



# Manganese is Electric!



GREEN AND EUROPEAN SOURCE OF ULTRA HIGH-PURITY MANGANESE





**Euro  
Manganese  
Inc.**

**GREEN AND EUROPEAN SOURCE OF  
ULTRA HIGH-PURITY MANGANESE**

**Corporate Presentation – May 2020**



# Cautionary Note

## Forward-Looking Statements and Risks Notice

Except for statements of historical fact relating to the Euro Manganese Inc. (“EMI” or the “Company”), certain information contained in this presentation constitutes forward-looking statements. When we discuss our costs and timing of current and proposed evaluation; planning; development; capital expenditures; cash flow; working capital requirements; and the requirement for additional capital; operations; revenue; margins and earnings; future prices of electrolytic manganese metal, manganese sulphate and other products; future foreign currency exchange rates; future accounting changes; future prices for marketable securities; future resolution of contingent liabilities; or other things that have not yet happened in this review, we are making statements considered to be forward-looking information or forward-looking statements under Canadian law. We refer to them in this review as forward-looking information.

The forward-looking information typically includes words and phrases about the future, such as: plan, expect, forecast, intend, anticipate, estimate, budget, scheduled, believe, may, could, would, should, might, and will. We can give no assurance that the forward-looking information will prove to be accurate. It is based on a number of assumptions management believes to be reasonable, including but not limited to the continued operation of the Company’s exploration, evaluation and development activities, no material adverse change in the market price of commodities and exchange rates, and such other assumptions and factors as set out herein.

It is also subject to risks associated with our business, including but not limited to: risks inherent in the mineral exploration and evaluation and mineral extraction business; commodity price fluctuations and hedging; competition for mineral properties; mineral resources and reserves and recovery estimates; currency fluctuations; interest rate risk; financing risk; environmental risk; foreign activities; legal proceedings; and other risks.

If our assumptions prove to be incorrect or risks materialize, our actual results and events may vary materially and adversely from what we currently expect as set out in this review.

Forward-looking information is designed to help you understand management’s current views of our near and longer-term prospects, and it is not appropriate for other purposes. We will not necessarily update this information unless we are required to by law.



# Compliance Statements



## Competent and Qualified Persons Statement

All production targets for the Chvaletice Manganese Project referred to in this presentation are underpinned by estimated Measured and Indicated Mineral Resources 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 and Disclosures for Mineral Projects* ("NI 43-101"), respectively.

Additionally, the scientific and technical information included in this presentation is based upon technical reports prepared 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., and Mr. Mark Horan, P.Eng, MSc., Senior Mining Engineer, all with Tetra Tech Canada Inc. ("Tetra Tech"), and entitled "Technical Report and Preliminary Economic Assessment for the Chvaletice Manganese Project, Chvaletice, Czech Republic" having an effective date of 29 January 2019 (release date 15 March 2019) (the "NI-43-101 Technical Report") and "Public Report and Preliminary Economic Assessment for the Chvaletice Manganese Project, Chvaletice, Czech Republic" having an effective date of 29 January (release date 22 March 2019) (the "JORC Code Report"). The NI-43-101 Technical Report was filed on SEDAR at [www.sedar.com](http://www.sedar.com) on 15 March 2019 and the JORC Code Report was lodged with the ASX on 26 March 2019. The above-named persons are consultants to, and independent of the Company 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, and Horan 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.

## 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 exploration results, estimates of Measured and Indicated Mineral Resources, and production targets as reported in accordance with the JORC Code and NI 43-101 standards:

- i. Drill results for the Chvaletice Manganese Project reported on page 18 of this presentation were reported in TSX-V and ASX market announcements dated 17 October 2018 and 17 December 2018, respectively.
- ii. The closing of the option agreement reported on page 20 of this presentation was reported in the TSX-V and ASX market announcement dated 17 October 2018.
- iii. The decision made to proceed to Feasibility Study stage reported on pages 5, 6, 22, 23 and 26 of this presentation was reported in the TSX-V and ASX market announcement dated 22 May 2019.
- iv. Metallurgical testing results referred on pages 5, 18, 22 and 25 of this presentation were reported in the TSX-V and ASX market announcement dated 17 December 2018.
- v. Results of the drilling program and metallurgical testing reported on page 18 of this presentation were reported in TSX-V and ASX market announcements dated 17 October 2018 and 17 December 2018.
- vi. The simplified process flowsheet reported on page 23 of this presentation was reported in the TSX-V and ASX market announcement dated 30 January 2019.
- vii. Production specifications and other details related to the proposed demonstration plant reported on page 25 of this presentation were reported in the TSX-V and ASX market announcement dated 12 December 2019.

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 Measured and Indicated Mineral Resources as provided in the relevant market announcements, as well as all material assumptions underpinning the production targets and financial forecast information in the JORC Code Report, 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.

# Introduction to Euro Manganese

## Developing the Chvaletice manganese resource in the Czech Republic – in the heart of Europe.

- ➔ **25-year project** designed by world-leaders in high-purity manganese production (“**HPM**”).
- ➔ Production of battery-grade manganese by reprocessing tailings (**waste recycling**) in Europe makes the Chvaletice manganese products **environmentally-superior**.
  - No hard rock mining, crushing or milling required. No long-distance ore transportation to processing facility. On site production of finished product. **No new waste generation**.
  - **Manganese carbonate ore allows direct leach**. No energy-intensive calcination or environmentally-challenging chemical reduction of ore required prior to leaching.
- ➔ **Extensive metallurgical test work completed** with modern, conventional, **proven process technology**.
- ➔ Pilot-plant test completed, PEA completed, feasibility study underway and now **ready to start building 7x scale-up Demonstration Plant – shovel-ready**.
- ➔ **Strong permitting momentum**. Proactive, respectful and intensive community consultation and engagement.
- ➔ Chvaletice expected to become **Europe’s only primary producer of HPM products**. Close to large, growing market.
- ➔ Strong customer interest. Developing strategic commercial relationships. **Setting the stage for project financing**.





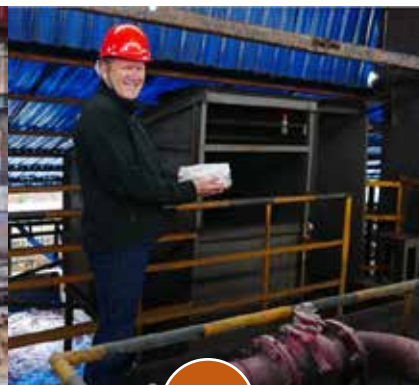
# Investment Highlights



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## HPM MARKET SET TO BE TRANSFORMED

- HPM demand growing rapidly on back of growth in the Li-ion and EV markets
- Significant barriers of entry to HPM, where not all manganese ores and HPM are created equal
- Mn used in the vast majority of Li-ion batteries, with low substitution risk
- Strong customer interest.
- Euro Manganese is building strategic commercial relationships.

## STRATEGIC EUROPEAN SOURCE OF SUPPLY

- Globally significant, 25- year project expected to be Europe's only primary producer of High Purity Electrolytic Manganese Metal ("HPEMM") and High Purity Manganese Sulphate Monohydrate ("HPMSM")
- Located in the heart of Europe's fast growing EV production hub
- Strategic supplier of in an industry where China currently has a 93% market share and where that share is growing

## EXCELLENT INFRASTRUCTURE AND JURISDICTION

- Rail, highway, gas pipeline, water and competitively-priced power available on-site
- Rights to industrially-zoned land adjacent to deposit secured for plant
- Sophisticated, stable and business-friendly Czech Republic jurisdiction in the European Union
- Europe's automotive industry employs over 14 million people and is strongly committed to electrification.

## EASILY TREATED CARBONATE TAILINGS

- Uniform and fully drilled deposit very well suited to production of HPM using clean, modern and commercially proven technologies
- Carbonate ore and tailings deposit provide significant extraction and processing cost, and environmental advantages
- Pilot plant products exceed ultra-high purity manganese specifications required by the most demanding high-tech customers

## WASTE RECYCLING, NOT MINING

- Recycling of old mine waste and remediation of polluted site, solving an old environmental problem for local communities
- No mining waste.
- Preliminary mining permit received in 2018
- Solid permitting momentum
- Opportunity to purchase certified CO<sub>2</sub>-free power, further reducing already small environmental footprint

## CLEAR DEVELOPMENT PLAN

- Pilot plant confirmed ultra-high purity nature of product and amenability of process flowsheet for this deposit.
- Feasibility study in progress and building upon PEA issued in early 2019
- Start of EIA process expected in Q2 2020
- Strong customer interest for demonstration plant to be built in 2020/21

## LED BY HIGHLY EXPERIENCED MANAGEMENT TEAM

- Solid multidisciplinary team with proven development track record and award-winning excellence in environmental and social practices
- Rare in-house HPM production experience
  - "God is in the details"
- World-leading HPM technology, plant design and construction expertise secured
- Management team and directors are significant and supportive shareholders

# Investment Highlights

## Recent Developments

### ➔ 55% of annual HPEMM and HPMSM capacity of proposed Demonstration Plant allocated to first five customers in MoUs

1. JFE Steel Corporation. Major Japanese steel producer  
– for use in specialty steel applications



Other parties under NDA regarding the disclosure of Corporate name

2. Global leading participant in the lithium-ion battery supply chain - for use in NMC cathodes
3. Company focused on large scale lithium-ion battery manufacturing - for use in NMC cathodes
4. Global chemicals and specialty materials company - for use in hybrid automobile battery anodes
5. Global chemicals and specialty materials company - for use in ferrite permanent magnets

### ➔ Preliminary Feasibility Test Work Confirms PEA results

- Magnetic separation test results verified PEA results of approximately 85% Mn recovery and a 15% Mn concentrate grade
- Deep purification testwork successful in meeting very high target product specifications

### ➔ EMN admitted to European Battery Alliance

- EBA objective is to grow a European EV battery industry in a supply-chain worth over €250 billion per year from 2025 – EBA includes all major European EV and Li-ion industry players and the EU

### ➔ Czech Government Support

- Investment incentives approved by Czech Republic's Ministry of Industry and Trade
- EMN secures ~CDN\$27 Million of Corporate Income Tax Credits

### ➔ Significant Environmental Ruling

- Czech government ruling issued that Project is not expected to cause adverse effects to endangered species and their habitat under EU's Natura 2000

# 1 HPM Market Set to be Transformed

## SUMMARY

- ➔ Demand for HPM products growing rapidly around the world driven by growth of the electric vehicle and Li-ion battery industry
  - To date, the supply response has been entirely within China
- ➔ NMC cathode chemistry expected to dominate, with strong future market opportunity for solid-state batteries
- ➔ Under-investment in necessary HPM production capacity is acute, and widely expected to cause supply deficits in near to medium term
- ➔ Europe has emerged as a major electric vehicle production hub
  - Over € 24 billion in investments in European electrical vehicle, battery, cathode and precursor plants underway – more expected
- ➔ High-purity manganese products are difficult to produce reliably without high manufacturing costs or significant adverse environmental impacts
- ➔ Automotive and battery industry requires a reliable and verifiable supply of high-purity and sustainably- produced manganese products
- ➔ Processing manganese carbonate ore is more reliable and environmentally sustainable vs manganese oxide ore



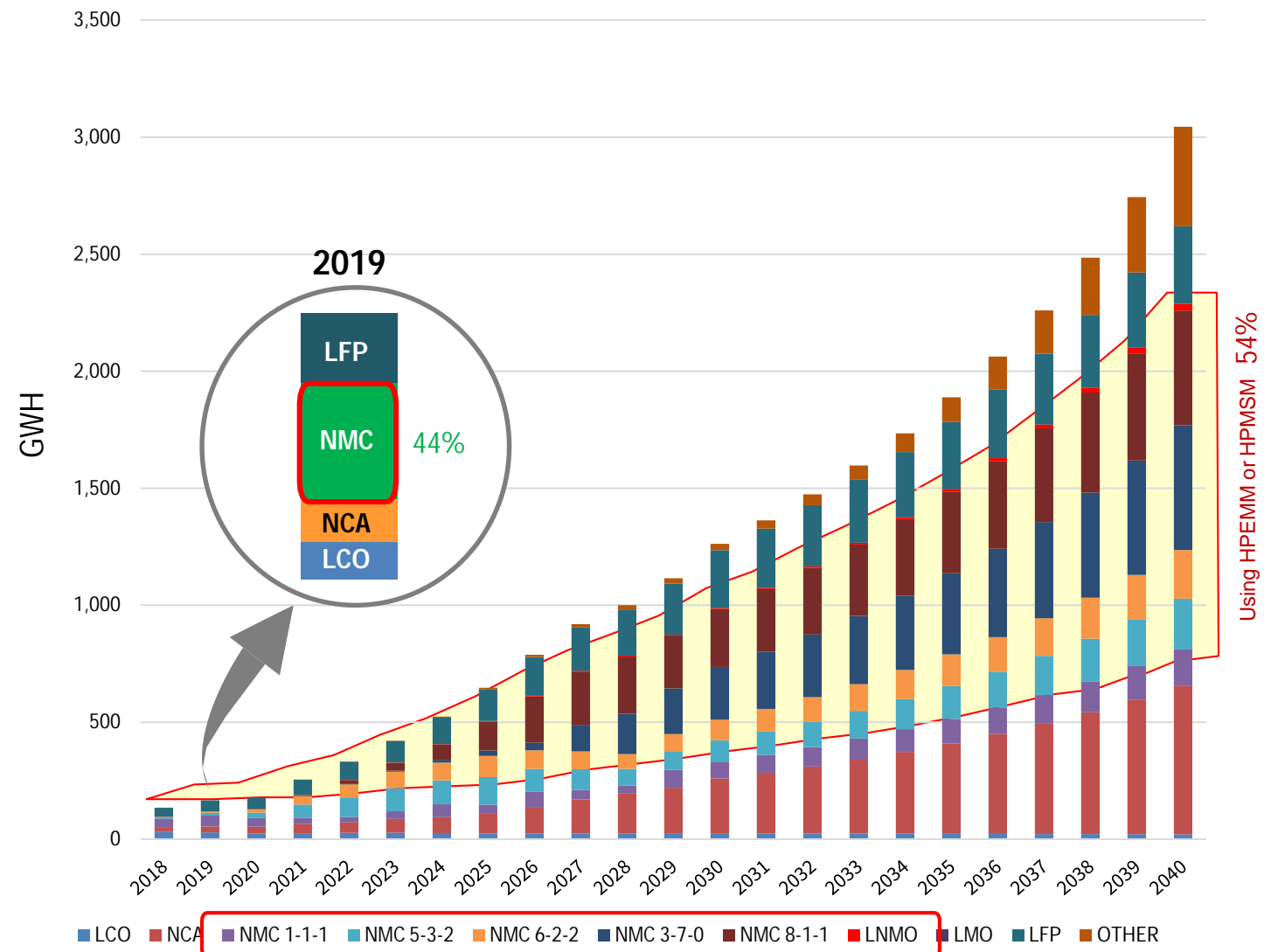


# 1 HPM Market Set to be Transformed

## Manganese Use in NMC and LNMO Cathode Formulations

- ➔ The vast majority of Li-ion batteries use manganese in their cathodes and require HPM
  - Little price sensitivity given Mn is lowest cost input in a Li-ion battery (0.25%-2.3% of battery pack cost)
- ➔ Li-ion battery market due to grow dramatically in the next twenty years, growing from **166 GWh** of annual demand in 2019 to **3,045 GWh** in 2040 (18-fold increase)
  - Most NMC today is 1-1-1 as it is the most stable and long lasting
  - Other Mn predominant formulations will emerge in the next decade with NMC 5-3-2 and 6-2-2 forecast to be the most popular formulation by 2026
  - LNMO, the highest consumer of Mn per kWh of capacity is predicted to mature commercially after 2025, principally in electronics and certain EV battery formulations
- ➔ NMC 5-3-2 is ideally suited for solid state batteries
- ➔ The higher the purity of Mn in the battery, the lower quality of Ni and Co that can be tolerated.

Li-ion Rechargeable Battery Demand to 2040

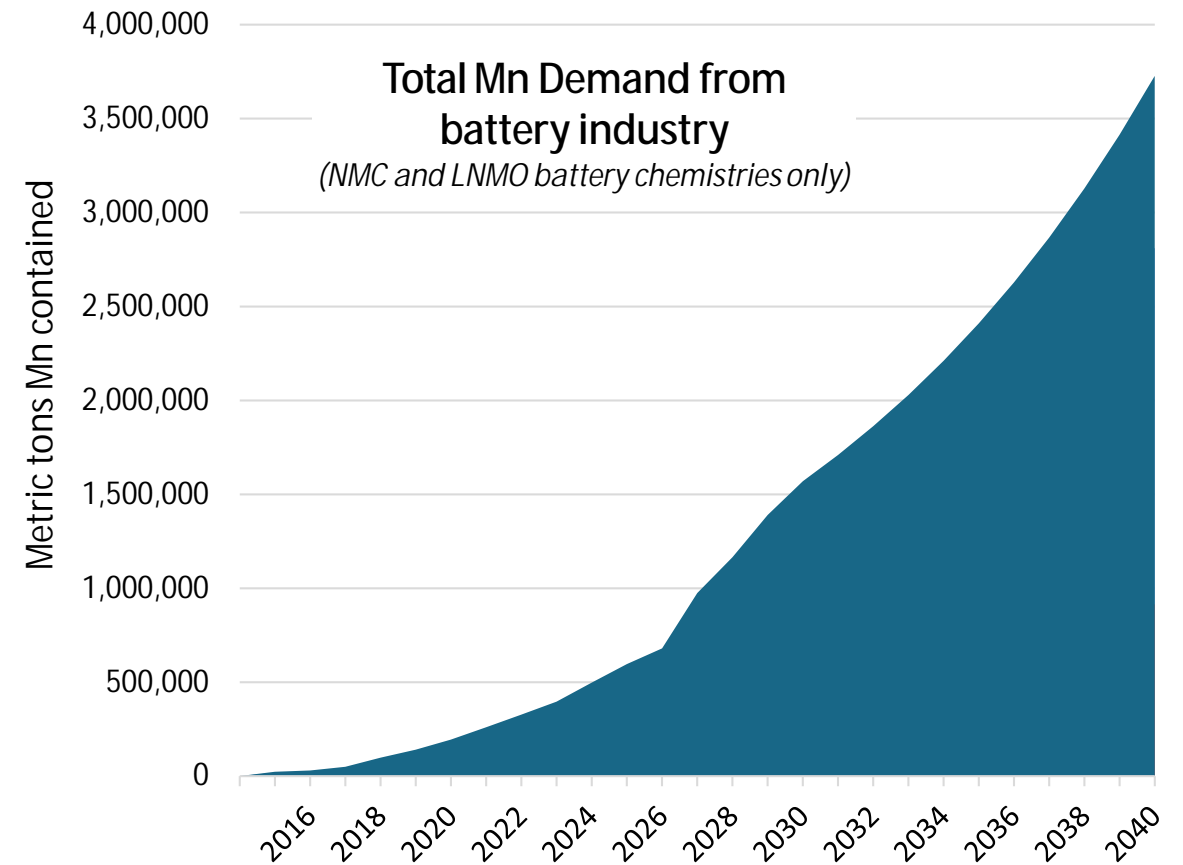
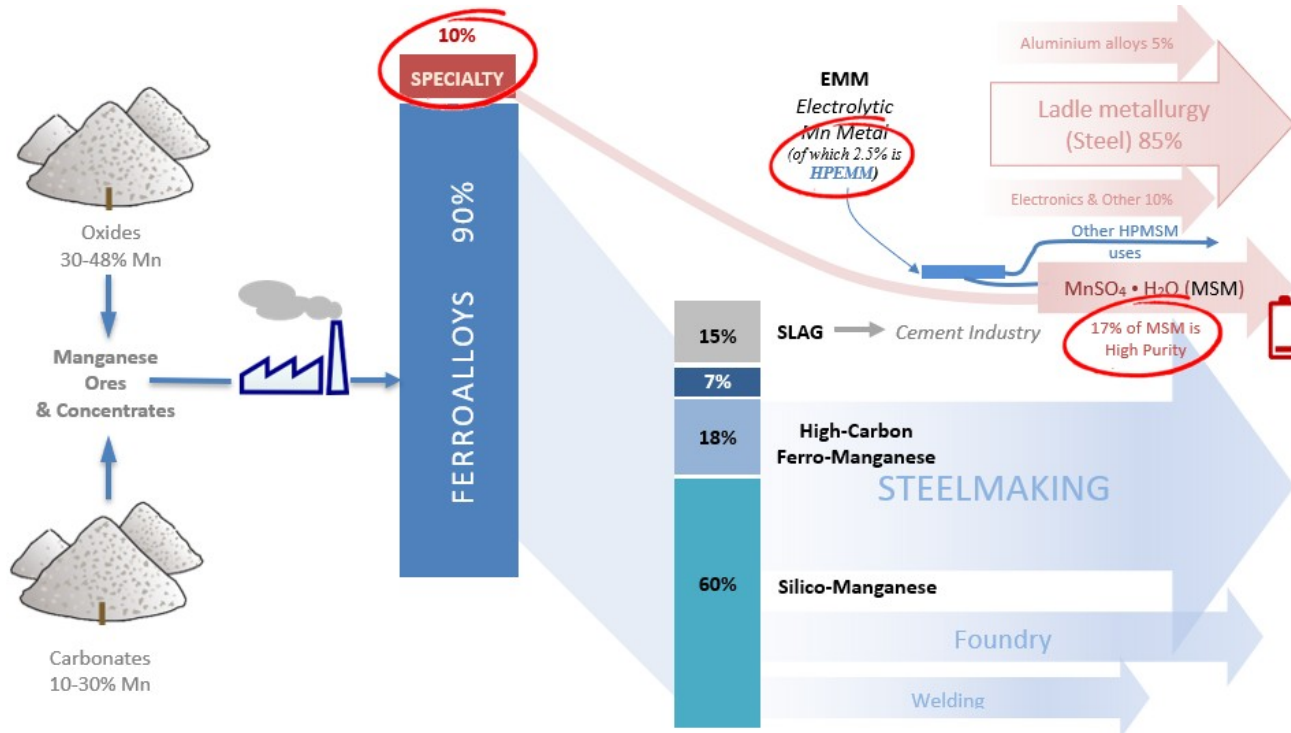


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# 1 HPM Market Set to be Transformed

## Manganese Use in Li-ion Battery Market



➔ Only a small proportion of manganese ores are used for the specialty route

- Critical factor is availability of right quality ore in right location
- Carbonate ores (which are rare) are preferred for HPM, although oxides can be used after roasting or chemical treatment (making oxides more expensive to process, energy intensive and much less environmentally friendly)

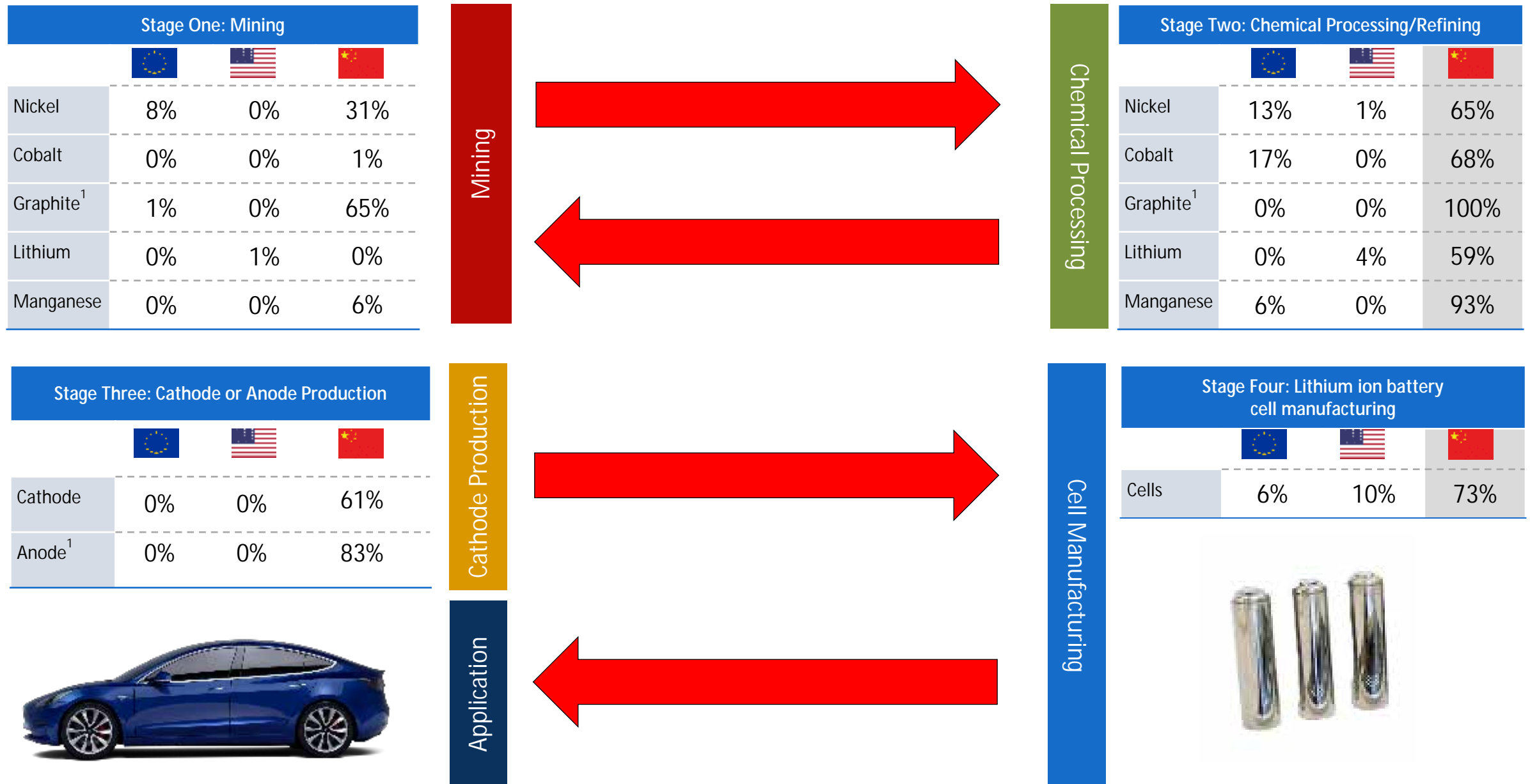
➔ Li-ion cathode manufacturers and NMC precursor producers purchase HPMSM that has been made directly from manganese ore or from EMM, or they purchase high-purity EMM in order to make their own HP manganese sulfate

➔ The primary cathode chemistries in 2040 will be NMC and LNMO, requiring manganese input of the over one million tonnes of manganese metal equivalent per annum

Source: Cairn Energy Research Advisors, CPM Group ©2019



# EU, North America and China share of the Lithium-ion Battery Raw Materials Supply Chain



Source: BENCHMARK MINERAL INTELLIGENCE



2

# Strategic European Source of Supply



Europe is becoming a global hub for EV and battery production

<b>BASF</b>	FINLAND	-15 GWh	<b>inoBat</b>	SLOVAKIA	10 GWh	<b>SAFT</b>	GERMANY	32 GWh
<b>TerraFame</b>	FINLAND		<b>Leclanché</b>	SWITZERLAND	1 GWh	<b>BYD</b>	TBD (Eastern Europe)	24 GWh
<b>umicore</b>	FINLAND		<b>SAFT</b>	FRANCE	2 GWh	<b>SVOLT</b>	TBD	
<b>BASF</b>	GERMANY		<b>SAFT</b>	FRANCE	32 GWh	<b>SK innovation</b>	POLAND	
<b>umicore</b>	POLAND	-30 GWh	<b>SAFT</b>	FRANCE	32 GWh	<b>HUAARONG</b>	POLAND	
<b>northvolt</b>	SWEDEN	32 GWh	<b>CATL</b>	GERMANY	60 GWh	<b>FOOSUNG</b>	POLAND	
<b>Envision AESC</b>	UNITED KINGDOM	8 GWh	<b>northvolt</b>	GERMANY	30 GWh	<b>'TORAY'</b>	HUNGARY	
<b>LG 화학</b>	POLAND	17 GWh	<b>FARASIS</b>	GERMANY	10 GWh	<b>northvolt</b>	POLAND	
<b>Johnson Matthey</b>	POLAND	-30 GWh	<b>Customcells</b>	GERMANY	1 GWh	<b>Daimler</b>	POLAND	
<b>SK innovation</b>	HUNGARY	7.5 GWh	<b>LIACON</b>	GERMANY	1 GWh	<b>SAMSUNG SAMSUNG SDI</b>	AUSTRIA	
<b>SK innovation</b>	HUNGARY	7.5 GWh	<b>VARTA</b>	GERMANY	1 GWh	<b>Jaguar LAND-ROVER</b>	UNITED KINGDOM	
<b>SAMSUNG SAMSUNG SDI</b>	HUNGARY	3 GWh	<b>TERRAE</b>	GERMANY	34 GWh	<b>Hyperbat</b>	UNITED KINGDOM	
<b>GSYUASA</b>	HUNGARY		<b>TESLA</b>	GERMANY	-20-40 GWh	<b>PSA *</b>	SPAIN	
						<b>PSA *</b>	SPAIN	
						<b>PSA *</b>	SLOVAKIA	

**CHVALETICE MANGANESE PROJECT**



\*PSA Group: Citroën, DS, Opel, Peugeot and Vauxhall

Source: Cairn Energy Research Advisors ©2020

### 3 Excellent Infrastructure and Jurisdiction

#### Strategically Located in the Heart of Europe

- ➔ Set in an industrialized valley with gentle topography, served by excellent infrastructure. **Rail, gas, water and power are all available on the Project site**
- ➔ Adjacent to 820 MW power station at a major node in the Czech Republic's modern electrical distribution grid, ensuring competitively-priced power
- ➔ The Czech Republic is a modern, industrialized free market economy with a highly-skilled and educated workforce, and a member of the European Union. Corporate tax rate is 19%.
- ➔ Potential Czech and EU green direct investment and innovation incentives





# 4 Easily Treated Carbonate Tailings

## Barriers to Entry in the HPM Market



Photos show ultra high purity manganese products made from Chvaletice Manganese Project tailings during 2018 product development and testwork program.

- ➔ Ultra-high-purity manganese products have emerged as **critical raw materials** for new, high-performance, low-cobalt Li-ion battery manufacturing; they are difficult to produce
- ➔ Technical specifications for manganese products are tightening for demanding new battery formulations
- ➔ Producing ultra-high-purity manganese for new generation batteries is principally a processing cost and environmental challenge

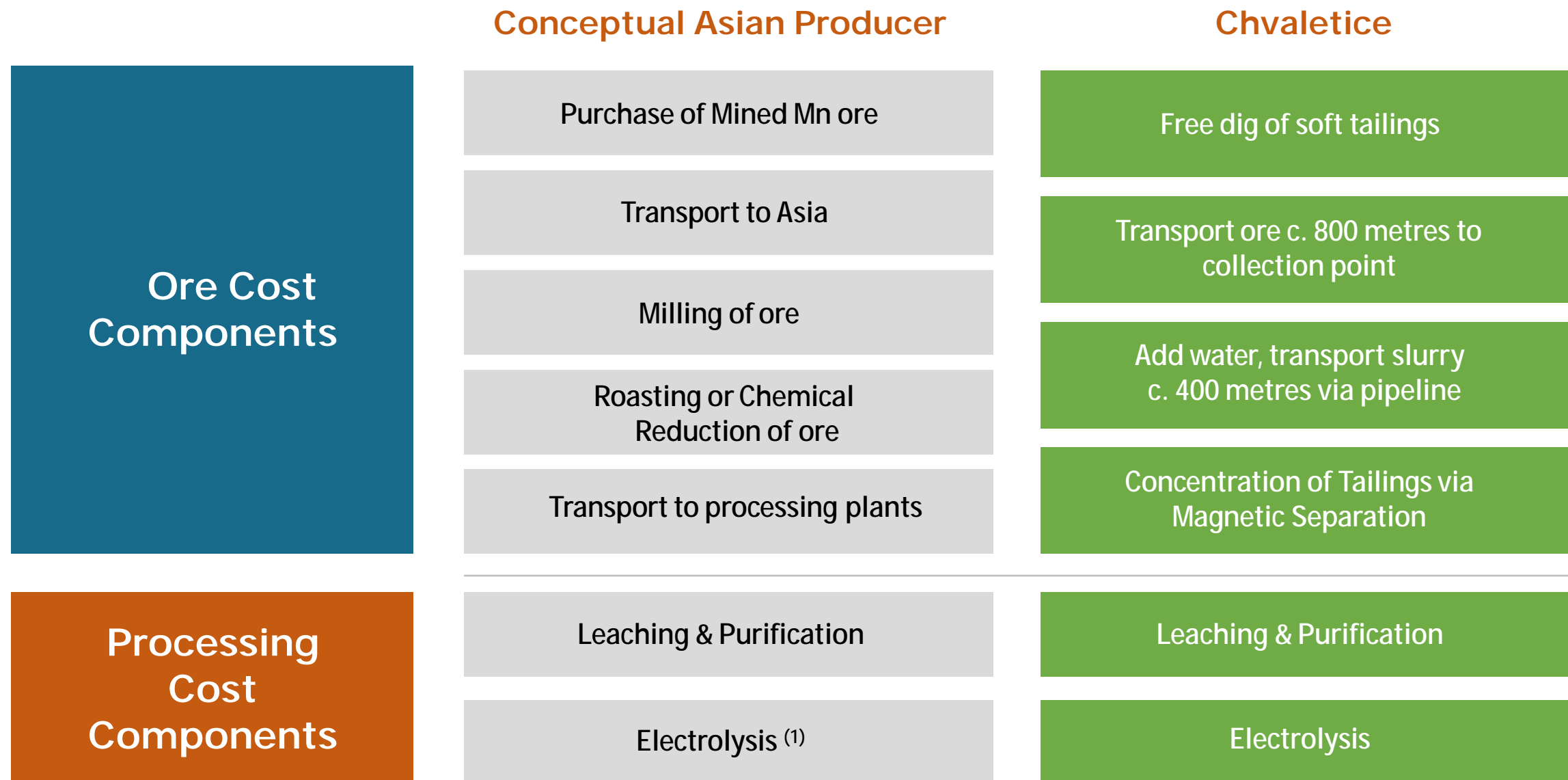
- ➔ Product purity is critical. **Very significant resource quality, technological and environmental barriers to entry**
- ➔ **Very few manganese deposits are well-suited to efficient, environmentally-sustainable production of high-performance, Li-ion battery-grade manganese products**

Source: Cairn Energy Research Advisors, CPM Group ©2019

# 4 Easily Treated Carbonate Tailings

## Simpler Cost-Effective Processing

- Asia imports the majority of its manganese ore used for HPM production, predominantly from oxide sources in Africa
- In comparison, EMN processes tailings onsite with simple commercially proven technologies



1) Asia generally has slightly higher electricity costs but lower full-time equivalent labour costs.



4

# Easily Treated Carbonate Tailings



## Extensive Technical Studies and Testwork





4

# Easily Treated Carbonate Tailings

## Drilling & Bulk Sampling



*Sonic drill – modern, effective sampling tool*



*Sonic drill "core" of soft, sandy tailings material*



*14.8 tonne bulk sample collected using Sonic drill for metallurgical and pilot plant testing*

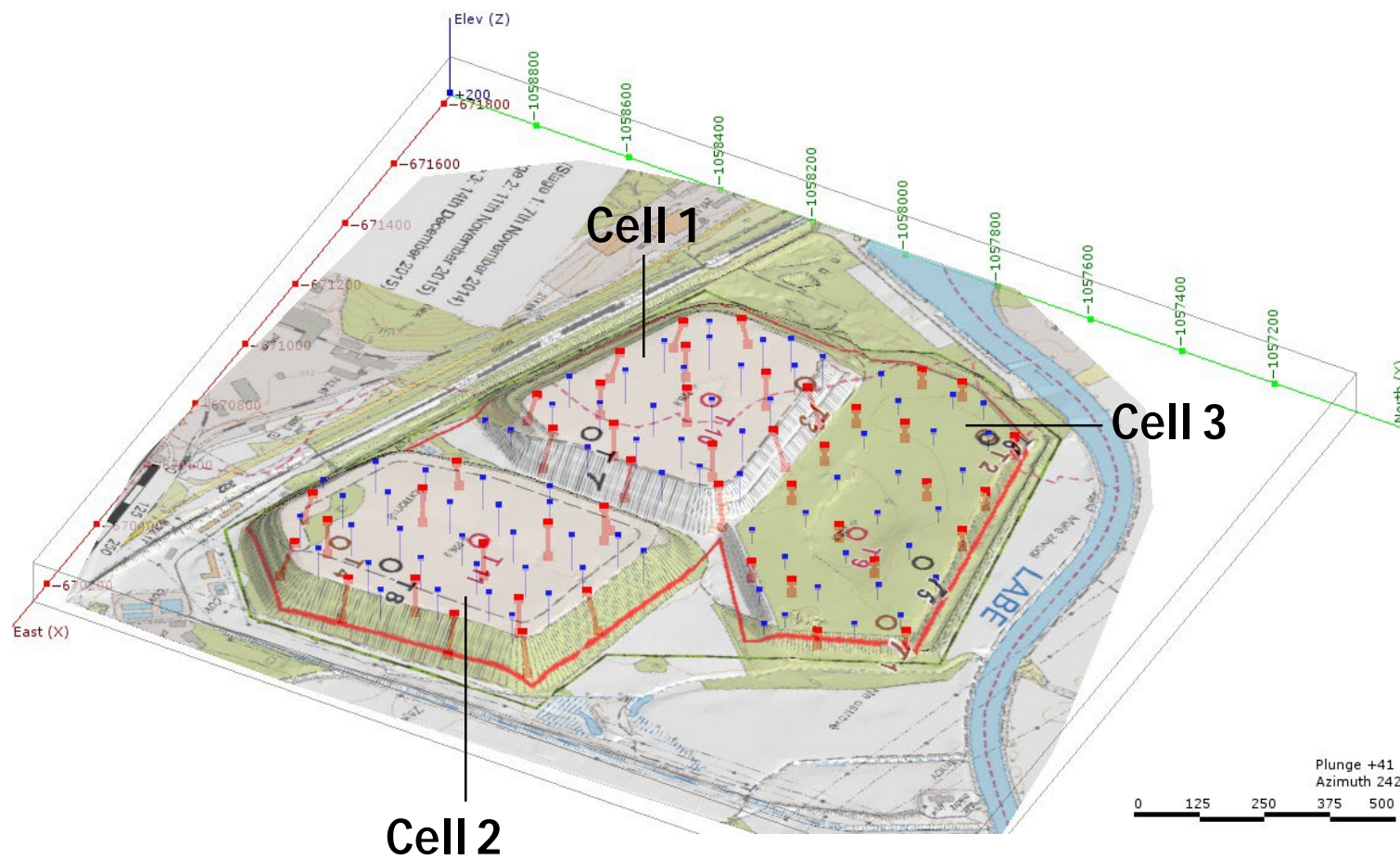


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# Easily Treated Carbonate Tailings

## Fully Drilled Ore Body

### 2017-2018 DRILL PROGRAM



- 2017 Drill holes
- 2018 Drill holes

- ➔ 160-Hole 2017-2018 Sonic and auger drill program upgraded the resource estimate to a Measured and Indicated Status (**98.3% of the resource classified as Measured under NI 43:101/JORC 2012**)
- ➔ Resource model forms reliable basis for tailings extraction plan and robust project economics
- ➔ Representative bulk samples collected with drill rig supported extensive 2018/2019 metallurgical testwork and process design studies
- ➔ Test mining program planned for 2020 in the context of Demonstration Plant development

# 5 Waste Recycling, Not Mining.

## Meeting Europe's Circular Economy Goals by Recycling Waste

- ➔ Extraction of Chvaletice manganese is expected to result in self-funding environmental remediation of the Chvaletice site, bringing it in full compliance with all Czech and European Union health, safety and environmental standards and regulations

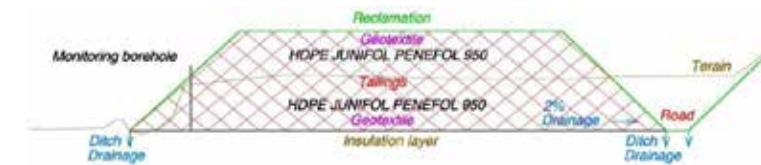
### Staged Tailings Extraction

- ➔ Tailings extracted in phases, cell-by-cell, then placed back on same site
  - No new waste generation
  - Small footprint of tailings exposed at any given time

### Progressive Site Reclamation

- ➔ After Mn extraction, **tailings to be washed and neutralized**, placed on impermeable membrane, then capped with geomembrane, before site revegetation for long-term, safe and productive use. Reclamation plan is being designed with community input
- ➔ Site restoration and long-term usage plan to be designed in collaboration with local communities and regulators
- ➔ Minimizing environmental footprint and leaving site in better condition than it is today

**A major collateral benefit to local communities and the country**

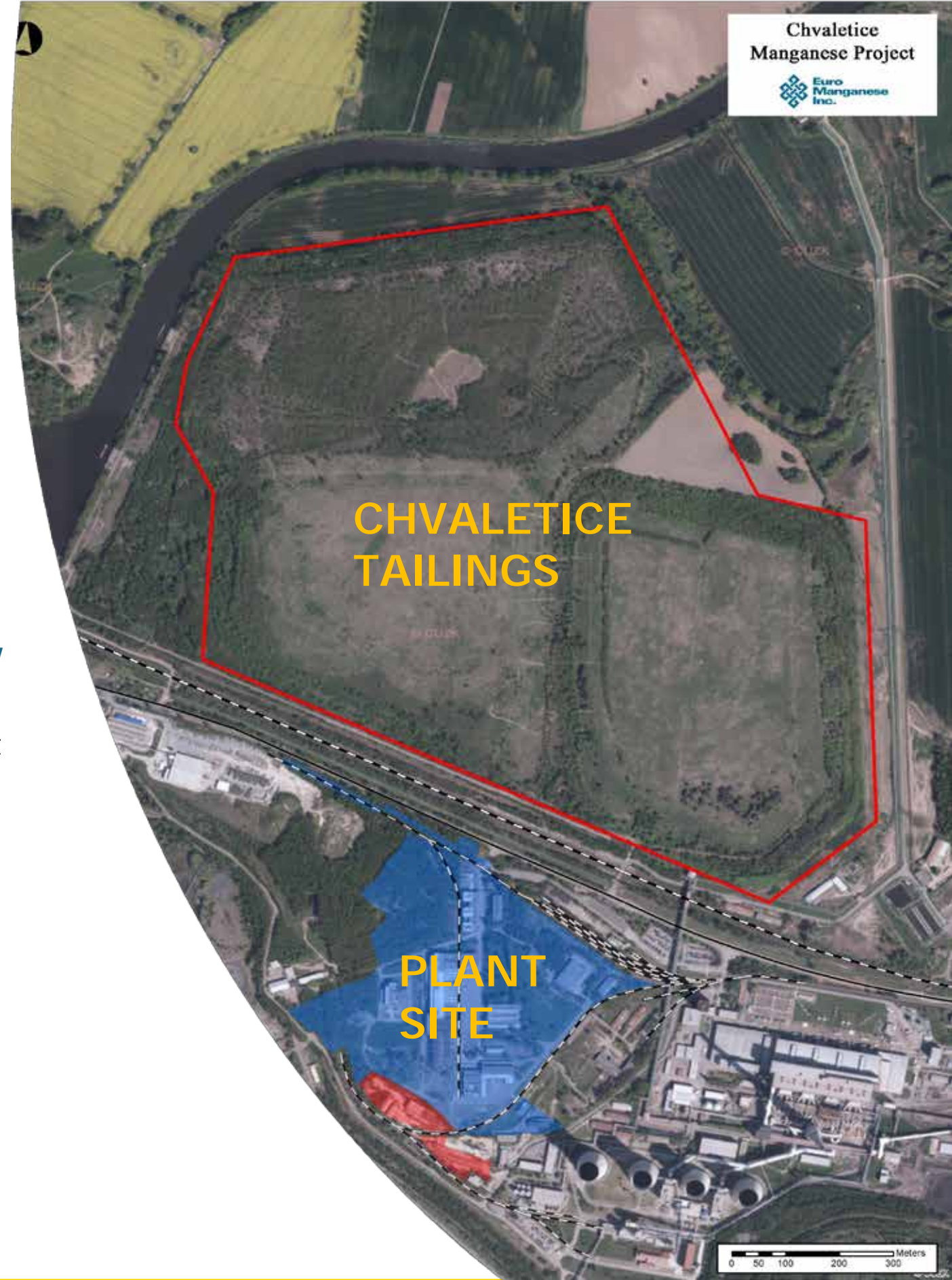




## 5 Waste Recycling, Not Mining.

### PERMITTING MOMENTUM AND PLANT SITE LAND SECURED

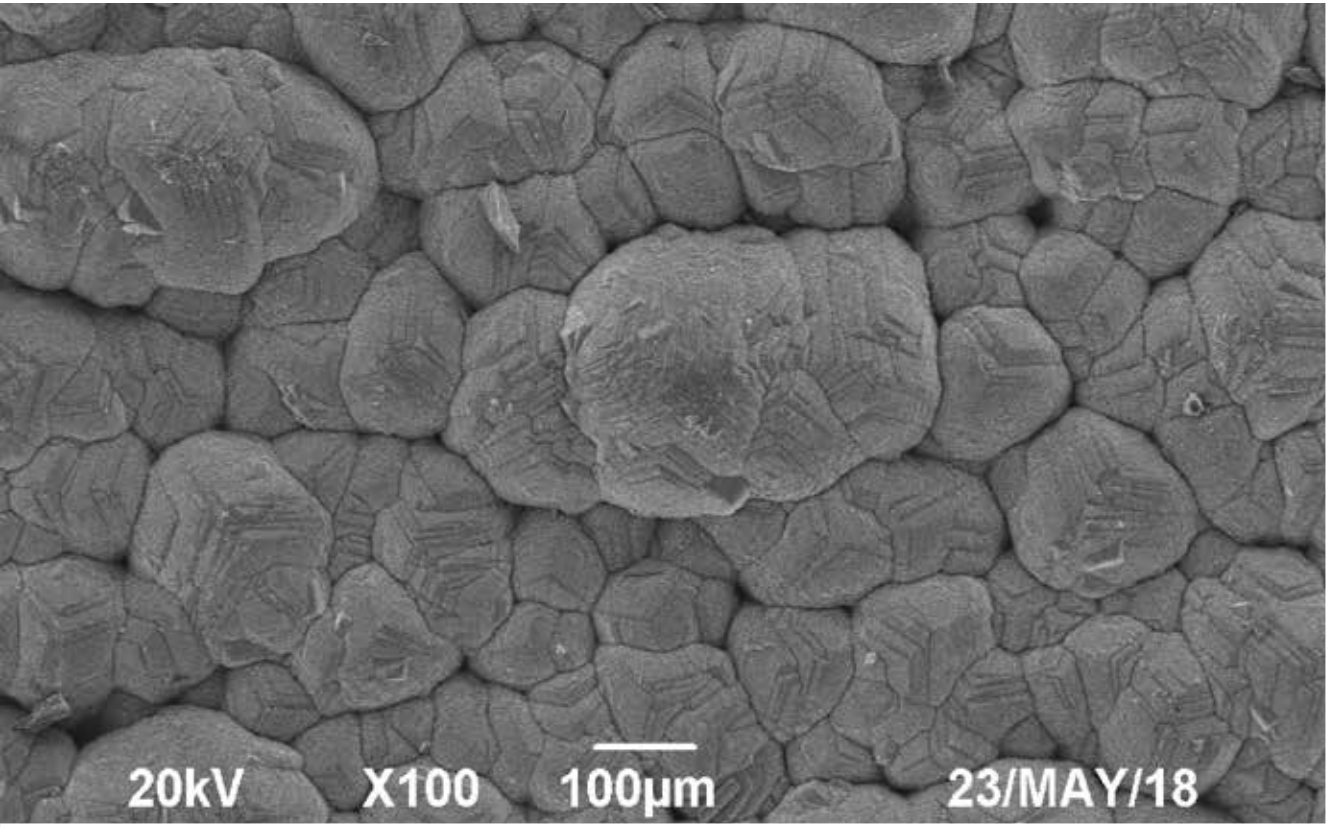
- ➔ Baseline environmental studies completed. EIA preparation initiated with Q2 2020 Project Notification submission targeted
- ➔ Rezoning process initiated. **Both adjoining municipalities voted unanimously to proceed with land-use plan change**
- ➔ Intensive community consultation ongoing. **Overwhelmingly positive feedback and reaction to project**
- ➔ Closed option in 2018 to acquire 100% of Czech company that owns 19.94 hectares of strategically-located land (Shaded blue on map), with payments spread over up to 5-years, and tied to permitting progress milestones. Additional parcels of land secured in 2018 and 2019, including one from the adjoining village of Trnavka
  - Plant site land already zoned for industrial use
  - Onsite infrastructure: Two rail spurs and sidings, highway access, gas, water and electrical energy
  - Located fewer than 200 metres from Chvaletice tailings
  - Adjacent to 820 MW power plant, as well as ready-mix concrete and pre-cast concrete plants





# 6 Clear Development Plan

## Pre-Feasibility Study-level Testwork Program and Pilot Plant Tests Completed





# 6 Clear Development Plan

## Target Project Development Timeline

### RECENT MILESTONES

### NEAR TERM MILESTONES

2018

- ü Upgrade resource estimate to NI 43-101 Measured and Indicated status
- ü Pilot scale metallurgical testwork, process design and optimization studies
- ü Confirm ability to produce ultra-high-purity EMM and MSM, meeting highest customer specifications for low-cobalt and high-nickel EV battery formulations
- ü Determine target products and specifications for modeling in PEA and Feasibility Study (HPEMM and HPMSM)
- ü Plant site selection and plant site land acquisition
- ü Complete environmental baseline studies
- ü Intensifying community engagement
- ü Product specification development

2019

- ü Complete NI-43-101/JORC Code Preliminary Economic Assessment (for both HPEMM and HPMSM production)
- ü Initiate EIA notification preparation process for filing in Q2-2020
- ü Design demonstration plant (DP) to produce bulk samples of finished manganese products in Czech Republic for customer testing and qualification
- ü Organizational development
- ü Initial DP MoUs and first steps towards offtake agreements
- ü Trigger rezoning process – community votes unanimous
- ➔ Intensive, ongoing community consultation

2020/2021

- ➔ Build and commission Demonstration Plant + start of qualification process
- ➔ Complete land acquisition
- ➔ Complete project Life Cycle Assessment (LCA)
- ➔ Completion of EIA and permitting process
- ➔ Complete feasibility study
- ➔ Detailed engineering
- ➔ Additional MoUs and offtake agreements
- ➔ Project financing
- ➔ Initiate Construction

2023

- ➔ Start-up, commissioning and commercial production

# 6 Clear Development Plan

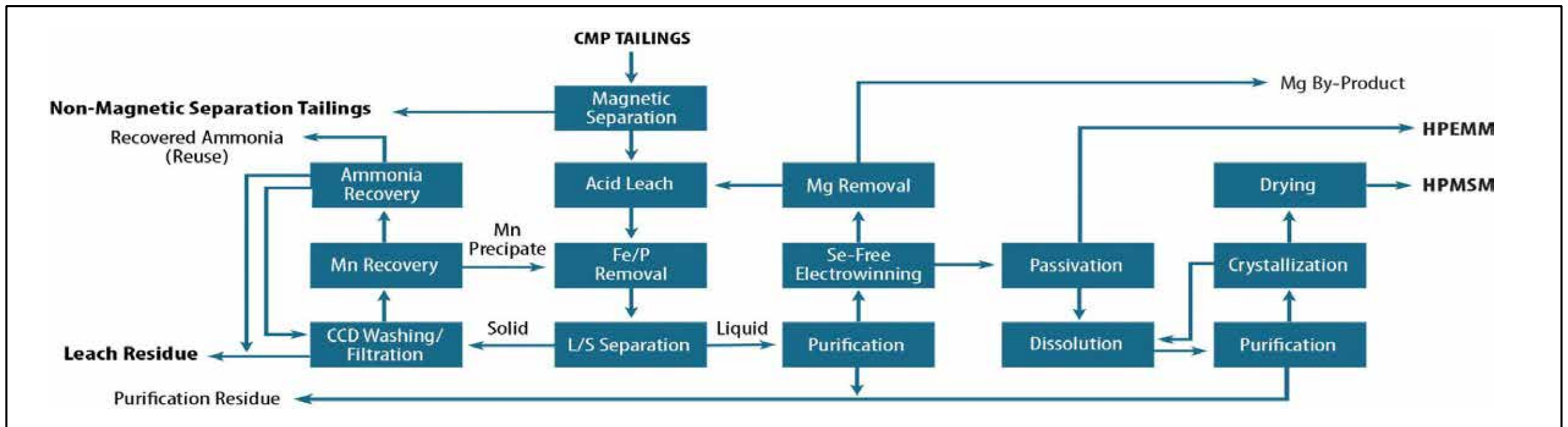
## FEASIBILITY STUDY

- Feasibility Study initiated in 2019 based on process flowsheet developed during scoping and pre-feasibility study programs conducted during 2017 and 2018. **Feasibility Study completion scheduled for H2 2020**
- Feasibility Study based on pilot plant process flowsheet that successfully confirmed amenability of Chvaletice carbonate ore to low-cost and low-environmental impact **production of exceptional purity manganese products meeting very demanding battery industry customer specifications**
- Process stability and reliability are achieved by producing electrolytical manganese metal and converting it to manganese sulphate. Both are **proven, commercial processes**
- **HPM process flowsheet is selenium and chromium-free, assuring exceptional environmental performance and full compliance with Czech and European Union environmental standards**

### Highly experienced Feasibility Study contributors:

- **Tetra Tech Canada** – Owner’s Engineer, studies coordination, economics and Feasibility Study Qualified Person (QP) under NI 43:101 and JORC 2012 Code
- **Beijing General Research Institute for Mining and Metallurgy (BGRIMM)** – Process plant design, process optimization
- **Tractebel Czech Republic** – Localization studies, including cost estimation, compliance with Czech and EU regulations and codes
- **GET sro.** – Tailings extraction, dry stacking and site reclamation
- **Bilfinger Tebodin** – Environmental

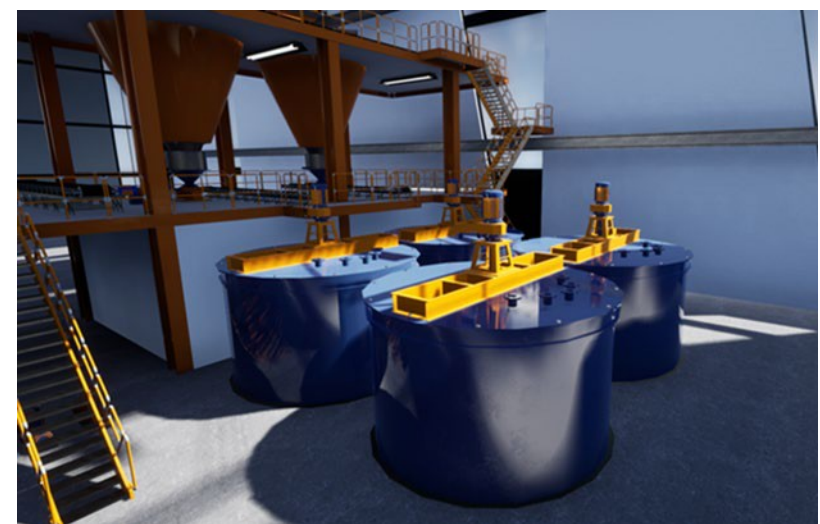
### Conventional Process Flowsheet





# 6 Clear Development Plan


## Preliminary Chvaletice Plant Design





## 6 Clear Development Plan

### DEMONSTRATION PLANT: THE KEY NEXT STEP.

- ➔ Demonstration Plant (DP) is a key element of EMN's Chvaletice development strategy
  - ➔ Lumpsum, turnkey EPC contract for DP awarded to CRIMM (Changsha Research Institute of Mining and Metallurgy, a division of China Minmetals Corporation) in December 2019; commissioning targeted to begin in H1 2021
  - ➔ CRIMM has conducted extensive prior metallurgical testwork on Chvaletice for EMN since 2017, including building and operating its pilot plant. CRIMM are world leaders in manganese processing and battery materials production
  - ➔ CRIMM scope of work includes DP design, delivery, installation, commissioning, laboratory set-up and operator training program. All equipment and technology is conventional and commercially proven
- 
- ➔ DP total price ~US \$2.5 M, plus ~\$1.5 M installation / infrastructure cost. Annual operating cost ~\$1 M
  - ➔ DP replicates 2019 PEA process flowsheet and is designed to produce 32 kg of HPEMM or 100 kg of HPMSM per day
  - ➔ DP designed to deliver multi-tonne, finished -product samples to customers, either HPEMM or HPMSM, as required
  - ➔ DP output for 1<sup>st</sup> year of production will be allocated to selected customers during H1 for product qualification process
    - Strong customer interest in testing and qualifying DP products
    - MoUs are typically a prelude to potential offtake agreements
  - ➔ Company may apply for green direct investment incentives, capacity development and/or innovation and upscaling funding from EU .



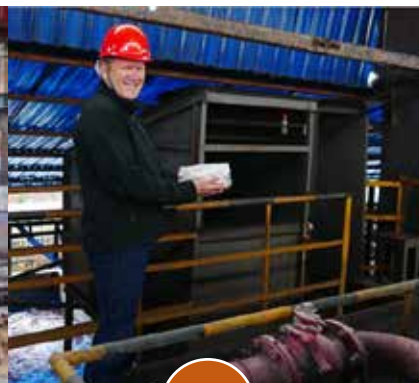
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- Strong customer interest.
- Euro Manganese is building strategic commercial relationships.

## STRATEGIC EUROPEAN SOURCE OF SUPPLY

- Globally significant, 25- year project expected to be Europe's only primary producer of High Purity Electrolytic Manganese Metal ("HPEMM") and High Purity Manganese Sulphate Monohydrate ("HPMSM")
- Located in the heart of Europe's fast growing EV production hub
- Strategic supplier of in an industry where China currently has a 93% market share and where that share is growing

## EXCELLENT INFRASTRUCTURE AND JURISDICTION

- Rail, highway, gas pipeline, water and competitively-priced power available on-site
- Rights to industrially-zoned land adjacent to deposit secured for plant
- Sophisticated, stable and business-friendly Czech Republic jurisdiction in the European Union
- Europe's automotive industry employs over 14 million people and is strongly committed to electrification.

## EASILY TREATED CARBONATE TAILINGS

- Uniform and fully drilled deposit very well suited to production of HPM using clean, modern and commercially proven technologies
- Carbonate ore and tailings deposit provide significant extraction and processing cost, and environmental advantages
- Pilot plant products exceed ultra-high purity manganese specifications required by the most demanding high-tech customers

## WASTE RECYCLING, NOT MINING

- Recycling of old mine waste and remediation of polluted site, solving an old environmental problem for local communities
- No mining waste.
- Preliminary mining permit received in 2018
- Solid permitting momentum
- Opportunity to purchase certified CO<sub>2</sub>-free power, further reducing already small environmental footprint

## CLEAR DEVELOPMENT PLAN

- Pilot plant confirmed ultra-high purity nature of product and amenability of process flowsheet for this deposit.
- Feasibility study in progress and building upon PEA issued in early 2019
- Start of EIA process expected in Q2 2020
- Strong customer interest for demonstration plant to be built in 2020/21

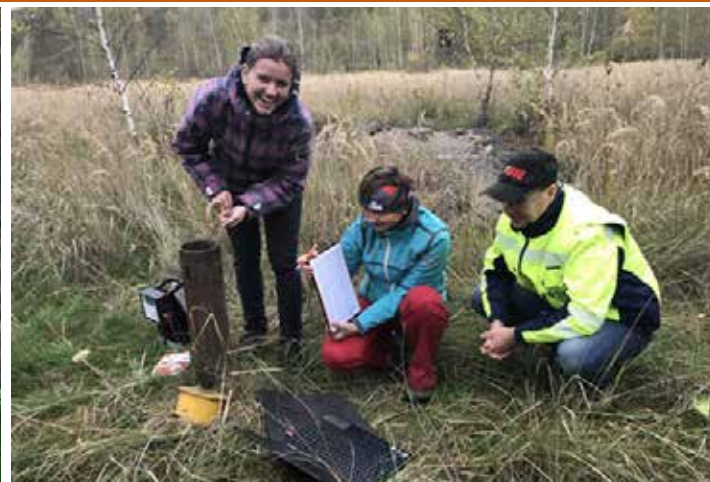
## LED BY HIGHLY EXPERIENCED MANAGEMENT TEAM

- Solid multidisciplinary team with proven development track record and award-winning excellence in environmental and social practices
- Rare in-house HPM production experience
  - "God is in the details"
- World-leading HPM technology, plant design and construction expertise secured
- Management team and directors are significant and supportive shareholders





# Thank You!



Marco A. Romero | President & CEO | Tel: +1 (604) 681-1010 x 101  
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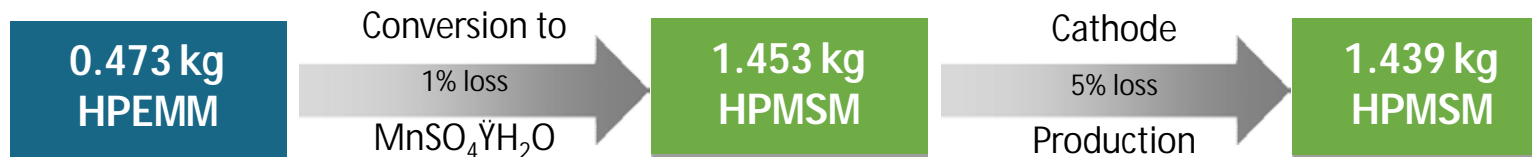


# APPENDICES





# HP Manganese Market Opportunity



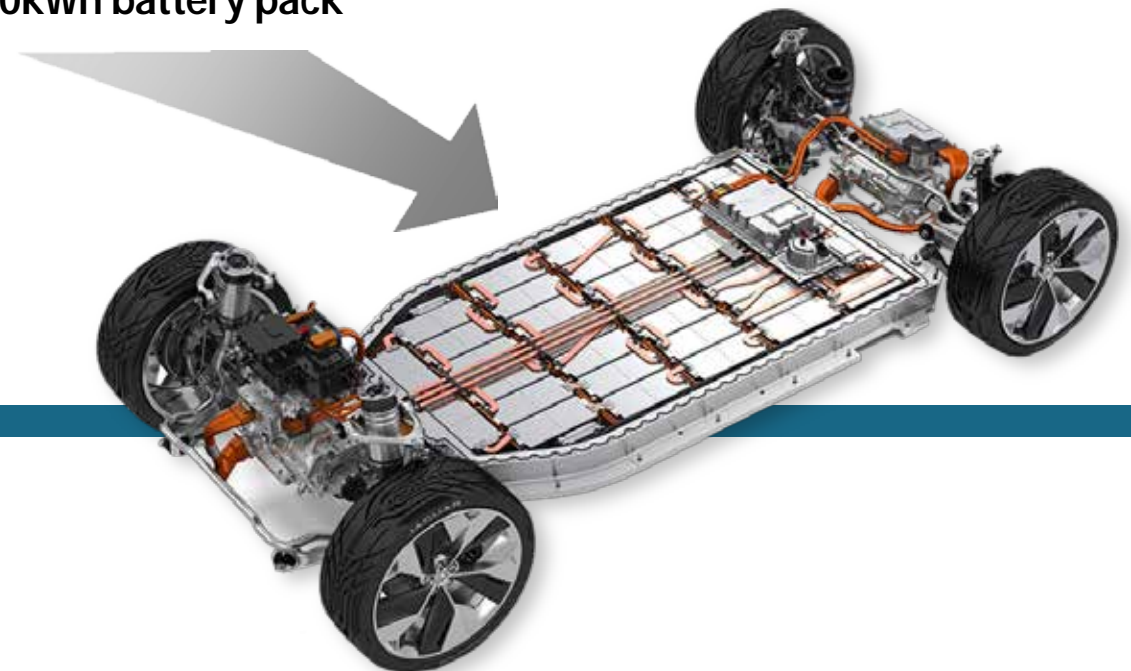
Some new battery formulations will use up to 2.3 times more manganese than the prevalent NMC-111 chemistry

Equivalent to 0.445 kg HPEMM



1 kWh Cathode  
x90

for a 90kWh battery pack



Gross Mn weight required for 1 kWh of battery capacity:

NMC-111: 0.473 kg HPEMM	or	1.453 kg HPMSM
NMC-532: 0.404 kg		1.241 kg
NMC-622: 0.269 kg		0.828 kg
NMC-811: 0.127 kg		0.389 kg
NMC-370: 0.986 kg		3.031 kg

1kWh = 0.13 – 1.1 kg HPEMM

## A 90-kwh BATTERY PACK MAY:

- ➔ Weigh 500 kg
- ➔ Contain 11 kg to 99 kg of Mn (depending on battery chemistry)
- ➔ Cost \$13,000
- ➔ The cost of manganese can be 0.25% to 2.3% of the cost of the battery pack\* (depending on battery chemistry)

\* assuming \$3/kg of HPEMM (2018 price)

Source: Cairn Energy Research Advisors, CPM Group ©2019



# 4 Easily Treated Carbonate Tailings

## 2018 NI 43-101 / JORC Resource Estimate

Updated Resource Estimate NI 43:101/JORC 2012 Resource Estimate included in Technical Report dated March 15, 2019 by Tetra Tech Canada Inc.

### ➔ 2017 – 2018: 160-hole drilling program findings

- Manganese is for the most part 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 ore
- Extraordinary 98.3% of Chvaletice resource is now classified in Measured category

### Chvaletice Mineral Resource Statement, Effective Date December 8, 2018

Tailings Cell #	Classification	Volume (m <sup>3</sup> )	Tonnage (MT)	Dry In-situ Bulk Density (t/m <sup>3</sup> )	Total Mn (%)	Soluble Mn (%)
#1	MEASURED	6,577,000	10,029,000	1.52	7.95	6.49
	INDICATED	160,000	236,000	1.47	8.35	6.67
#2	MEASURED	7,990,000	12,201,000	1.53	6.79	5.42
	INDICATED	123,000	189,000	1.55	7.22	5.30
#3	MEASURED	2,942,000	4,265,000	1.45	7.35	5.63
	INDICATED	27,000	39,000	1.45	7.90	5.89
TOTAL	MEASURED	17,509,000	26,496,000	1.51	7.32	5.86
	INDICATED	309,000	464,000	1.50	7.85	6.05
COMBINED	M&I	17,818,000	26,960,000	1.51	7.33	5.86

\* Resources are not to be considered reserves and their economic viability has not been proven or confirmed.

# 7 Led by Highly Experienced Team

## Canada



**Marco Romero**

**PRESIDENT & CEO,  
FOUNDER & DIRECTOR**

- 40 years of diversified international experience in mining and construction material industries
- Company builder and co-founder of several Canadian enterprises including Eldorado Gold, Polaris Materials, Delta Gold and Euro Manganese
- Recipient of several international, national and regional awards for achievements in corporate social responsibility and environmental excellence



**Martina Blahova**

**CHIEF FINANCIAL OFFICER**

- 20 years of experience in finance; including public practice with PricewaterhouseCoopers and Ernst & Young in the Czech Republic and UK
- Previously corporate controller at Euro Manganese Inc.
- Held senior roles in automotive and mining industry, including Manager of Financial Reporting at SSR Mining Inc. and FP&A manager for KS Kolbenschmidt Inc., a Czech subsidiary of the Rheinmetall Group AG
- Qualified as a CPS (CGA) and as an ACCA (UK) and holds a Master's Degree in International Business



**Thomas Glück**

**VICE PRESIDENT,  
DEVELOPMENT**

- 27-year track record of successful development and operation of production facilities for electrolytic manganese metal and associated manganese products
- Held various leadership roles for world's leading producer of high purity, selenium-free EMM, Manganese Metal Company, including superintendent, development manager and works manager
- Holds a PhD in Chemical Engineering



**Fausto Taddei**

**VP CORPORATE DEVELOPMENT &  
CORPORATE SECRETARY**

- Over 30 years of public resource company experience with development and operating entities involved in precious and base metals, and metallurgical coal. Senior level experience in multiple mining operations, financing, treasury functions, off-take arrangements, tax planning and public company reporting and governance matters
- Held Senior VP & CFO positions with Nevsun Resources Ltd., Aura Minerals Inc. and Western Canadian Coal Corp.
- Qualified as a CPA (CA) in 1985



# 7 Led by Highly Experienced Team

## Europe



**Jan Votava**

**MANAGING DIRECTOR (MANGAN CHVALETICE S.R.O.) & DIRECTOR OF EURO MANGANESE INC.**

- Engineer with 19 years experience as an executive leader in the Czech republic
- Responsible for leading Euro Manganese's subsidiary in the Czech Republic, its organizational and reputational development, as well as Project permitting and development
- Previously held roles as Head of Transformation Team for Europe, Technical Director for Central Europe, and Executive Chairman and Managing Director for the Czech Republic for Lafarge Holcim
- Holds a doctorate in mechanical engineering



**Wenling Sun**

**STRATEGIC DIRECTOR, CHINA**

- Highly experienced mining industry professional with 19-year track record in China in mining project development, metals trading, pricing, trade structure, project management and financing
- Ran consulting practice, advising international clients on procurement of Chinese technology, equipment and services
- Managed development of first bio-heap copper and nickel leaching projects in China. Played a key role in several international mine and plant developments
- Holds a Masters degree in Economics from Renmin University



**Tomas Hochmann**

**TECHNICAL DIRECTOR**

- Started career in basic petrochemistry research leading to a PhD in Chemical Engineering. Worked in applied research and development for petrochemical and pharmaceutical companies
- 20 years in cement industry working in cement plants in the Czech republic, Bosnia, Libya, Serbia, Venezuela and Canada – responsible for process development and optimization, plant operations, plant strategy, investment planning and construction management
- Led technical training of young engineers, troubleshooting and start-ups in cement plants



**Blanca Dobrkovská**

**ENVIRONMENTAL MANAGER**

- Engineer of Environmental Science and Ecology
- Over 15 years of experience in environmental legislation and management
- Previously, held different managerial roles in the aerospace industry responsible for environmental issues and compliance for companies at Prague Airport, Nuclear Research Centre and CEMEX s.r.o.
- Holds a MSc. at Wageningen University, Netherlands and Engineering degree at Czech Agricultural University



**Lucie Jaremová**

**PROCUREMENT MANAGER**

- Supply Chain Professional. Background in purchasing, logistics, strategic sourcing, planning and materials management with over 20 years' experience in the chemical industry
- Held positions in multinational chemical company, as European Purchasing Manager for projects in India, China, United Arab Emirates and Brazil
- Holds a degree in Economics from the Czech Technical University of Transport and Communication



**Erika Duchanová**

**COMMUNICATIONS MANAGER**

- Public relations professional. Named Manager of the Year 2010 by the Czech Managerial Association
- In the last 20 years she has worked in diverse industries and managed newspapers, a broadcasting company, a museum, the Paris-Dakar race, among others
- Has a Master's degree in Public Relations from the Faculty of Education & Philosophy at the University of Ostrava, Czech Republic



**Vit Gloser**

**DIRECTOR CORPORATE DEVELOPMENT**

- Former banker with extensive experience in international trade finance in Middle East, Far East, North Africa and eastern parts of the former USSR
- 10+ years in Private Banking;
- Formerly Vice Chairman of Kolektory Praha, a Czech utility company
- Graduated from the School of Economics in Prague with a degree in International Business
- Post graduate training in Managerial Finance at City University in London, UK

# 7 Led by Highly Experienced Team

## Non-Executive Directors



**Roman Shklanka**

**DIRECTOR & CO-FOUNDER**

- Geologist, mine finder and company builder whose experience includes Chairman, director and co-founder of Canico Resource Corp, Polaris Materials, Kobex Resources, Pacific Imperial Mines, Delta Gold Corp. and Sutton Resources
- Previously held various senior exploration roles with Placer Dome over more than 20 years, including VP Exploration
- Inducted into Canadian Mining Hall of Fame in 2009



**David Dreisinger**

**DIRECTOR**

- Professor and chair holder of the Industrial Research Chair in Hydrometallurgy at UBC
- Published over 200 papers and involved in 16 U.S. patents for work in hydro-metallurgical research
- Active international consulting practice on many major hydrometallurgical projects and plants
- Corporate experience includes director and executive with Search Minerals, Clifton Star Resources, Polymet, South American Silver and Lead FX



**Daniel Rosický**

**DIRECTOR**

- Practiced law for 23 years and is fluent in English and Czech. Daniel is an attorney at law of the Czech Bar Association and was also admitted to the Bar in Ontario, Canada
- Senior partner at PRK Partners, a leading Czech corporate law firm
- Specializes in real estate and inbound foreign investment law, including resource development
- Born in the Czech Republic and educated in Canada



**Harvey McLeod**

**DIRECTOR**

- Geotechnical engineer and a world leader in the evolution and development of mine tailings management over a 40-year career, with work on over 100 tailings dams in over 20 countries
- Chairman of the ICOLD subcommittee on tailings dams and active in the Canadian Dam Association
- Currently VP Strategic Marketing for Klohn Crippen Berger
- Inducted as Fellow of the Canadian Engineering Institute in 2017



**John Webster**

**INTERIM CHAIRMAN & DIRECTOR**

- Senior finance professional who spent over 30 years with PricewaterhouseCoopers until his retirement in 2014
- Roles included British Columbia Managing Partner, three years as Assurance Leader in Romania and head of the firm's mining practice in Canada
- Extensive experience as audit partner and advising private and listed clients
- Director of Eldorado Gold Corporation



**Gregory Martyr**

**DIRECTOR**

- Over 30 years experience in resources investment banking and corporate finance, and international resource and mining company management
- Executive Director of Carbon Fibre Development Technologies Pty Ltd.
- Former Managing Director with Standard Chartered Bank, ultimately as the Global Head of Advisory, Mining and Metals
- Previously a partner with Gryphon Partners and held several executive roles with Normandy Mining Ltd. Incl. President, Americas



# Euro Manganese Inc. - Capitalization



- ➔ Dual IPOs completed on October 2<sup>nd</sup>, 2018. Shares trade on the TSX Venture Exchange and CHESD Depository Instruments (CDIs) trade on the Australian Stock Exchange
- ➔ ASX & TSXV Symbol: "EMN"
- ➔ Cash position as of 12/31/2019 ~C\$2.0M.
- ➔ Current Market Capitalisation: ~C\$18.5 M based on C\$0.10
- ➔ Recent C\$1 million private placement at \$0.11

Capitalization as of May 1, 2020	
Shares (including ~77.7M CDIs)	185,405,635
Options	15,850,000
Warrants	5,756,750
<b>Fully Diluted</b>	<b>207,012,385</b>

## Ownership Structure at May 1, 2020

Total 185,405,635

