements, land access and permitting, and EPCM for the commercial plant, statements regarding the ability of the Company to obtain strategic project status and any associated benefits, the ability to obtain any grants, subsidies, or funding from the European Union, Czech state, or under any other program or legislation, and the ability for the Company to benefit from legislation in the European Union or elsewhere.

Regarding the Chvaletice Project, forward looking information or statements include, but are not limited to, the ability of the Company to continue to operate the demonstration plant, the Company's ability to deliver exceptional ESG benefits to stakeholders including net positive environmental benefits, job creation, community benefits, and royalties and/or taxes; the ability of the Company to obtain required permits and surface rights; and the results of the feasibility study and economic analysis, including the base case. Forward looking statements also include statements regarding the Company's offtake strategy, statements regarding by-product opportunities, and statements about the Company's project financing strategy, including regarding any debt funding potential from the European Bank for Reconstruction and Development ("EBRD") or the European Investment Bank, ESG Funds, or Commercial Banks, and any equity, strategic investment, and any royalties, and potential grants. Regarding the Orion secured financing, such forward-looking information or statements include, ability of the Company to meet required milestones and condition precedents to access the second US\$30m tranche of funding, potential conversion of the loan into a royalty, the Company's ability to advance the Project if it receives some or all of the secured funding package, and the Company's ability to satisfy the conditions precedent and make a final investment decision in order to complete the sale of the US\$50 million royalty.

Regarding the Bécancour Plant, forward-looking statements include, but are not limited to, statements concerning the Company's plans for advancing the Bécancour Plant, results from the scoping study, statements regarding the timing for completion of the Bécancour feasibility study, the Company's estimated engineering and construction timelines to build the Bécancour Plant, the technical capability of the Bécancour Plant, the Company's ability to operate the Bécancour Plant and produce both HPMS and HPMSM with any associated cash flow, and the Company's ability to meet North American demand.

All forward-looking statements are made based on the Company's current beliefs including various assumptions made by the Company, including that: the Company can achieve its goals; that the political and community environment in which the Company operates in will continue to support the development and operation of the Chvaletice Project; that the Company will have enough working capital to be able to fund its operations and meet the conditions of its secured financing, and assumptions related to the factors set out herein. Factors that could cause actual results or events to differ materially from current expectations include, among other things: insufficient working capital, the inability to raise additional capital, the inability to obtain grants, subsidies, or funding from government or other programs, risks and uncertainties related to the ability to obtain, amend, or maintain necessary licenses, or permits; delay or inability to receive necessary regulatory approvals; risks related to acquisition of surface rights; the inability of the Company to meet the conditions of its secured financing and risks related to granting security; lack of availability of acceptable financing for developing and advancing the Chvaletice Project; inability to secure sufficient offtake agreements; risks related to the availability and reliability of equipment, facilities, and suppliers necessary to complete development; the ability to develop adequate processing capacity with expected production rates; the presence of and continuity of manganese at the Chvaletice Project at estimated grades; developments in EV battery markets and chemistries; and risks related to fluctuations in currency exchange rates, changes in laws or regulations; and regulation by various governmental agencies. For a further discussion of risks relevant to the Company, see "Risk Factors" in the Company's annual information form for the year ended September 30, 2024, available on the Company's SEDAR+ profile at [www.sedarplus.ca](http://www.sedarplus.ca).

Although the forward-looking statements contained in this presentation are based upon what management of the Company believes are reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this presentation and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the Company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this presentation.

# Introduction

EXECUTIVE SUMMARY



# Investment Highlights

**Euro Manganese will partner with leading mobility companies to support the global energy transition**



Chvaletice Manganese Project Transforms Waste-to-Value by Recycling Historic Tailings into High Purity Manganese

Robust Project Economics - \$1.3B NPV, 22% IRR, \$554M Avg Revenue pa, 59% EBITDA Margin

Securing Western Supply of HPM with planned production of 16ktpa of HPEMM & 100ktpa of HPMSM over 25 years

Global supply shortage with HPMSM expected to move into deficit post-2027 and increase steadily to 6.2 Mt by 2035

Chvaletice Demonstration Plant recently commissioned, produced on spec material, above production targets

2025 focussed on customer offtakes based on successful demonstration plant commissioning

Orion non-dilutive financing package up to US\$100 million (US\$20 million drawn)

Strong environmental benefit through reprocessing of historic tailings at Chvaletice, advanced permitting

# Euro Manganese

## CAPITALIZATION - at December 31, 2024

Shares (including ~210.0 Mill. CDIs)	402,669,227
Options	21,957,454
Warrants	-
Fully Diluted	424,626,681

## FINANCIAL METRICS - at September 30, 2024

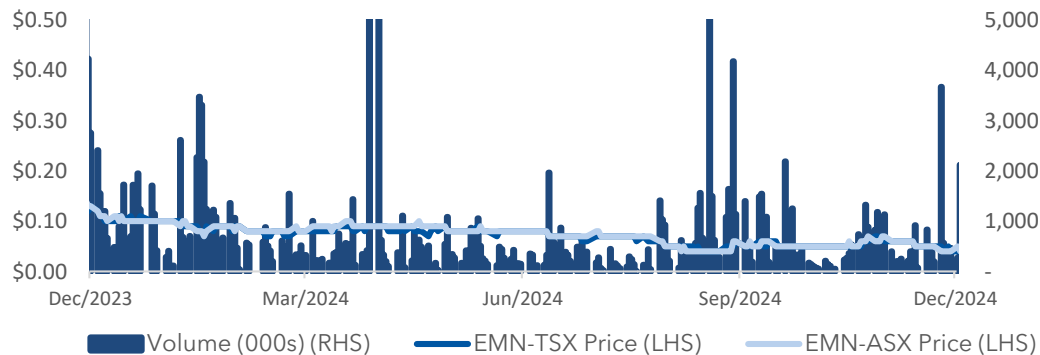
Cash balance	C\$9.4 million
Total Liabilities	C\$30.7 million
Debt	C\$27.5 million
Market cap (at C\$0.05/share)	C\$20.1 million
Enterprise value	C\$38.2 million

## TRADING SYMBOLS

TSX-V & ASX: EMN | OTCQB: EUMNF | Frankfurt: E06 Canaccord Genuity

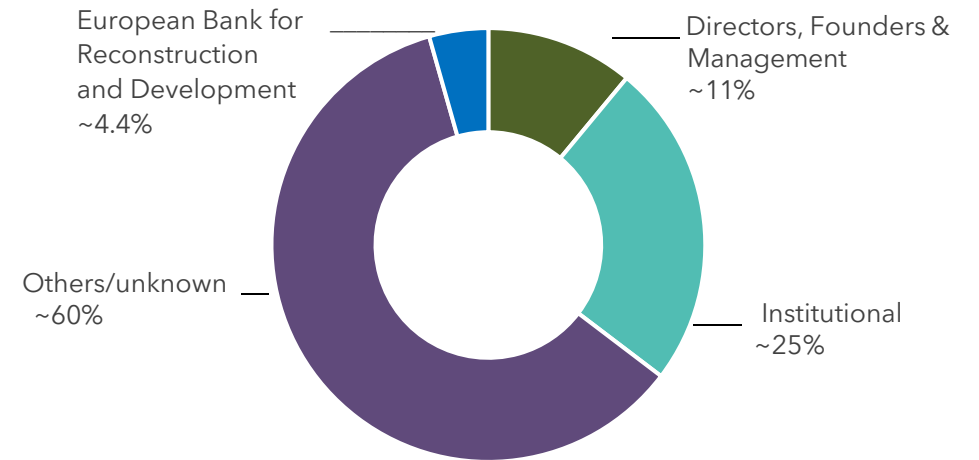
## RESEARCH COVERAGE

## 12-month Share Price and Volume



Source: Irwin and Factset.

## Ownership Structure at September 30, 2024 Total 402,669,227



## BOARD & KEY EXECUTIVES

Chairman	John Webster
Director	Dr David Dreisinger
Director	Ludvine Wouters
Director	Thomas Stepien
Advisor to the Board	Jan-Erik Back
Interim CEO	Martina Blahova
CFO	Dean Larocque

# High-Purity Manganese 101

MARKET OVERVIEW



# Manganese is an Essential Raw Material in Most Lithium-Ion Batteries

**Nickel-Manganese-Cobalt (NMC) cathodes are the dominant chemistry in EV batteries**

## ABOUT HIGH-PURITY MANGANESE\*

### Affordable

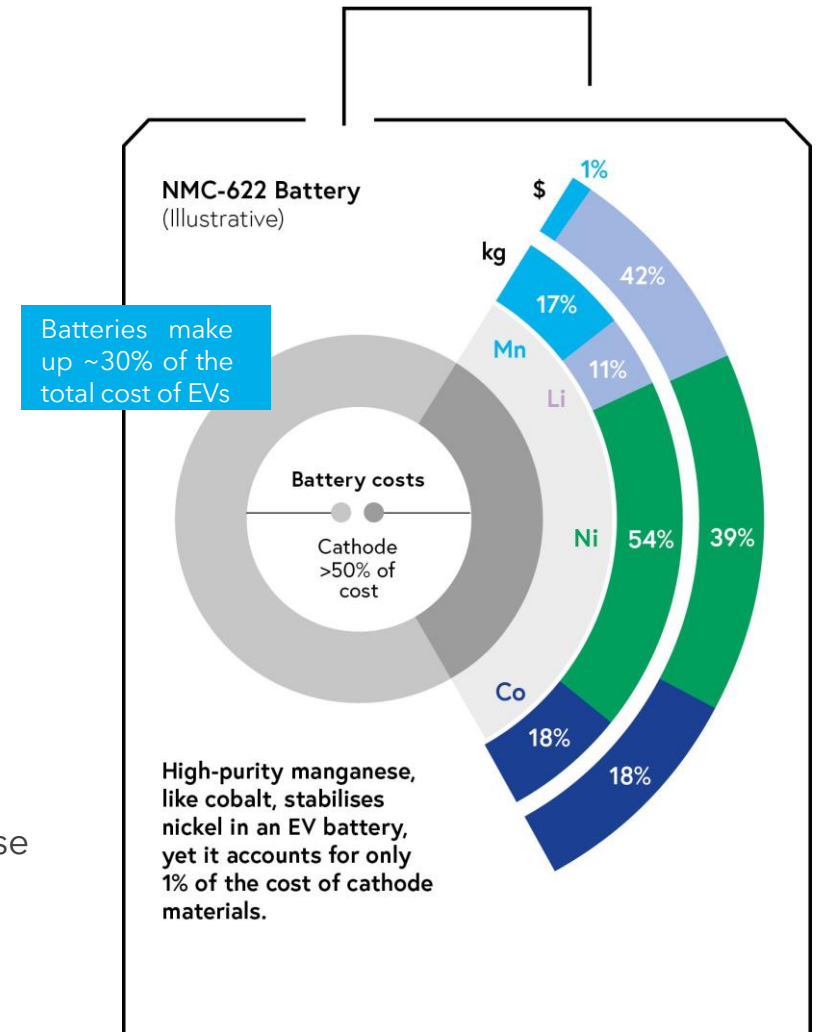
- The most affordable and abundant of the NMC cathode materials
- Comprises 17% of material in NMC-622 cathode but accounts for only 1% of cost

### Improves Safety and Lower Environmental Impact

- Stabilizes nickel, improving safety, in an EV battery
- Ore production has significantly lower environmental impacts than nickel or cobalt

### Improves Driving Range

- Increases energy density in LMFP (30% to 80% manganese) and other high-manganese cathode chemistries

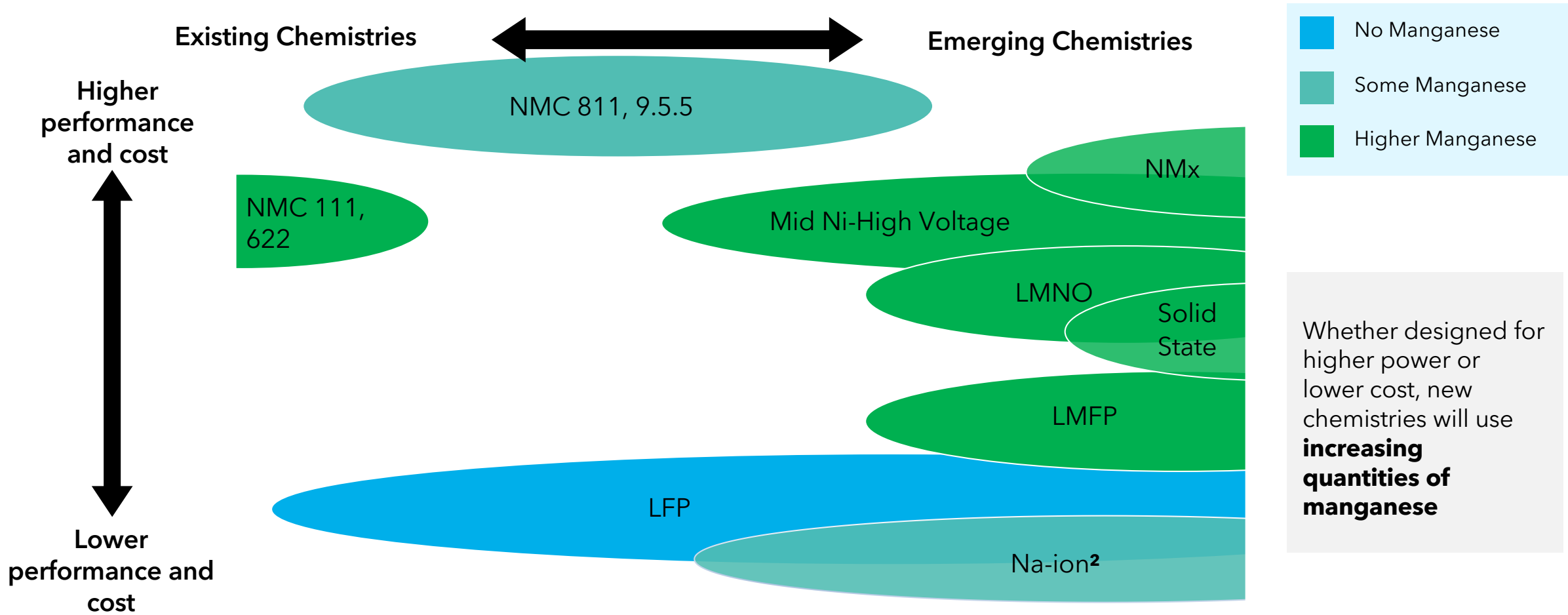


\* HPMSM (High Purity Manganese Sulphate Monohydrate) and HPEMM (High Purity Electrolytic Manganese Metal)

Source: Company analysis using European metal prices as at November 2023

# Manganese Crucial to Price Reduction and Performance Enhancement

## Battery chemistry<sup>1</sup> price and performance segmentation



1. LMNO (Lithium Manganese Nickel Oxide), NMC (Nickel-Manganese-Cobalt), NMx (Nickel-Manganese-Additives Cobalt-free), LFP (lithium iron phosphate battery), LMFP (Lithium manganese iron phosphate).

2. Na-ion also has application in Energy Storage



# Medium and Long-Term Outlook for High-Purity Manganese Remains Robust

With >90% of high-purity manganese currently produced in China, the market seeks to secure Western supply

## Market facing near-term headwinds

- OEM cost pressure due to slower than expected EV sales
- Ramp-up and quality challenges have led to project cancellations and significant delays

## However, the EV transition will continue

- US still a growth market
- China selling record volumes, regions such as South America showing potential
- OEMs reducing unit vehicle costs with new battery chemistries
- Projects looking to modularize - slower, but not stopping

## Western manganese outlook robust in the medium to longer term

- Focus on cheaper chemistries supports mass adoption and requires more manganese (e.g., Mid-Ni High Voltage, LMFP)
- Players still seeking material with superior ESG credentials, battery regulations will remain significant in Europe

# Western Supply Chain Development and Recent EV deals

Chinese dominance of EV supply chains has seen recent reactions from Western customers and governments

- Chinese dominance of new energy industries is increasingly clear with a leading position in the EV supply chain from value-added chemicals to cells and cars
- With escalating geopolitical risk, securing supply outside of China continues to be a strong trend in the western world and EMN’s Chvaletice project is a potential solution for this continuing trend
- Recent events such as the U.S department of Defence designating CATL as a “Chinese military company” shows significant escalation to trade and political tensions
- Recent strategic investments include Volkswagen's C\$69 million investment, offtake and strategic partnership with Patriot Battery Metals

**CISION**

**C\$69 MILLION<sup>1</sup> INVESTMENT, OFFTAKE AND STRATEGIC PARTNERSHIP WITH VOLKSWAGEN AND POWERCO TO PROPEL PATRIOT BATTERY METALS TOWARDS PRODUCTION**

PR Newswire  
December 18, 2024 • 10 min read

**China's curbs on exports of strategic minerals**

By Reuters  
August 15, 2024 9:22 AM EDT · Updated 3 months ago

**US adds Tencent, CATL to list of Chinese firms allegedly aiding Beijing's military**

By Michael Martina, David Shepardson and Karen Freifeld  
January 10, 2025 7:16 AM GMT+11 · Updated 3 days ago

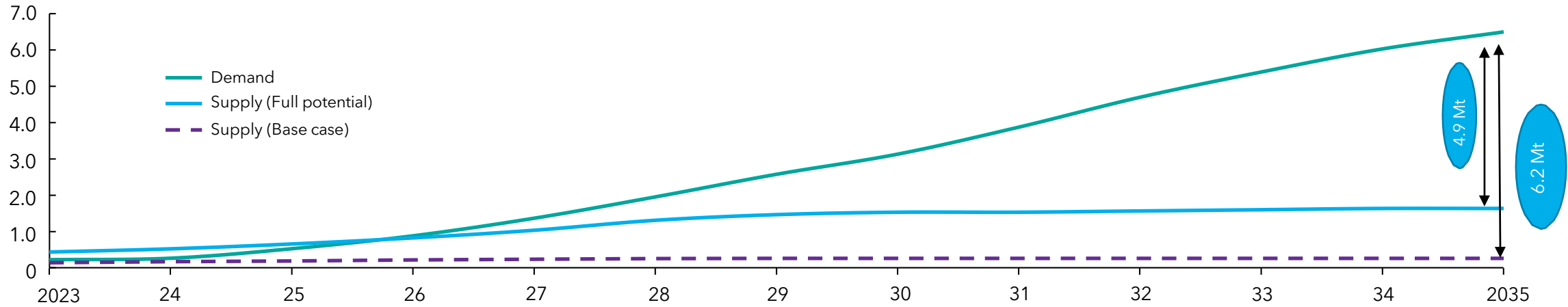
Summary Companies

- Tencent's HK shares fall 7%, CATL drops 5%, COSCO down 4%
- Tencent, CATL deny military ties, call designations mistakes
- List is part of US efforts to restrict Chinese firms over security risks
- Designation impacts companies' reputations

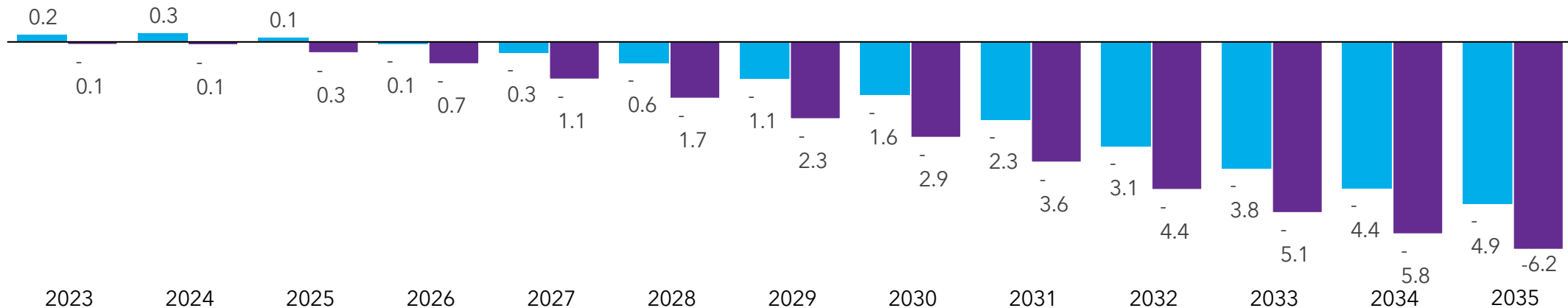
# Supply-Demand Imbalance Looming for Battery-grade Manganese

The balanced supply-demand of HPMSM is expected to move into deficit as significant gaps appear post-2027 and increase steadily thereafter up to 6.2 Mt by 2035

Global HPMSM market balance, 2023-2035, millions of metric tons (Mt) of HPMSM



Supply/Demand HPMSM balance, 2023-2035, millions of metric tons (Mt) of HPMSM



1. Includes stationary storage batteries on top of EVs  
Source: International consultancy estimates

# The Only Integrated Project in Europe, Offers Clear Product Advantages Including Low-Carbon and Circular Production

✘ Negative
 ✔ Positive
 — Neutral



## Chinese players



## Other global players



## Euro Manganese



		Chinese players	Other global players	Euro Manganese
<b>Security of supply</b>	<i>Likelihood of supply chain disruption arising from producer location</i>	✘ Geopolitical tensions pose a supply risk	✔ Local production favorable	✔ Local production favorable
<b>Project stage</b>	<i>How advanced players are in project lifecycle</i>	✔ Most of the operational capacity is in China	— Scoping to pre-feasibility for many, E25, South 32 & Giyani more advanced	✔ FEED ready (with on-site demonstration plant)
<b>Carbon emissions</b>	<i>Emissions intensity of production method</i>	✘ Typically, emissions intensive and unregulated	— Varies, larger upstream emissions & reagents utilization	✔ Up to 65% lower emissions from production than Chinese players
<b>Circularity benefit</b>	<i>Circularity of operations</i>	✘ Limited to none	✘ Very limited or none in place	✔ Circular tailings reprocessing (only one in the world)
<b>Regulatory environment</b>	<i>Any favorable/unfavorable regulatory environment</i>	✘ Relatively loose and not fully enforced	✔ Favorable to most ex-China players	✔ Favorable in key jurisdictions (EU & NA)
<b>Non-production costs</b>	<i>Additional non-production costs such as transport and environmental</i>	— Medium to high depending on location and setup	— Medium to high depending on plant location and process	✔ Limited due to location and production method

Source: Industry PEA, pre-feasibility and feasibility analysis for each HPMSM player

# Chvaletice Manganese Project

COMPANY & PROJECT OVERVIEW



# Focused on Production of High Purity Manganese (HPMn) Products

## Chvaletice to produce High Purity Manganese Metal (HPEMM) & High Purity Manganese Sulphate Monohydrate (HPMSM)

**Chvaletice is a unique waste-to-value project**  
Involves reprocessing historical mine tailings to produce high-purity manganese

**Recycling**

- Historic tailings containing easily-treated manganese carbonate<sup>(1)</sup>
- Well-defined Proven + Probable mineral Reserve of 27Mt @ 7.4% Mn with uniform distribution<sup>(1)</sup>
- No hard-rock mining impacts

**Processing**

- Manganese is extracted using best-in-class environmental and safety standards
- Production of 48Kt/annum of Mn equivalent for 25 years<sup>(1)</sup>

**Remediation**

- Net positive environmental benefits from remediation of historic tailings area
- Best practice tailings management (filtered, dry-stack)

2017-2018 O&M Program  
■ 2017 O&M Index  
■ 2018 O&M Index

**1**

### A unique recycling opportunity

- Unique Mn tailings reprocessing project**
- Unique circularity** (recycling under CRMA)
- Ecosystem benefits
- 25-year project life

**Flow sheet produces two high-purity manganese products: HPEMM & HPMSM**  
Robust process uses proven, conventional and commercial technologies; adheres to strict European environmental regulations

- 01 Ore to Slurry**  
manganese ore and tailings are mixed
- 02 Magnetic Separation**  
produces Mn concentrate
- 03 Leaching and Purification**  
produces purified Mn solution
- 04 Electrowinning**  
produces cathodes with minimal waste (99.9% Mn)
- 05 Oxidation & Crystallisation**  
produces HPEMM powder (99.9% Mn)

Processing via the metal route provides several advantages:

- Superior purity for next stage sulphate production
- Metal used as feedstock for steel manufacturing
- Metal can be further processed to advanced locations
- Metal can be sold to specialty alloy producers

**2**

### Production of two high-purity manganese products

- Commercial 5-step process including **electrowinning**
- High quality product at low carbon output**

**Demonstration Plant has produced on-spec HPEMM and HPMSM**  
Enables large-scale product samples on batch basis

- HPEMM (99.9% pure) and HPMSM<sup>(1)</sup> (99.8% pure) produced; external lab tests confirm meet Plant specifications
- Final commissioning underway
- Valuable insights gained from operation of Demo Plant, leading to engineering & operational process improvements
- Facilitates supply chain qualification of Chvaletice high-purity manganese products

**3**

### Demonstration Plant has produced HPEMM and HPMSM

- Feasibility study complete
- HPEMM and HPMSM produced on spec
- ESIA approved**
- EPCM** contractor selected
- FEED** Initiated

**Chvaletice has good cashflow and margins together with security of supply for Europe**  
Stable production over 25-year project life, supported by 27 Mt reserves base

**Feasibility Study Base Case Highlights (5 figures in USD)** (July 2022)

<b>NPV</b>	<b>IRR</b>	<b>Payback</b>
\$1.3B	22%	~4 Years
(\$1.3B discount)	(Regional, post-tax)	

**Capital**

\$757M	<b>Production</b>	<b>Life of Project</b>
(Initial production)	48 Ktpa Mn (100% sulphate + 70% HPEMM)	25 Years

**Revenue**

\$554M	<b>EBITDA</b>	<b>Margin</b>
(Average per year)	\$229M	59%
	(EBITDA margin)	

**HPMSM Price in Europe** (USD/MT)

**4**

### Feasibility Study demonstrated attractive economics

- \$1.3B NPV** (Base case)
- 22% IRR
- 59% EBITDA margin
- 25-year project lifetime
- 16K tpa of HPEMM/yr**
- 100K tpa of HPMSM/yr**

# The Project Transforms Waste-to-Value by Recycling Historic Mine Tailings

**Conventional, proven processing of mine tailings to produce high-purity manganese**

## Recycling

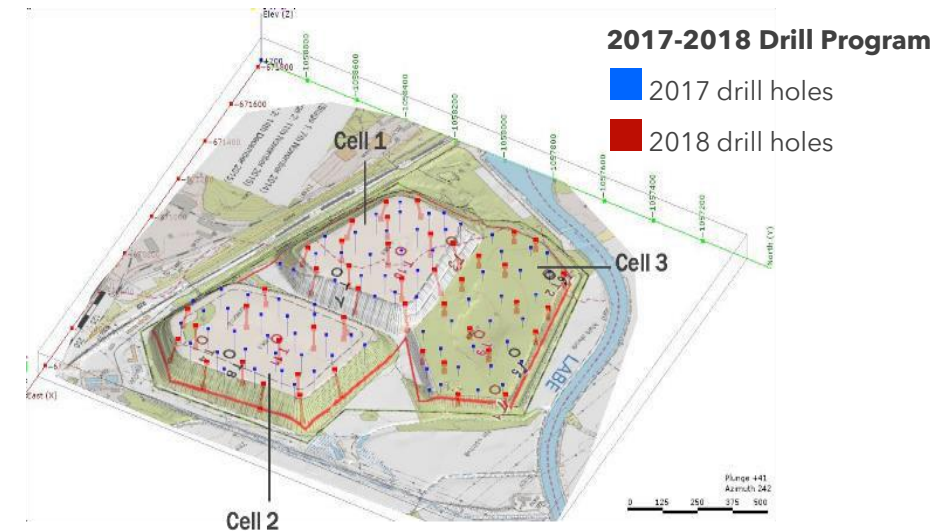
- Historic tailings containing leachable manganese carbonate <sup>(1)</sup>
- Well-defined Proven + Probable Mineral Reserve of 27 Mt @ 7.4% Mn with uniform distribution <sup>(2)</sup>
- No blasting, crushing or grinding required

## Processing

- Manganese is extracted using best-in-class environmental and safety standards
- Production of 48K tpa of Mn-equivalent for 25 years <sup>(2)</sup>

## Remediation

- Net positive environmental benefits from remediation of historic tailings area
- Best practice tailings management (filtered, dry-stack)



1. Leachable Carbonate ores, most suitable for HP Mn production, are rare. Oxide ores require extra treatment and removal of impurities is challenging.  
 2. Based on 2022 Feasibility Study, published on 27 July 2022.

# Prime Location, Favorable Government Policies and Key Approvals Received



## REGULATION AND POLICY

- Located in the Czech Republic, EU member state since 2004, a sophisticated, stable, and **business-friendly jurisdiction that is highly supportive of new, green investments**
- **Ideally positioned to benefit from emerging EU and US regulations** and incentives regarding nearshoring of supply <sup>1</sup>



## LOGISTICS

- **Well-located for delivery of goods from regional, national, and international points** of origin via a substantial highway/road network:
  - The Baltic-Adriatic corridor, part of the EU's Trans-European Transport Network, will serve to further enhance transportation options and availability to the project region
  - Ocean ports in northern Europe and the north Adriatic provide multiple opportunities for delivery of overseas origin goods with direct connections to major highways and/or rails



## PERMITS

- Euro Manganese has **received approval of the Environmental and Social Impact Assessment (ESIA)** for the Chvaletice Manganese Project from the Czech Ministry of Environment
- Major gating permit, **Mining Lease Permit received** in January 2025; remaining permits are more procedural



## ENVIRONMENTAL

- **Life Cycle Assessment (LCA) shows net positive environmental benefits** from remediation of historic tailings (land, water, air, biodiversity)
- Project intends to use **100% carbon free and renewable electricity**: CO2 1/3rd vs current industry in China. MoU in place with Statkraft, largest renewable energy company in EU
- **No freshwater use**: supply of industrial wastewater from neighboring power plant for process make-up water
- **Use of by-product CO2 and hydrogen process emissions within the process circuit**, as well as targeted reagent regeneration and recycling



## SOCIAL

- **Land access payments** to local municipalities and local land holders
- Strong engagement and communication with local communities
- **~400 jobs created** during operation, more in construction phase
- **~US\$1.5 billion in corporate taxes and royalties** over life of project
- One-third of Government **royalties flow back to local municipalities**

1. Both the IRA (30D Clean Vehicle) and the EU CRMA have local sourcing constraints for battery materials and critical minerals that play in favour of non FOEC procurement



# Flow Sheet Produces High-Purity Manganese Products: HPEMM & HPMSM

Process uses commercial technologies and adheres to European environmental regulations

**1**  
**Ore to Slurry**  
Ore excavated, slurried and fed into process plant




**2**  
**Magnetic Separation**  
Beneficiation step increases Mn concentration



**3**  
**Leaching and Purification**  
Produces purified Mn solution for electrowinning



**4**  
**Electrowinning**  
produces **HPEMM flakes (99.9% Mn)**  
Selenium-free process



**5**  
**Dissolution & Crystallization**  
produces **HPMSM powder (32.3% Mn)**



Processing via the metal route provides several advantages

Facilitates purity for next stage sulphate production

Metal used as feedstock for emerging and new battery chemistries and technologies

Metal can be further processed at satellite dissolution facilities for production of HPMSM

Metal can be sold to specialty alloy industry

# Demonstration Plant has Produced On-Spec HPEMM and HPMSM

**Final commissioning of Demonstration Plant complete  
Enables large-scale product samples on batch basis**

- HPMSM produced from dissolution of HPEMM, both produced at the Demonstration Plant
- Two independent external labs confirmed HPMSM meets specifications, with low levels of impurities
- Allows production of bulk, multi-tonne finished product samples of HPMSM and/or HPEMM for prospective customers' supply chain qualification
- Successful completion of a 5-day continuous operation program of HPEMM, producing 172 kg of on spec metal exceeding target production by 30%
- Validates design flowsheet and facilitates continuation of customer offtake process including samples available for qualification



# Robust Cashflow and Margins Together with Security of Supply for Europe

Stable production over 25-year project life, supported by 27 Mt reserve base

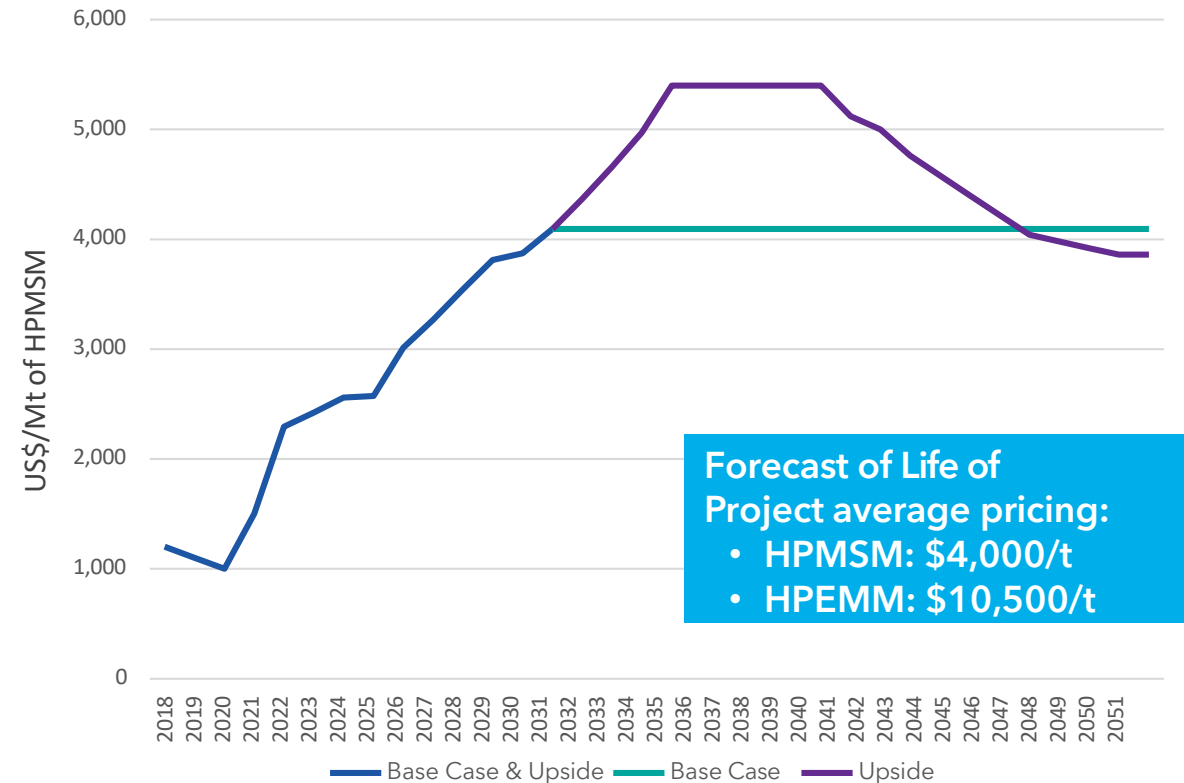
## Feasibility Study Base Case Highlights

(All figures in USD, July 2022)

<b>NPV</b>	<b>IRR</b>	<b>Payback</b>
\$1.3B Post tax (8% discount)	22% Ungeared, post tax	~4 Years
<b>Capital</b>	<b>Production</b>	<b>Life of Project</b>
\$757M To initial production	48K tpa Mn 100 Kt HPMSM + 15 Kt HPEMM	25 Years
<b>Revenue</b>	<b>Opex</b>	<b>Margin</b>
\$554M Average per year	\$229M Average per year (\$215/t of dry plant feed)	59% EBITDA margin

## Feasibility Study Price Forecast for HPMSM

(USD/t real, July 2022)\*



\* Pricing forecast per CPM Group, 2022; Base case project economics based on Tetra Tech Canada's adoption of a risk-adjusted short-term price forecast.

# 2025/2026 Pathway

There are a number of material and near-term catalysts expected for EMN



# Introduction to Euro Manganese Executive Team

Track record of raising capital and delivering large-scale projects; deep high-purity manganese processing experience



**Martina Blahova**  
Interim CEO

- 25 years experience in finance including public practice with PwC and EY in the Czech Republic and UK
- Previously CFO and Corporate Controller for Euro Manganese
- Held senior roles in automotive and mining industry, including Manager of Financial Reporting at SSR Mining
- CPA, CGA (Canada), ACCA (UK), Masters Degree in International Business



**Dean Larocque**  
CFO

- 30 years of experience in finance, most recently as Senior Assurance Partner at PwC
- Vast experience in IPOs, M&A, due diligence, all forms of financing, dual listings, and mining and public company-specific accounting, regulatory and controls issues
- CPA (Canada and US), Certified Financial Planner (CFP), joint Bachelor of Business Administration (BBA) and Bachelor of Arts in Economics (BA)



**Laurel Petryk**  
Chief Legal Officer & Corporate Secretary

- Over 24 years of legal experience in corporate, securities, governance, and mining gained from a large national firm and in-house, and regulatory experience including working at the British Columbia Securities Commission
- Previously partner at McMillan LLP, with speciality in mining
- Previous in-house roles include Senior Legal Counsel at HSBC, and Leader and Senior Legal Counsel at Vancouver Coastal Health



**James Fraser**  
VP Commercial

- 25 years of experience in the geosciences, consulting, mining, carbon credit and automotive sectors
- Previously Head of Sales & Sourcing and Managing Director with two UK- based specialist automotive and motorsport engineering firms
- Previously with Permian Global, an investment fund focused on forest carbon, senior positions in commercial and technical fields at Rio Tinto, strategy consultant for McKinsey
- Doctorate in Earth Sciences, University of Oxford



**Andrea Zaradic**  
VP Operations

- 30 years of experience in corporate, project and business development, focused on mining and renewable energy
- Senior roles, including President & CEO of Northair Silver; Program Manager for Ballard Power; VP Operations and Development for Magma Energy Corp.; Manager of Infrastructure Development for Canico Resource, Construction and Senior Process Operations Engineer for BHP
- M.A.Sc degree in mechanical engineering, P.Eng. (BC, ON)



**Jan Votava**  
Managing Director, Mangan Chvaletice

- 19 years experience as an executive leader in the Czech Republic
- Responsible for leading Euro Manganese's subsidiary in the Czech Republic
- Previously Head of Transformation Team for Europe, Technical Director for Central Europe, and Executive Chairman and Managing Director for the Czech Republic for Lafarge Holcim
- Doctorate in mechanical engineering

# Introduction to Euro Manganese Board of Directors and Advisors

Board of Directors and Advisors with a vast amount of experience in mining and related sectors



**John Webster**  
Chairman

- Over 30 years of experience with PwC including former BC Managing Partner, Assurance Leader in Romania and head of mining practice in Canada
- Extensive experience as audit partner and advising private and listed clients, international experience with mine development projects
- Director, Eldorado Gold



**Dr. David Dreisinger**  
Director

- Professor and Industrial Research Chair in Hydrometallurgy at the University of British Columbia
- International consulting practice focused on major hydrometallurgical projects and plants
- Former Director, PolyMet Mining, Search Minerals, LeadFX, Cascadero Copper Corp.; officer positions with Camrova Resources, Clifton Star Resources and South American Silver



**Ludivine Wouters**  
Director

- Seasoned strategy, governance, and policy executive with more than 20 years of experience in European and emerging markets
- Managing Partner at Latitude Five, leading the Mining and Minerals practice with expertise in mining policy and governance, including working with policy shapers on critical minerals and responsible sourcing priorities
- Named one of the 100 Global Inspirational Women in Mining in 2013
- Currently a Visiting Fellow with the European Council on Foreign Relations



**Thomas M. Stepien**  
Director

- Over 30 years of global technology management, operations and engineering experience at small and large companies
- Currently CEO of QM Power and Operating Partner at KCK Investment Group
- Director and former CEO, Primus Power Solutions, former VP at Applied Materials
- BS and MS in Mechanical Engineering, Massachusetts Institute of Technology



**Jan-Erik Back**  
Advisor

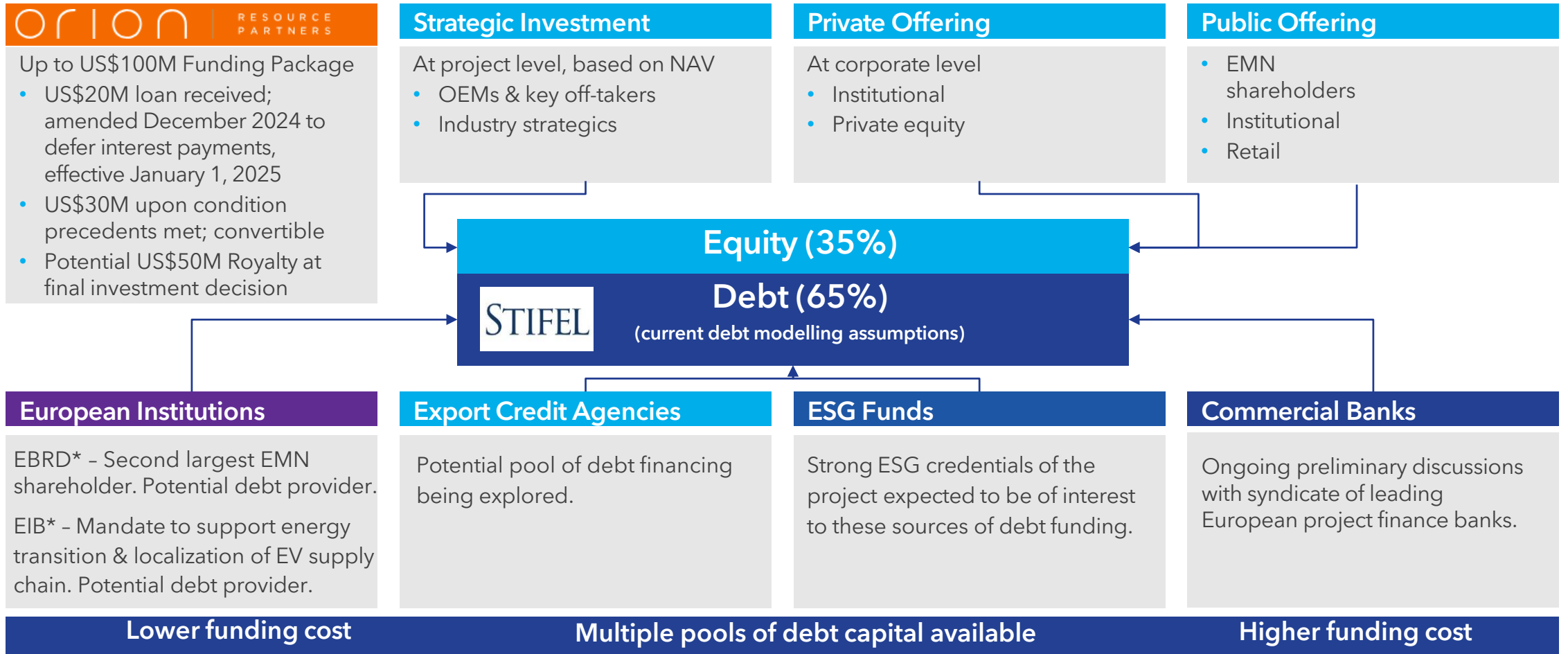
- CEO of Galiant Partners, an independent advisory firm focussed on the global, metals mining and related sectors
- Former Head of Project Finance at Stifel and Managing Director at Hatch Corporate Finance
- Completed over US\$100B of assignments in the mining sector
- BSc in Economics from the London School of Economics and Political Science

# Project Funding

PROJECT FINANCE



# Project Financing Strategy Provides Optionality



\* **European Bank for Reconstruction and Development (EBRD)**, an international financial institution owned by 73 countries, the European Union and the European Investment Bank  
**European Investment Bank (EIB)** is the lending arm of the European Union and is one of the largest multilateral financial institutions in the world



# European Bank for Reconstruction and Development (“EBRD”)

EBRD is a financial institution helping centrally-planned countries transition to market economies

## EBRD Overview

- EBRD is a multilateral development bank established in 1991 to foster the development of market economies through private-sector investments with commercial partners.
- Invested over €210 billion in more than 7,300 projects across three continents. Providing policy guidance, technical assistance, and capacity building to enhance governance, competitiveness and sustainability
- Headquartered in London, the EBRD is owned by 71 countries and two EU institutions. <https://www.ebrd.com/who-we-are.html>

## Euro Manganese and EBRD

- In September 2022, EMN made a private placement of 17,800,000 common shares to the EBRD at a price of C\$0.4775 per share, generating gross proceeds of C\$8,5 million
- Funding enabled the Company to complete a feasibility study and construct and operate the demonstration plant
- EBRD is currently the second largest shareholder of EMN, with a 4.4% interest in the Company

## EBRD Partnership Benefits

1

### Influential Investor and Partner

Large-scale investor and an influential development actor with in-depth local, and sector-specific knowledge

2

### Battery Supply-Chain Investment Experience

EBRD has invested in companies such as **Saryogan Graphite Limited, and European Metals Holding Plc**, which provide critical materials in the battery supply chain.

3

### Sustainability Focus

The EBRD's key area of investment is the green transition, providing support for resource efficiency, decarbonization, and more.

4

### Support for Policy Dialogue

The EBRD engages in policy dialogue and provides technical advice to foster innovation.

# Redefining the Offtake Strategy

Primary focus on the development of a robust term sheet stage “offtake book”

**HPEMM and HPMSM offtake agreements are highly tailored and require a curated approach**

- Non-exchange traded product requiring bilateral contractual commitments
- Pricing is defined by global market but with specific customer/contract variances
- Number of clients require varying volumes across contract lengths (e.g. for their own production ramp-up requirements)

**EMN has prioritised developing a term sheet “offtake book” prior to entering binding contracts**

- Ensure optimal product/volume mix without over/under commitment
- Balance overall sales portfolio to avoid customer concentration risk and allow all customers to participate
- Enable optimal pricing mix to maximize revenue

**Completion and successful operation of the Demonstration Plant is a key milestone in the offtake process**






- Enables EMN to pre-qualify its products and to confirm contractual specifications
- Provides overall credibility to EMN in materially derisking its production capabilities

**By-product opportunities to be explored further**

- By-products that may be sold include:
  - 80,000 tpa of magnesium carbonate - used in fertilizer industry
  - 60,000 tpa of gypsum - various industrial applications

# Recent Positive Offtake Progress

Significant volumes of HPEMM and HPMSM now under term sheet and contractual offtake right

	HPEMM	HPMSM	BY-PRODUCTS
<b>EXECUTED OFFTAKE TERM SHEET</b>			
		✓	
	✓		
		✓	✓
	✓		
<b>CONTRACTUAL OFFTAKE RIGHTS</b>			
	✓	✓	

- Target to secure offtake contracts for approximately 80% of annual production with appropriate minimum incentive price
- Four offtake term sheets executed, and one contractual offtake right executed
- Over 100% of annual HPEMM volume from 2034 under term sheets rights
- Over 25% of annual HPMSM volume from 2034 under term sheets and contractual offtake rights
- Focus on additional term sheet commitments from North American and European OEMs

1. Orion secured offtake rights to 22.5% of production volume under its royalty financing agreement

# Strategic Project Status, Local and EU-Based Grants

Strategic Project Status will assist in accessing Local and EU based grants

1

## EU CRMA Strategic Project Application

- Application submitted
- Announcement of Strategic Projects expected in March 2025
- Potential benefits:
  - Access to financing from private and public sources
  - Strategic Projects may receive preferred financing terms
  - Increased potential to receive grant funding to support the project

2

## Czech Government Grants and Tax Incentives

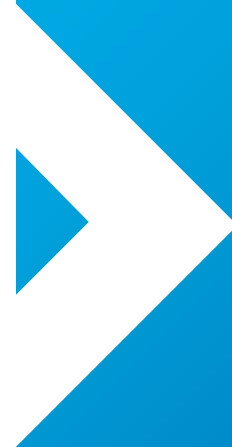
- Engaged with Investment and Business Development Agency of the Czech Republic (CzechInvest), which manages the process of Czech Government investment incentives
- Chvaletice Manganese Project may qualify as "Production of Strategic Products"
- Benefit could include corporate income tax relief and cash grants
- Application process to underway

3

## EU Innovation Fund Funding Application

- EU Innovation Fund receives its funding from the EU CO<sub>2</sub> taxes
- Budget of approximately €4.6 billion in grants with €2.4 billion earmarked for net-zero technologies
- Euro Manganese is preparing to apply for funding from the EU Innovation Fund's 2024 call for proposals
- Initial step - viability check assessment initiated

# Appendix



## Bécancour, Québec First-Mover Advantage in North America for Production of HPMSM

### Bécancour overview

- Scoping study completed in March 2023 to evaluate development of an HPEMM dissolution plant to produce HPMSM. Study leveraged process development and engineering work completed to support the Chvaletice, Czech project
- Feasibility Study will be the next stage of project development but currently on hold and subject to financing
- Option agreement in place with SPIPB to purchase 8Ha, Lot 3A. Option to be executed by September 2025
- Service agreements in place with WSP Canada for feasibility study and AtkinsRéalis (previously SNC Lavalin) for permitting, on hold

### Cooperation Agreement with the W8banaki

- Defines how the Company and the W8banaki intend to communicate and work together to develop Bécancour
- Working closely with local stakeholders and community of paramount importance to NAM



### Benefits of location

- Major EV battery supply chain cluster, excellent industrial infrastructure
- Stable, supportive government, qualified workforce and service providers
- Reliable and competitively-priced green energy

# Positive Scoping Study Highlights Released for Bécancour Dissolution Plant

Study outlined strong preliminary project economics, modest capex, and short build time

Scoping Study Highlights (\$ figures in CAD)\*

## NPV

C\$190M

(post tax, 8% discount)

## IRR

26%

(post tax, ungeared)

## Payback

~4 years

## Capex

C\$110M

(incl \$15M contingencies)

## Production

48,500 tpa

(HPMSM)

## Build Period

~2 years

engineering/construction

## Plant Design

- Throughput of 16k tpa of HPEMM to produce 48k tpa of HPMSM
- Leverages extensive process development & engineering work already completed at Chvaletice
- Minimal infrastructure required; offsite infrastructure limited to powerline connection and potential railway spur from main line

## Next Steps

- Confirm metal supply; customer off-take.
- Commence Feasibility Study for the Plant; WSP Canada selected
- Permitting to advance in parallel with Feasibility Study; AtkinsRéalis selected
- Option agreement in place with SPIPB to purchase lot 15 or 3A. Currently under review\*\*

\*Economic analysis run on a constant \$ basis with no inflation, no government grants, and unlevered. Outcomes and economics have a margin of error of -30%/+50%. Cost estimates based on Q4 2022 pricing. Assumes full HPEMM supply secured from non-Chinese supplier

\*\* Subject to final purchase agreement regarding the Port of Bécancour.

North American Manganese cautions that the Study does not constitute a scoping study within the definition used by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), as it relates to a standalone industrial project and does not concern a mineral project of the Company. As a result, disclosure standards prescribed by National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI-43-101") are not applicable to the scientific and technical disclosure in the Study. Any references to Scoping Study or Feasibility Study by North American Manganese in relation to the Bécancour Plant are not the same as terms defined by the CIM Definition Standards and used in NI 43-101.



# Resources Converted to Reserves with 98% Classified in Proven Category

Estimated in accordance with the CIM Definition Standards on Mineral Resources and Mineral Reserves adapted by CIM Council, as amended, which are materially identical to the JORC Code

## Chvaletice Mineral Reserve Statement, Effective Date July 14, 2022\*

Tailings Cell #	Classification	Volume (m3)	Tonnage (MT)	Dry In-situ Bulk Density (t/m <sup>3</sup> )	Total Mn (%)
#1	PROVEN	6,651,000	10,132,000	1.51	7.83
	PROBABLE	141,000	208,000	1.52	8.24
#2	PROVEN	7,929,000	12,106,000	1.53	6.91
	PROBABLE	119,000	183,000	1.54	7.35
#3	PROVEN	2,744,000	3,979,000	1.46	7.49
	PROBABLE	25,000	36,000	1.46	7.98
TOTAL	PROVEN	17,325,000	26,217,000	1.50	7.35
	PROBABLE	284,000	427,000	1.51	7.84
COMBINED	<b>PROVEN &amp; PROBABLE</b>	17,609,000	26,644,000	1.51	7.41

### 160-hole drilling program (2017-2018) key findings:

- Manganese is evenly distributed through the entire tailings deposit
- Finely milled, unconsolidated tailings placed above ground expected to result in very low mining and virtually zero ore dressing costs
- ~80% of manganese is contained in easily leachable manganese carbonate minerals that require no calcination or chemical reduction prior to leaching, unlike manganese oxide ores

\*Probable Reserves have lower confidence than Proven Reserves. Inferred Resources have not been included in the Reserves.





## Notes to Mineral Reserve Statement

1. Estimated in accordance with the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council, as amended, which are materially identical to the JORC Code.
2. The Mineral Resource is inclusive of the Mineral Reserves.
3. Probable Reserves have lower confidence than Proven Reserves. Inferred Resources have not been included in the Reserves.
4. A break-even grade of 2.18% total Mn has been estimated for the Chvaletice deposit based on preliminary pre-concentration operating costs of \$6.47/t feed, leaching and refining operating cost estimates of \$188/t feed, total recovery to HPEMM and HPMSM of approximately 60.5% and 58.9% respectively and product prices of US\$9.60 kg/t for HPEMM and US\$3.72 kg/t for HPMSM (CPM Group Report, June 2022). The actual commodity price for these products may vary.
5. Grade capping has not been applied.
6. Numbers may not add exactly due to rounding.
7. Minimal dilution and losses of <1% are expected to occur at the interface between the lower bounds of the tailings cells and original ground as the surface is uneven.

# Compliance Statements

## Competent and Qualified Persons Statement

All production targets for the Chvaletice Manganese Project referred to in this presentation are underpinned by estimated Proven and Probable Reserves prepared by competent persons and qualified persons in accordance with the requirements of the Joint Ore Reserves Committee Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition ("JORC Code") and National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("NI 43-101"), respectively. The NI-43-101 report, including the results of the Feasibility Study, was filed on SEDAR at [www.sedarplus.ca](http://www.sedarplus.ca) on September 9, 2022 and is available on the Company's website. The JORC Technical Report was lodged with the ASX on September 14, 2022.

The scientific and technical information included in this presentation is based upon information prepared and approved by Mr. James Barr, P. Geo, Senior Geologist, Mr. Jianhui (John) Huang, Ph.D., P. Eng., Senior Metallurgical Engineer, Mr. Hassan Ghaffari, P.Eng, M.A.Sc., Senior Process Engineer, Mr. Chris Johns, P.Eng, Senior Geotechnical Engineer, Davood Hasanloo, P.Eng, M.A.Sc., Senior Hydrotechnical Engineer, and Mrs. Maurie Marks, P.Eng, Senior Mining, all with Tetra Tech Canada Inc. ("Tetra Tech"), and Ms. Andrea Zaradic, P. Eng., Vice President Operations for Euro Manganese. Mr. Barr, Mrs. Marks, Mr. Ghaffari, Mr. Johns, Mr. Hasanloo and Mr. Huang are consultants to, and independent of, EMN within the meaning of NI 43-101, and have sufficient experience in the field of activity being reported to qualify as Competent Persons as defined in the JORC Code, and are Qualified Persons, as defined in NI 43-101. Messrs. Barr, Huang, Ghaffari, Johns, Hasanloo and Mrs. Marks have no economic or financial interest in the Company and consent to the inclusion in this presentation of the matters based on their information in the form and context in which it appears. In addition, technical information concerning the Chvaletice Manganese Project is reviewed by Ms. Andrea Zaradic, P. Eng, VP Operations for Euro Manganese, and a Qualified Person under NI 43-101. Ms. Zaradic has reviewed and approved the information in this presentation for which she is responsible and has consented to the inclusion of the matters in this presentation based on the information in the form and context in which it appears.

## References to ASX and TSX-V Market Announcements

This presentation contains information extracted from certain of the Company's ASX and TSX-V market announcements, as shown below, including estimates of Proven and Probable Reserves, and production targets as reported in accordance with the JORC Code and NI 43-101 standards:

- i. The Feasibility Study results as reported on page 19 of this presentation was reported in the TSX-V and ASX market announcement dated 27 July 2022.
- ii. The flow sheet summarized on page 17 of this presentation was reported in the TSX-V and ASX market announcement dated 27 July 2022.
- iii. The Reserve Statement reported on pages 32-33 of this presentation was reported in the TSX-V and ASX market announcement dated 27 July 2022.
- iv. The expected annual production as reported on page 19 of this presentation was reported in the TSX-V and ASX market announcement dated 27 July 2022.
- v. Information on the ESG benefits and Life Cycle Assessment results as reported on page 15 of this presentation were reported in the TSX-V and ASX market announcement dated 7 Dec. 2022.
- vi. Information on the demonstration plant commissioning status as reported on page 18 of this presentation was reported in the TSX-V and ASX market announcements dated 13 April 2023 and 13 November 2023.
- vii. Information on the Orion Funding Package as reported on page 24 of this presentation was reported in the TSX-V and ASX market announcement dated 28 November 2023, and December 4, 2024.
- viii. Information on the Env. & Social Impact Assessment approval referred to on page 16 of this presentation was reported in the TSX-V and ASX market announcement dated 27 March 2024.
- ix. The Bécancour Scoping Study results summarized on page 31 of this presentation were reported in the TSX-V and ASX market announcement dated 9 Aug 2023.

The Company is not aware of any new information or data that materially affects the information contained in the above-referenced market announcements. The Company also confirms that all material assumptions and technical parameters underpinning the estimates of Proven and Probable Reserves as provided in the relevant market announcements, as well as all material assumptions underpinning the production targets and financial forecast information, continue to apply and have not materially changed, and that the form and context in which the Competent Persons' findings are presented have not been materially modified.



# EURO MANGANESE

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TSXV: EMN | ASX: EMN | OTCQB: EUMNF | Frankfurt Stock Exchange: E06

[info@Mn25.ca](mailto:info@Mn25.ca) | [www.Mn25.ca](http://www.Mn25.ca)

