

# Goodman Gold Challenge 2023

---

## Battery Metal Edition

February 4<sup>th</sup>, 2023

- I. Investment Proposal
- II. Frontier Lithium
- III. Comparative Analysis
- IV. Industry Outlook
- V. Conclusion

## CSM Wealth Advisors

Josh Chitwood, Liam Gilbride,  
Mark Peirce, Spencer Snow



# Cautionary Statements

---

*The information set forth in this presentation, including any statements regarding the Colorado School of Mines team's evaluation of Magna Mining, Frontier Lithium, and Generation Mining, contains forward-looking statements that are subject to a number of risks and uncertainties. These forward-looking statements include, but are not limited to, statements regarding the potential success of the exploration and development efforts of the aforementioned companies, as well as potential returns for investors.*

*It should be noted that actual results may differ materially from those projected in these forward-looking statements as a result of a number of factors, including but not limited to: the inherent risks associated with the exploration and development of mineral properties, the uncertainty of interpreting drilling results and other geological data, fluctuations in commodity prices and currency exchange rates, the possibility of project cost overruns or unanticipated costs and expenses, and the impact of laws and regulations governing mining operations and the ability to obtain necessary permits and approvals.*

*The Colorado School of Mines team does not undertake any obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by applicable securities laws. The reader is cautioned not to place undue reliance on forward-looking statements.*

# Investment Proposal - Invest in Frontier Lithium

## Tier 1 Spodumene Lithium Resource Globally

- Significant Exploration Upside Potential
- 2023 Prefeasibility Study Expectations
  - Increased Resources in the PAK & Spark Deposit
  - Increased Economic Viability

**STRONG BUY**

Current Price: \$2.79



Target Price: \$5.10



*"Always Moving Forward"*

## Favorable Lithium Outlook

- Spot Price of Lithium is \$70,000/t
- Supply Deficit

## Advancing the Project One Step at a Time

- Experienced Management Team
- Vertical Integration of the Project



# Investment Proposal- Target Companies

---

## Frontier Lithium

TSXV: FL.V

**PAK and Spark Deposits**

Preliminary Economic Assessment

Lithium Spodumene



## Magna Mining

TSXV: NICU.V

**Shakespeare and Crean Hill**

Feasibility Study and PEA

Nickel, Copper, and PGM's



## Generation Mining

TSX: GENM

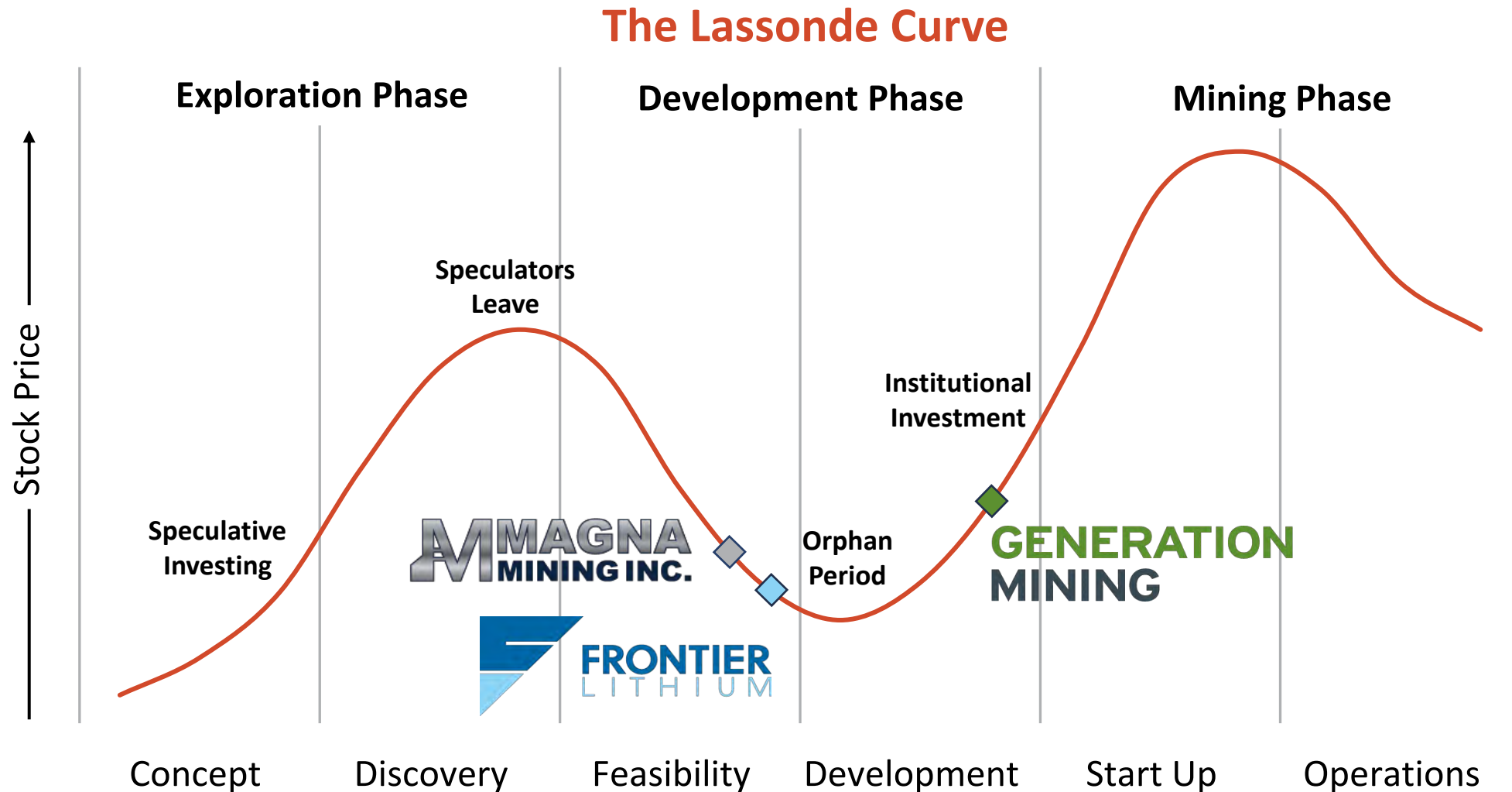
**Marathon Project**

Feasibility Study



















PGM's, Copper, Gold, Silver



# Investment Proposal- Life Cycle Perspective



# Investment Proposal - Comparative Analysis

	Project Status	Green Economy Focus	Resource Nationalism	P/NAV	Exploration Potential	Project Risks
Frontier Lithium	Positive PEA, awaiting PFS 	Lithium producer for EV's 	Canada's premier lithium deposit 	0.17* 	Continuous exploration 	Technical and infrastructure 
Generation Mining	Feasibility complete 	Palladium used in catalytic converters 	Market Saturation 	0.11 	No exploration underway 	Funding and commodity price 
Magna Mining	Awaiting Crean Hill PEA 	Nickel used for renewable energy 	Market Saturation 	1.25 	Crean Hill drilling program 	Funding and technical 



# Frontier Lithium - Overview



## Project Location

- Red Lake Mining District of Ontario

## Deposit Geology

- Granitic pegmatite hosting a lithium spodumene deposit.

## Land Package

- 27,000 hectares land package
- Remains largely unexplored

## Project Highlights

- The deposits contain low iron impurities.

## Four Spodumene Deposits

- PAK Pegmatite
- Spark Pegmatite
- Pennock Pegmatite
- Bolt Pegmatite

Source: Frontier Lithium

# Frontier Lithium - Exploration Potential



## Project Location

- Red Lake Mining District of Ontario

## Deposit Geology

- Granitic pegmatite hosting a lithium spodumene deposit.

## Land Package

- 27,000 hectares land package
- Remains largely unexplored

## Project Highlights

- The deposits contain low iron impurities.

## Four Spodumene Deposits

- PAK Pegmatite
- Spark Pegmatite
- Pennock Pegmatite
- Bolt Pegmatite

**PAK and Spark Deposits Remain Open to Depth and Along Strike**

Source: Frontier Lithium



# Frontier Lithium - Resource Extension



## Project Location

- Red Lake Mining District of Ontario

## Deposit Geology

- Granitic pegmatite hosting a lithium spodumene deposit.

## Land Package

- 27,000 hectares land package
- Remains largely unexplored

## Project Highlights

- The deposits contain low iron impurities.

## Four Spodumene Deposits

- PAK Pegmatite
- Spark Pegmatite
- Pennock Pegmatite
- Bolt Pegmatite

**A new spodumene pegmatite discovered approximately 1 km North-West of the Spark Deposit**

Source: Frontier Lithium

# Frontier Lithium - Project Overview

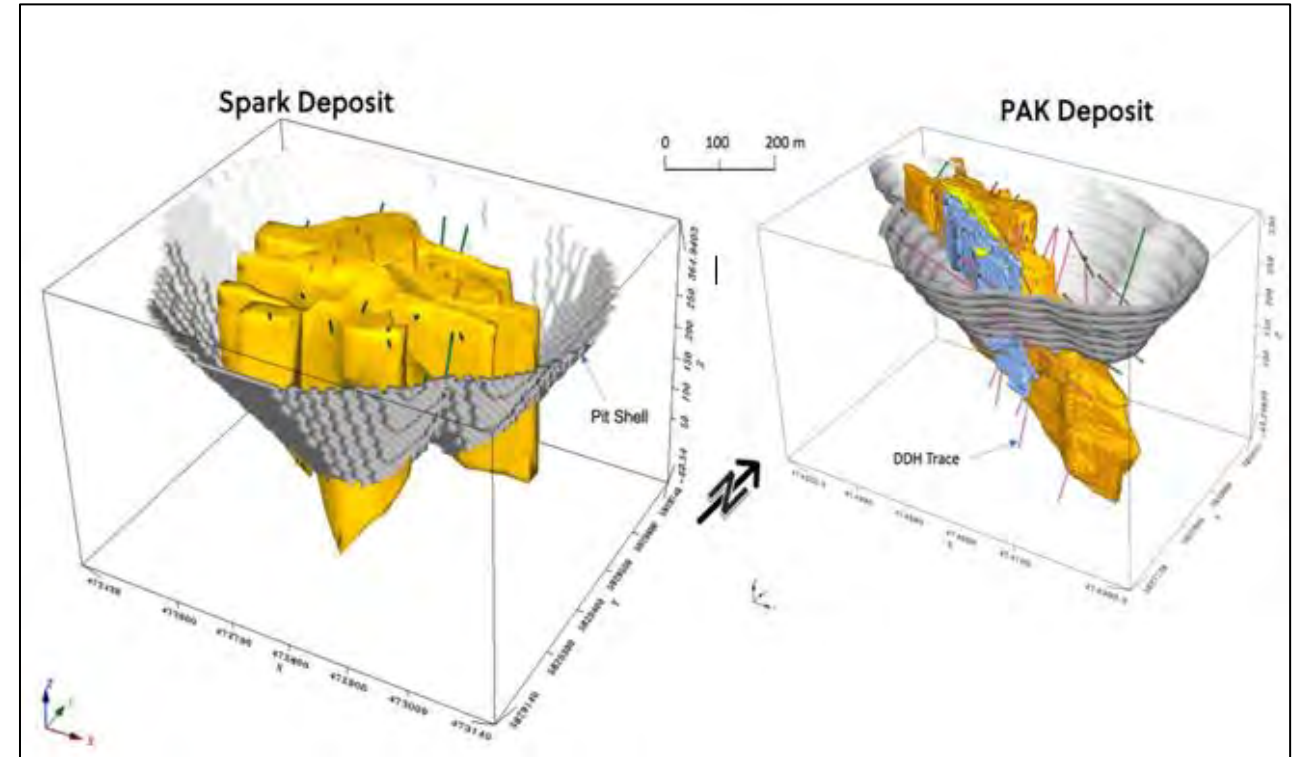


## Project Ownership

- Frontier – 100% of Property

## 2021 Preliminary Economic Assessment

- Mine Life - 26 Years
- Post-Tax NPV<sub>8%</sub> - \$1,290 M
- Post-Tax IRR - 21%
- Payback Period - 6.5 Years
- LOM Gross Revenue - \$11,320 M
- Initial CAPEX - \$879 M
- Stripping Ratio – 3.6



PAK	Tonnage (t)	Grade (%)	Contained Li2O (t)
M&I	6.68 M	2.02%	135,163
Inferred	2.67 M	2.29%	61,107
<b>Total</b>	<b>9.36 M</b>	<b>2.10%</b>	<b>196,270</b>

Spark	Tonnage (Mt)	Grade(%)	Contained Li2O (t)
Indicated	3.26 M	1.59%	51,850
Inferred	15.7 M	1.31%	205,905
<b>Total</b>	<b>18.9 M</b>	<b>1.36%</b>	<b>257,755</b>

# Frontier Lithium - Company Overview

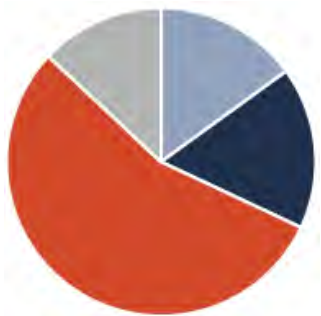


## Market Profile

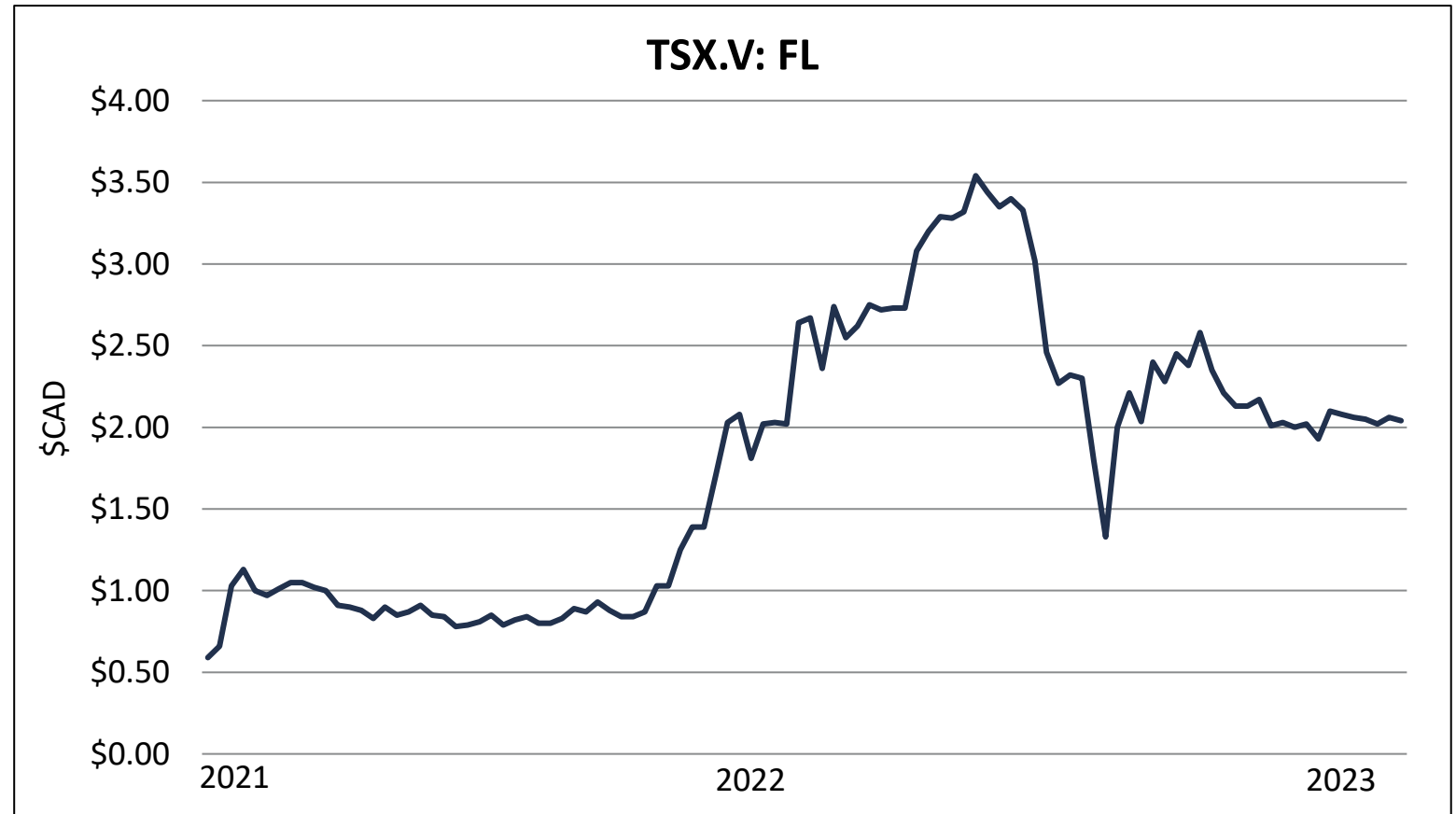
- Share Price - \$2.79
- Market Cap - \$625.4M
- Share O/S - 224.14M
- Enterprise Value - \$592.2M

## Shareholder Breakdown

- General Public: 55%
- Board and Management: 17%
- Institutions: 15%
- Private Investors: 13%



- Public
- Insiders
- Institutions
- Private



# Frontier Lithium - Experienced Management



## Management



**Trevor R. Walker**

**President and CEO**

20+ Years of experience in mining and construction

**Garth Drever**

**VP Exploration**

40+ Years in Mineral Exploration

**David Ewing**

**VP Sustainability and External Affairs**

20+ Years in ESG and Indigenous affairs

**Dr. Naizhen Cao**

**VP Technology**

Extensive experience with lithium and battery materials

**Tony Zheng**

**CFO**

11+ Years of mine finance  
CPA, CA, CGA

## Board of Directors

**Rick Walker**

**Chairman of the Board**

45+ Years in mining and construction Experience

**Marc Boissonneault**

Head of Global Nickel Operations at Glencore

**John Didone**

35+ Years in accounting

**Miko Koziol**

35+ Years Exploration Experience

**Stephen J.J. Letwin**

Former President and CEO of IAMGOLD Corporation

**Greg Mills**

Former Managing Director of RBC Capital Markets

**Tess Lofsky**

Legal Executive

**Bart Meekis**

Former Chief of Sandy Lake Nation

# Frontier Lithium - Valuation



Criteria	2021 PEA	Base Case	Bullish Case
Lithium Price (LiOH)	\$US13,500/t	\$US24,100/t	\$US34,700/t
Post-Tax NPV <sub>8%</sub>	\$1,290 M	\$3,709 M	\$6,164 M
Post-Tax IRR	21%	43%	63%
Payback Period	6.5 Years	5.0 Years	3.4 Years
Est. Post-Tax Revenue	\$3,360 M	\$8,000 M	\$12,000 M
P/NAV	0.48	0.17	0.10

# Frontier Lithium - Peer Valuation Analysis

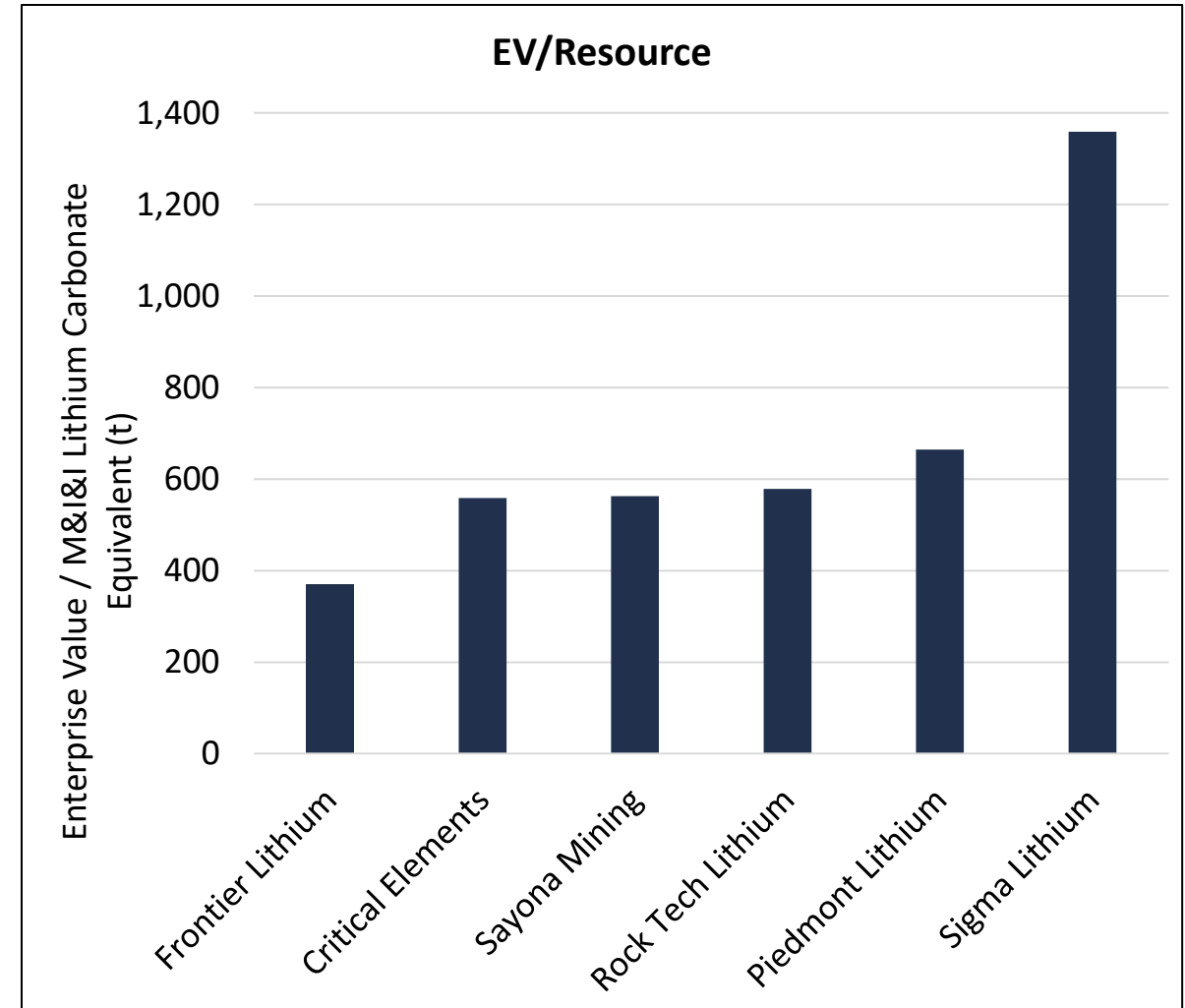


## Comparable Lithium Carbonate Equivalent

- Ratio of Enterprise Value to the Measured, Indicated, and Inferred LCE tonnages
- Average EV/Resource of Peers: \$590/t

## Frontier Lithium

- EV/Resource: \$370/t
- 1.6X Undervalued Compared to Peers





# Frontier Lithium - Peer Valuation Analysis



## Comparable Lithium Carbonate Equivalent

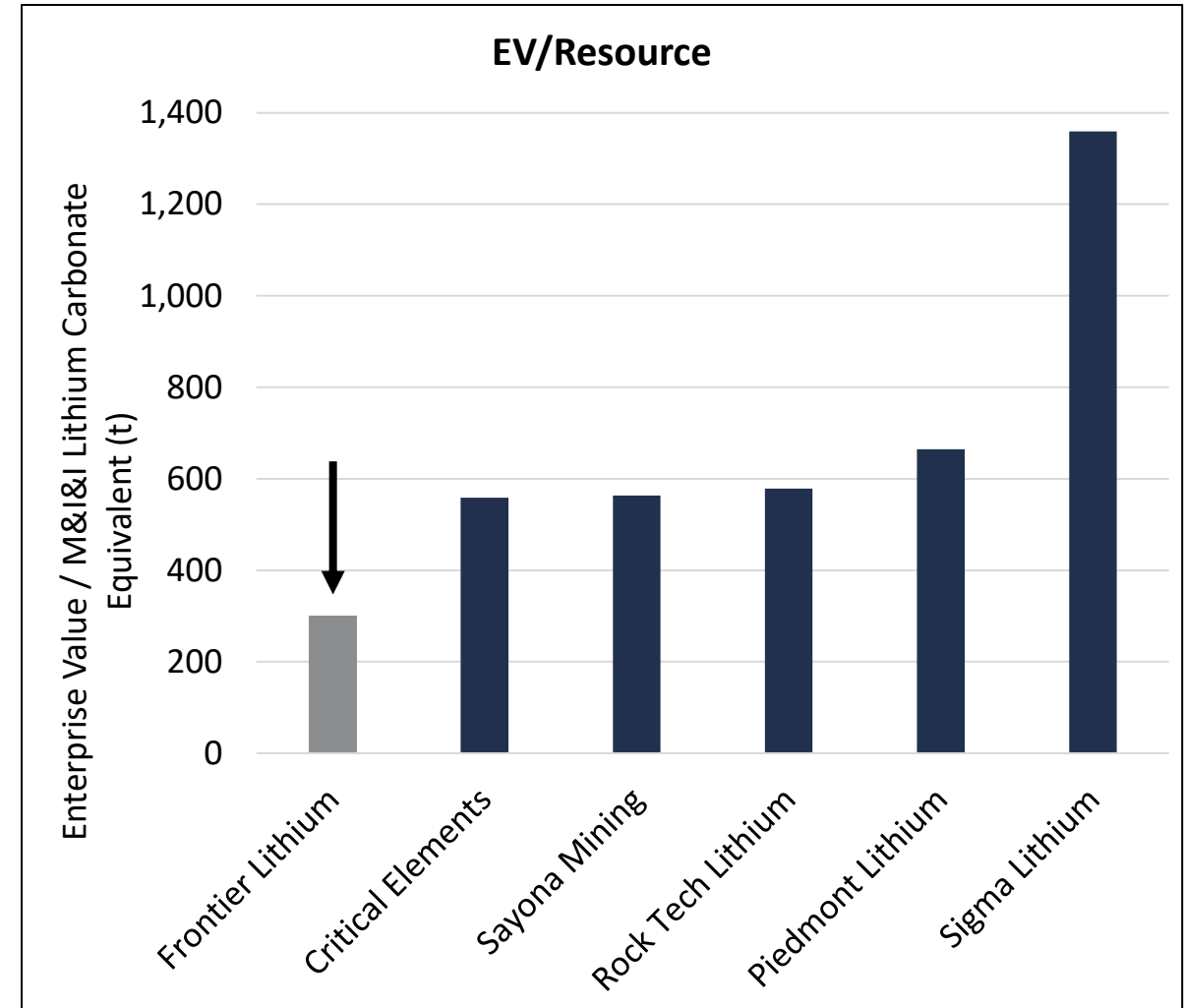
- Ratio of Enterprise Value to the Measured, Indicated, and Inferred LCE tonnages
- Average EV/Resource of Peers: \$590/t

## Frontier Lithium

- EV/Resource: \$370/t
- 1.6X Undervalued Compared to Peers

## Increased Mineral Resources

- 2022 Drilling Program on Spark Deposit
- Decreased Cutoff Grade with Higher Lithium Prices
- EV/Resource: \$300/t
- 2.0X Undervalued Compared to Peers



# Frontier Lithium - Peer Valuation Analysis



## Comparable Lithium Carbonate Equivalent

- Ratio of Enterprise Value to the Measured, Indicated, and Inferred LCE tonnages
- Average EV/Resource of Peers: \$590/t

## Frontier Lithium

- EV/Resource: \$370/t
- 1.6X Undervalued Compared to Peers

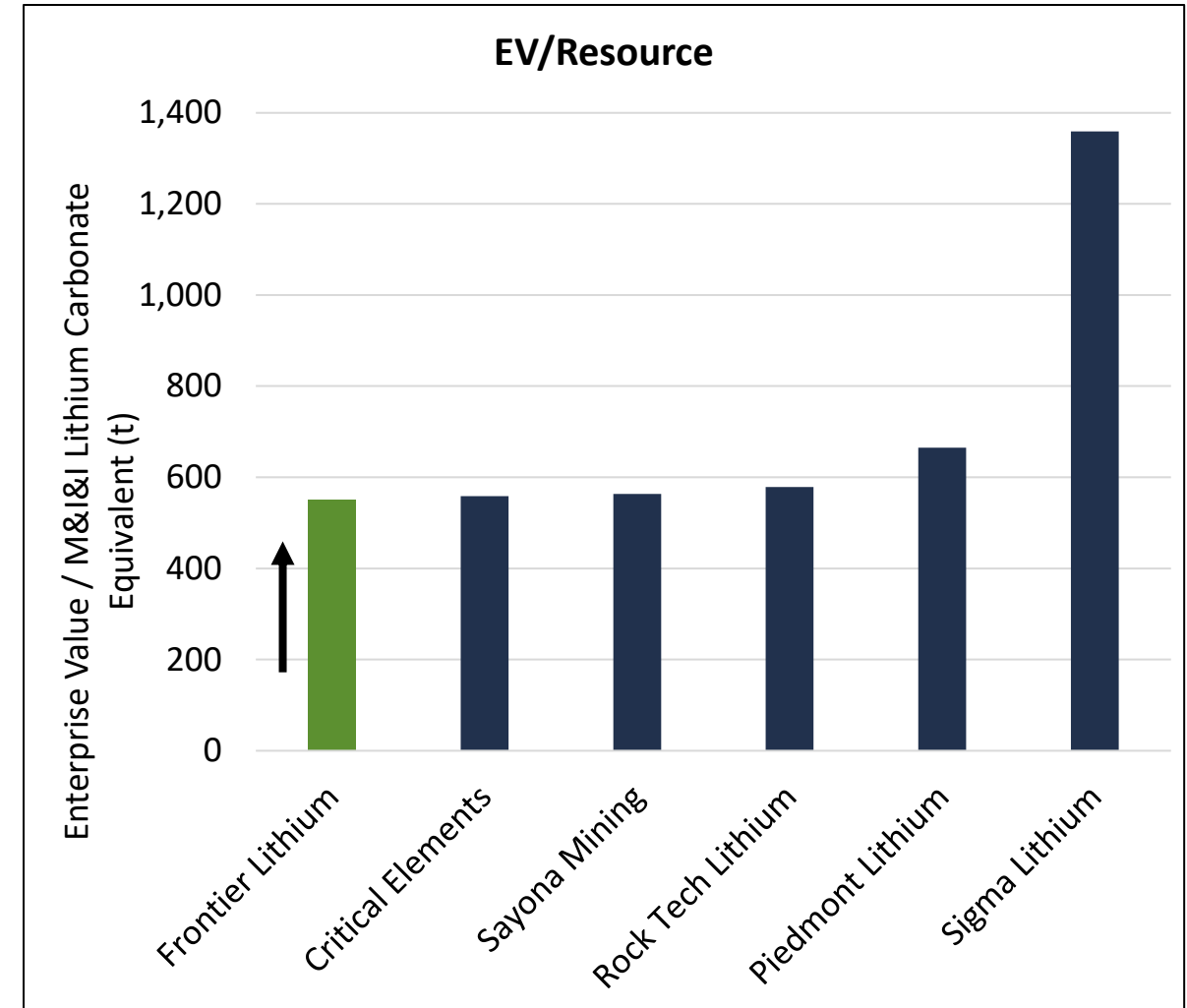
## Increased Mineral Resources

- 2022 Drilling Program on Spark Deposit
- Decreased Cutoff Grade with Higher Lithium Prices
- EV/Resource: \$300/t
- 2.0X Undervalued Compared to Peers

## Conservative Valuation

EV/Resource: \$550/t

1.8X Increase in Frontier Lithium's Share Price



# Frontier Lithium - Target Price



## Analyst - Short Term Outlook

STIFEL  
NICOLAUS

11/22/22

**BUY: \$4.80**

 **CORMARK**  
SECURITIES INC.

11/17/22

**BUY: \$4.00**

**cg**/Canaccord  
Genuity  
Capital Markets

10/11/22

**Speculative BUY: \$4.75**

 **RBC**  
Capital  
Markets

12/05/22

**Outperform \$3.25**

## CSM Wealth Advisors - Long Term Outlook

**Strong Buy**

**Target Price: \$5.10**



# Frontier Lithium - SWOT Analysis

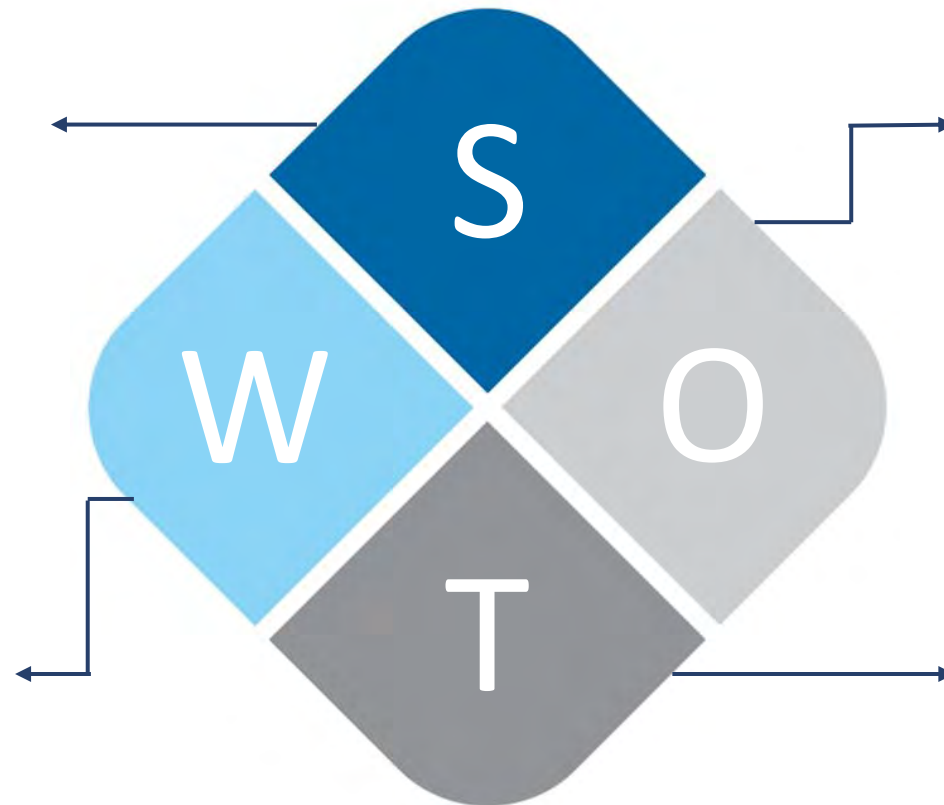


## Strengths

- Lithium Grade and Quality
- Diverse Management Team
- ESG and Sustainability
- Indigenous Benefits Agreements
- Significant Exploration Potential
- Vertical Integration

## Weaknesses

- Long-term Financing Unknown
- Earlier Stage
- Infrastructure



## Opportunities

- Public Opinion
- Strategic Regional Battery Metals Supplier
- Support the Green Economy
- Resource Nationalism

## Threats

- Nemaska Lithium History
- Foreign Markets
- Supply Chain Disruptions
- Competitors
- Recession

Source: Frontier Lithium

# Frontier Lithium – Not A Nemaska Lithium



## Key Factors

- Lower Cap-Ex \$1,300 M CAD vs. \$880 M CAD
- Diverse Management
- Experienced Consulting Group for PFS
- Economic Without Chemical Plant
- Plant Expenditures Spread Out
- More Optimism in the Lithium Market
- Experienced Lithium Processing



Nemaska  
Lithium



# Industry Outlook - Government Support

## 2020 Canada-US Joint Action Plan

- Secure Supply Chains
- Strategic Manufacturing
- Resource Nationalism

## Canada's Contribution and Actions

- Canada's strengthened climate plan (2020)
- Pan-Canadian Framework (2016)
- 2030 Emissions Reduction Plan (2022)

## United States Contribution and Actions

- The Federal Sustainability Plan
- 100% Carbon pollution-free electricity by 2035
- Achieve net-zero emissions procurement by 2050



## Critical Minerals

*“Improve the security of critical minerals in Canada and the United States and ensure that U.S. and Canadian mineral industries are competitive and remain stable into the future.”*



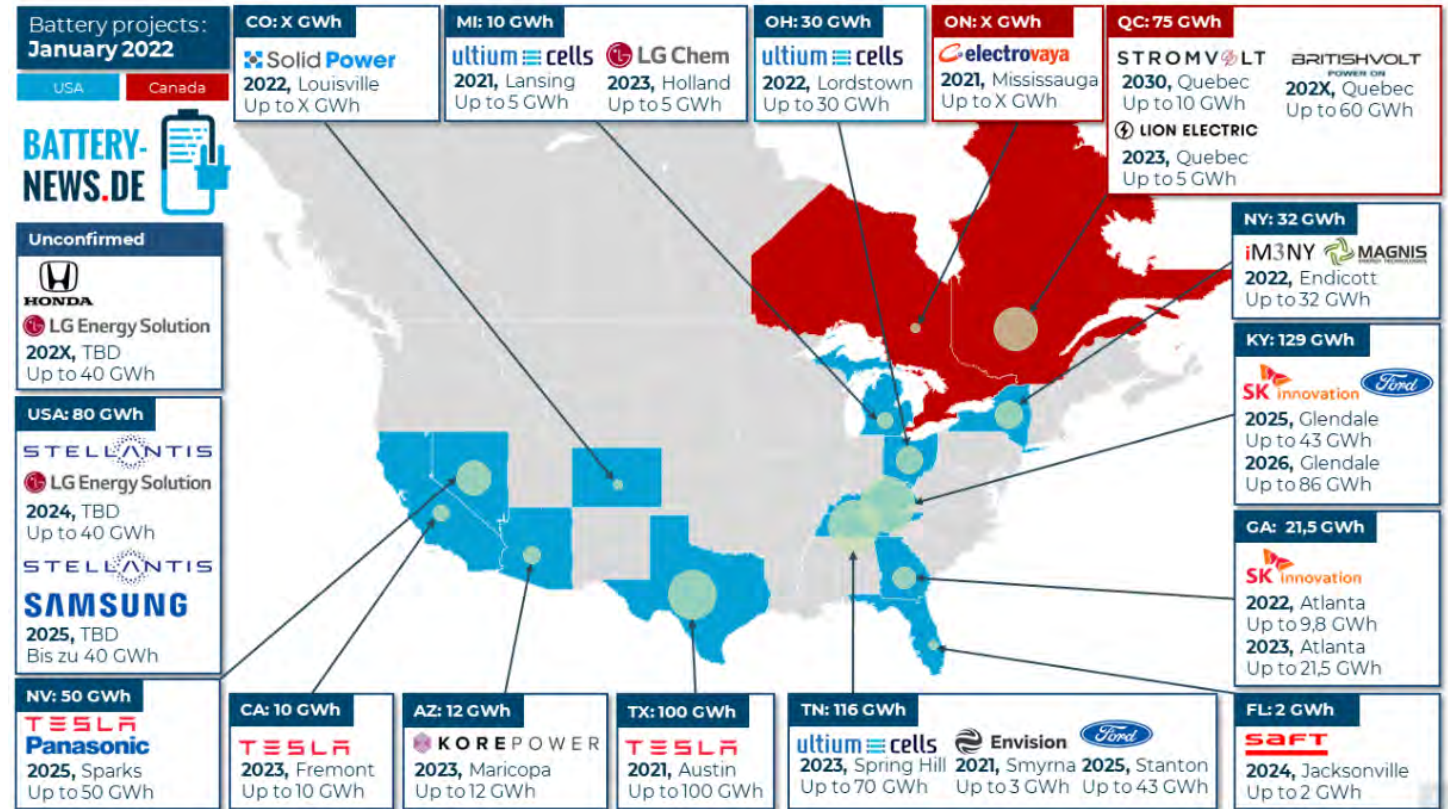
# Industry Outlook - Battery Metal Demand

## 2030 EV battery Supply Chains

- 40 new cathode production plants
- 50 new anode production plants
- 90 new battery Gigafactories
- 81 new EV Plants

## S&P Global Projection

- 500% Increase in lithium-ion battery demand by 2030
- “Without huge investments in lithium mining, shortage of lithium will limit the number of EV’s”



Source: BatteryNews.de

# Industry Outlook - Battery Metal Demand

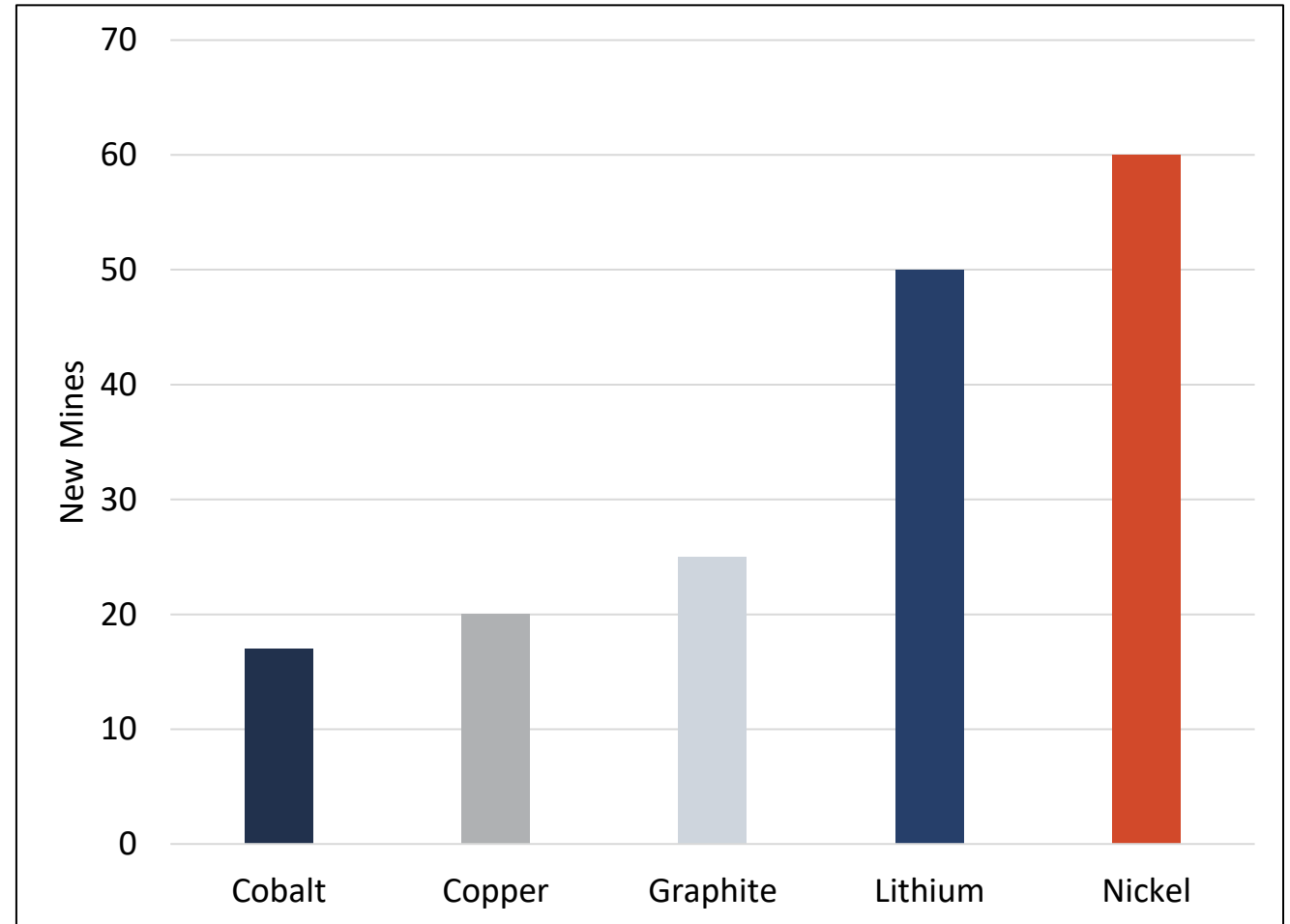
## 2030 EV battery Supply Chains

- 40 new cathode production plants
- 50 new anode production plants
- 90 new battery Gigafactories
- 81 new EV Plants

## S&P Global Projection

- 500% Increase in lithium-ion battery demand by 2030
- “Without huge investments in lithium mining, shortage of lithium will limit the number of EVs”

**The EV supply chain starts with mining and can only be accomplished with new mines**



Source: International Energy Agency

# Industry Outlook - Lithium Forecast

## Lithium Supply and Demand

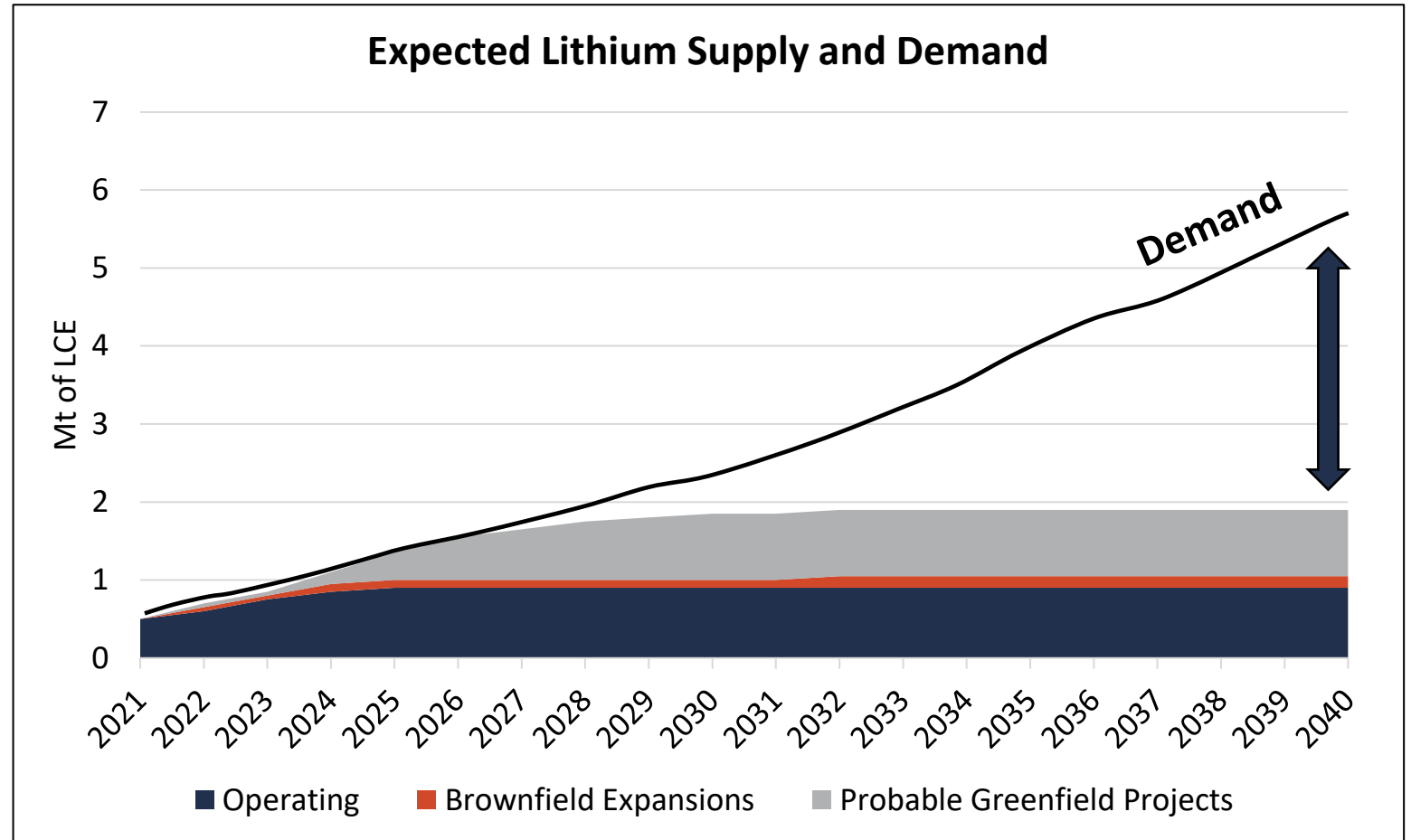
- 51 New Highly Probable Greenfield Projects
- Markets Remain Tightly Balanced until 2027

## 2030 Lithium Market

- 2.3 Mt LCE Demand
- 2.1 Mt LCE Supply

## Forecasted Deficit

- 3.5 Mt LCE Deficit by 2040
- Prices will see support from tight supply



Source: Benchmark Mineral Intelligence

# Industry Outlook - Lithium Investments

## GM Invested in Lithium Americas

- Largest automotive investment into the mining industry for \$US650 M

## Piedmont Lithium's Tennessee Project

- Received a \$US140 M grant from the US Department of Energy

## Ioneer's Rhyolite Ridge Project

- Received conditional approval for a \$US700 M loan from the US Department of Energy

**B** Bloomberg.com

### Move Over, Tesla. Old Auto Is Locking in Lithium, Too

General Motors is securing the raw materials it needs for electric cars, taking full advantage of US angst over China by building a supply...




 Junior Mining Network

### Piedmont Lithium Selected for \$141.7 Million Grant by United

...  
Piedmont Lithium Selected for \$141.7 Million Grant by United States Department of Energy for Tennessee Lithium Project ... Mr. Keith Phillips...



 CNBC

### Lithium company Ioneer scores \$700 million conditional loan from Energy Department for Nevada plant

Ioneer is developing the Rhyolite Ridge Lithium-Boron Project in Esmeralda County, Nevada. When fully operational, the site will produce enough...



# Conclusion - Invest in Frontier Lithium

---

Tier 1 Deposit Globally

Favorable Lithium Outlook

Experienced Leadership

Supply Deficit

Exploration Upside

**STRONG BUY**

Current Price: \$2.79



Target Price: \$5.10



*"Always Moving Forward"*

# Goodman Gold Challenge 2023

---

## Battery Metal Edition

February 4<sup>th</sup>, 2023

- I. Investment Proposal
- II. Frontier Lithium
- III. Comparative Analysis
- IV. Industry Outlook
- V. Conclusion

## CSM Wealth Advisors

Josh Chitwood, Liam Gilbride,  
Mark Peirce, Spencer Snow





# Appendices

---

I. Competition Information

II. Industry Analysis

III. Magna Mining

IV. Generation Mining

V. Frontier Lithium

# Competition Information - CSM Wealth Advisors

---



**Joshua Chitwood**

**B.S. Mining Engineering '23**

Surface Operations

Mineral Processing



**Mark Peirce**

**B.S. Mining Engineering '23**

Underground Operations

Geotechnical Engineering



**Liam Gilbride**

**B.S. Mining Engineering '24**

Mine Finance

Consulting



**Spencer Snow**

**B.S. Mining Engineering '23**

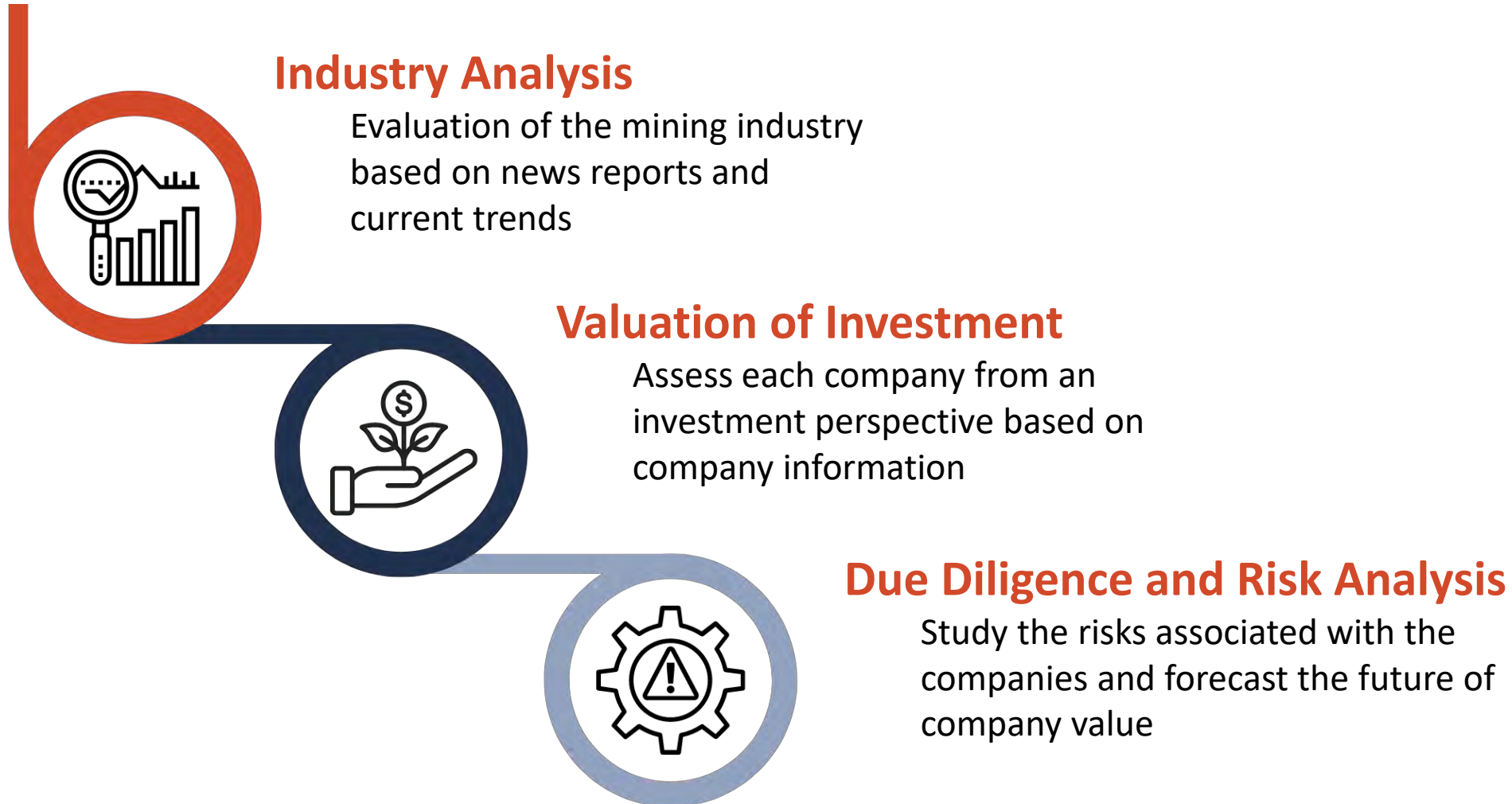
Mine Finance

Mine Planning

*"A principled financial advisory team providing elite clients with long-term financial growth through expert analysis"*

# Competition Information - Deliverables

---



# Competition Information - Investment Strategy

## Investment Strategy

### Mr. Jonathan Goodman

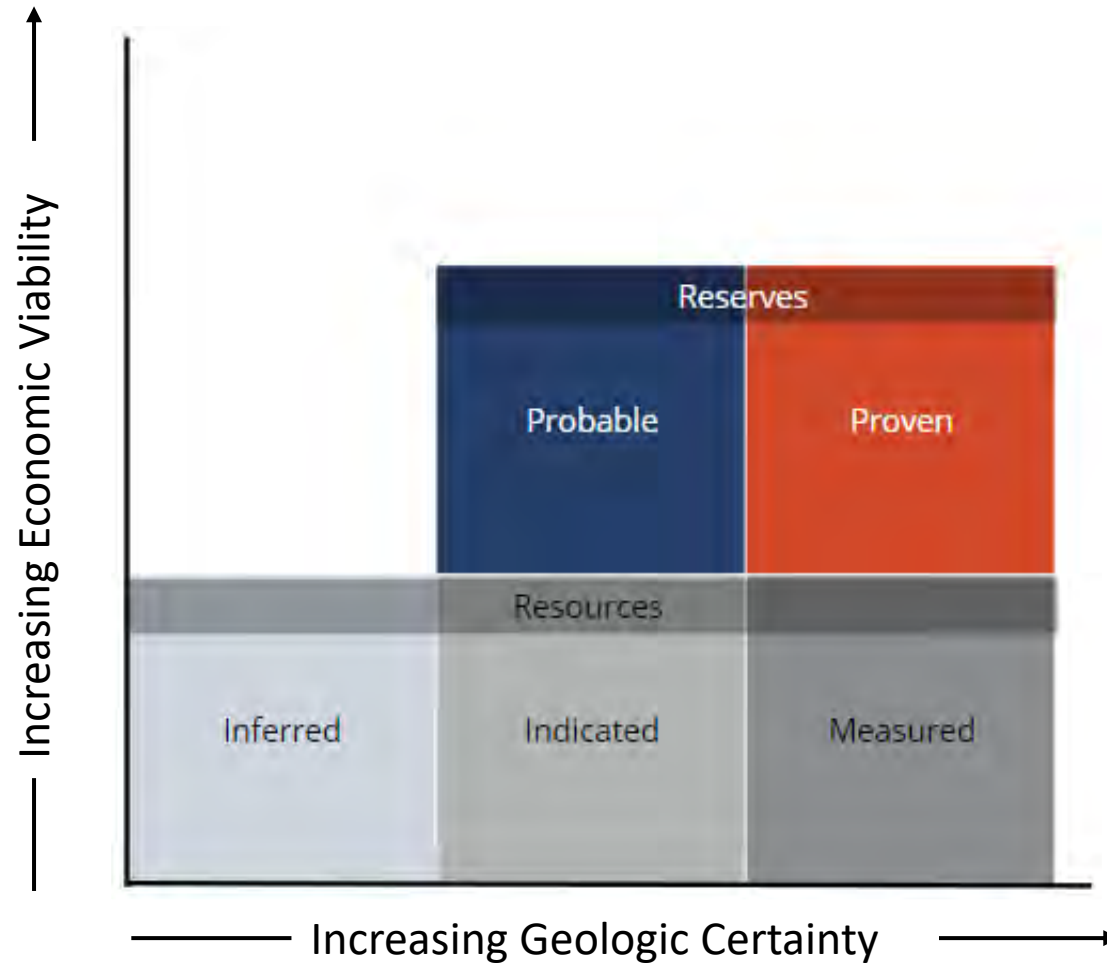
- Client's ongoing investments and respective investing habits suggest he is looking for...
  - Long-term investment (3-5 years)
  - Moderate to high risk tolerance

### Investment Committee

- Interested in long-term capital gain



# Industry Analysis - SME Resources and Reserves



# Industry Analysis - Future of the Mining Industry

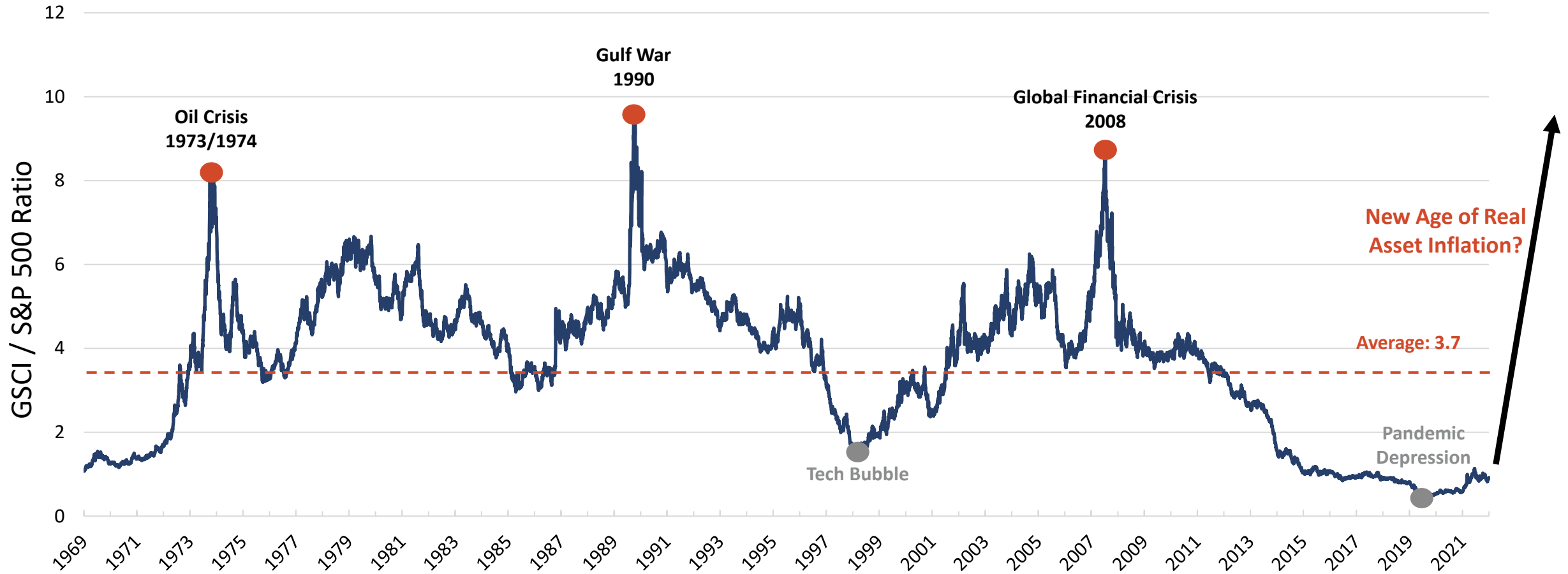
## Trends Shaping the Way We Operate – Risks and Opportunities





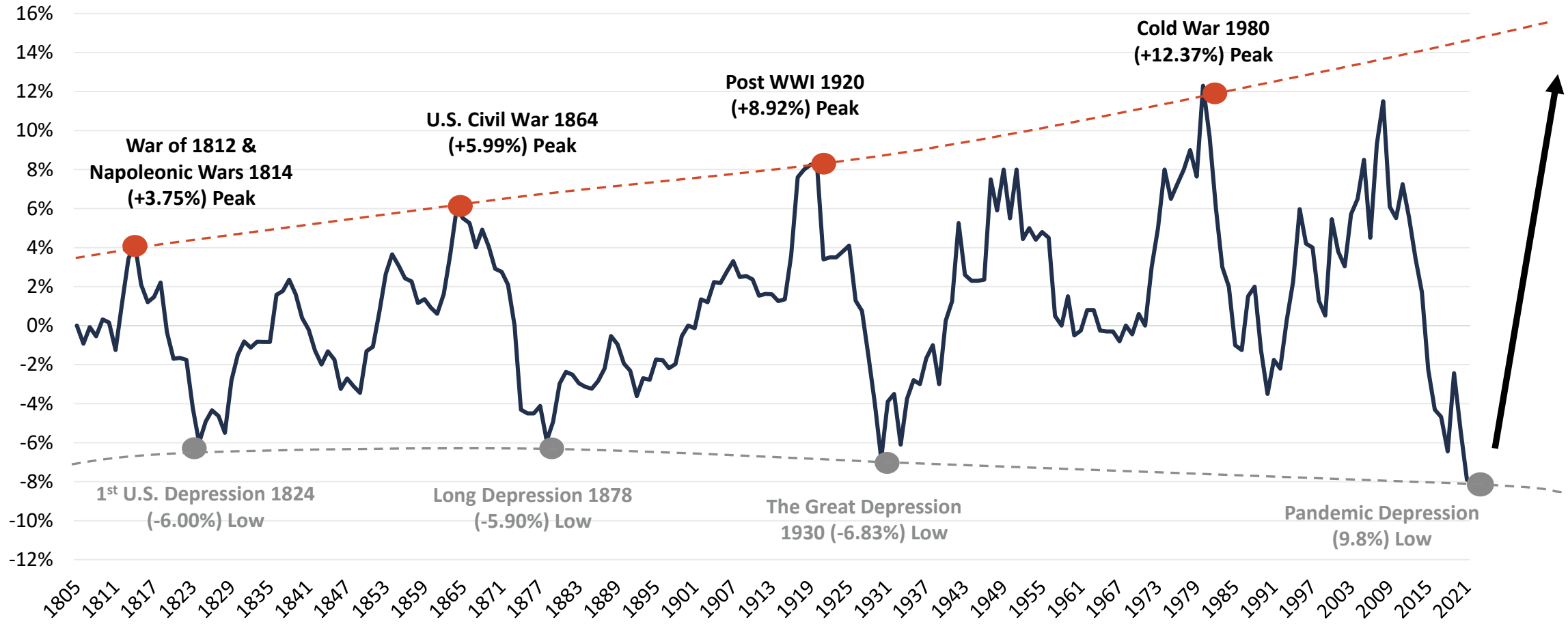
# Industry Analysis - Real Asset Inflation

## Commodities to Equity Ratio

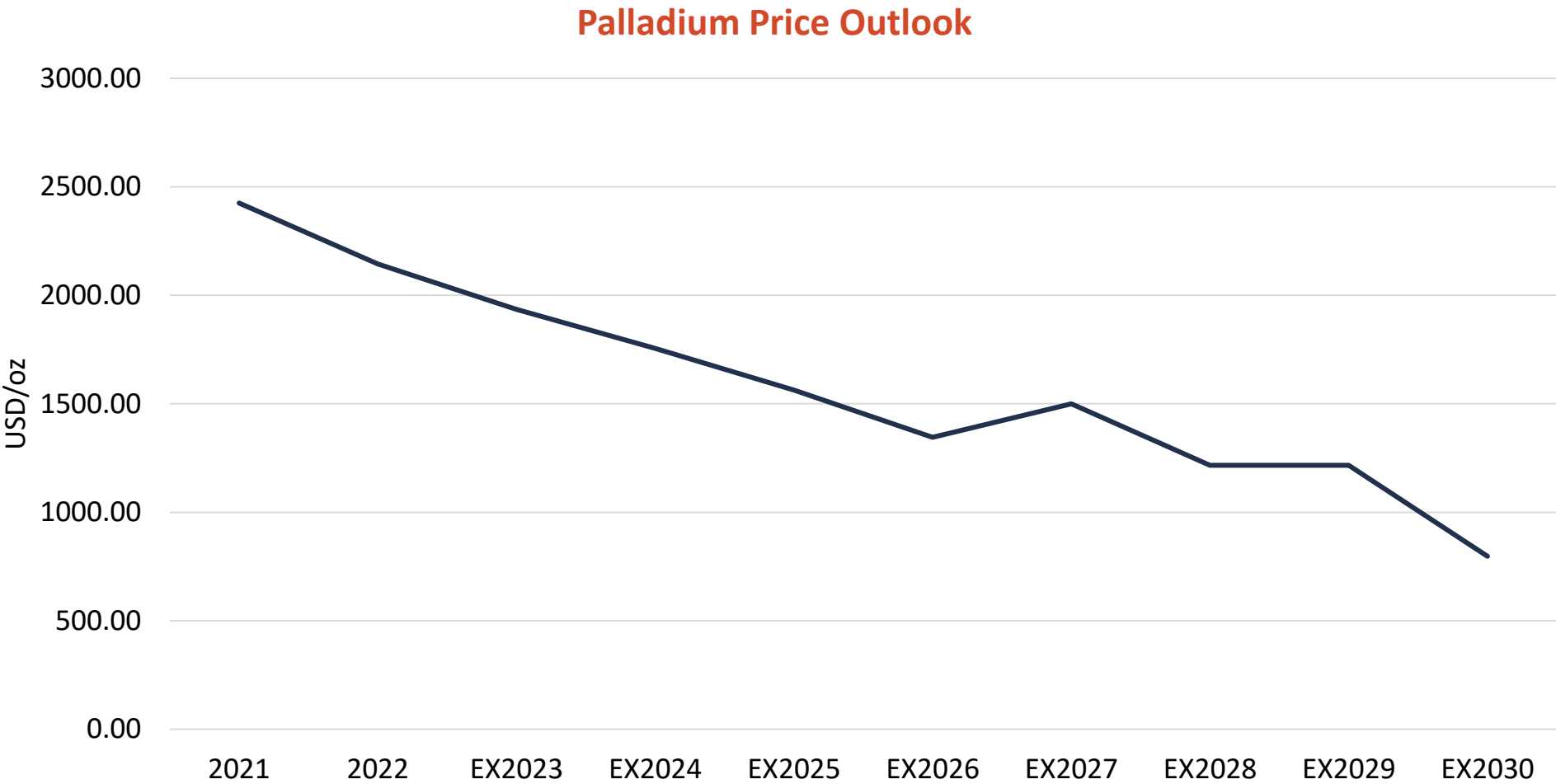


# Industry Analysis - Commodity Returns

## 10 Year Rolling Average of Commodity Price Returns



# Industry Analysis - Palladium Price Outlook



Source: S&P Capital IQ Pro

# Magna Mining - Marquee Asset



## Deposit Geology

- The Ni-Cu-PGM Shakespeare deposit comprises mainly pyrrhotite, chalcopyrite and pentlandite with lesser pyrite.

## Location

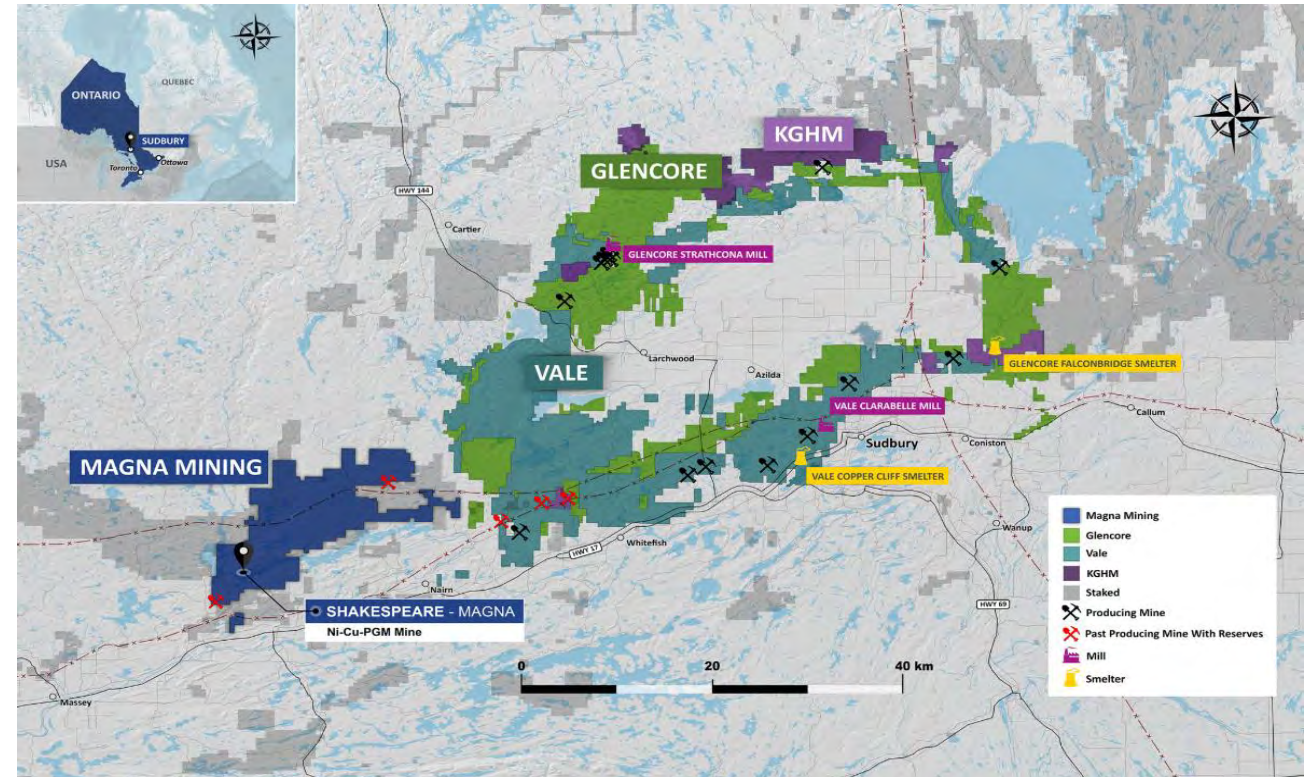
- Shakespeare Township of Ontario

## Project Highlights

- The project is planned to have both open pit and underground operations.

## Notable Permits Obtained

- Construction of a 4,500 tpd mill
- Surrounding 180 km<sup>2</sup> land package with high exploration potential.



***“A Past Producing Mine and an Exploration Portfolio in a World-Class Nickel District”***



Source: Magna Mining Corp.

# Magna Mining - Project Overview

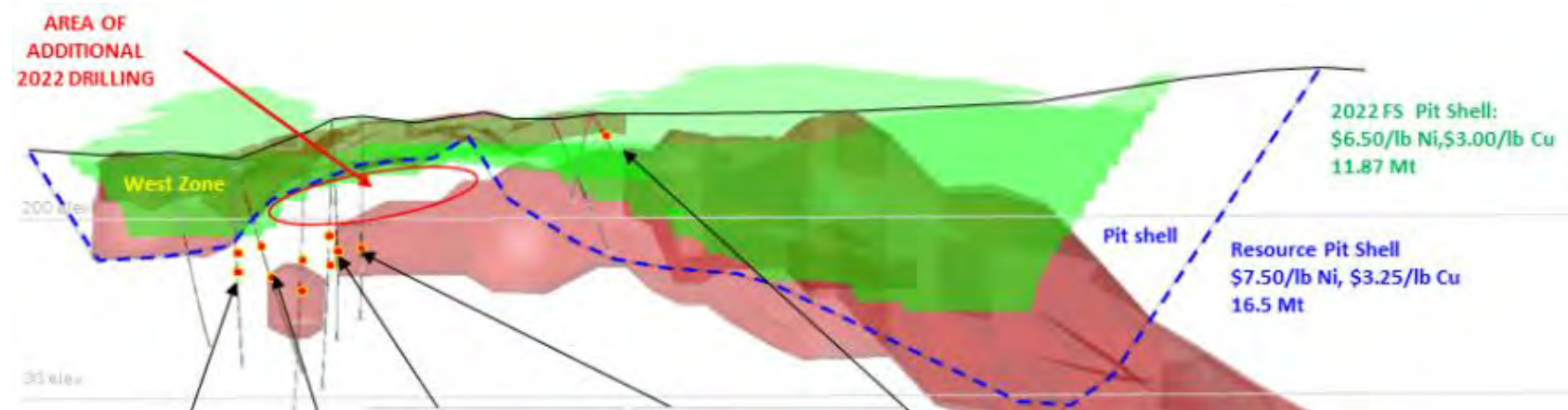


## Project Ownership

- Magna: 100% of Property
- Joint Venture with Glencore: 83.9/16.1 Magna

## Report Highlights

- Mine Life: 7.1 Years
- Post-Tax NPV<sub>6%</sub>: \$140M CAD
- Post-Tax IRR: 21.5%
- Payback Period: 3.5 Years
- CAPEX: \$242.1M CAD
- OPEX: \$471M CAD



Shakespeare Project	Tonnage (Mt)	Ni %	Cu %	Co %	Pt (g/t)	Pd (g/t)	Au (g/t)
Probable	11.87	0.33	0.35	0.02	0.32	0.36	0.18

Source: Magna Mining



# Magna Mining - Company Overview



## Market Profile

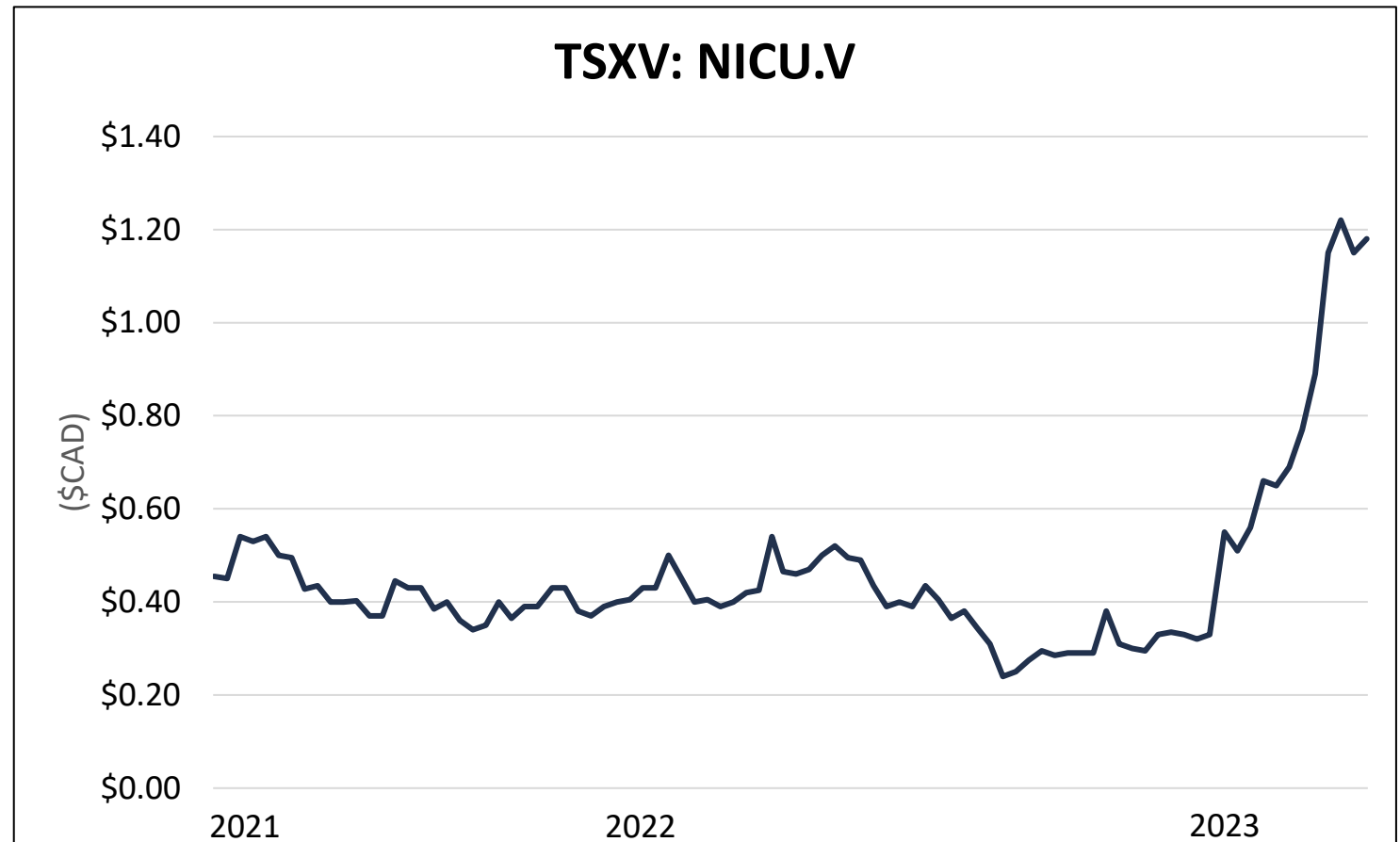
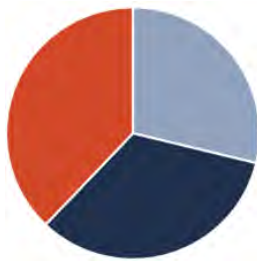
- Share Price: \$1.08
- Market Cap: 160.13M
- Shares O/S: 146.24M

## Notable Shareholders

- Dundee Corporation: 22%
- TFG Asset Management: 12.7%
- Mine Management Partners: 6.89%

## Company Ownership

- Public
- Institutions
- Insiders



Source: Magna Mining

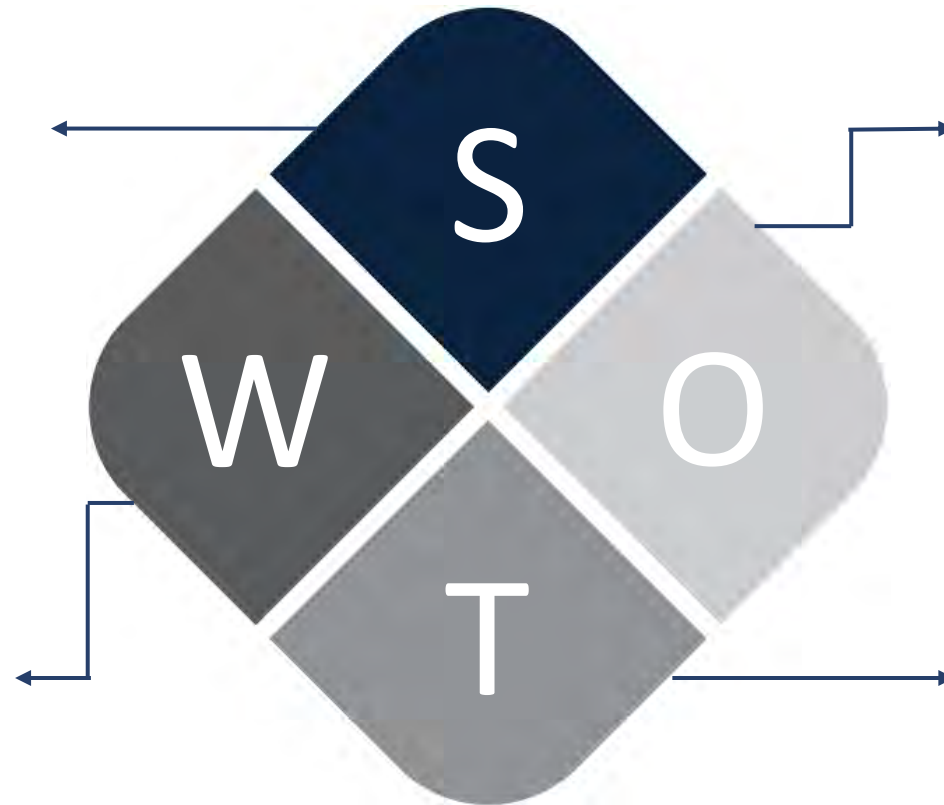
# Magna Mining - SWOT Analysis

## Strengths

- Economic Viability
- Low CAPEX for Shakespeare Project
- Permits in Place for Mine and Mill
- Expanding the resource with Crean Hill

## Weaknesses

- Finite resource/mine life
- Highly Valued Stock
- Comparably Low NPV for Shakespeare Project



## Opportunities

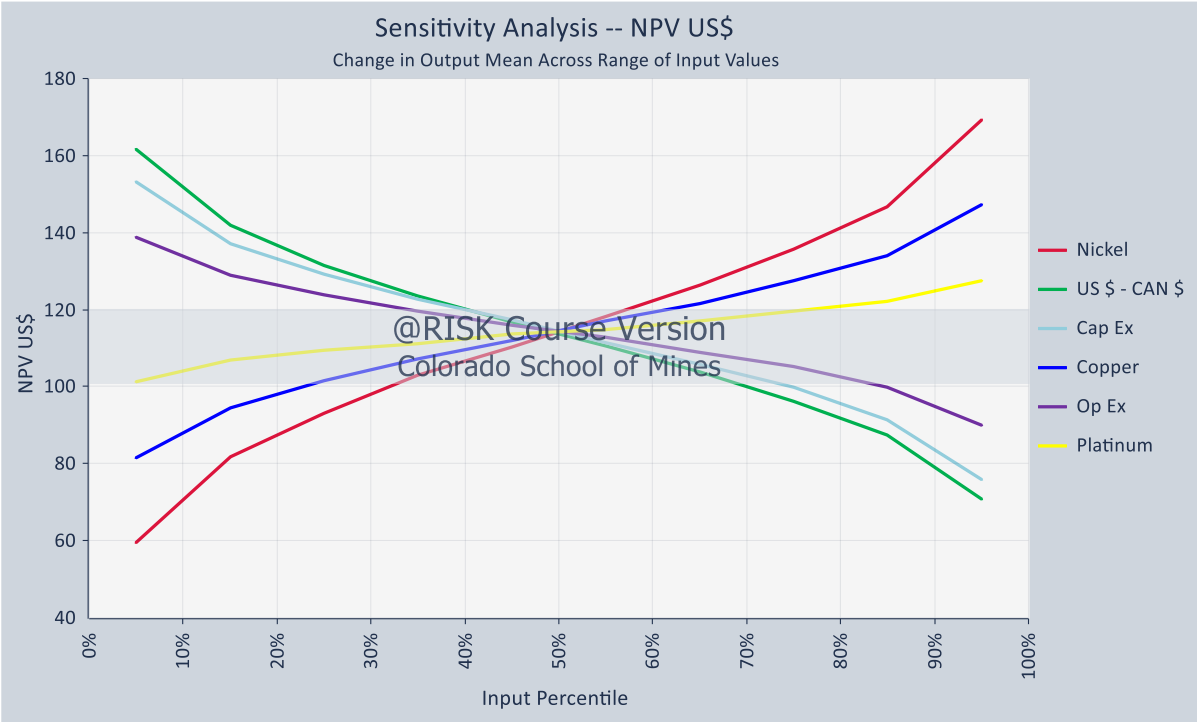
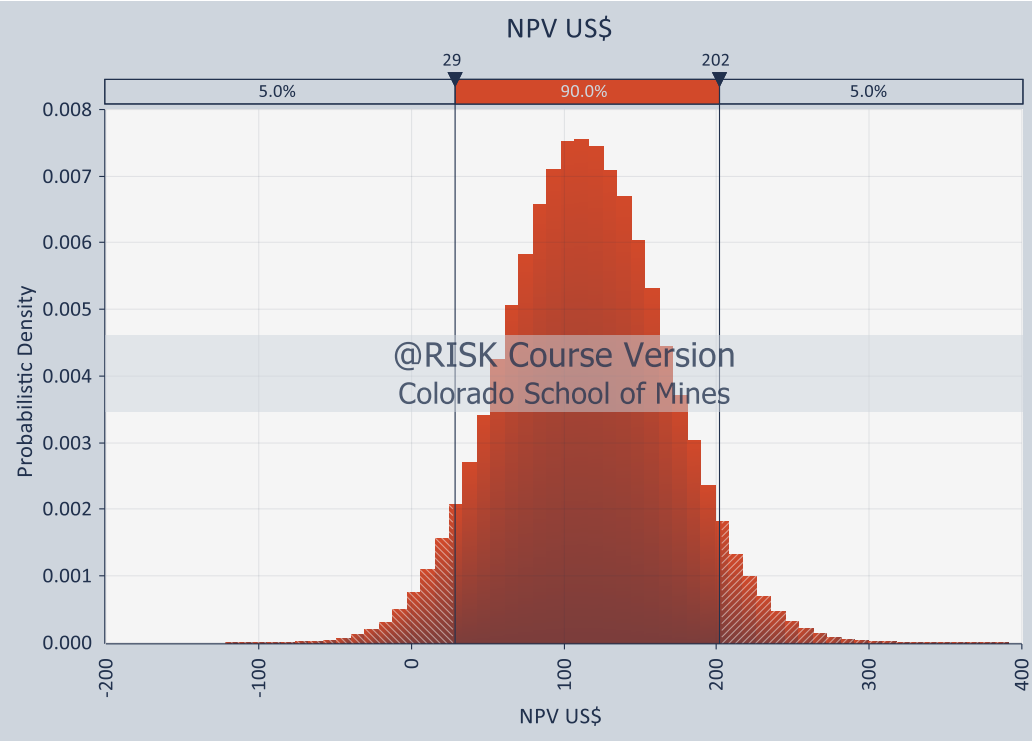
- Critical Mineral Focus
- Potential Shakespeare Continuity
- Toll Milling partnerships

## Threats

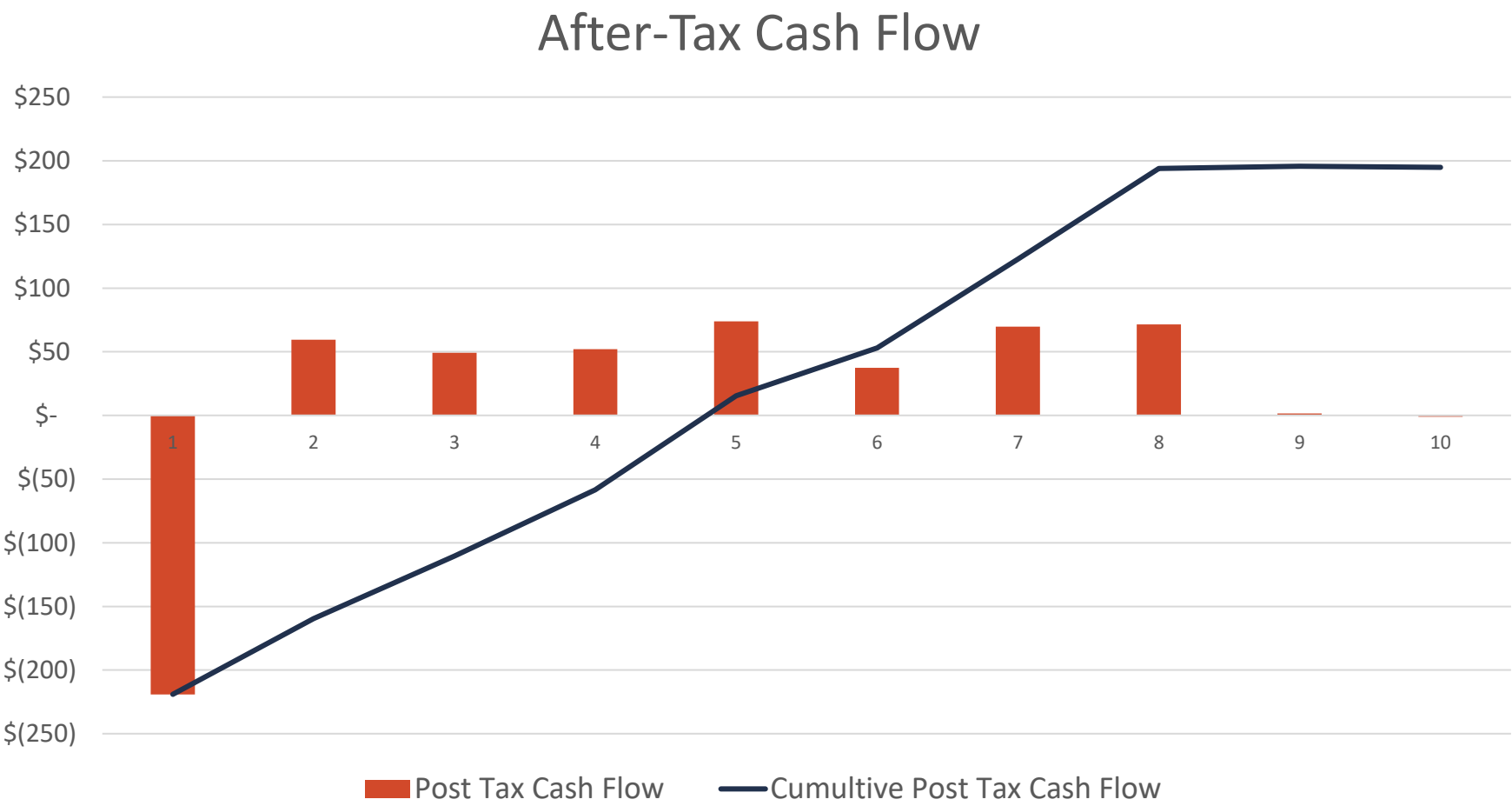
- Delays with defining Crean Hill
- Commodity Prices
- Crean Hill Permitting

Source: Magna Mining

# Magna Mining - Sensitivity Analysis



# Magna Mining - Sensitivity Analysis



# Generation Mining - Project Overview

GENERATION  
MINING

## Deposit Geology

- One of several mafic to ultramafic intrusive bodies in the Mid-continent Rift System that host significant copper, nickel, or PGM sulfide mineralization

## Location

- Thunder Bay District of Ontario

## Project Highlights

- Has the ability to transport the Cu-PGM concentrate by rail.

## Potential Shipping Channel Use

- Project location allows for direct access to Lake Superior, indicating the possibility of utilizing shipping channels



*“Critical Minerals for Future Generations”*

Source: Generation Mining



# Generation Mining - Project Overview

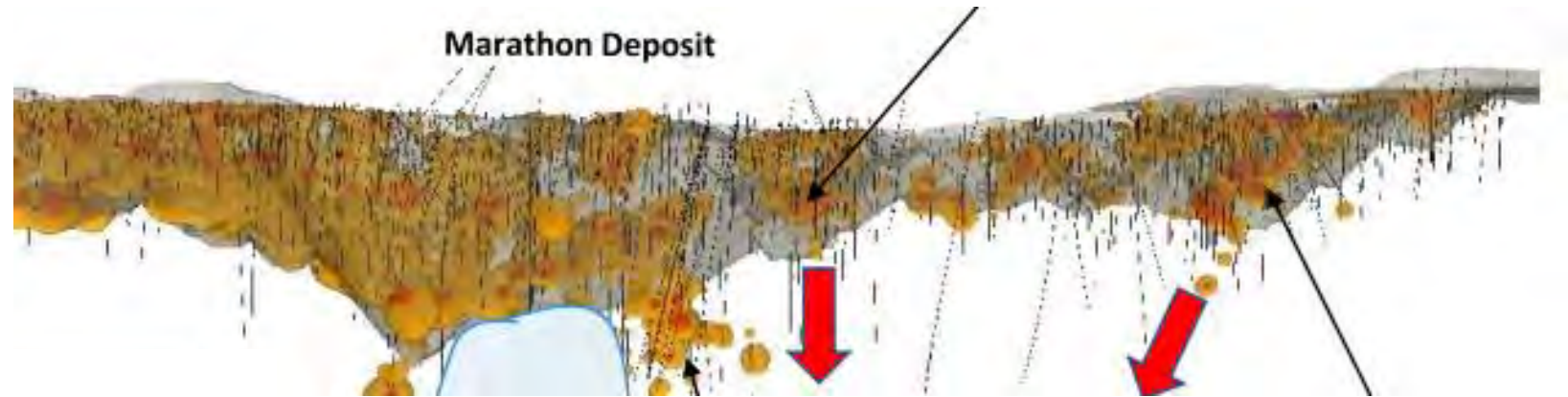
**GENERATION  
MINING**

## Project Ownership

- Generation: 80% Interest
- Stillwater Canada: 20% Interest

## Report Highlights

- Mine Life: 14.6 Years (Including Pre-Production)
- Post-Tax NPV<sub>6%</sub>: \$1,068M
- Post-Tax IRR: 29.7%
- Payback Period: 2.5 Years (Production)
- CAPEX: \$1,087M
- OPEX: \$2,700M



Generation Mining	Tonnage (kt)	Cu (%)	Pd (g/t)	Au (g/t)	Pt (g/t)	Ag (g/t)
Proven	85,091	0.202	0.660	0.070	0.212	1.359
Probable	32,610	0.213	0.512	0.061	0.168	1.541
<b>Total</b>	<b>117,701</b>	<b>0.205</b>	<b>0.619</b>	<b>0.067</b>	<b>0.200</b>	<b>1.410</b>

Source: Generation Mining



# Generation Mining - Company Overview

**GENERATION  
MINING**

## Market Profile

- Share Price: \$0.72
- Market Cap: \$131.65M
- Shares O/S: 180.34M

## Notable Shareholders

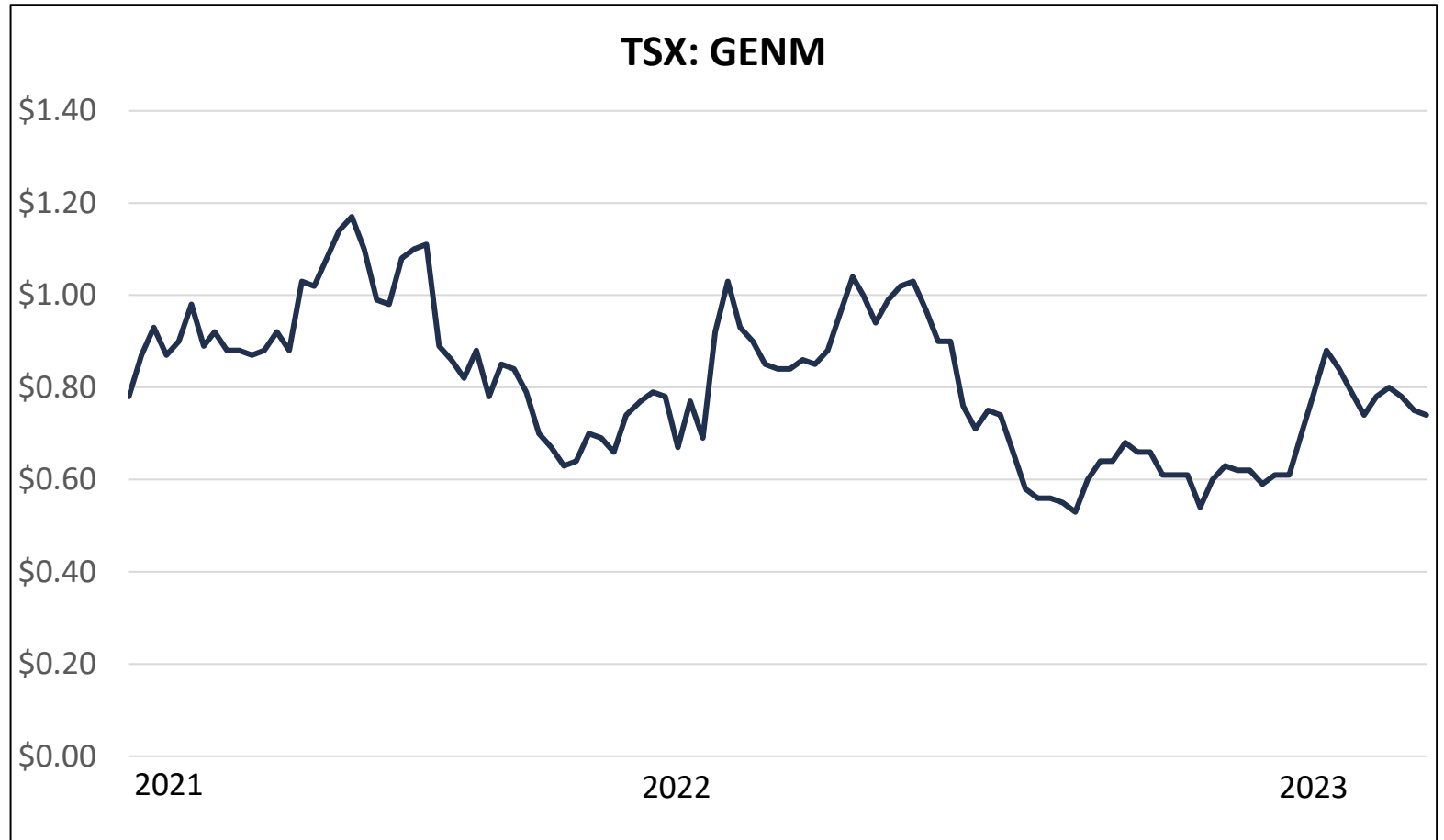
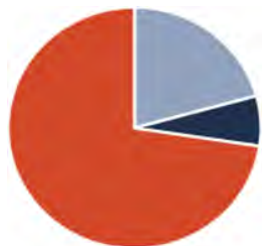
- Sibanye-Stillwater: 18.2%
- Eric Sprott: 9.1%
- Zebra Holdings: 6.2%
- Osisko Mining: 3.0%
- Officers and Directors: 7.0%

## Company Ownership

Public

Institutions

Insiders



Source: Generation Mining

# Generation Mining - SWOT Analysis

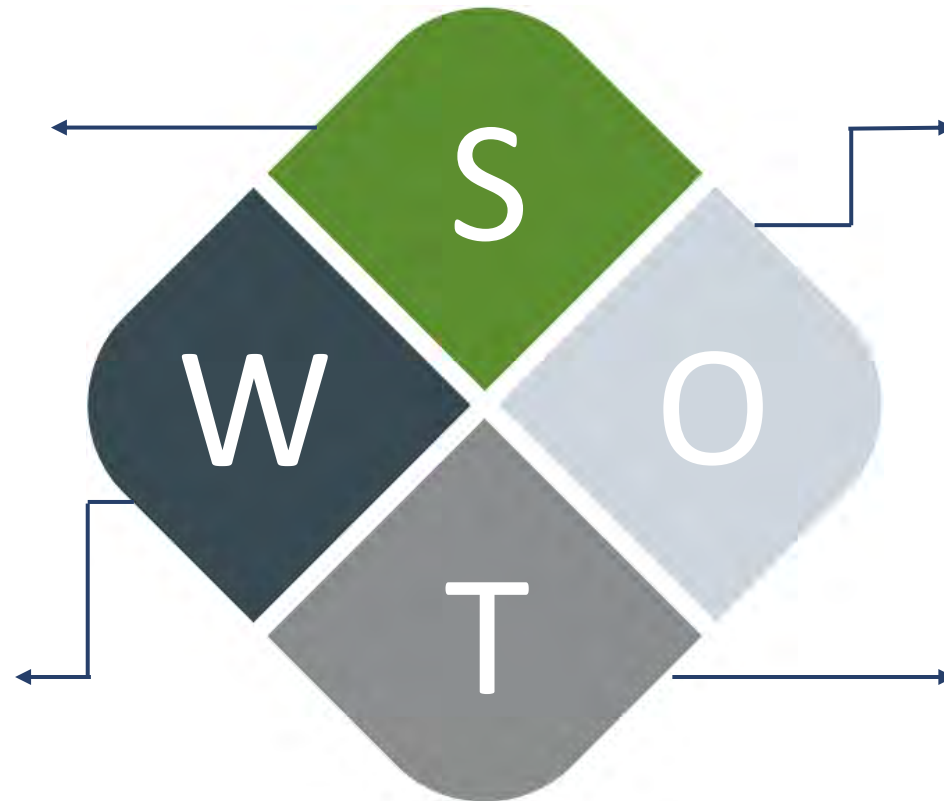
GENERATIONMINING

## Strengths

- Economic Viability Demonstrated
- Notable Shareholders
- Undervalued Stock Price

## Weaknesses

- Not as focused on green economy
- ESG Communication
- Commodity Markets



## Opportunities

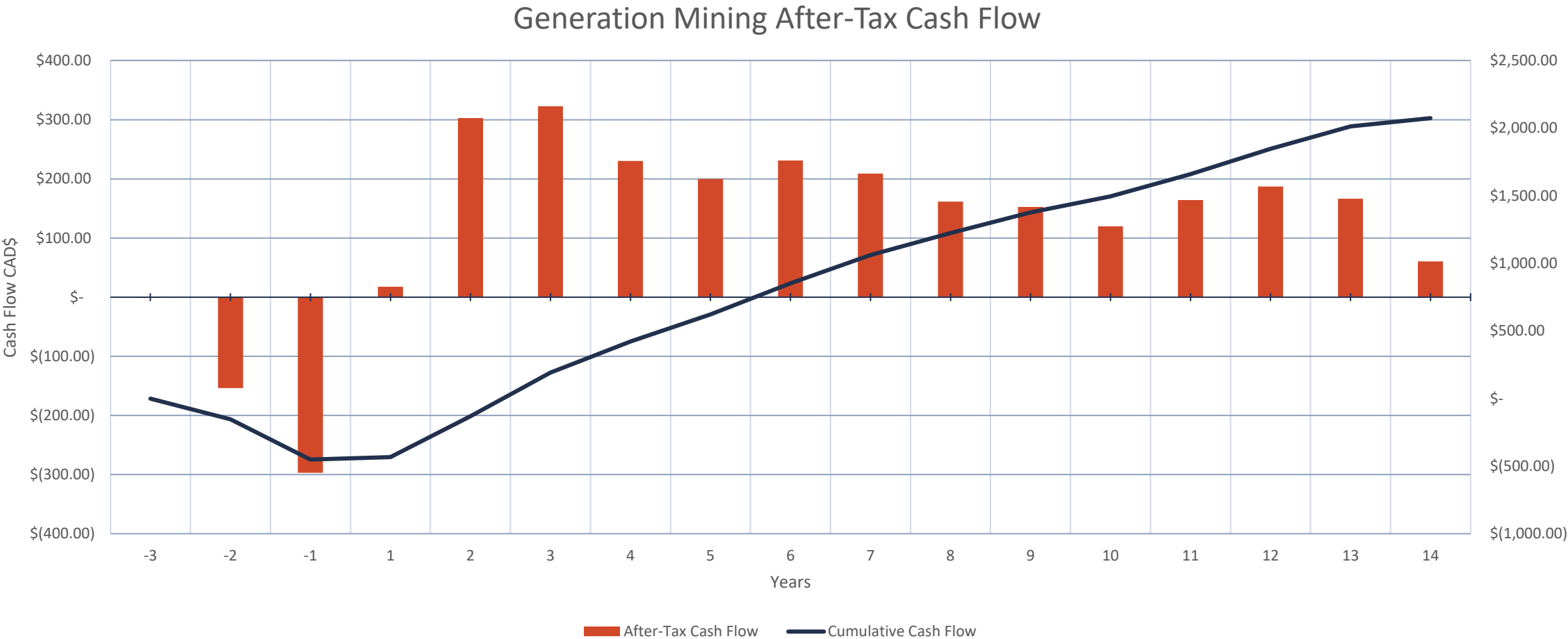
- Exploration Potential
- Critical Mineral Focus
- Located Near Power and Transportation

## Threats

- Securing Institutional Investment
- Palladium Price Outlook
- Multiple Similar Deposits Located Nearby

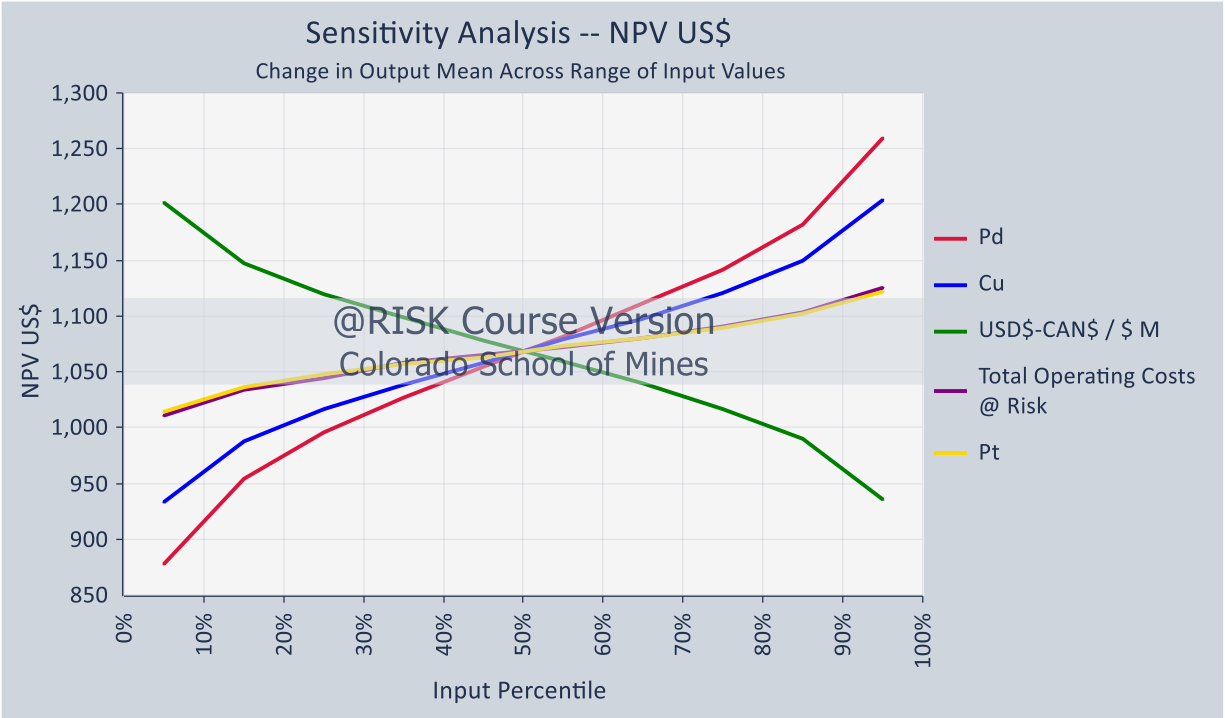
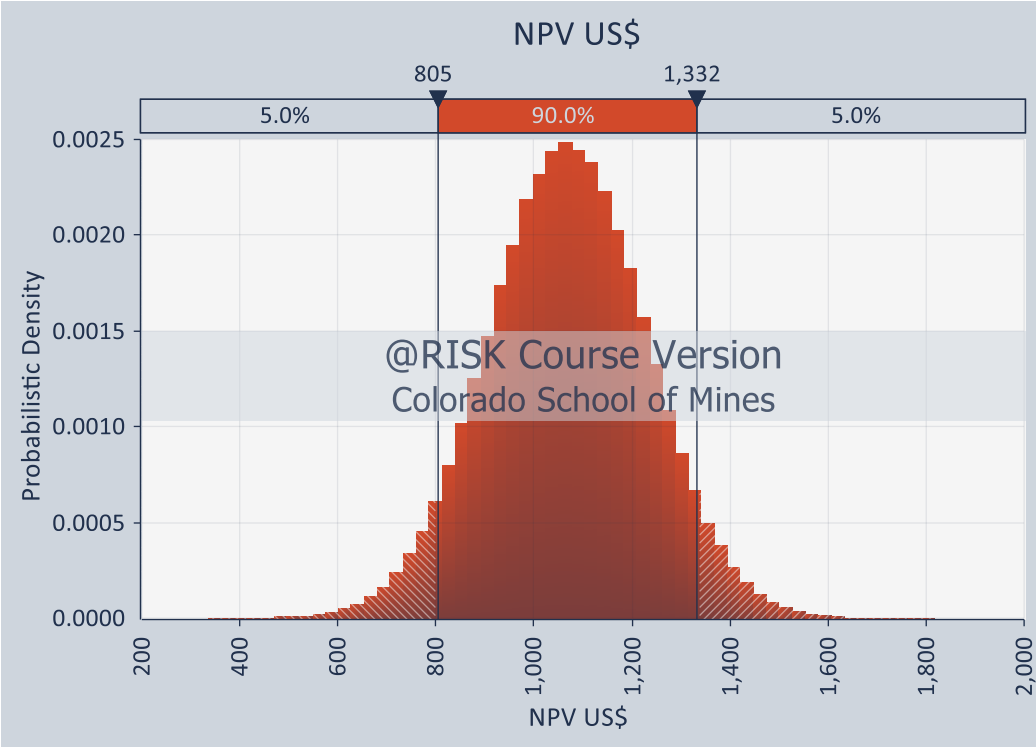
Source: Generation Mining

# Generation Mining - Financial Model



Source: Generation Mining

# Generation Mining - Sensitivity Analysis



# Frontier Lithium - Multiple Scenarios



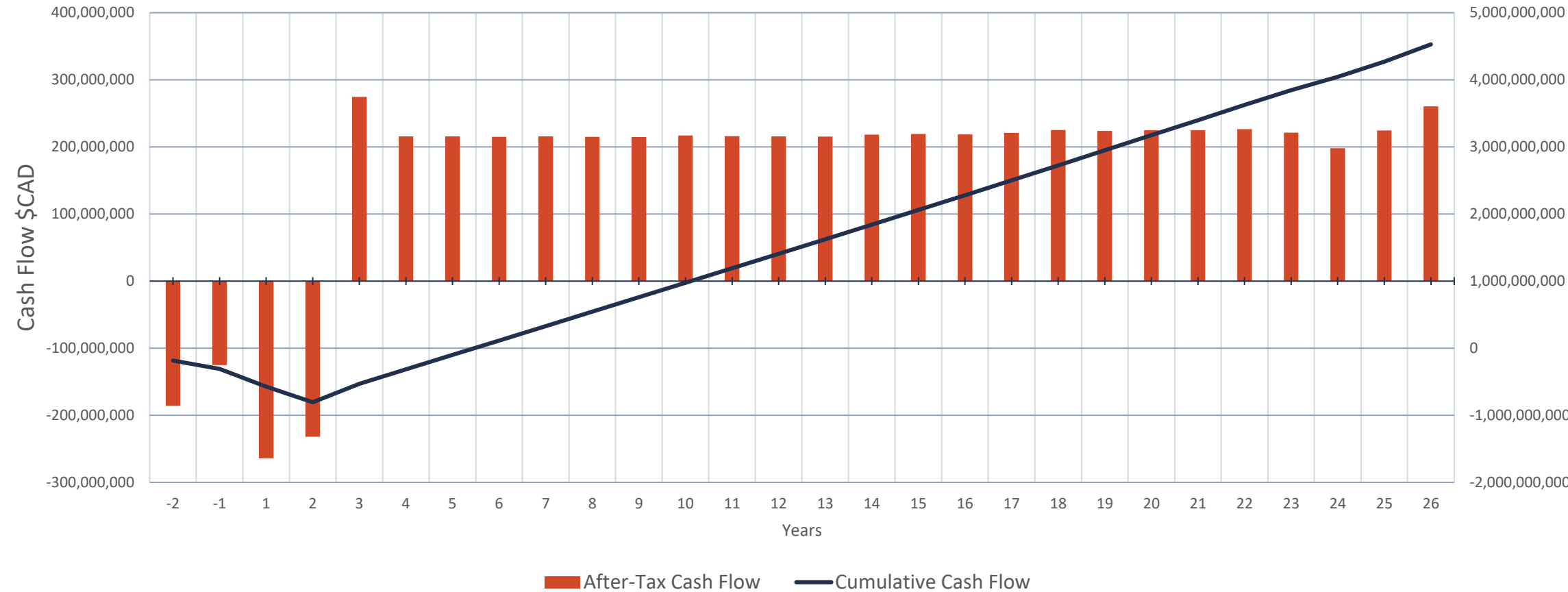
## Project Economics Without Battery Grade LiOH Plant

Criteria	Spot (Li \$70,000 US / t)	Base (Li \$34,700 US / t)	Breakeven Point (Li \$23,500 US / t)
NPV 8%	\$1,700 M US	\$400 M US	\$0 US
IRR	84%	27%	8%
Payback Period	2.8 Years	3.7 Years	12.8 Years
Initial Capital Expenditures	\$320 M US	\$320 M US	\$320 M US

# Frontier Lithium - PEA \$13,500/t

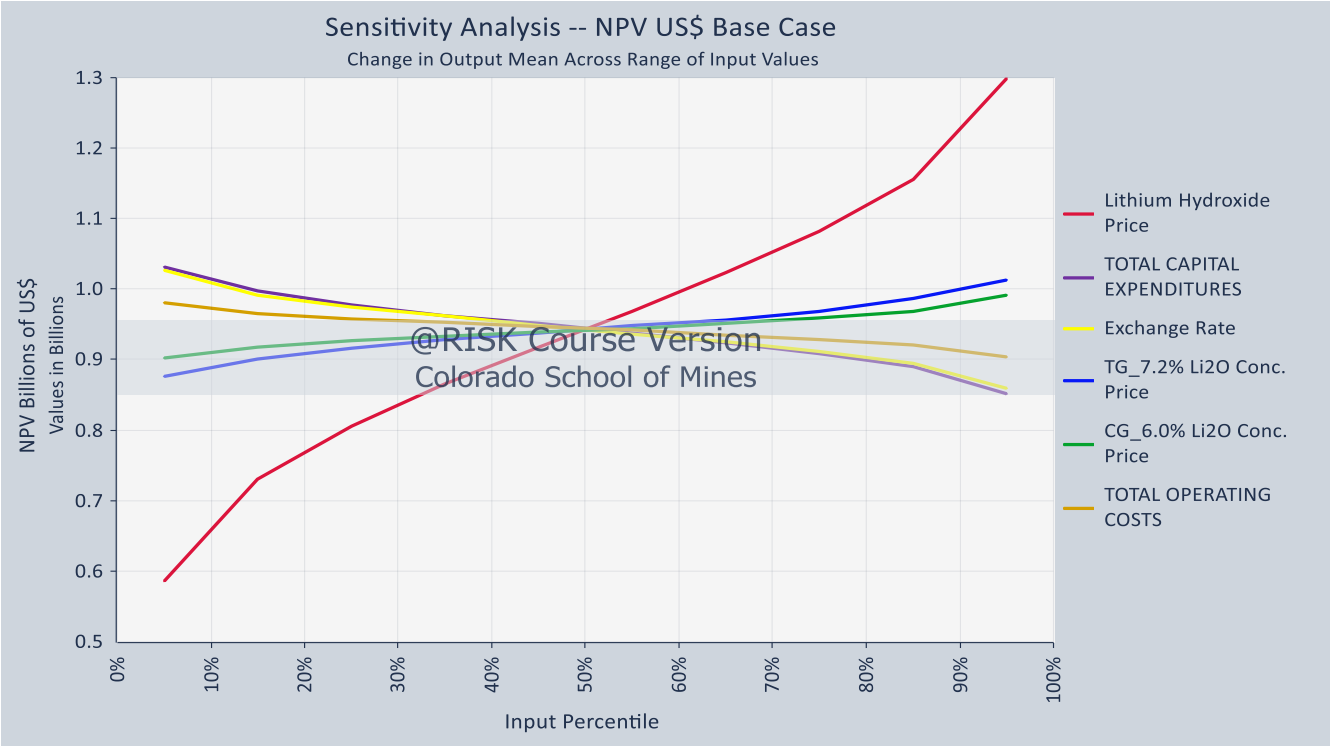
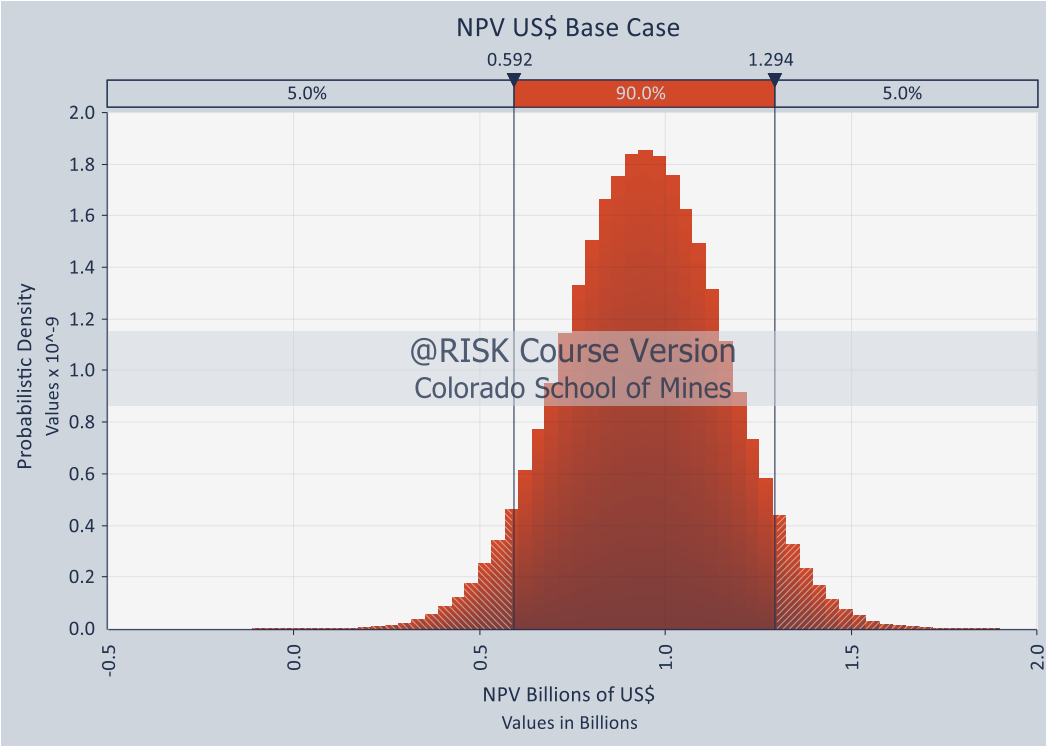


Frontier Lithium Base Case





# Frontier Lithium - PEA \$13,500/t

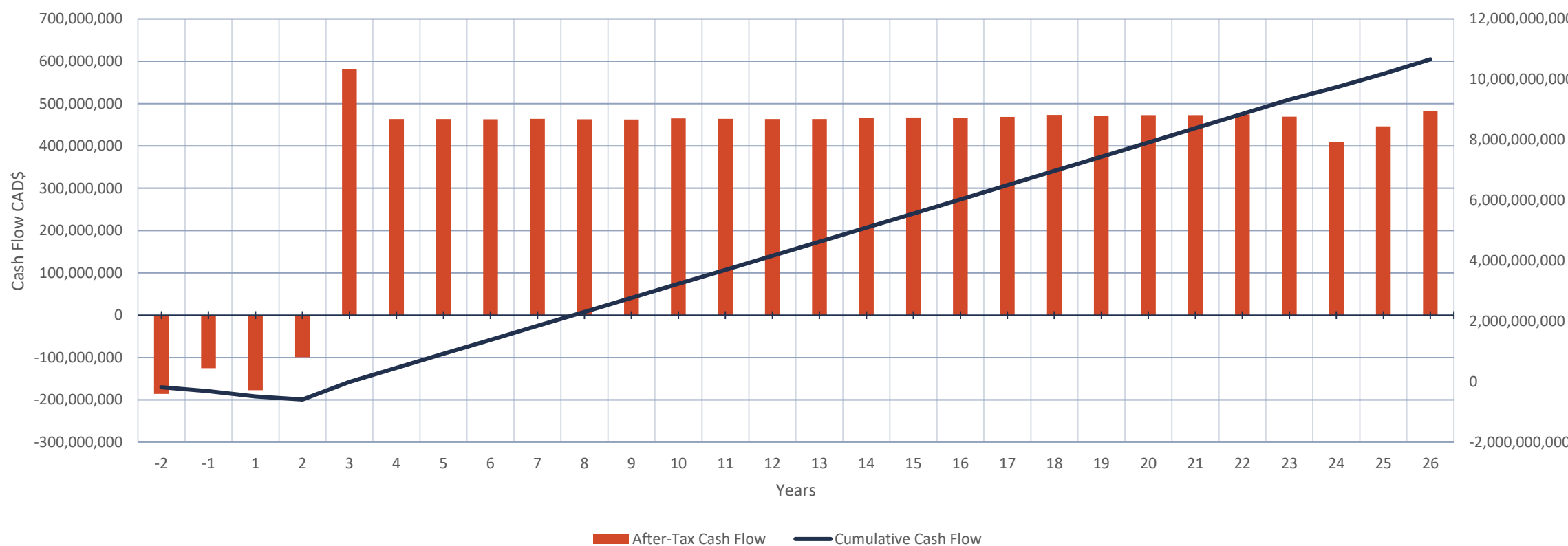


Median NPV 8%	Median IRR
\$1,290 M	21%

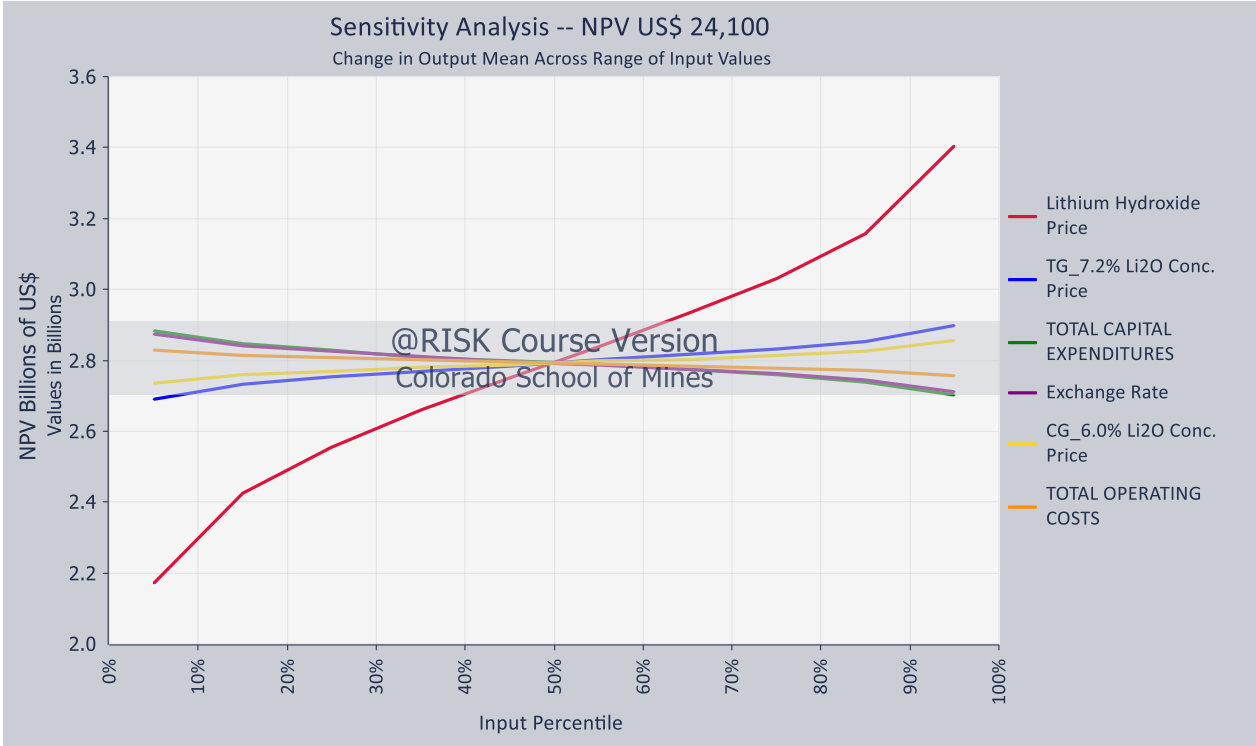
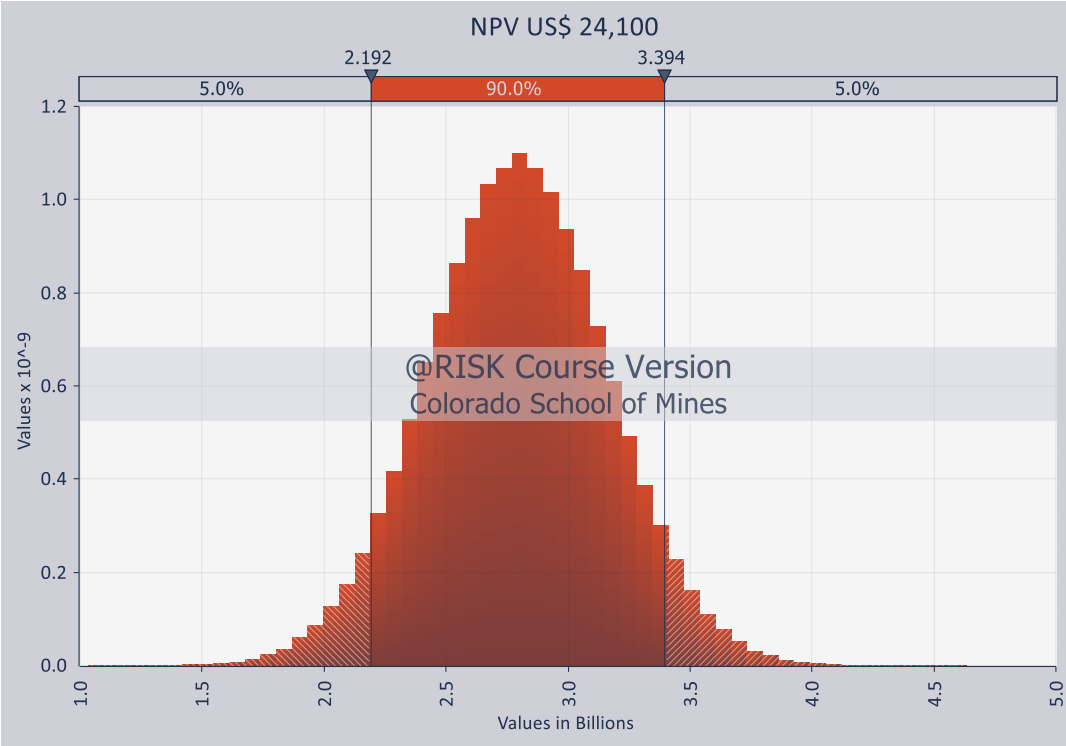
# Frontier Lithium - Base Case \$24,100/t



After-Tax Cash Flow



# Frontier Lithium - Base Case \$24,100/t

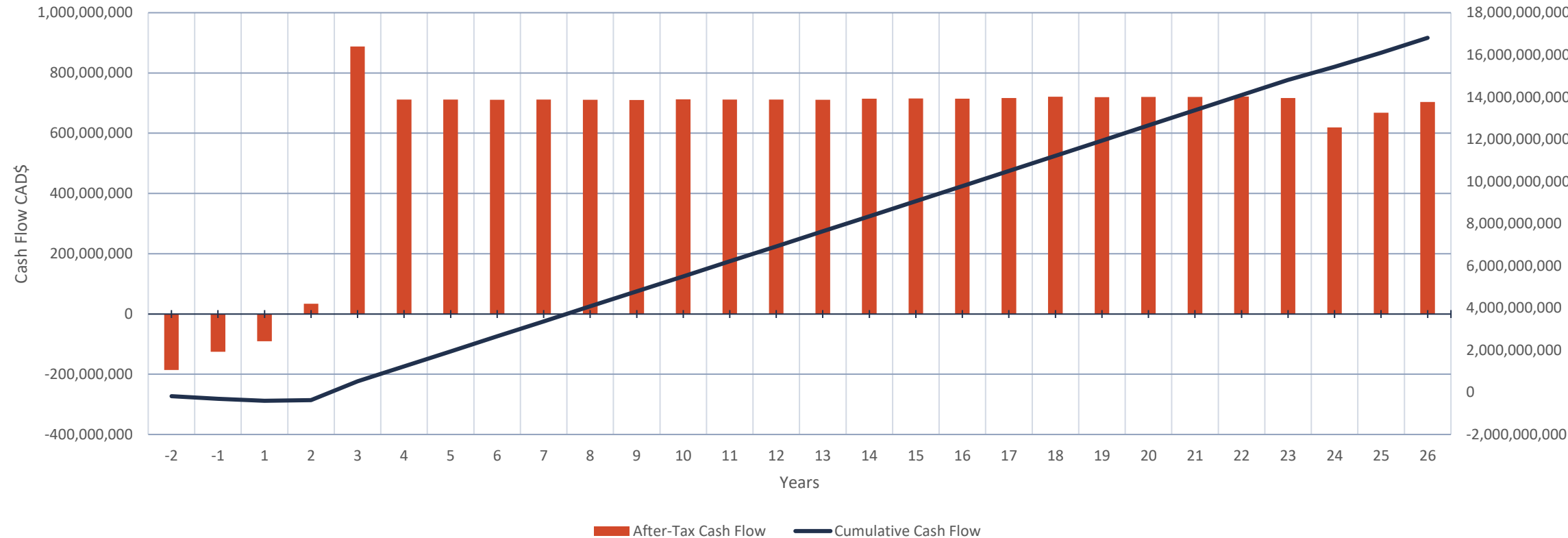


Median NPV 8%	Median IRR
\$3,709 M	43%

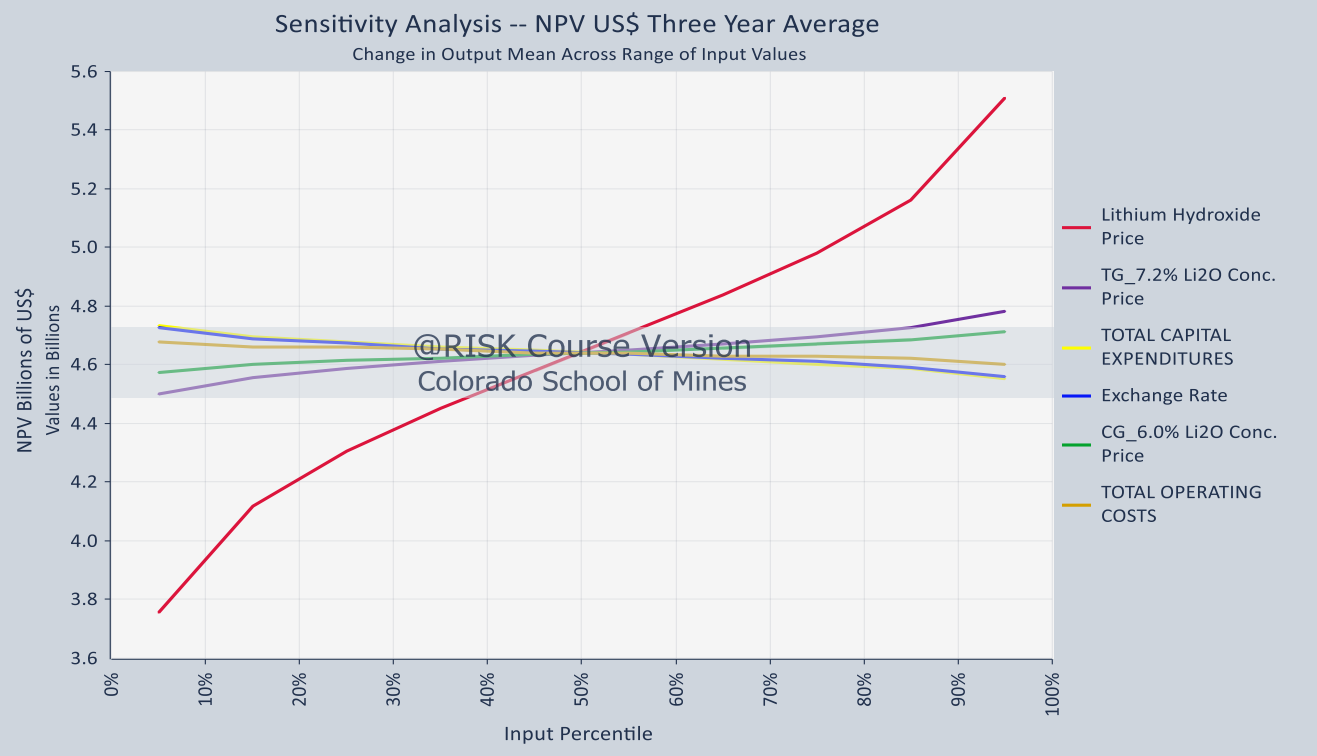
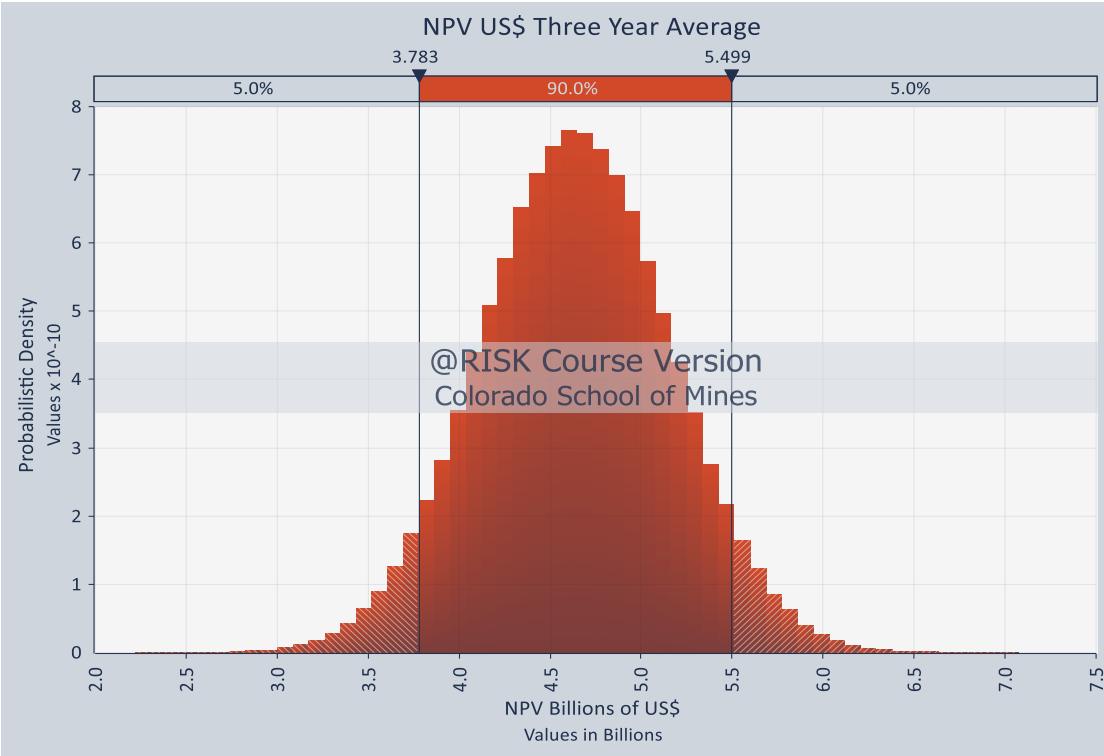
# Frontier Lithium – Bullish Case \$34,700/t



After-Tax Cash Flow



# Frontier Lithium – Bullish Case \$34,700/t



Median NPV 8%

\$4.64B USD

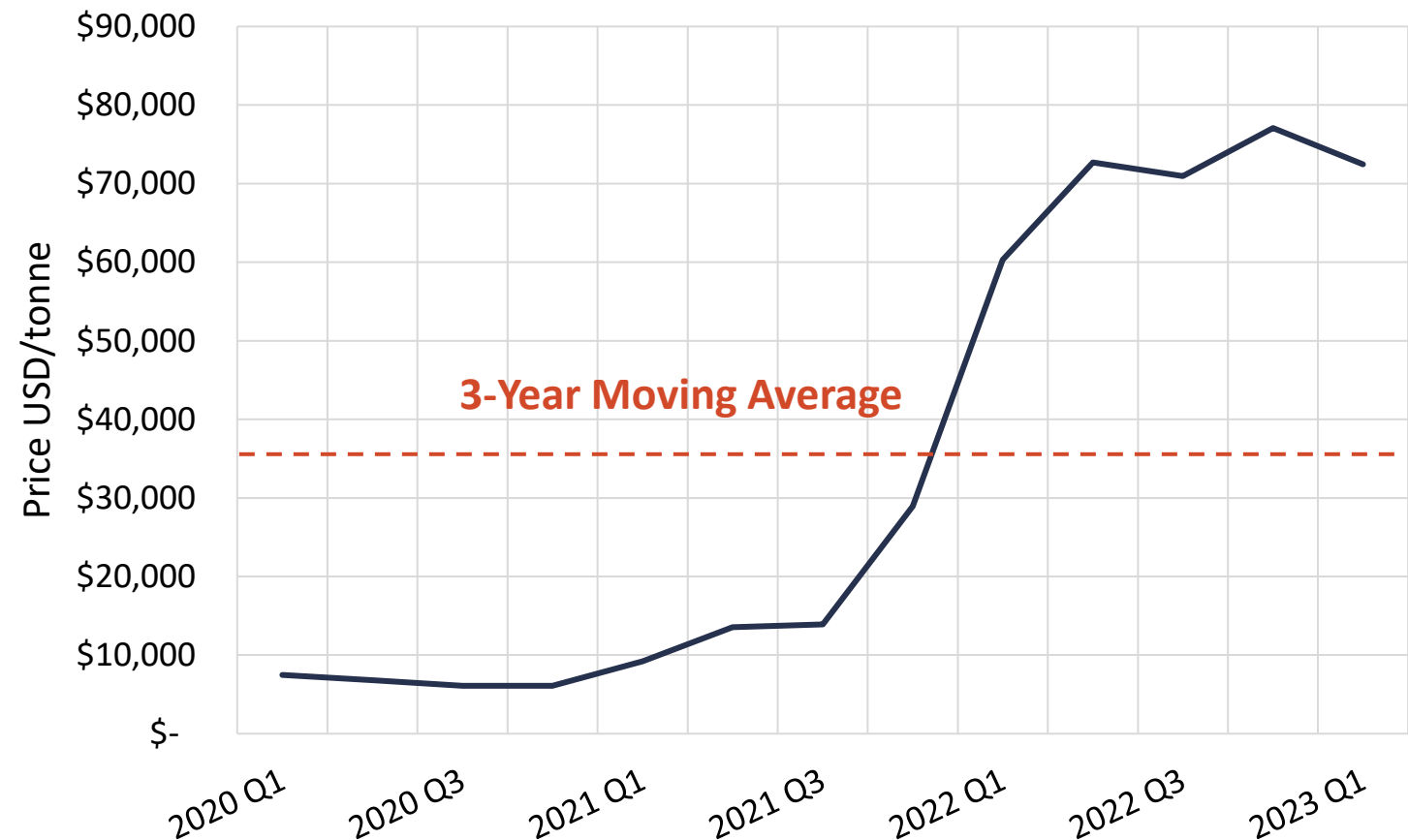
Median IRR

62.6%

# Frontier Lithium – 3 Year Moving Average



## Battery Grade Lithium Hydroxide Prices





# Frontier Lithium - Development Schedule

