

# manganese X Energy Corp

TXSV:MN FSE: 9SC2 OTC:MNXXF



## Mining the Future

# Disclaimer

Certain statements in this presentation are forward- looking statements which may include, but are not limited to, statements with respect to the future financial or operating performance of Manganese X Energy Corp. and its projects, the market conditions, business strategy, corporate plans, objectives and goals, the estimates of the timing, cost, nature and results of corporate plans, the strategy for the development of Manganese X Energy's property and regulatory matters. Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors that may cause the actual results, performance or achievements of Manganese X Energy Corp. to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward looking statements address future events and conditions and therefore involve inherit risks and uncertainties. Although Manganese X Energy Corp. believes that such expectations are reasonable, there can be no assurance that such expectations will prove to be correct, and therefore actual results may differ materially from those currently anticipated in such statements. You are cautioned not to place undue reliance on any such forward looking statements, whether made in this presentation or in any question and answer period related to this presentation.

# Manganese X Energy Value Proposition

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★ **Strategically Positioned**

The manganese deposit is in New Brunswick, Canada, with proximity to North America and Europe, top consumers of manganese.

★ **Simple Metallurgical Process**

Battery Hill Carbonate ore is easily leachable, allowing for direct production of battery grade manganese sulphate.

★ **Great Upside at Lower Risk**

The company's focus on metallurgy at early stage yielded promising results that enhance the advancement of compliant-resource quantification.

★ **Potential for Large Resource and Multiple Products**

Non-compliant manganese resources estimated at 39 million tonnes at 9% Mn (\*), offer the potential to expand to non battery material products.

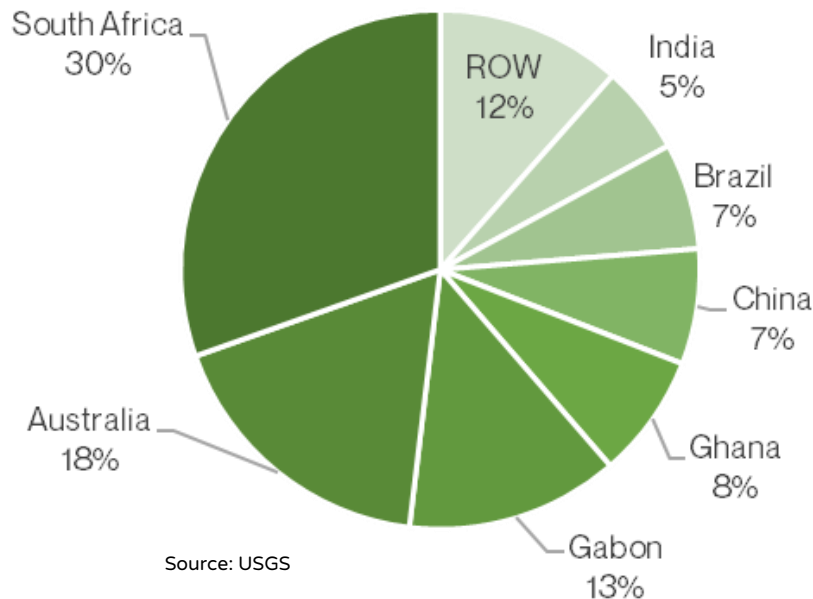
★ **In collaboration with downstream players**

The company has signed a collaboration agreement with a cathode materials producer.

(\*) Please note that the above information has been taken from historic sources that were not prepared or reviewed by a Qualified Person for Manganese X Energy under NI 43-101 and are considered historic and should not be relied upon. They were obtained from Sidwell, 1957, who used a sparsely spaced gravity survey and limited drilling to obtain these results. No qualified person has done sufficient work to classify the historical estimate(s) as current mineral resources or reserves and Manganese X Energy is not treating the historical estimate as current resources or reserves.

# North America is Dependent on Manganese Imports

## Manganese Production



- ★ There is no manganese mine production in the United States or Canada.
- ★ Manganese X Energy has the potential to become North America's most significant producer of manganese products for the North American and European markets.

# Manganese Uses

★ Most manganese, like nickel, is used for steel production



★ Other uses include:

## ***Batteries***

EV and stationary energy storage batteries



## ***Chemicals***

Agriculture (fertilizer, animal feed, fungicide)

Water purification

Pigments

Manganese ferrite (used in ceramics, cement, coatings, etc.)





# Manganese is an Essential Material for Batteries

- ★ ***Electric vehicles (EV)***  
NMC (Li-Ni-Mn-Co),  
LMFP (Li-Mn-Fe-P) and  
LMO (Li-Mn oxide) type  
batteries



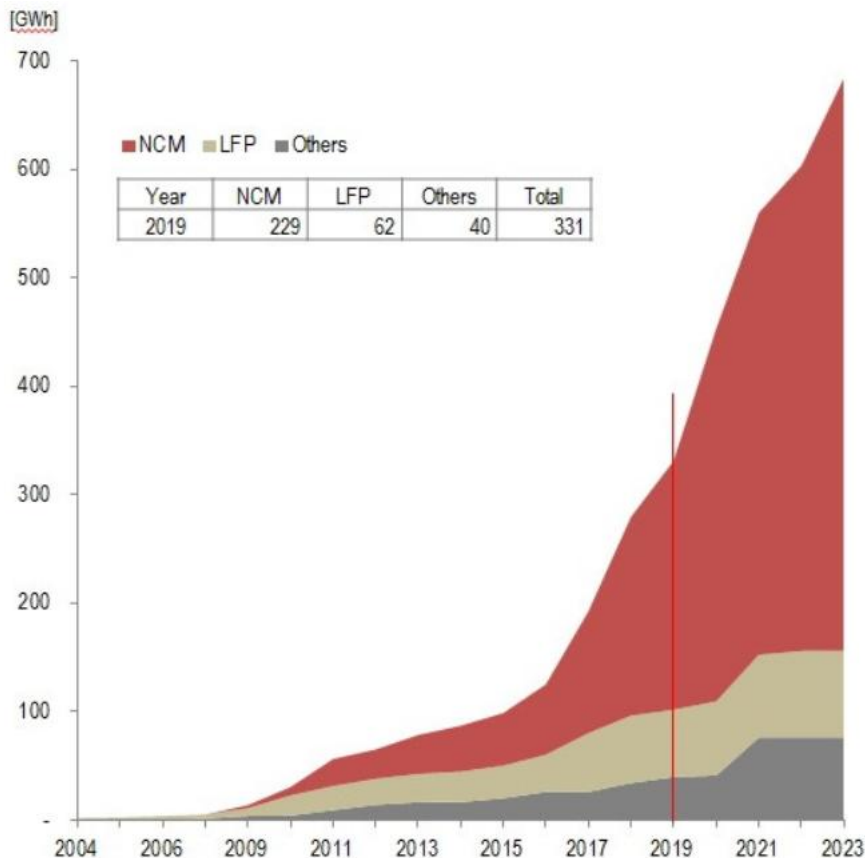
- ★ ***Household disposable batteries***  
Alkaline Zn-Mn dioxide

- ★ ***Grid energy storage***  
NMC (Li-Ni-Mn-Co) and  
LMFP (Li-Mn-Fe-P)

- ★ ***Low voltage battery*** Zn-Mn dioxide



# Lithium-Manganese Batteries in High Demand



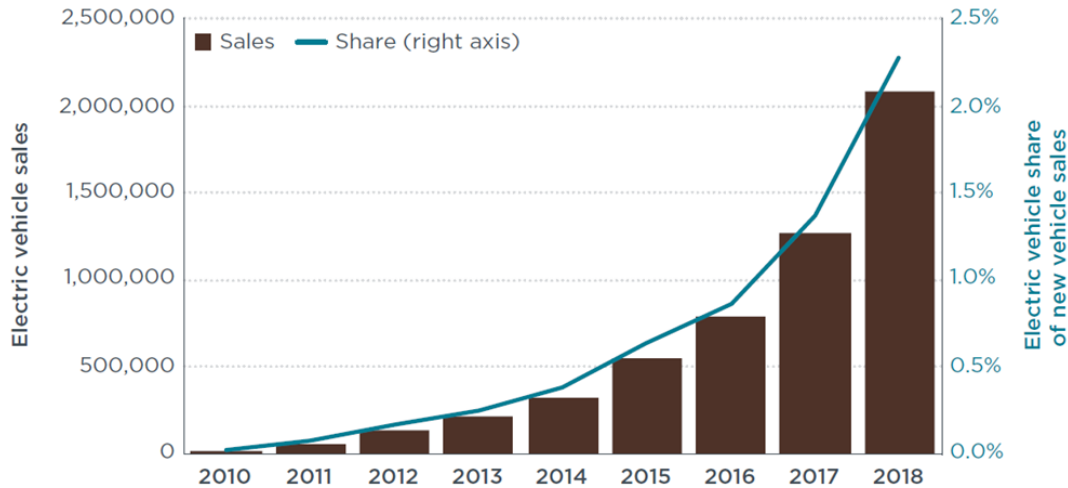
Source: BNEF

- ★ **NMC** (nickel-manganese-cobalt) lithium battery is the most widely used chemistry.
- ★ **Lithium-Manganese-Iron-Phosphate** (LMFP) provides a 10 to 15% increase in energy density compared to conventional LFP, that is widely adopted in China - Dow Chemicals.
- ★ **NMC** battery production capacity takes up 69% of the entire Li-ion battery production capacity.

- Bloomberg New Energy Finance

# EV Market Trends

**Electric Vehicles Sales**

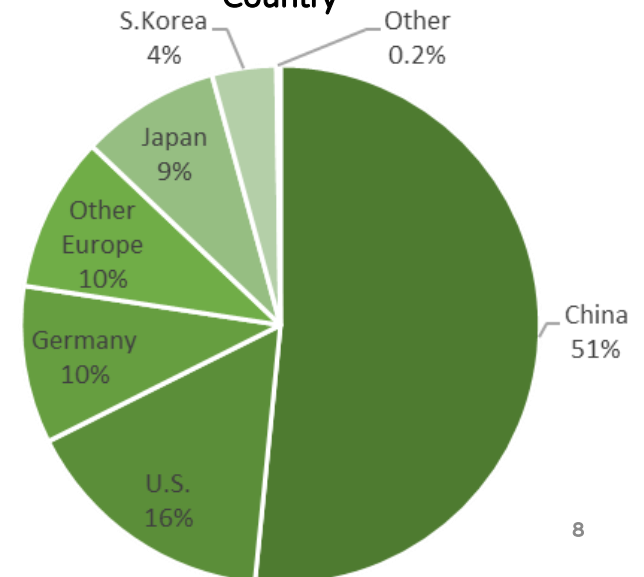


Source: ICCT

Major European countries, India, China, among other nations are planning to phase out internal combustion engines within the next 20 years.

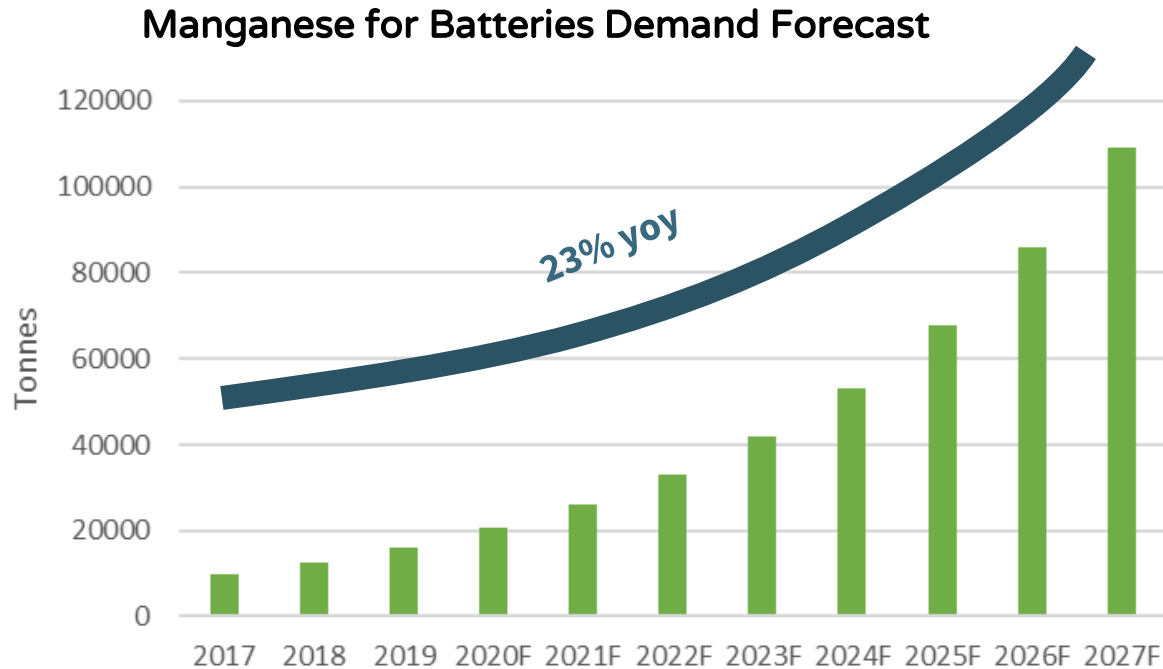
Less than 2.5% of the total 91.6 million passenger vehicles sold in 2019 were electric.

**Share of Electric Vehicles Sales per Country**





# Expected increase in EV sales to drive battery materials demand



**Manganese demand, just from lithium-ion batteries, expected to grow at a compounded annual rate of 23% to 2027. – Roskill, 2019**

# Battery Minerals and Technology Assets

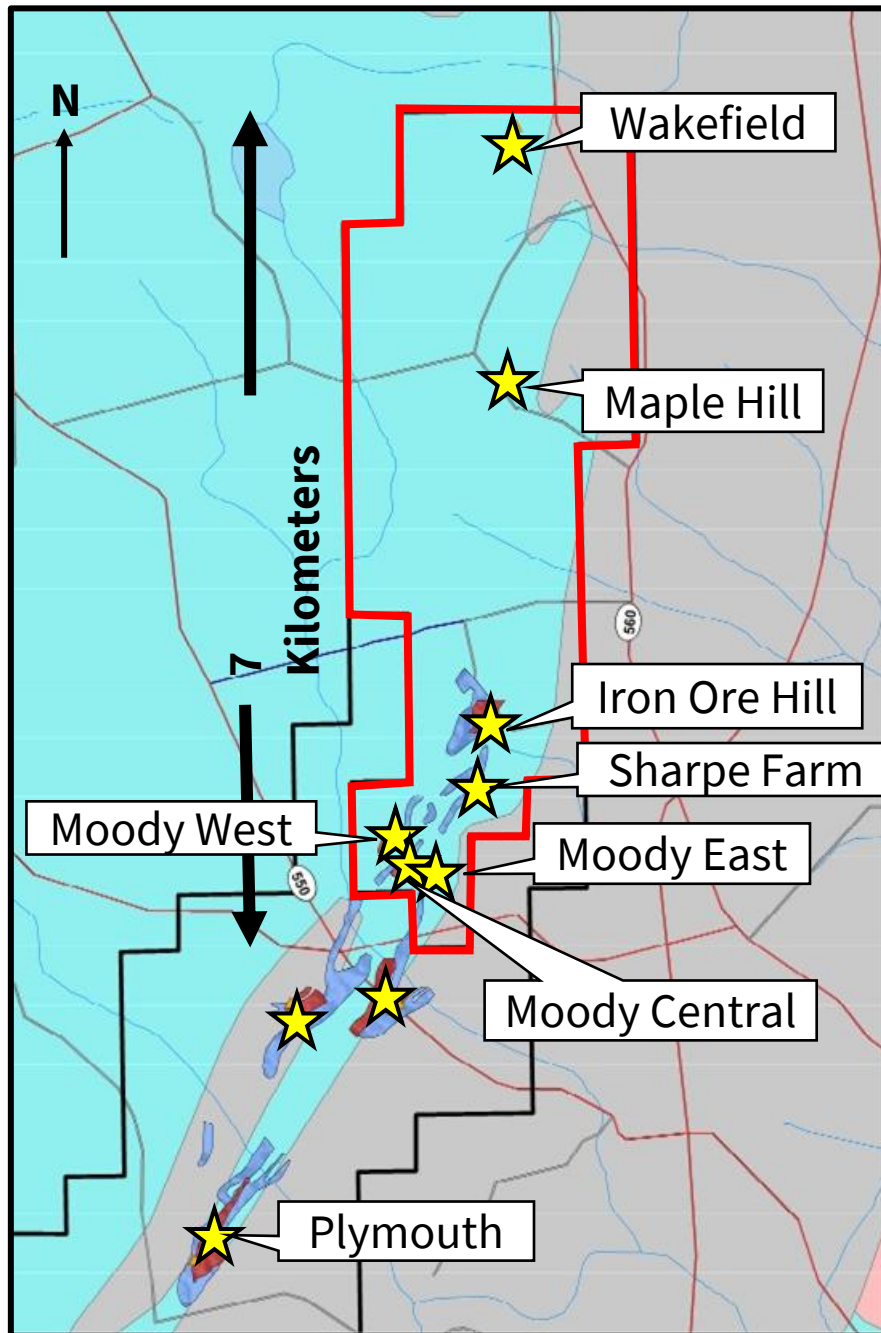
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## Manganese

Flagship Asset – Battery Hill Manganese Deposit

## Other Assets

- LAB Graphite Deposit
- Peter Lake Nickel-Cobalt Project
- Disruptive Battery Corp.



# Battery Hill

## Responsible and Ethical Source of Manganese

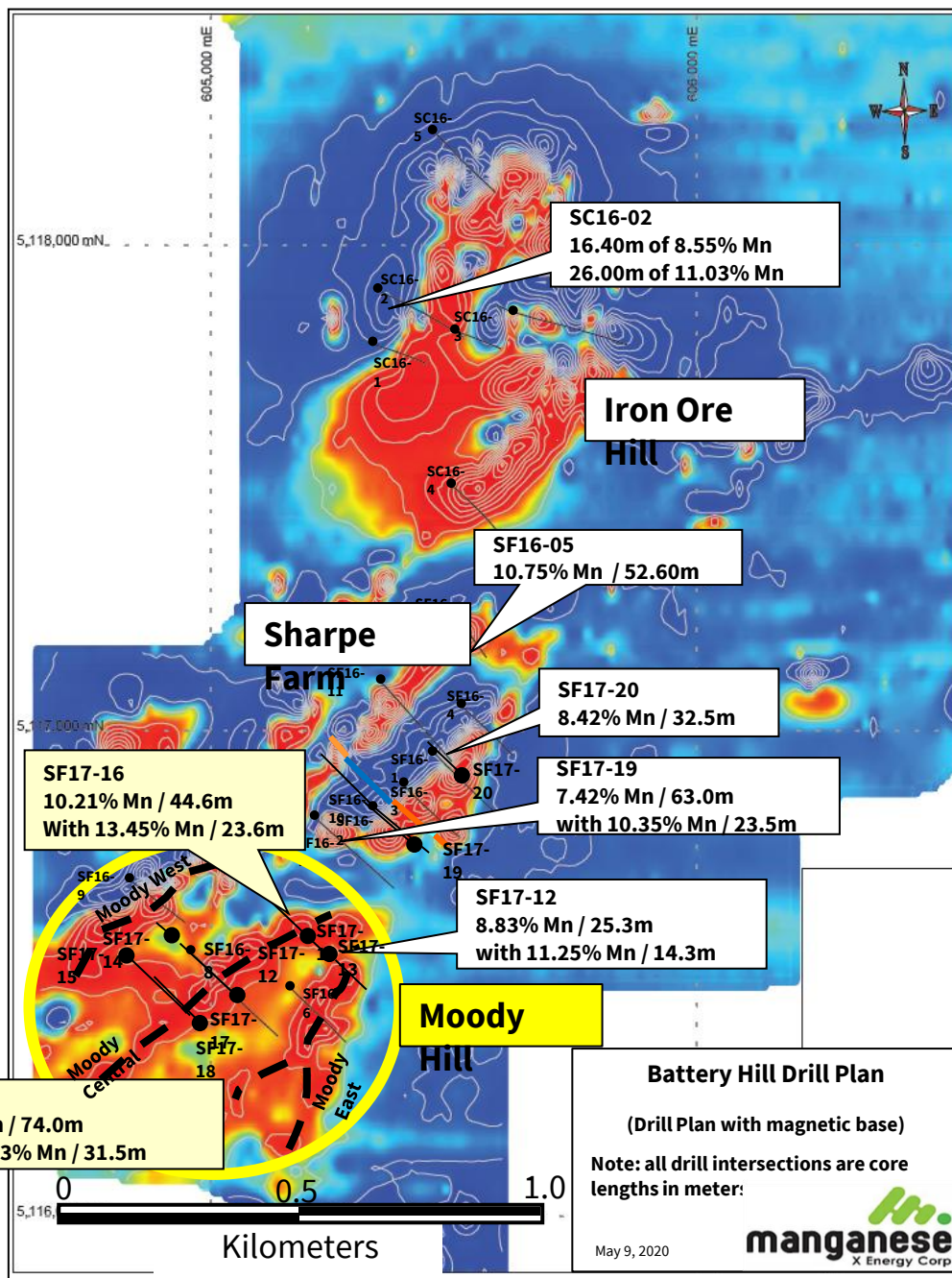
- ★ The Battery Hill deposit in the Houlton Woodstock property consists of 55 claims totaling 1228 hectares located in New Brunswick.
- ★ It encompasses all or part of four Manganese zones, Iron Ore Hill, Moody Hill, Sharpe Farm, Maple Hill and Wakefield.
- ★ The deposits have excellent location, being approximately 5 km northwest of the town of Woodstock and are easily accessible from the Trans-Canada highway via all-weather roads.
- ★ It is strategically situated 12 kilometers from the US (Maine) border, near existing power transmission lines, railway and road access that provide suitable transport to major shipping lanes on the Atlantic Ocean and Saint Lawrence Seaway.

# Battery Hill

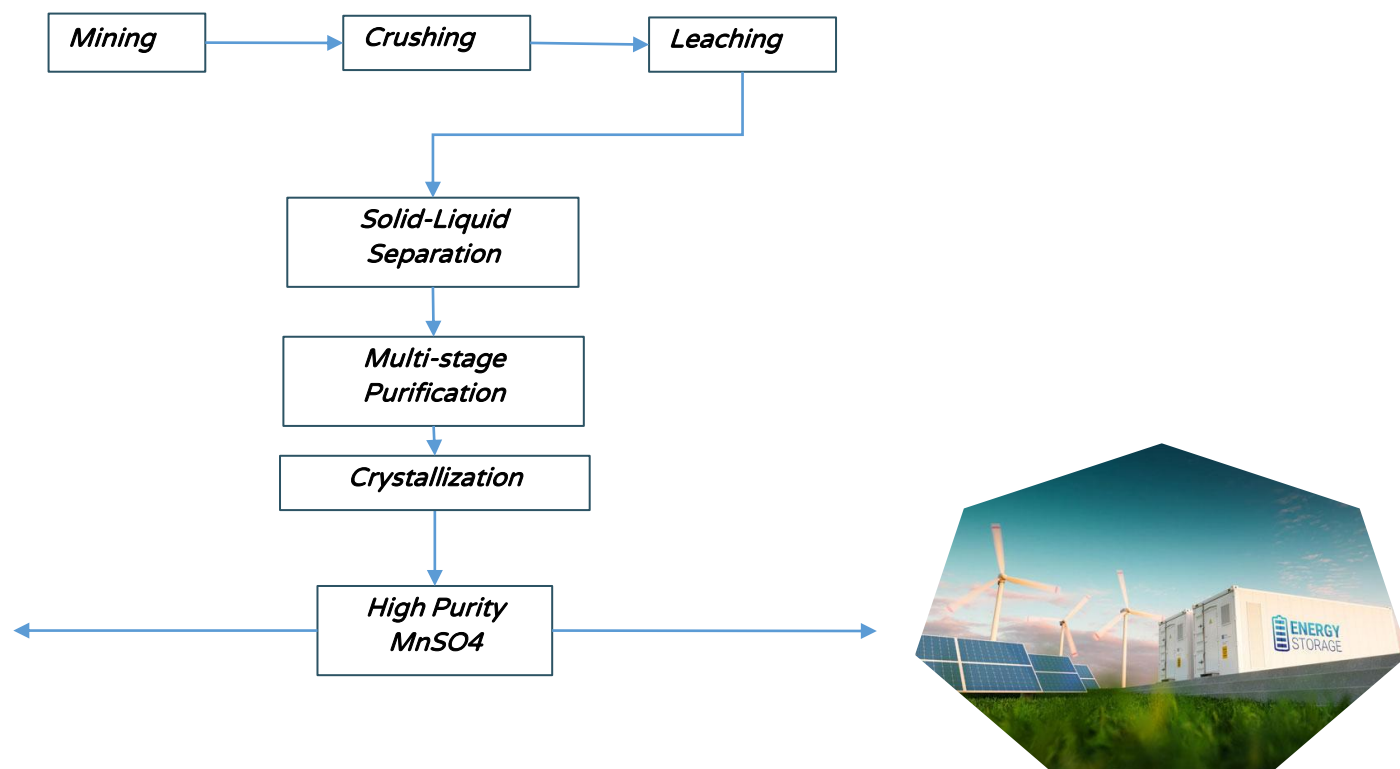
## Responsible and Ethical Source of Manganese

- ★ Non-compliant resource estimate amounts to 39 million tons at 9% Mn. (\*)
- ★ Mineralization remains open in most directions (depth and strike) for significant expansion.
- ★ Metallurgical and Drilling programs to determine a compliant resource are ongoing. Current focus is on near surface, higher grade areas at the Moody Hill zones.
- ★ Upon successful completion of the programs, work will be initiated toward the completion of a preliminary economic assessment (PEA).

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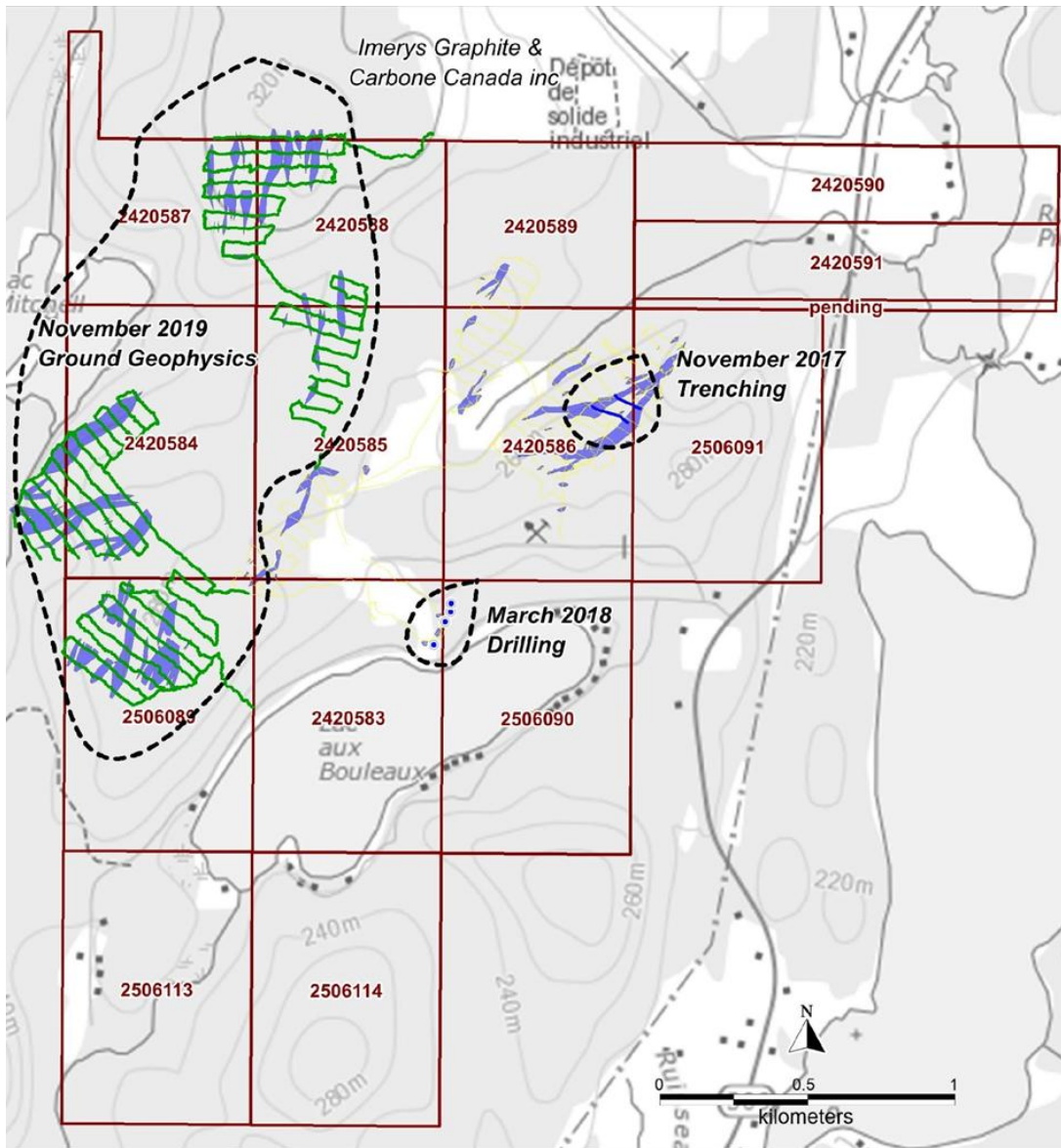


# Simple Processing Steps



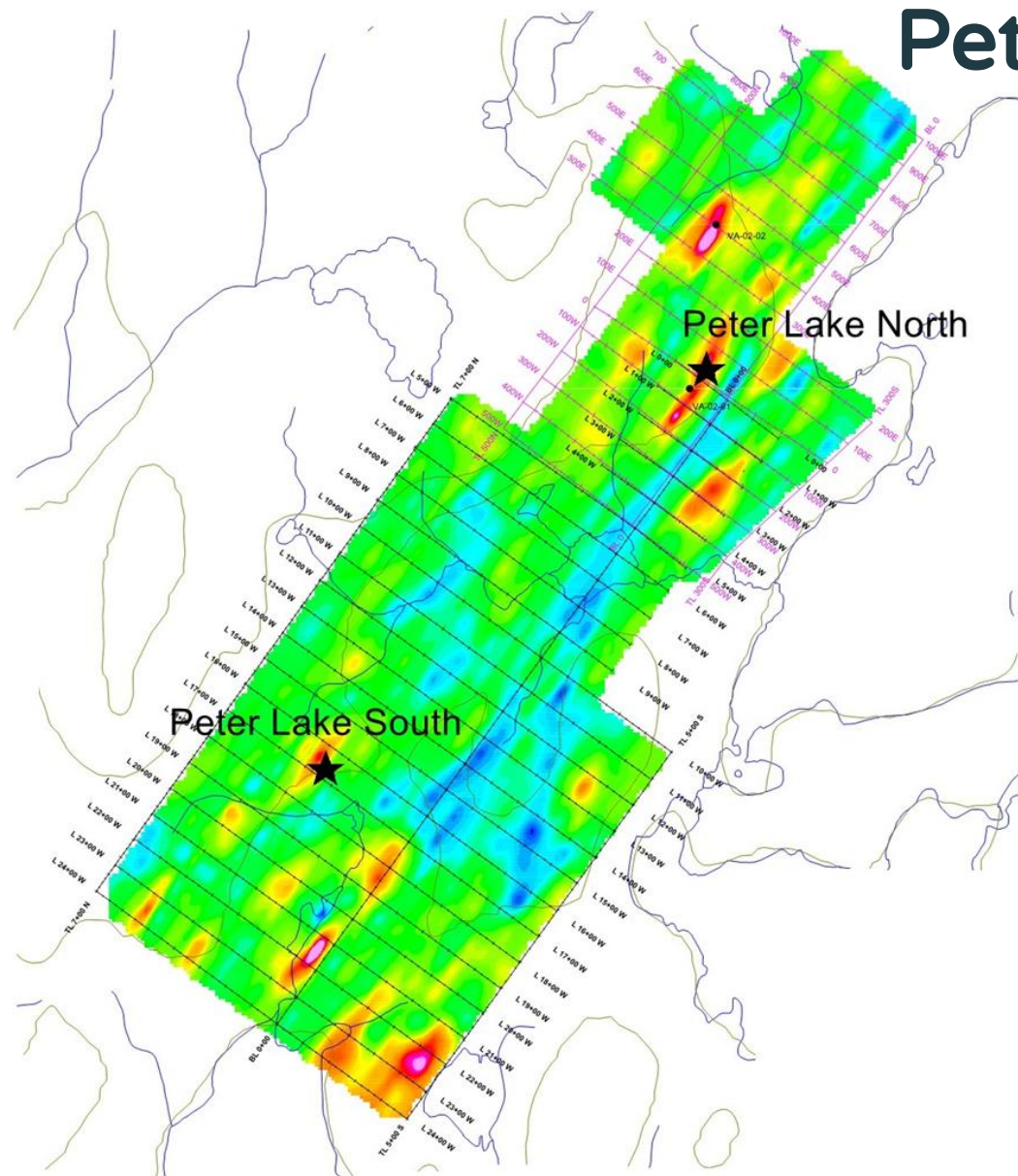


# LAB Graphite Property



- ★ Past exploration tests intersected significant graphite mineralization in drill holes and trenches.
- ★ Preliminary metallurgical results returned very good results with recoveries up to 96%.
- ★ The high percentage of large flake graphite is positive for a high quality, premium priced product.
- ★ Infrastructure is excellent with road access and electrical power on site; and  
The property is located contiguous to TIMCAL's Lac des Iles producing graphite mine.
- ★ Manganese X Energy is awaiting TSX Venture approval for record date to spinoff Graphano Energy Ltd. (GEL) In addition to declare dividend date to entitle for every 8 Manganese X shares held on that date will receive 1 GEL as a dividend.

# Peter Lake Ni-Cu-Co Property



- ★ Two Copper-Nickel-Cobalt occurrences known as Peter Lake North and Peter Lake South are included within the property. Previous grab sampling returned values ranging from 0.4% to 22.8% copper, 0.14% to 0.73% nickel, 500 ppm to 0.266% cobalt, as well as elevated gold and silver.
- ★ The mineralization is associated with mafic intrusions of the Serpent Suite and has been traced intermittently on surface for more than 2 kilometers.
- ★ The property has received very limited exploration to date with only 2 shallow diamond drill holes completed in 2002. The Peter Lake South occurrence, discovered in 2012, has not been tested by drilling.

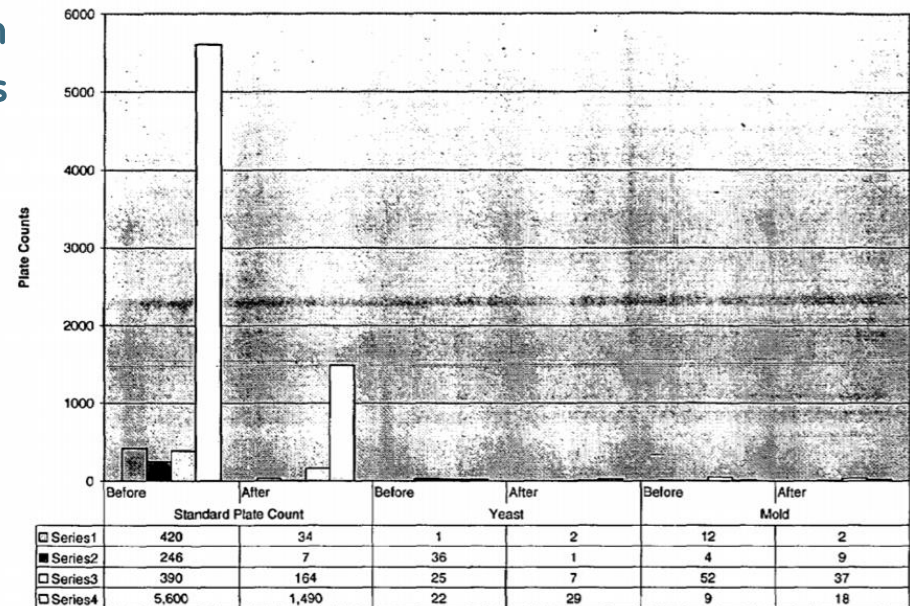
# Disruptive Battery Corp.

The Disruptive Battery Corp. (DBC), is a 100% owned subsidiary of Manganese X Energy. It was created for the purpose of accelerating a manganese thesis as it relates to stored energy technologies. The intent is to advance the employment of manganese for greener power production and penetrating the battery market. DBC has identified and is in discussions with several battery technology developers.

DBC has seized a technology opportunity in the air purification sector, motivated by this once in 100 years virus pandemic.

The Company purchased the patents for a HVAC technology, and is currently developing it.

HVAC Technology  
Microbial test results, before and after



# Disruptive Battery Corp.

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- ★ In conjunction with US JV partner PureBiotics, Virginia State University (“VSU”) is researching and testing US patented HVAC Delivery System for mitigation of Covid-19 and other contaminants.
  - ★ PureBiotics HVAC system intends to provide a method of reducing microbial levels in the interior of buildings by vaporizing Pure Biotic mist to produce a vaporized antimicrobial Pure Biotic air mist entraining the vaporized air in an airstream This offers the potential for global scalability.
  - ★ VSU research and testing labs working in collaboration with top rated specialized hazard materials laboratory for Coronavirus testing as well as the Centers for Disease Control and Prevention (“CDC”) and other university labs, providing additional range of testing.
  - ★ VSU study would ensure that all of the data from all parties involved in the testing is properly structured and documented



# Comp Analysis

Company	Market Cap	Main Ore Type	Main Product	Acid Solubility	Flowsheet	Capex	Working Stage
Manganese X Energy Battery Hill, Canada	C\$ 49.7	Carbonate	HP MnSO <sub>4</sub>	<b>Easier</b>	<b>Simple</b>	<b>Lower</b>	PEA
Giyani Metals Corp., Kgwakgwe, Namibia	C\$ 62.3	Oxide	EMM, HP MnSO <sub>4</sub>	Poor	complex	Higher	PFS
Euro Manganese Corp., Chvaletice, Czechia	C\$ 209.7	Carbonate	EMM, HP MnSO <sub>4</sub>	<b>Easier</b>	complex	Higher	PFS
Element 25 Butcherbird, Australia	C\$ 229.9	Oxide	Ore Concentrate	N.A.	Simple	<b>Lower</b>	FS

Market data – January 22, 2021; [exchangerates.org.uk](http://exchangerates.org.uk) AUD/CAD=0.954

**Manganese X Energy is targeting the main manganese product for the growing EV and stationary energy markets. The ore has a relatively easy solubility in acid, and preliminary metallurgical tests (\*) suggest a simple flowsheet and lower capex compared to EMM processes.**

(\*) Tests performed by Kingston Process Metallurgy and Kemetco



# Key Milestones

	Manganese	LAB/PL	HVAC
2020	<ul style="list-style-type: none"> <li>* Drilling Program</li> <li>* Flowsheet development</li> <li>* Start permitting process</li> </ul>	<ul style="list-style-type: none"> <li>* Completed NI 43-101 technical report</li> </ul>	<ul style="list-style-type: none"> <li>* Testing and validation of vaporous formulas (VF)</li> </ul>
2021	<ul style="list-style-type: none"> <li>* Resource Estimate</li> <li>* Pilot Plant</li> <li>* PEA</li> </ul>	<ul style="list-style-type: none"> <li>* Spin-out of LAB</li> <li>* Drilling program</li> <li>* Metallurgical tests</li> </ul>	<p>Upon successful test of VF at laboratory level:</p> <ul style="list-style-type: none"> <li>* Pursue regulatory approvals</li> <li>* Adapt and re-engineer patented HVAC apparatus to new VF</li> </ul>
2022	<ul style="list-style-type: none"> <li>* Reserve Estimate</li> <li>* Demo Plant</li> <li>* Feasibility Study</li> </ul>	<ul style="list-style-type: none"> <li>* Pilot plant</li> <li>* PEA</li> </ul>	<ul style="list-style-type: none"> <li>* Perform tests in commercial buildings upon regulatory approvals, pursue partnerships</li> </ul>

# Corporate Strategy

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- ★ Focus on metallurgy from the start to de-risk project
- ★ Target a key strategic product – high grade manganese sulphate for electric vehicles and stationary battery systems
- ★ Invest in research and development of downstream products
- ★ Partnership with downstream players

# Management Team

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## **Martin Kepman, Chief Executive Officer & Director**

Martin Kepman and Associates Inc, founded in 1982, is a business development and management consulting firm owned and operated by its president Martin Kepman. Martin, in his 34 years of consulting experience, has consulted on a wide range of projects, in multiple industries ranging from software , soft goods, printing, food to mining.

## **Roger Dahn, Chairman of the Board & Director**

Since June, 2016, Mr. Dahn has served as vice-president of exploration and significantly advanced the company's Battery Hill project, right from its grassroots start to where it is now headed for a preliminary economic assessment. In addition managing and providing leadership to the board of directors, Mr. Dahn (with the full participation and support of the board) will continue to provide guidance and direction to management in advancing Manganese X's Battery Hill project. He will act as a direct liaison between the board and the company's management, through its chief executive officer, Mr. Dahn has over 38 years experience in the mining and exploration industry. His experience includes over 16 years with Noranda Inc. and Hemlo Gold Mines Inc. Mr. Dahn is a registered professional geologist and a qualified person as defined by National Instrument 43-101.

# Management Team

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## **Jay Richardson, Chief Financial Officer & Director**

Jay Richardson is a Canadian Chartered Accountant (CA CPA), a Singapore Certified Public Accountant (CPA) and a Fellow of the Insolvency Practitioners' Association of the United Kingdom (FIPA). He has practiced as a Partner at Ernst & Young (Canada and Singapore) and KPMG (UK) prior to establishing his own practice as a company doctor in Toronto, Canada in 1993. He has served as the CEO or Chairman of eight listed public companies and as CFO of numerous others. He has extensive public company governance experience from over a dozen Board memberships including having served as Interim Chairman of the Argus Corporation.

## **Perry MacKinnon Vice-President of Exploration**

Perry MacKinnon, PGeo, graduated in 1982 from Acadia University in Wolfville, N.S. (BSc, geology), and is an accredited professional geologist with the respective professional associations in Nova Scotia and New Brunswick. Mr. MacKinnon has over 30 years experience in the mining industry, having worked continent-wide on a variety of projects from the Alaskan Cordillera, the greenstone belts of Northern Manitoba and Quebec, and an array of mineralizing environments in Atlantic Canada, as well as porphyry-style projects in Mexico. He has worked as an independent consultant since 2005, with a significant focus on Canada's east coast. Mr. MacKinnon is a registered professional geologist and a qualified person as defined by National Instrument 43-101.

# Board of Directors

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## **Luisa Moreno, Ph.D., Director**

Dr. Moreno possesses unparalleled expertise in strategic minerals and related processes. She is currently Founder and Managing Director at Tahuti Global. Prior to this, she spent 7 years as a Financial and Senior Equity Analyst at Canadian financial research and investment banking firms.

## **Robert Tjandra, Director**

Mr. Tjandra brings with him a unique blend of professional management, leadership, and entrepreneurial skills, and has over 25 years of combined experience working, consulting, and developing businesses in construction, trading, oil and gas, fintech, and cleantech. He is passionate about development of EV and energy storage, including sustainable mining development. Mr. Tjandra serves as the President, Chief Operating Officer, and a director of Canbud Distribution Corp. (CSE: CBDX), and as a director of Florence Wealth Management Inc. (a registered Exempt Market Dealer in Canada). He is also a director of Electrum Charging Solutions, a private EV charging technology company.

## **Shimmy Posen, Corporate Secretary**

Mr. Posen is a lawyer and Partner at Garfinkle Biderman LLP, where he focuses on corporate finance, M&A and securities law. He acts for public and private companies, securities dealers and financial institutions on a number of public and private financings and commercial transactions.



# Financial Details

Number of Shares	120.6 million
Options	5.8 million
Warrants	8.7 million
Shares fully diluted	135.2 million
Market cap (May 4th, 2021)	C\$ 47.4 million

Frequency: DAILY

Source: stockhouse.com, May 04/2021



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## For Further Information

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