



**DEFENSE  
METALS**

# **Delivering Critical Metals to Meet National Security + Green Technology Needs**

JANUARY 2024 CORPORATE PRESENTATION

[DEFENSEMETALS.COM](https://www.defensemets.com)

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TSX-V: **DEFN**  
OTCQB: **DFMTF**  
FSE: **35D**

**DISCOVERY**  
GROUP



# FORWARD-LOOKING STATEMENTS

This presentation includes certain statements that constitute “forward-looking information or statements” within the meaning of applicable securities law, including without limitation, the Company’s plans for its Wicheeda REE project, other statements relating to the technical, financial and business prospects of the Company, completing additional studies, complete pre-feasibility study on Wicheeda project, advancing the Wicheeda project, environmental studies, optimize pilot plants, completing project milestones in 2023 and onwards, expected timelines, and other matters. Forward-looking statements address future events and conditions and are necessarily based upon a number of estimates and assumptions. These statements relate to analyses and other information that are based on forecasts of future results, estimates of amounts not yet determinable and assumptions of management. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often, but not always, using words or phrases such as “expects” or “does not expect”, “is expected”, “anticipates” or “does not anticipate”, “plans”, “estimates” or “intends”, or stating that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved), and variations of such words, and similar expressions are not statements of historical fact and may be forward-looking statements. Forward-looking statements are necessarily based upon a number of factors that, if untrue, could cause the actual results, performances or achievements of the Company to be materially different from future results, performances or achievements express or implied by such statements. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which the Company will operate in the future, including the price of metals, anticipated costs and the ability to achieve goals, that general business and economic conditions will not change in a material adverse manner, that financing will be available if and when needed and on reasonable terms, and that third party contractors, equipment and supplies and governmental and other approvals required to conduct the Company’s planned exploration activities will be available on reasonable terms and in a timely manner. While such estimates and assumptions are considered reasonable by the management of the Company, they are inherently subject to significant business, economic, competitive and regulatory uncertainties and risks.

Forward-looking statements are subject to a variety of risks and uncertainties, which could cause actual events, level of activity, performance or results to differ materially from those reflected in the forward-looking statements, including, without limitation : (i) risks related to rare earth elements, and other commodity price fluctuations; (ii) risks and uncertainties relating to the interpretation of exploration and metallurgical results; (iii) risks related to the inherent uncertainty of exploration and cost estimates and the potential for unexpected costs and expenses; (iv) that resource exploration and development is a speculative business; (v) that the Company may lose or abandon its property interests or may fail to receive necessary licences and permits; (vi) that environmental laws and regulations may become more onerous and risks related to adverse weather or climate events; (vii) that the Company may not be able to raise additional funds when necessary; (viii) the possibility that future exploration, development or mining results will not be consistent with the Company’s expectations including risks relating to inaccurate geological, metallurgical and engineering assumptions; (ix) exploration and development risks, including risks related to accidents, equipment breakdowns, labour disputes or other unanticipated difficulties with or interruptions in exploration and development; (x) competition; (xi) the potential for delays in exploration or development activities or the completion of geologic reports or studies; (xii) the uncertainty of profitability based upon the Company’s history of losses; (xiii) risks related to environmental regulation and liability; (xiv) risks associated with failure to maintain community acceptance, agreements and permissions (generally referred to as “social licence”), including local First Nations and risks relating to the impact of Covid-19 or other viruses and diseases on the Company’s ability to operate (xv) risks relating to obtaining and maintaining all necessary government permits, approvals and authorizations relating to the continued exploration and development of the Company’s projects; (xvi) risks related to the outcome of legal actions; (xvii) political and regulatory risks associated with mining and exploration; (xix) risks related to current global financial conditions; and (xx) other risks and uncertainties related to the Company’s prospects, properties and business strategy. These risks, as well as others, could cause actual results and events to vary significantly. Factors that could cause actual results to

differ materially from those in forward looking statements include, but are not limited to, continued availability of capital and financing and general economic, market or business conditions, the loss of key directors, employees, advisors or consultants, adverse climate and weather conditions, increase in costs, equipment failures, risks relating to unanticipated operational difficulties (including failure of equipment or processes to operate in accordance with specifications or expectations, cost escalation, unavailability of materials and equipment, government action or delays in the receipt of government approvals, industrial disturbances or other job action, and unanticipated events related to health, safety and environmental matters), risks relating to inaccurate geological, metallurgical and engineering assumptions, decrease in the price of rare earth elements, the impact of Covid-19 or other viruses and diseases on the Company’s ability to operate, an inability to predict and counteract the effects of COVID-19 on the business of the Company, including but not limited to, the effects of COVID-19 on the price of commodities, capital market conditions, restriction on labour and international travel and supply chains, litigation, delayed results, failure of counterparties to perform their contractual obligations and fees charged by service providers. Investors are cautioned that forward-looking statements are not guarantees of future performance or events and, accordingly are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty of such statements. The forward-looking statements included in this presentation are made as of the date hereof and the Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as expressly required by applicable securities legislation. The Company has a limited history with no assurance of revenues; estimating mineral resources is risky; exploration and development is speculative and may not result in profitable mining operations; exploration, development, and mining requires substantial capital, resulting in significant financing risks and shareholder dilution. The key risks related to exploration in general are that chances of identifying economical reserves are extremely small. The scientific and technical content of this presentation has been reviewed and approved by Kris Raffle, P.Geo., a Director of the Company and a Qualified Person as defined by National Instrument 43-101. Visit [www.sedarplus.ca](http://www.sedarplus.ca) for further information and disclosure on the for the Wicheeda Rare Earth Element Project, British Columbia, Canada and the Company.

## Market & Industry Data

The information contained herein includes market and industry data that has been obtained from third party sources, including industry publications. The Company believes that its industry data is accurate and that its estimates and assumptions are reasonable, but there is no assurance as to the accuracy or completeness of this data. Third party sources generally state that the information contained therein has been obtained from sources believed to be reliable, but there is no assurance as to the accuracy or completeness of included information. Although the data is believed to be reliable, the Company has not independently verified any of the data from third party sources referred to in this presentation or ascertained the underlying economic assumptions relied upon by such sources. Not for Distribution; No Offering This is for information purposes only and may not be reproduced or distributed to any other person or published, in whole or part, for any purpose whatsoever. This does not constitute a general advertisement or general solicitation or an offer to sell or a solicitation to buy any securities in any jurisdiction. Such an offer can only be made by prospectus or other authorized offering document. This presentation and materials or fact of their distribution or communication shall not form the basis of, or be relied on in connection with any contract, commitment or investment decision whatsoever in relation thereto. No securities commission or similar authority in Canada or any other jurisdiction has in any way passed upon the adequacy or accuracy of the information contained herein. You should not rely upon this document in evaluating the merits of investing in our securities or for understanding our business.





# DISCOVERY GROUP

An alliance of public companies, individually managed and focused on the advancement of global mineral exploration and mining projects, with a proven track record of generating shareholder value.

Over C\$2.6 billion  
in M&A since 2016

Over C\$1 billion in  
equity raised since 2002

#### Companies succeed with access to:

- Integral industry relationships
- Increased company profile
- High-quality deal flow
- Significant capital
- Proven technical & management talent



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**ER** ELEMENTAL  
ALTUS  
ROYALTIES

**FIREWEED  
METALS**

**GoldBasin**  
RESOURCES CORPORATION

**K2  
GOLD**

**KODIAK COPPER**



**PROSPECTOR**  
Metals Corp.

**VALORE**  
METALS CORP.

# INVESTMENT HIGHLIGHTS

- **High-Quality Asset**

100% owned Wicheeda rare-earth project, with potential to be a globally significant producer

- **Excellent Accessibility**

Project accessible by road, with proximity to rail and power infrastructure, and access to a major deep-sea port

- **Technically Strong Project**

Open pit project with favorable, conventional metallurgy

- **Experienced Technical Team**

Working with industry-leading partners (SGS, SRK Consulting, APEX Geoscience, Hatch)





# EXPERIENCED MANAGEMENT + BOARD



**Craig Taylor**  
CEO + Director

Since 2018, Craig Taylor has been a Director and the CEO of Defense Metals Corp. and has helped advance the project from exploration to development stage. Mr. Taylor has been a director and officer of several TSX.V listed resources companies.



**Dr. Luisa Moreno, Ph.D.**  
President + Director

Dr. Luisa Moreno is a Physics Engineer, with a PhD in Materials Science and Mechanics from Imperial College London, UK. She is known as a leading analyst in rare earths and has published several reports and articles for the investment community. She is an officer and Director of several green materials and technology companies.

**John Goode, P.Eng. Metallurgical Consultant**

John has undertaken many programs testwork, engineering and economic evaluations of existing and proposed REE recovery operations including Chinese separation plants, Avalon Rare Metal's Thor Lake project; Quest's Strange Lake project; Search Minerals Foxtrot deposit; and Polymetal/Vostok's Tomtor REE-Nb-Sc project in Siberia.

**Ryan Cheung, CPA, CA CFO, Corp. Sec. + Director**

Ryan holds a Bachelor of Commerce degree and has been providing accounting, management, securities regulatory-compliance services to private as well as publicly listed companies.

**Alex Heath, CFA, ICD.D VP Corporate Development**

Alex has a B.Com. with honours from the University of British Columbia and is a CFA Charterholder. He spent eight years with Saloman Partners including as a Vice-President of Investment Banking focused on mining financings and merger and acquisition transactions. In 2019, he joined Discovery Group as Strategic Advisor, Corporate Development & Investor Relations. Mr. Heath is also a director of several public mining issuers.

**Kristopher J. Raffle, P.Geo. NI 43-101 Qualified Person + Director**

Kristopher is a Partner and Principal Geologist with the leading geologic consulting firm, APEX Geoscience Ltd., with over 20 years of international exploration experience. He is a Director and QP of several publicly listed mineral resource companies.

**John Robins, P.Geo., Advisor, Co-Founder & Principal of Discovery Group**

John Robins is a professional geologist, prospector and entrepreneur with over 35 years of experience in the mining industry. In 2022 he was the recipient of the AME's Murray Pezim Award for his significant contribution to the financing of exploration and development projects over the last 20 years. He was also awarded the Spud Huestis Award in 2008 for having made significant contributions to mineral exploration in British Columbia and Yukon.

**William H. Bird, P.Geo. Director**

William has a unique combination of business credentials and mineral-industry expertise, with a broad background as officer and independent director for publicly traded mineral-resource companies. Including the CEO of two rare earths companies.

**Len Clough Director**

Len spent 13 years in investment management and has extensive public company management experience. He has worked in senior management roles including CEO and as a director of several issuers.

**Andrew Burgess, CPA, CA Director**

With more than 35 years of experience, Andrew is a Chartered Accountant, a Certified Public Accountant, and the former CFO of Spectrum Mining Corporation.

**Dale Wallster Director**

Dale is a prospector and geologist with over 40 years' experience in North American mineral deposit exploration. As President and founder of Roughrider Uranium Corp., Dale and his team are widely credited for the discovery of Hathor's Roughrider deposit. In January of 2012 Rio Tinto plc acquired Hathor for CAD\$650MM.



# FINANCIAL SNAPSHOT

## CAPITAL STRUCTURE as of January, 2024

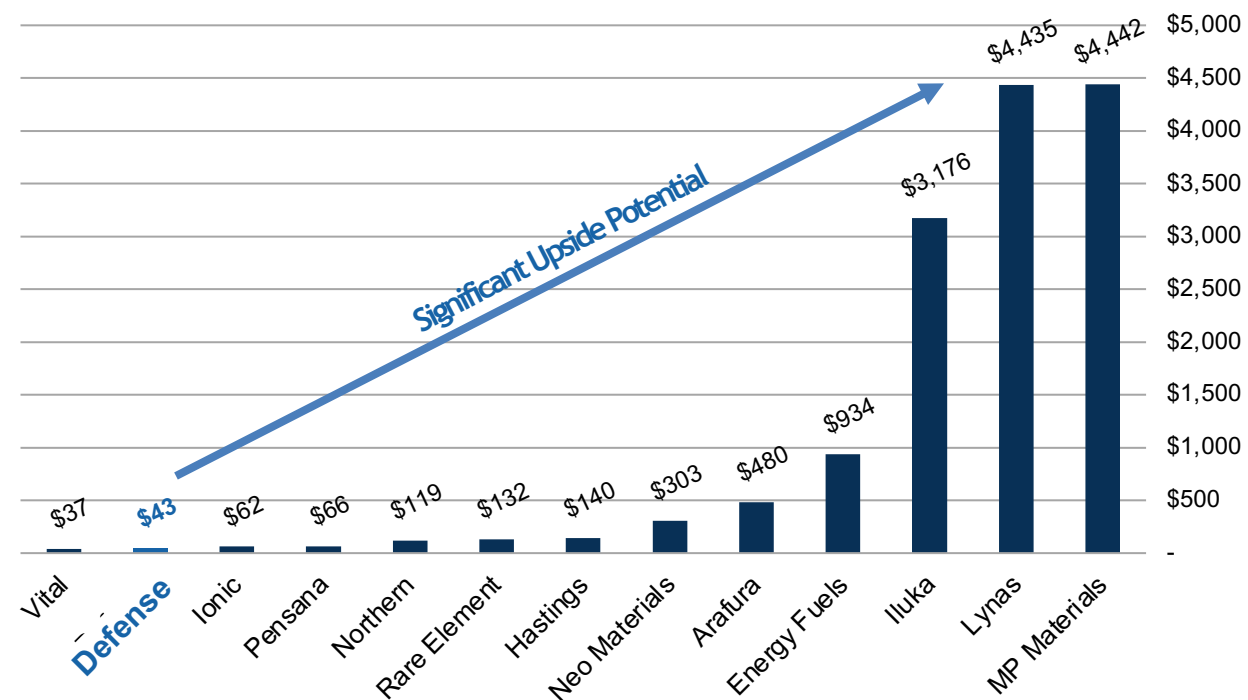
Shares Outstanding. 255.7M

Warrants 30.6M

Options 25.5M

Fully Diluted 316.6M

## Market Cap Comparison (US\$M)



Source: S&P Capital IQ Treasury Stock Method, Market Date: July 7, 2023





# THE CRITICAL ROLE OF RARE EARTH ELEMENTS – APPLICATIONS

## AGRICULTURE

- Farm equipment motors
- Fertilizers

## AUTOMOTIVE

- Electric Vehicle Motors
- Catalytic converters

## AEROSPACE/ DEFENSE

- Plane Motors
- Submarines
- Guidance equipment
- Thermal barrier coatings

## CHEMICALS/ CATALYSTS

- Optical-quality glass
- Air pollution control

## HEALTHCARE

- MRI scanners
- CT scanners

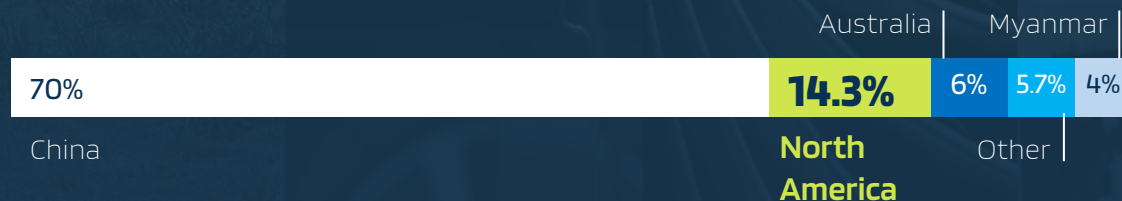
## ELECTRONICS

- Computer screens
- Smartphones
- Batteries
- Hard drives

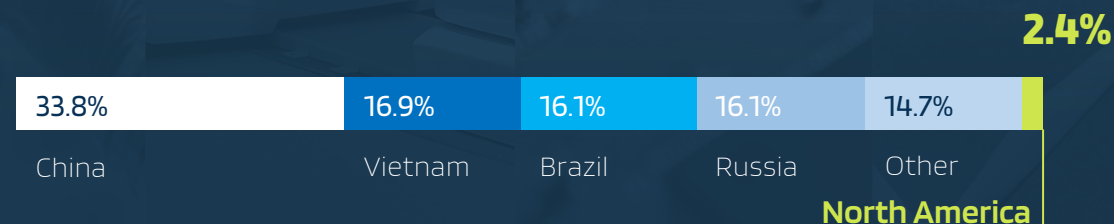
## POWER GENERATION

- Wind turbines
- Other power generators

## Rare Earth Elements 2022 Global Production



## Rare Earth Elements 2022 Global Reserves (Estimate)



# LEADING NORTH AMERICA'S SUPPLY CHAIN

Targeting  
**25,000 tonnes REO,**  
 ~10% of current  
 global  
 production<sup>1</sup>

		Supply Chain		
		Mining & Mineral Upgrade	Cracking	Separation
Production (tonnes REO)	Country	Ore Conc	Mixed Chemical Conc	Separate Oxides
140,000	China	China	China	China
38,000	United States	United States	China	China
30,000	Myanmar	Myanmar	Myanmar, China	China
<b>25,000</b>	<b>WICHEEDA</b>	<b>CANADA</b>	<b>PFS UNDERWAY</b>	<b>TO BE STUDIED</b>
17,000	Australia	Australia	Malaysia	Malaysia, China
3,000	India	India	India	India
2,700	Russia	Russia	Estonia	Estonia
4,000	Madagascar	Madagascar	China	China
2,000	Thailand	Thailand	Thailand	Thailand
1,000	Brazil	Brazil	Brazil	Brazil
1,000	Vietnam	Vietnam	Vietnam	Vietnam
500	Burundi	Burundi	China	China

1) Source: USGS Rare Earth Mineral Commodity Summary, 2021

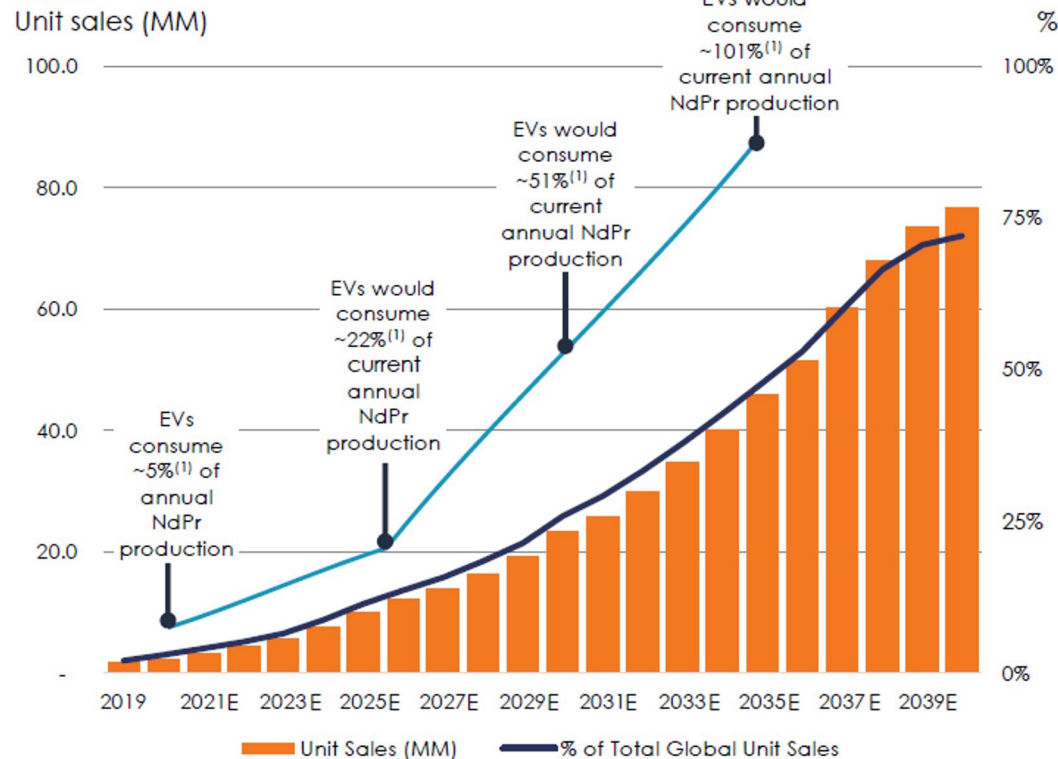




# ELECTRIC VEHICLES

## A Driver for Rare Earth Demand

Global Electric Vehicle Units Sales / % of Global Total Vehicle Unit Sales



Source: MP Materials, Morgan Stanley, CRU

- An electric vehicle (EV) uses 1kg to 3kg of neodymium-iron-boron (NdFeB) magnets in standard drivetrain motors
- NdFeB magnets are in 93% of all electric vehicles. Tesla, GM, Ford, VW, Hyundai, Toyota and others build vehicles using these magnets
- Every ten million new EVs require ~10,000 tonnes of additional neodymium or ~20% of current annual global supply. Over 70 million electric vehicles are expected to be sold when internal-combustion-engine vehicles are phased out



# STRATEGIC LOCATION

- Strategically positioned 80 km from Prince George and accessible from a major forestry service road, which connects to **Highway 97**
- The 100% owned 8,301-hectare Wicheeda deposit, has power transmission lines, a gas pipeline and a major rail line nearby
- Prince George, British Columbia, is a mining centre, with a skilled workforce
- **Port of Prince Rupert is 500km to the west and accessible by rail and road**



PRINCE RUPERT PORT, EXPANSION PLANNED BY 2024



PRINCE GEORGE TRAIN YARD





# MINERAL RESOURCE

The 2023 MRE comprises a 6.4 million tonne Measured Mineral Resource, averaging 2.86% (TREO)<sup>1</sup>; 27.8 million tonne Indicated Mineral Indicated Resource, averaging 1.84% TREO; and 11.1 million tonne Inferred Mineral Resource, averaging 1.02% TREO, reported at a cut-off grade of 0.5% TREO

Category	Tonnes (Million)	Grade > Cutoff											
		TREO <sup>2</sup> (%)	TREO (kT)	CeO <sub>2</sub> (%)	La <sub>2</sub> O <sub>3</sub> (%)	Pr <sub>6</sub> O <sub>11</sub> (%)	Nd <sub>2</sub> O <sub>3</sub> (%)	Sm <sub>2</sub> O <sub>3</sub> (ppm)	Gd <sub>2</sub> O <sub>3</sub> (ppm)	Eu <sub>2</sub> O <sub>3</sub> (ppm)	Dy <sub>2</sub> O <sub>3</sub> (ppm)	Tb <sub>4</sub> O <sub>7</sub> (ppm)	Ho <sub>2</sub> O <sub>3</sub> (ppm)
Measured	6.4	2.86	183	1.39	1.00	0.11	0.31	312	139	63	35	12	4
Indicated	27.8	1.84	516	0.89	0.62	0.07	0.21	232	111	50	32	10	4
M+I	34.2	2.02	699	0.98	0.69	0.08	0.23	247	116	52	32	10	4
Inferred	11.1	1.02	113	0.50	0.31	0.04	0.13	166	91	38	35	9	5

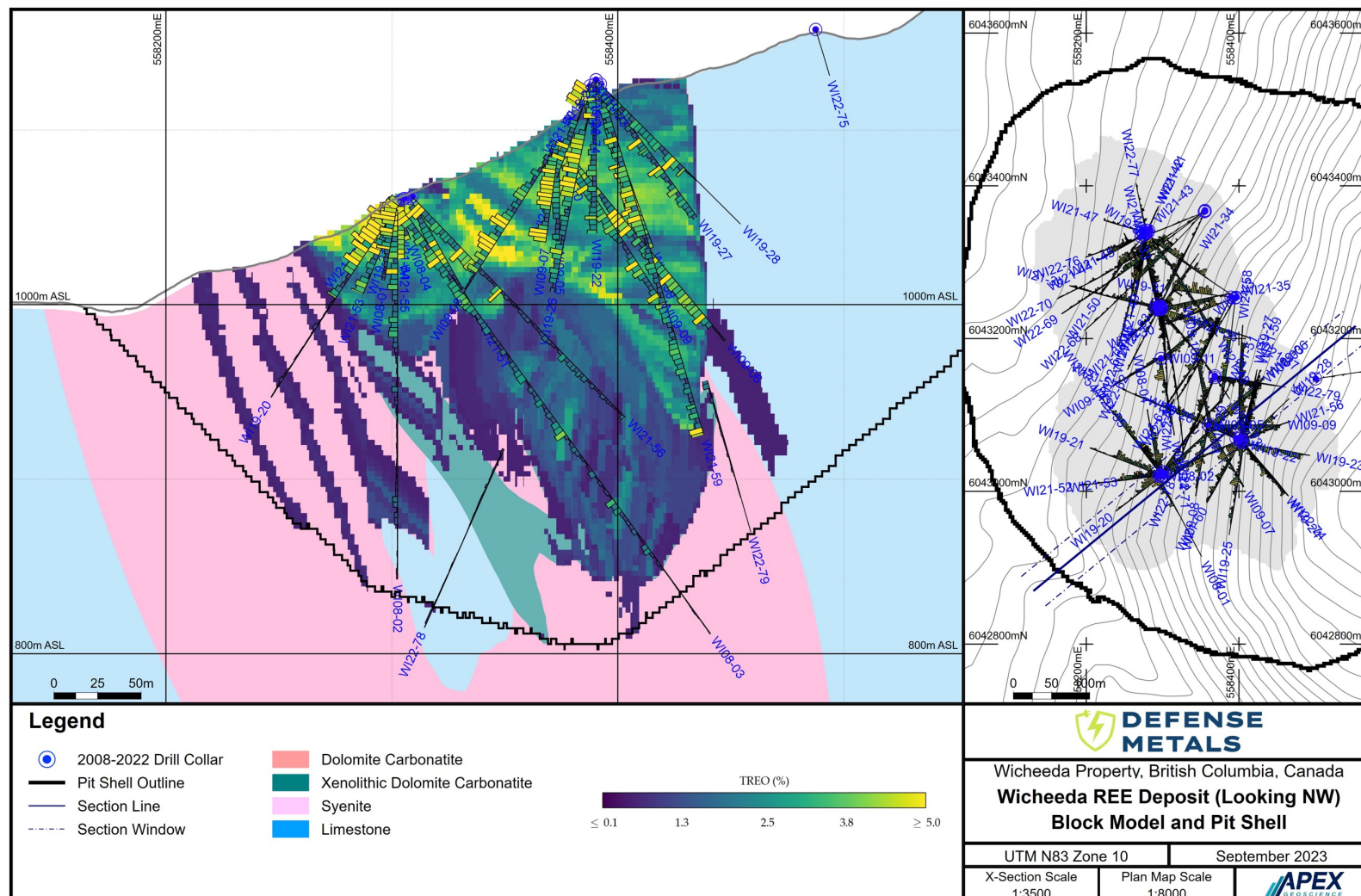
1) Total rare earth oxide, sum of 10 oxides: CeO<sub>2</sub>, La<sub>2</sub>O<sub>3</sub>, Nd<sub>2</sub>O<sub>3</sub>, Pr<sub>6</sub>O<sub>11</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub> and Ho<sub>2</sub>O<sub>3</sub>

See Defense Metals News Release Dated September 12, 2023



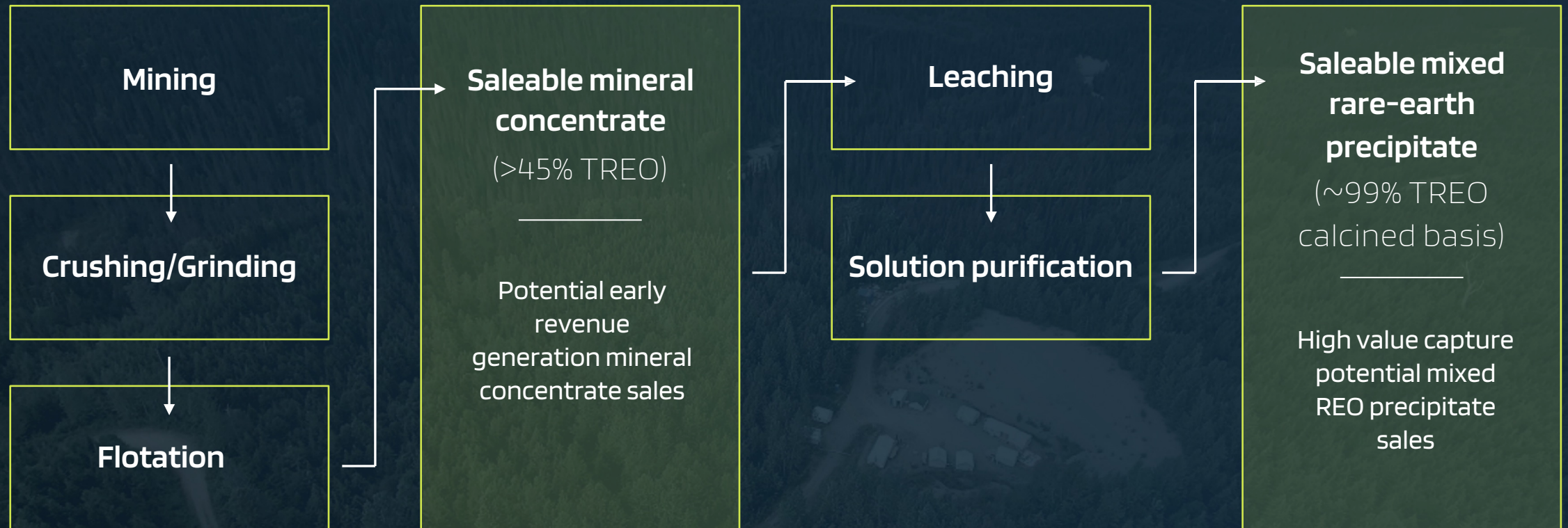
# RESOURCE BLOCK MODEL AND CONCEPTUAL PIT SHELL

High-grade  
rare earths at  
surface





# WICHEEDA FLOWSHEET



The flowsheet will be finalized with the PFS which is expected to be completed in H1-2024



# FLOTATION RESULTS

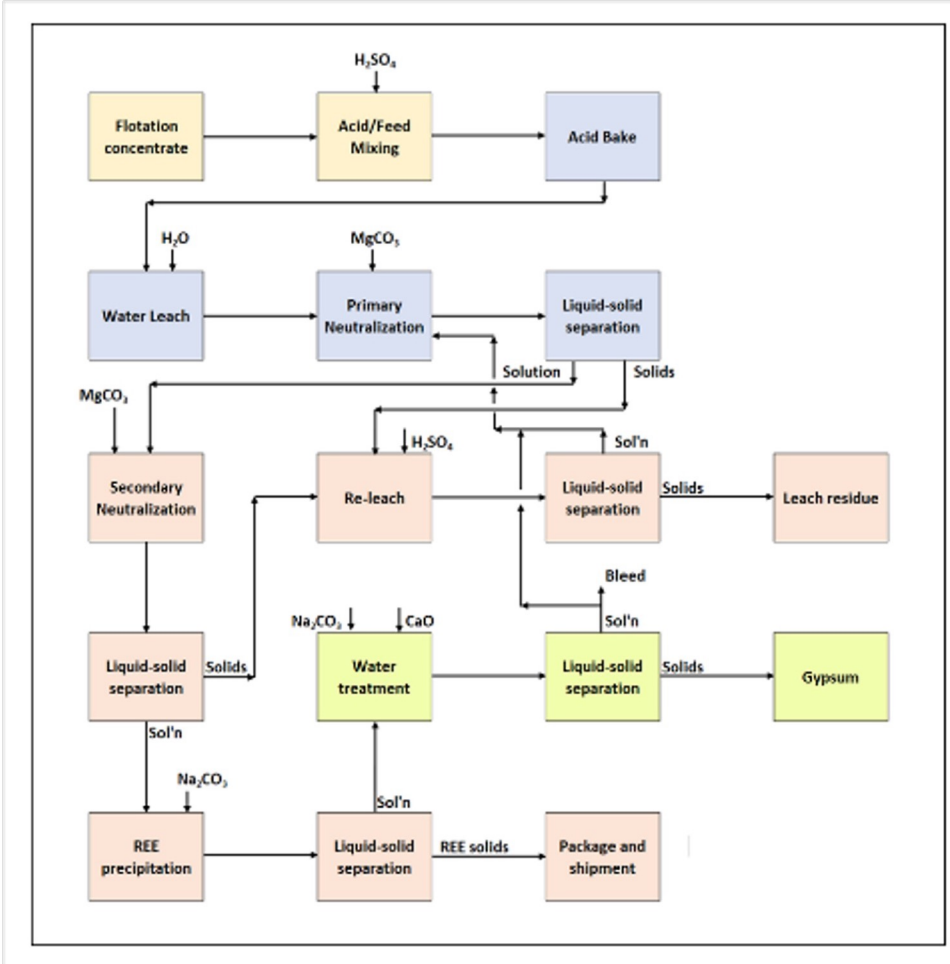
**Feed grade versus recovery at variable target concentrate grades.  
Demonstrates high concentrate grade and recoveries across a range of feed grades.**

	Variability Samples				
	Avg. Head Grade REO%	40% REO	45% REO	50% REO	55%REO
DC Samples (n=9)	3.3	85	81	77	71
DC-XE-SYN Blends (n=4)	2.5	80	77	75	68
XE-SYN Samples (n=10)	1.3	59	-	-	-

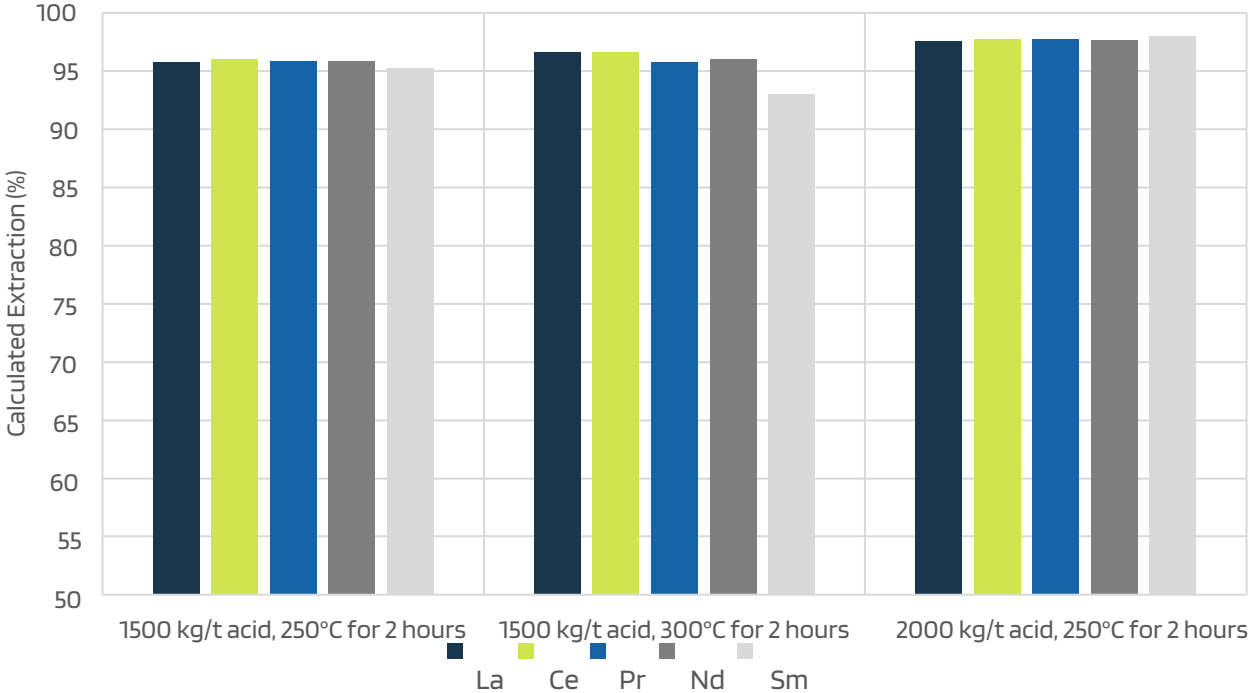




# HYDROMETALLURGY FLOWSHEET – Acid Bake, Preliminary Results



## >95% recovery of Neodymium and Praseodymium from Flotation Concentrate Into Leach Solution



# MINERALOGY AND HIGH-GRADE CONCENTRATE COMPARED TO GLOBAL PRODUCING DEPOSITS

Project	Stage	Grade (%TREO)	Flotation Concentration Grade and Recovery	Mineralogy	Annual Production
Wicheeda Canada	PFS underway	2.02% <sup>1</sup>	43% TREO, 60-80% recovery	Parasite/ Bastnaesite + Monazite	~20,000 tpy TREO est
Mt. Pass (MP Materials, MP-NYSE) <sup>2,3</sup> USA	Producer	8%	60% TREO, 67% recovery	Bastnaesite	~40,000 tpy TREO
Mt. Weld (Lynas Corp., LYC-ASX) <sup>2,3</sup> Australia	Producer	7%	40% TREO, 70% recovery	Monazite	~20,000 tpy TREO
Bayan Obo <sup>2,3</sup> China	Producer	6%	50% TREO, 60% recovery	Bastnaesite, Monazite	~50,000 tpy TREO
Sichuan <sup>4</sup> China	Producer	3.7%	50% - 60% TREO	Bastnaesite	~ 30,000 TREO

1) See Defense Metals News Release Dated September 12, 2023

2) Verbaan, N., Bradley, K., Brown, N., and Mackie, S., 2015 A review of hydrometallurgical flowsheets considered in current REE projects. In: Simandl G.J. and Neetz, M. (Eds.). Symposium on Strategic and Critical Materials Proceedings.

November 13-14, 2015, Victoria, BC EMPR, BCGS Paper 2015-3, pp. 147-162

3) These are commercial operations, and the results of Defense Metals' current results are from controlled lab testing and are not comparable

4) Ling ZHI LI, Xiaosheng YANG, ERES2014





# PROJECT TIMELINE

## Completed in 2022:

Acquired 100% of Wicheeda  
Completed 10,859m in late 2021 through 2022  
Completed geotechnical drilling

Adopted acid bake process flowsheet  
Produced high-grade concentrate from a pilot plant  
Signed agreement with First Nations  
Raised ~\$12.06M

## 2023 Plans

### H1 2023

- Completed hydromet pilot plant
- Started pre-feasibility study
- Advanced environmental studies

### H2 2023

- Optimization and scale up of flotation and hydromet pilot plants
- Engage potential offtake partners

### H1 2024

- Complete pre-feasibility study

### H2 2024

- Start feasibility study

### 2025

- Optimization and scale up of flotation and hydromet pilot plants





# DEFENSE METALS

## CONTACT

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**Todd Hanas**, VP Investor  
Relations

[todd@defensemetals.com](mailto:todd@defensemetals.com)

+1 (778) 994-8072

228-1122 Mainland  
Street Vancouver, BC

V6B-5L1

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## EXCHANGE LISTINGS

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