



MAYHEW PERFORMANCE Ltd.

CONSULT • DEVELOP • EXECUTE



# Projects and Achievements

2020-2024



MAYHEW PERFORMANCE Ltd.  
CONSULT • DEVELOP • EXECUTE

# Why Mayhew Performance?



Industry Leaders and Subject Matter Experts in Battery Electric Vehicle Technology and Mining Due Diligence.



Over 50 Years of combined experience in Surface and Underground Operations.



Innovation experts in Green Technology, GHG Emissions and Off Grid Power



Sustainable operations with increased Performance, Productivity and Audits



Timely execution of Projects, Practical and Operational Global expertise.



# Mayhew Performance Projects



Image: Torex Gold Resources Inc, Media Luna

## BEV Feasibility Study and Operational Readiness

Client	Torex Gold Resources Inc
Location	CAN: Toronto (Corporate Office)
Site	Mexico, Minera Media Luna
Commodity	Precious Metals
Timeframe	2022-Ongoing
Nature of Project	BEV Audits, Peer Review, Procurement and Supply Change, including Operational Readiness at the mine site
Scope of Work	BEV Audits, Peer Review, Infrastructure Review, Mine Design and Charging philosophy including supporting procurement.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Torex Gold Resources Inc, Media Luna

## BEV Audit and Operational Readiness Support

Client	Torex Gold Resources Inc
Location	CAN: Toronto (Corporate Office)
Site	Mexico, Minera Media Luna
Commodity	Precious Metals
Timeframe	2024-Ongoing
Nature of Project	BEV Audits, Peer Review and Operational Readiness support
Scope of Work	BEV Audits, Peer Review and Operational Readiness
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Glencore, ODP (Onaping Deep)

## BEV Audit

Client	Glencore, Onaping Deep
Location	CAN: Toronto (Corporate Office)
Site	ODP (Onaping Deep)
Commodity	Precious Metals
Timeframe	2024-Ongoing
Nature of Project	BEV Audits, and Operational Readiness support
Scope of Work	BEV Audits and Operational Readiness support
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



## Feasibility Study and Technology Roadmap

Client	Discovery Silver Corp.
Location	CAN: Toronto (Head Office)
Mine Site	Mexico: Cordero
Commodity	Silver
Timeframe	2023-Ongoing
Nature of Project	Feasibility Study
Scope of Work	Technology Roadmap Development and Mining Engineering Support
Technology	MPL BEV proprietary Simulation Software.

Image: Mexico, Cordero Future Mine Layout



# Mayhew Performance Projects



Image: Greenhills, British Columbia, Canada

<b>BEV Confidential Project</b>	
Client	Teck Resources
Location	CAN: British Columbia, Canada
Mine Site	CAN: Greenhills Operations
Commodity	Coal
Timeframe	2022-Ongoing
Nature of Project	BEV Confidential Project
Scope of Work	BEV Confidential Project
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Kinross Great Bear, Red Lake, Ontario Canada

## BEV Trade Off Study

Client	Kinross Gold Corporation
Location	CAN: Toronto (Corporate Office)
Mine Site	CAN: Red Lake, Ontario Canada
Commodity	Gold
Timeframe	2023-Ongoing
Nature of Project	BEV Trade Off Great Bear
Scope of Work	BEV Trade off Study and Mining Support
Technology	MPL BEV proprietary Simulation Software.





# Mayhew Performance Projects

## SURGICAL MINING TECHNOLOGIES

Data-Driven Solutions To Unlock Uneconomic  
Deposits – Quickly And Sustainably.

Image: Novamera, Surgical Mining

### Advisory Board Member and Mining Support

Client	Novamera
Location	CAN: Oakville, Canada (Corporate Office)
Mine Site	Several Mine Sites
Commodity	Base Metals and Precious Metals
Timeframe	2024-Ongoing
Nature of Project	Surgical Mining vs Conventional Mining
Scope of Work	Advisory and Mining Support
Technology	MPL Surface and Underground Experience



# Mayhew Performance Projects



Image: Riino, Zero Emission

## Advisory Board Member and Mining Support

Client	Riino
Location	CAN: Sudbury, Ontario Canada
Mine Site	Several Mine Sites
Commodity	Base Metals and Precious Metals
Timeframe	2023-Ongoing
Nature of Project	Zero Emission Monorail
Scope of Work	Advisory and Mining Support
Technology	MPL Surface and Underground Experience



# Mayhew Performance Projects



Image: Tucson, Arizona, USA

## BEV Desktop Study

Client	South32
Location	Tucson Arizona, USA
Mine Site	Hermosa Project, Taylor Deposit
Commodity	Zinc, Lead Silver
Timeframe	2022-2023 (Complete)
Nature of Project	Desktop Study
Scope of Work	BEV Desktop Study, Pre-feasibility Study, Risk assessment, Technical and Economical Analysis based on 15 work packages
Technology	MPL proprietary Simulation Software.



# Mayhew Performance Projects



Image: Codelco, El Teniente, Chile

## El Teniente Extension Project

Client	CODELCO
Location	El Teniente, Chile
Mine Site	Andesita, Diamante, Andes Norte, Recursos Norte, Mina Diablo Regimiento Phase 4&5
Commodity	Copper
Timeframe	Q3 2021-2022 (Complete)
Nature of Project	BEV Desktop Study
Scope of Work	BEV Desktop Study, Pre-feasibility Study, Risk assessment, Technical and Economical Analysis, Onsite Workshop Training.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Detour Mine , Ontario, Canada

## Green House Gas Emissions

Client	Kirkland Lake Gold
Location	CAN: Detour Lake, Macassa Mine AUS: Fosterville
Mine Site	CAN: Detour Lake, Macassa Mine AUS: Fosterville, Cosmo
Commodity	Gold
Timeframe	2021-2023 (Complete)
Nature of Project	GHG Consultation
Scope of Work	SOW1 GHG Program Audits, SOW 2 GHG Calculation, SOW 3GHG Recommendation to Leadership, and GHG implementation at sites.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects

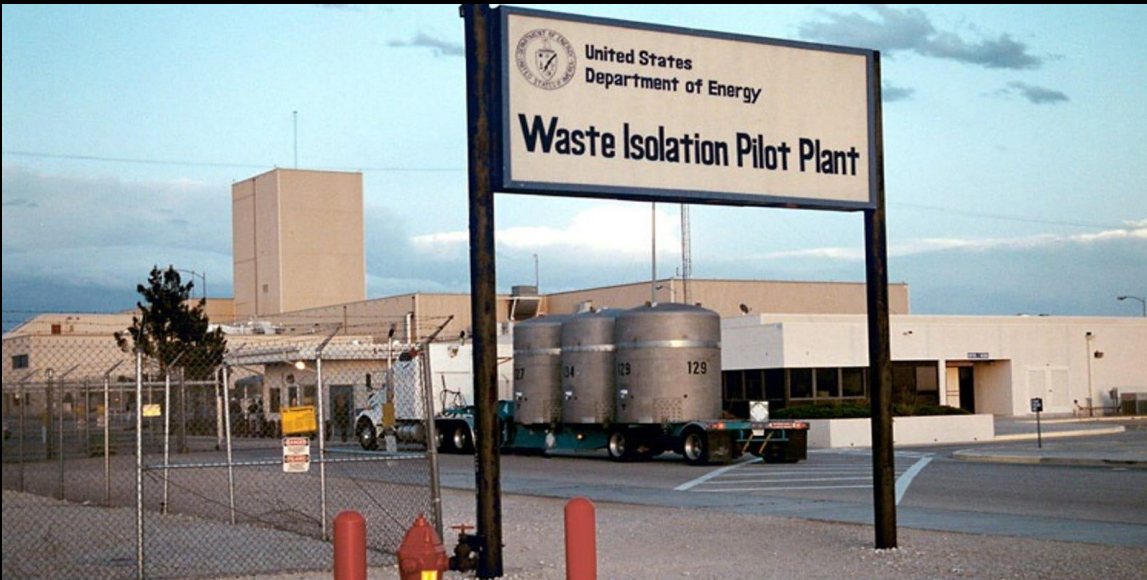


Image: WIPP Project, New Mexico, USA

## BEV Operational Feasibility

Client	United States Department of Energy (DOE)
Location	New Mexico, USA
Mine Site	WIPP Project
Commodity	Nuclear Waste
Timeframe	2021-2022 (Complete)
Nature of Project	BEV Operational Feasibility
Scope of Work	BEV Assessment, Audit and implementation including recommendation of new equipment.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Vale, Sudbury

## BEV Study and Support Program

Client	Vale North Atlantic Operations
Location	Sudbury, Ontario
Site	Vale, Sudbury
Commodity	Base Metals
Timeframe	2022-2023 (Complete)
Nature of Project	BEV Study and Support Program
Scope of Work	BEV Fleet review, BEV vs Diesel, North Atlantic fleet review and procurement and operational readiness
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



(L: Marcel Levesque R: Shawn Frappier)  
Image: Mayhew Performance Head office, Sudbury

## BEV General Awareness Training Program

Client	Vale North Atlantic Operations
Location	Sudbury, Ontario
Site	Learning and Development, Sudbury Operations
Commodity	Base Metals
Timeframe	2021 - 2022 (Complete)
Nature of Project	BEV Training Development and E- Learning modules.
Scope of Work	Video Production for BEV General Awareness; Onsite and In-house Training development for Battery Electric Vehicles. (Train the Trainer, E-Learning Modules, Underground Training)
Technology	MPL BEV proprietary Simulation Software.





# Mayhew Performance Projects



Image: Macassa Mine, Kirkland Lake, Ontario

## BEV Audit Program for Executive Leadership

Client	Kirkland Lake Gold
Location	Kirkland Lake, Ontario
Mine Site	Macassa Mine
Commodity	Gold
Timeframe	2021-2023 (Complete)
Nature of Project	BEV Productivity Audit
Scope of Work	Inspection Audit, Performance and Productivity tracking, GAP analysis, Charging audit with cooling system, Operational Recommendations.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Detour Mine , Ontario, Canada

## Enhanced Recycling Program, Canada

Client	Kirkland Lake Gold
Location	Detour Lake, Ontario, Canada
Mine Site	Detour Lake
Commodity	Gold
Timeframe	2021- 2022 (Complete)
Nature of Project	Enhanced Recycling Program, GHG Reduction
Scope of Work	Design, Manage and Implement Enhanced Recycling Program. Audits and Reporting on GHG Carbon Footprint reduction at site.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects

**KENNECOTT COPPER – Bingham Canyon**



## BEV/ Railveyor/ Conveyor Desktop Study

Client	Kennecott Copper, RioTinto
Location	Utah, USA
Mine Site	Bingham Canyon, USA
Commodity	Copper
Timeframe	2020-2021 (Complete)
Nature of Project	Operational Feasibility for BEV, Railveyor and Conveyor.
Scope of Work	Desktop Study for the open pit, Trade-off Study for BEV vs Diesel, and power calculation and assumptions; Material handling and logistics
Technology	MPL BEV proprietary Simulation Software.

Image: Kennecott Copper, Bingham Canyon, USA



# Mayhew Performance Projects



Image: Twin Metals, Minnesota, USA

## BEV Desktop Study

Client	Twin Metals
Location	Minnesota, USA
Mine Site	Maturi project
Commodity	Base Metals
Timeframe	2021-2022 (Complete)
Nature of Project	Desktop Study and Evaluation for Board Approval
Scope of Work	BEV Desktop Study, Pre-feasibility Study, Risk assessment, Technical and Economical Analysis.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Nickel Rim South, Glencore, Sudbury

## Nickel Rim South, Extension Project

Client	Vale, Glencore
Location	Sudbury, ON
Mine Site	Nickel Rim South(NRS)
Commodity	Base Metals
Timeframe	2022-2022 (Complete)
Nature of Project	BEV Peer Review
Scope of Work	BEV Peer review, Validation of Production Profile for Equipment selection.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



## Nalunaq Feasibility Study and Mine Manager

Client	AEX Gold
Location	Nanortalik, Greenland
Mine Site	Nalunaq
Commodity	Gold
Timeframe	2020-2021 (Complete)
Nature of Project	BEV Operational Assessment and mine operation readiness.
Scope of Work	BEV Trade-offs, Operational assessment to return into production.
Technology	MPL BEV proprietary Simulation Software.

Image: Nalunaq Project Nanortalik, Greenland



# Mayhew Performance Projects



Image: SAN Gabriel mine Lima, Peru

## BEV Desktop Study

Client	Buenaventura
Location	Lima, Peru
Mine Site	SAN Gabriel mine
Commodity	Base Metals
Timeframe	2021-2022 (Complete)
Nature of Project	BEV Desktop Study
Scope of Work	BEV Desktop Study, Pre-feasibility Study, Risk assessment, Technical and Economical Analysis.
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



Image: Nickel Rim South, Glencore, Sudbury

## Nickel Rim South BEV vs. Diesel

Client	Glencore Sudbury Integrated Nickel Operations (INO)
Location	Sudbury, ON
Mine Site	Nickel Rim South (NRS)
Commodity	Nickel
Timeframe	2021-2022 (Complete)
Nature of Project	BEV vs Diesel Comparative Analysis
Scope of Work	BEV vs Diesel comparison, data simulation and Validation study and Report findings.
Technology	MPL BEV proprietary Simulation Software.





# Mayhew Performance Projects



Image: Nickel Rim South, Glencore, Sudbury

## Glencore FHP SOP development

Client	Glencore Sudbury Integrated Nickel Operations (INO)
Location	Sudbury, ON
Mine Site	Nickel Rim South (NRS)
Commodity	Nickel
Timeframe	2021-2022 (Complete)
Nature of Project	Fatal Hazard Protocol – Development of Standard Operating Procedures.
Scope of Work	Standard Operating Procedure development for Tires and Rims, Updating Fatal Hazard Protocols
Technology	MPL BEV proprietary Simulation Software.



# Mayhew Performance Projects



(Image: College Boreal, Sudbury)

## College Boreal Training, Canada

Client	College Boreal
Location	Sudbury, Ontario
Site	Mayhew Performance Headquarters
Commodity	Education
Timeframe	2020-2021 (Complete)
Nature of Project	BEV Training Development and E-Learning modules.
Scope of Work	1 <sup>st</sup> BEV Training in the world developed by MPL. SOW included BEV General Awareness course development and training College students.
Technology	MPL BEV proprietary Simulation Software.



Mayhew Performance LTD

## Services we Provide

- This a detailed description of services we provide.
- For further information, contact us.

Mike Mayhew  
Mikemayhewperformance.com  
Mobile: 705-923-6298

### MPL Consulting

We provide consulting services which include Mine Due Diligence, Front End Decision Process, Feasibility of BEV, Mine Design for effective BEV implementation.

### BEV Training

Driving awareness and Education around BEV implementation with Risk Management, Health Care Safety and H&S Safety Training

### Battery Management

Effective Battery Management and fleet utilization including safe handling.

### BEV Audits and Support

Replacement batteries and chargers, Spare Parts, Business Service & Support Field Service Support

### Case studies

We provide Case Studies uniquely designed for your mine

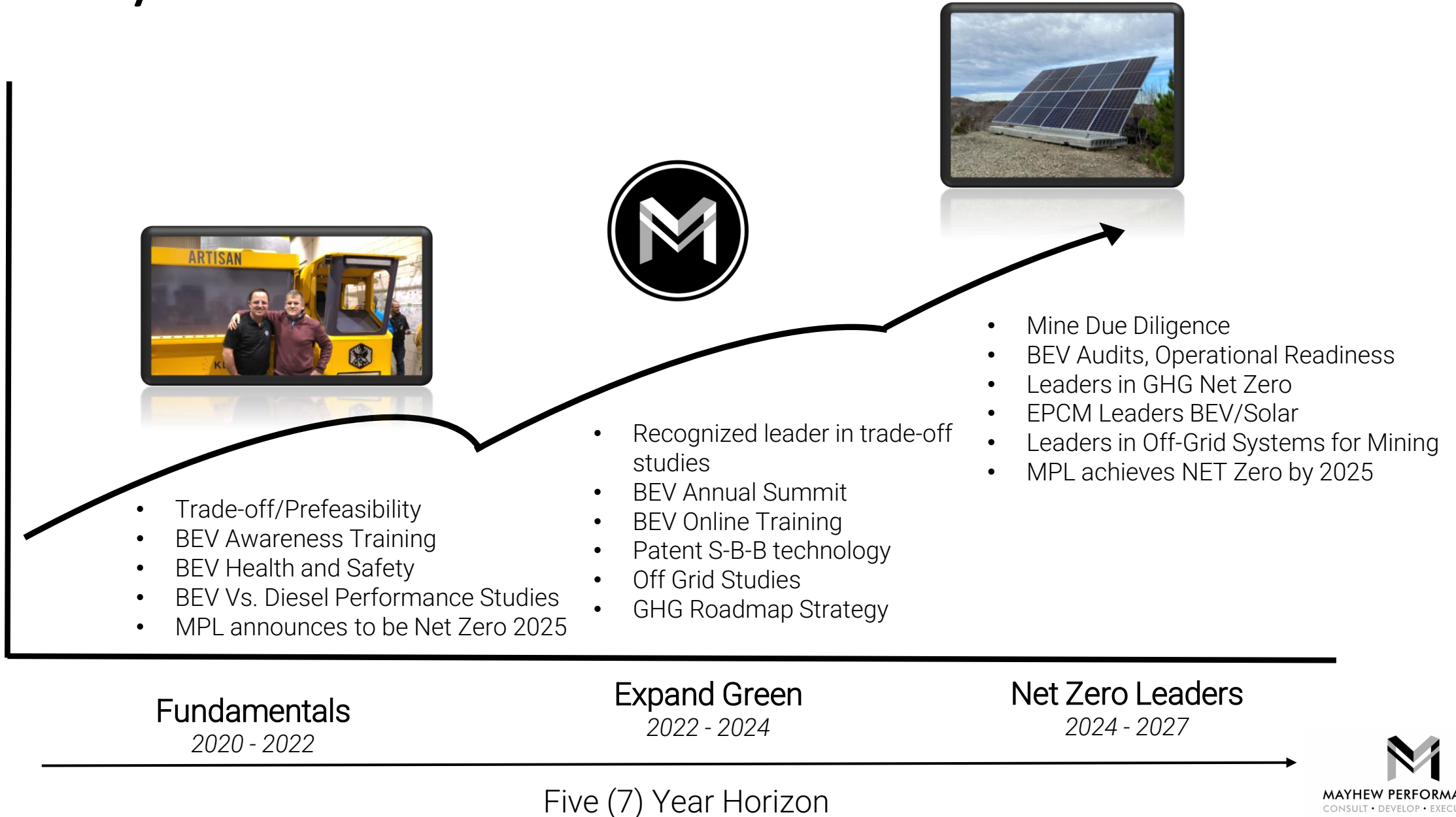
- Desktop Studies
- BEV vs Diesel
- Trolley Assist

### MPL Energy Solutions

We provide energy solutions uniquely designed for homes/mines which includes Solar energy and End of Life



# Mayhew Performance – Horizons of Growth



- Trade-off/Prefeasibility
- BEV Awareness Training
- BEV Health and Safety
- BEV Vs. Diesel Performance Studies
- MPL announces to be Net Zero 2025

- Recognized leader in trade-off studies
- BEV Annual Summit
- BEV Online Training
- Patent S-B-B technology
- Off Grid Studies
- GHG Roadmap Strategy

- Mine Due Diligence
- BEV Audits, Operational Readiness
- Leaders in GHG Net Zero
- EPCM Leaders BEV/Solar
- Leaders in Off-Grid Systems for Mining
- MPL achieves NET Zero by 2025

**Fundamentals**  
2020 - 2022

**Expand Green**  
2022 - 2024

**Net Zero Leaders**  
2024 - 2027

Five (7) Year Horizon



# Client Testimonials



“Torex Gold Resources engaged with Mayhew Performance Ltd in 2023 to assist us in evaluating the safety and technical aspects of BEV equipment during the selection of suppliers and models for our battery electric hybrid fleet at the Media Luna project in Mexico. Mike’s in-depth knowledge, coupled with his hands-on underground operating experience was key in the timely evaluation and selection, as well as in establishing key partnerships for our project. Mike understands the operational challenges when it comes to BEVs; and enabled us to appropriately understand and mitigate the risks associated with battery management, safe handling and storage, all of which is invaluable to our team as we prepare for the successful implementation of our (large) battery fleet”.

**Gertjan Bekkers, P.Eng Vice President Mines Technical Services**



“Discovery Silver is proud to be working closely with Mayhew Performance Ltd. as they continue to expand into the Green Energy Space. MPL is supporting DSV mission towards reducing our carbon footprint and developing our technology roadmap for the Cordero Project in Mexico.

**Tony Makuch, P.Eng President & CEO**



“Twin Metals Minnesota is committed to reducing our carbon footprint and moving towards Net Zero in order to be a sustainable mining company. We engaged with Mayhew Performance early as the Subject Matter Experts in Battery Electric Vehicles to help us rationalize and prove the business case to allow us to move towards BEV as the mine goes into production. Having MPL as a partner in the study was paramount to our overall decision-making process in moving forward with Battery Electric Equipment for the mine”.

**Glenn Barr, Vice President, Project Development**

# Mayhew Performance Clients



Discovery silver



NOVAMERA



GLENCORE



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