

GOODMAN GOLD CHALLENGE DÉFI D'OR GOODMAN

BATTERY METAL EDITION







GENERATION MINING



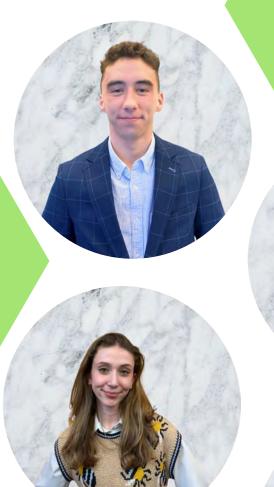
# Forward Looking Statement

According to applicable securities laws, some of the material presented in this presentation contains "forward-looking information," such as "future-oriented financial information" and "financial outlook" (collectively referred to herein as forward-looking statements). Except for statements of historical fact, information contained herein constitutes forward-looking statements and includes, but is not limited to, the (i) projected financial performance of the Company; (ii) completion of, and the use of proceeds from, the sale of the shares being offered hereunder; (iii) the expected development of the Company's business, projects and joint ventures; (iv) execution of the Company's vision and growth strategy, including with respect to future M&A activity and global growth; (v) sources and availability of third-party financing for the Company's projects; (vi) completion of the Company's projects that are currently underway, in development or otherwise under consideration; (vi) renewal of the Company's current customer, supplier and other material agreements; and (vii) future liquidity, working capital, and capital requirements. Forward-looking statements are provided to give potential investors the chance to understand management's beliefs and opinions about the future so they can use those beliefs and opinions as one consideration in assessing an investment, forward-looking statements are offered.

These assertions are not promises of future performance; therefore, you shouldn't rely on them too much. The estimates of future performance or results indicated or inferred by such forward-looking statements may differ considerably from actual performance and financial results in future periods because of known and unknown risks and uncertainties. There can be no guarantee that the forward-looking statements in this presentation will prove to be accurate. This is because actual outcomes and future events may differ materially from what is projected in the forward-looking statements, even though management of the company believes that these assumptions are reasonable. Except as required by relevant securities laws, the Company disclaims any duty to update any forward-looking statements if events or management's estimates or opinions should change. The reader is cautioned not to place undue reliance on forward-looking statements.













# Agenda

- Introduction
- Investment Alternatives
- The Pitch
- Analysis
- Conclusion





## **INVESTMENT CRITERIA**

# **Operations:**

Management Expertise

**Previous Experience** 

**Diverse Knowledge** 

**Ability to Adapt** 

Deposit Quality and Quantity

**Measured Deposit** 

**Type of Metal** 

**Cost Structure** 

**CAPEX / OPEX** 

**Predictability** 







# **INVESTMENT CRITERIA**

### **Return:**

Investment Horizon

**Production start date** 

Payback period

Valuation Upside

Upside

Sensitivity

IRR Flagship
Asset

IRR over 20%



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# CLIENT PROFILE DUNDEE CORPORATION



### PRESIDENT AND CEO

JON GOODMAN



#### MINING

Team of geologists, mining engineers, analysis, investment bankers and financiers.



#### COLLABORATION

Staying involved alongside capital partners.

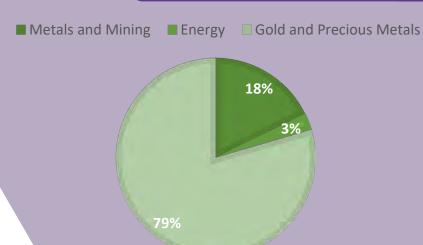


#### **PURPOSE**

Delivering long term and sustainable value that can be profitable at any point in the cycle

### Priority: Quick Payback





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# Investment Alternatives

### **INVESTMENT ALTERNATIVES**



Pay Back Period

Project Stage

**Deposit Quality** 

Market Cap.



### Frontier Lithium

4 years

**Exploration** 

1.54% *Li20* 

517.75 Million



### Generation Mining

4.1 years

Development

0.245 *avrg. g/t* 

129.90 Million



# Magna Mining Corp.

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Exploration

0.295 avrg. g/t

146.91 Million

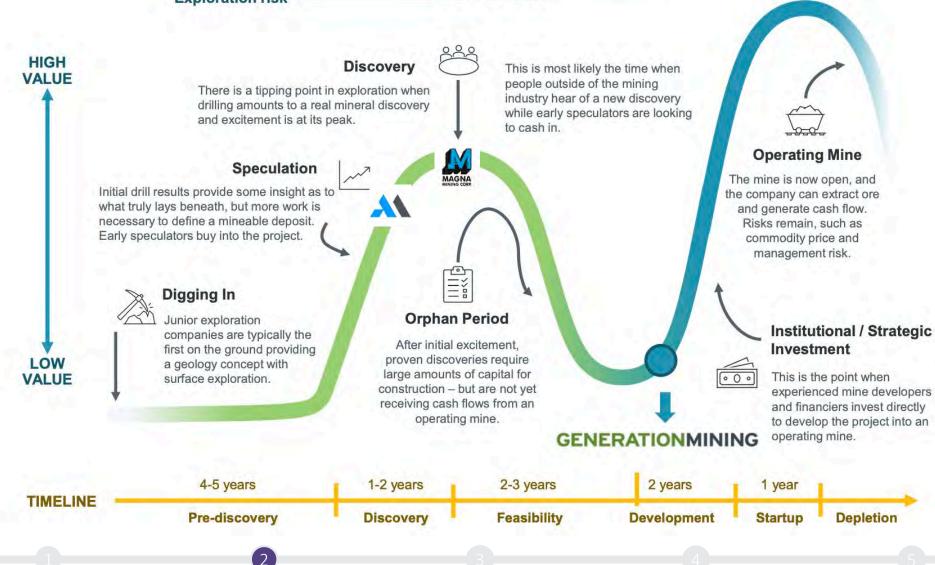








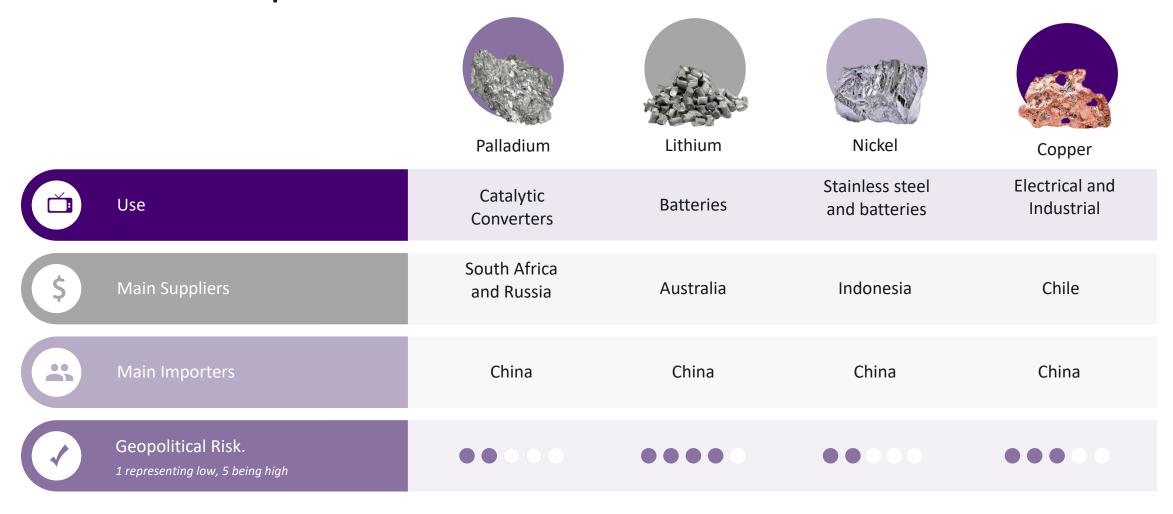
### Funding risk Technical risk Exploration risk



Introduction Comparison Pitch Analysis Conclusion



# Metal Comparison











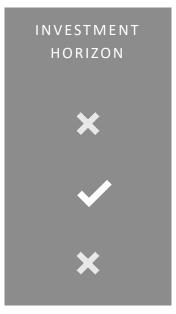
### **INVESTMENT UNIVERSE**



















# RECOMMENDATION GENERATION MINING













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# **Proposed Investment**

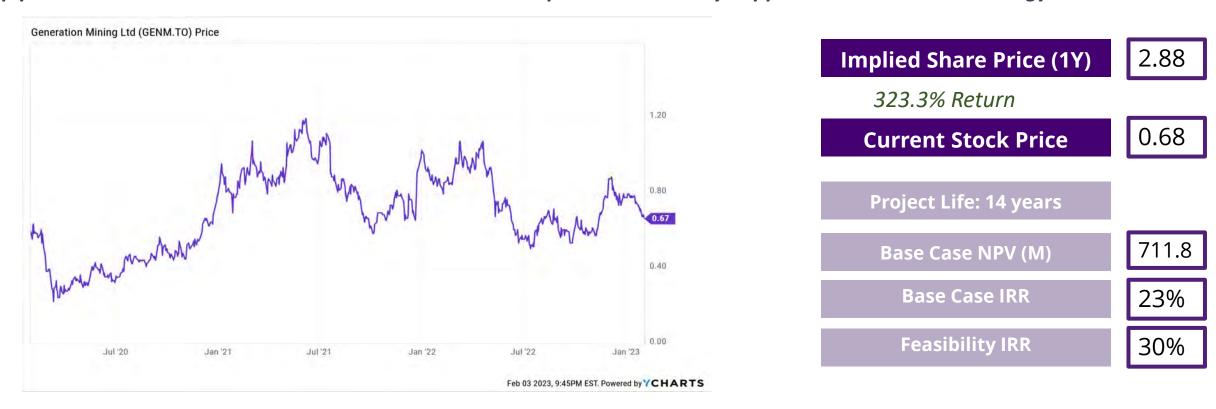
Introduction

**Embracing Progress: Moving from Palladium to Copper** 





Investors have been overlooking Generations high value Palladium, Platinum, and platinum deposits. Generation will help provide cleaner emissions to traditional vehicles and provide necessary copper to the renewable energy transition.



**Pitch** 

# **ENVIRONMENTAL, SOCIAL AND GOVERNANCE**



**Industry Standard** 

4.65 tons CO2

**Generation Mining** 

**1.5 tons CO2** 

**Enough Copper for 275,000 electric cars** 

**Evaluating electrical** mining fleet

Carbon free energy source

High efficiency equipment

Carbon Capture in construction concrete

Water treatment plant











Legally binding conditions

269

ways to address adverse effects on Indigenous people, health and socio-economic conditions of people and wildlife

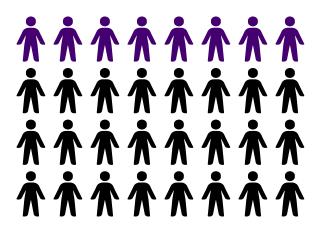
Employees during construction period

450-500

\*375 permanent

### Commitment

25% project workforce from within Biigtigong Nishnaabeg



Strengthen Canada's position as global leader in responsible and sustainable production of critical metals.





# **PROJECT**

Introduction

High-Level Production Profile



	Marathon	Competitor (CleanAir Metals)
Total Tonnage (M&I)	244,874	8,460
Strip Ratio	2.81	9.00
Copper Grade	0.21	0.25
Palladium Grade	0.62	0.98

### All-In-Sustaining-Costs US\$809 per ounce PdEq





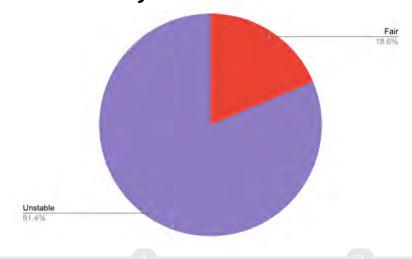


### Feb 3: \$1,627.00 per ounce

**Catalytic Converter Shortage** 

**Ukraine War and South African labour** 

# Production volume of palladium worldwide by political stability





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(5)

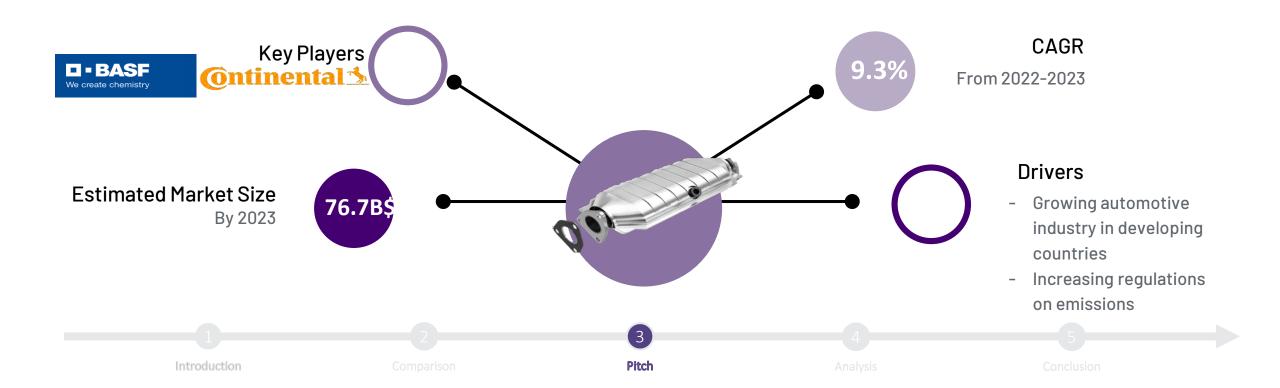
# **Catalytic Converters**



According to J. P. Morgan, over 80% of vehicles will still require catalytic converters in 2030

African automotive market: expected to grow to 42.06B with CAGR of **5.55%** until 2028

India's Automotive Market valued at **100 Billion USD** in 2021, expected to grow to **160 Billion USD** by 2027 with a registered **CAGR of 8.1%** 





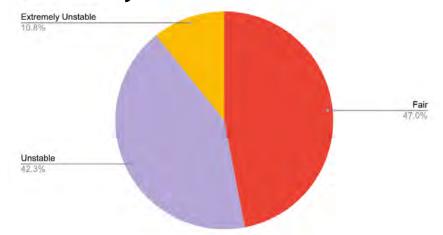
# Copper

### Feb 3: 4.05 per pound

**Used in everything** 

**Relatively Stable** 

# Production volume of copper worldwide by political stability



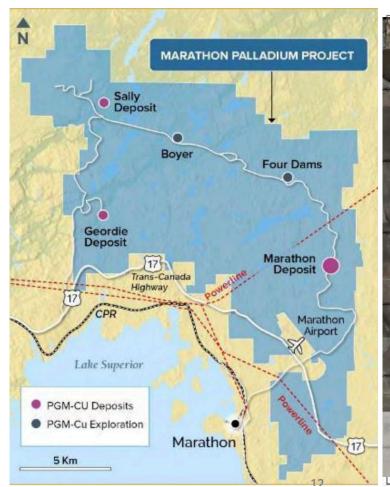


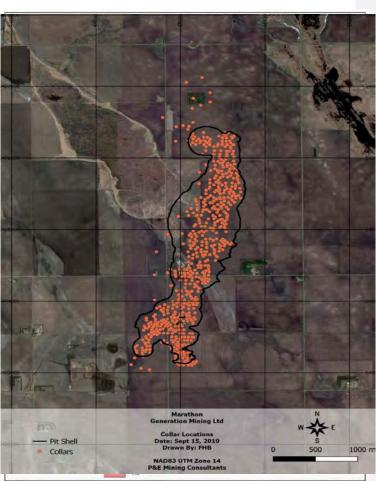
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### **Site Overview**





# Overarching Competitive Advantage:

- Trans-Canada Highway
- Served by CPR main rail line
  - Marathon airport
- Carbon-free/inexpensive power potential
  - Workforce potential
- Future exploration potential (Sally and Geordie Deposits)
- Strong Support from location town of Marathon

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### **Investment**

Institutional Shareholders	Percentage
Pric Sprott	8.2%
Zebra Holdings	8.0%
Sibanye Stillwater	8.0%
Osisko Mining	4.0%
Officers & Directors	6.5%

Capital Structure							
Shares Outstanding	170.2M						
Total Liabilities	48.5M						
Cash From Financing Activities	23.25M						
Fully Diluted Shares Outstanding	180.4M						
Basic Market Capitalization	\$139M						

Pitch

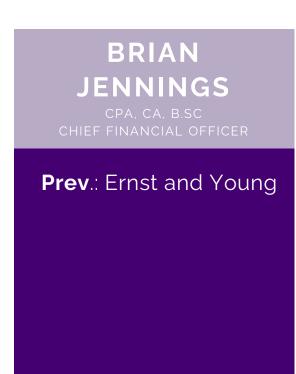


# Management team:



### FINANCE EXPERTS:









<u>Insider ownership</u>: 7%

management and board interested are aligned with shareholders.

### Management team:



### MINING INDUSTRY EXPERTS:



### **Learning Experience:**

Placer Dome is the subject of many controversies, providing a great learning experience



### **Success Story:**

Barrick Gold is the #2 highest earning. mine in Canada

#### DREW ANWYLL

M.ENG,P.ENG
CHEIF OPERATIONS OFFICER



Yrs. Experience: 31
Prev.:Placer Dome, Barrick
Gold, Detour Gold, and Gold
Source Mines



### ANN WILKINSON

VICE PRESIDENT, INVESTOR RELATIONS

Prev: VP Investor Relations
Gold Quest mining Corp,
Colossus Minerals, TMAC
Resources



### MAURO BASSOTTI

P.SC HON
VP, GEOLOGY



Prev.: Ma'aden, Detour Gold, New Gold, Barrick and Placer Dome



### **RUBEN WALLIN**

**VP SUSTAINABILITY** 

Expert: Environment,
Permitting, Indigenous
and Gov. relations
Prev.: Placer Dome,
Detour Gold, Barrick and
Osisko







**Pitch** 

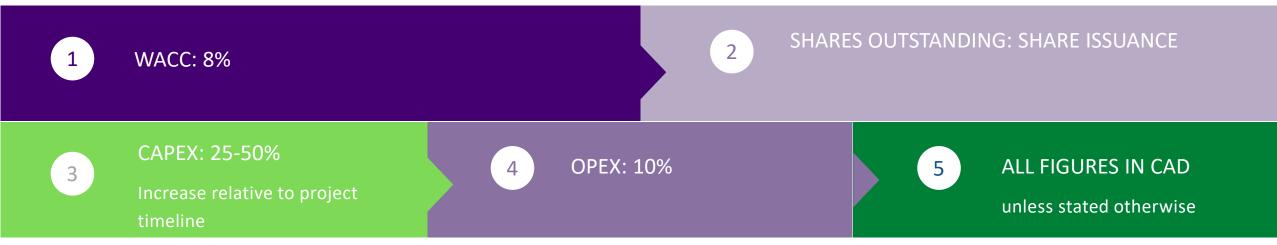
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# **Key Assumptions**



Baseline assumptions for comparative evaluation



### **Base-case price assumptions**



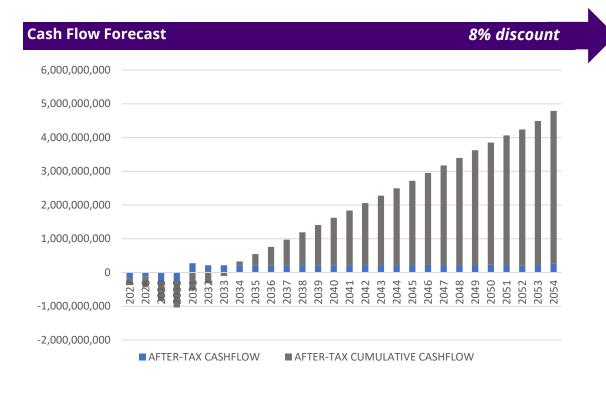
# **Frontier Lithium**





North America's highest-grade large tonnage Lithium Resource

### **Financial Valuation:**

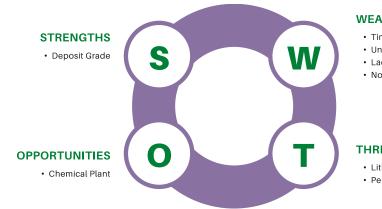


**Modelled Payback: 9.8** 

**Modelled NPV: 9,456 M** 

**Project Life: 26 years** 

IRR: 19%



#### **WEAKNESSES**

- Timeline
- Uncertainty
- · Lack of infrastructure
- · No indigenous consent

#### **THREATS**

- Lithium saturation
- Permitting

# **Magna Mining**

Sudbury's next nickel producer

Introduction



### Financial Valuation:



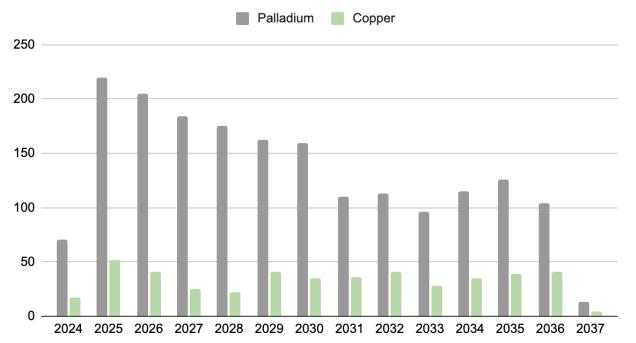
**Modelled Payback: 4.4 Years** 

Comparison Pitch Analysis Conclusion

# **A Unique Production Profile**

## **GENERATIONMINING**







2021:

Mine Life: 13-years

**Pd: 2.03Moz** 

**Cu: 500M Lbs** 

Pt: 634K oz of Pt

### Differentiators:

high-grade palladium and copper, reduce risk of decreasing palladium

### 2029:

70% of palladium will be mined, copper to mitigate

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Introduction

Comparison

Pitch

**Analysis** 



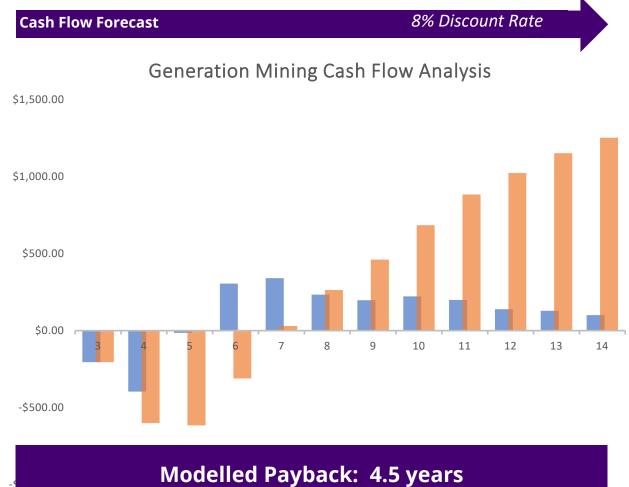


		2020 Feasibility Study	Modelled
	Discount Rate	5%	8%
	Milled Tonnage	117.7M	115M
*	Mine Life	14 Years 2024 to 2037	14 Years 2025 to 2038
• • •	Operating Costs	Capex \$1,205M OPEX: 2,731M	CAPEX: 1,469M OPEX: 3,003M
	USD to CAD	1.28 (USD to CAD 20y AVG)	1.28 (USD to CAD 20y AVG)
	Palladium. Price	2023 Spot Price – 15%	2023 Spot Price – 20%

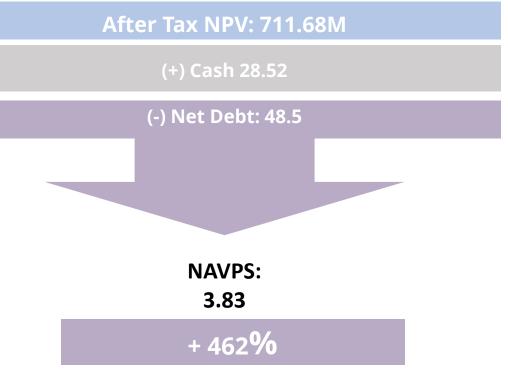


# **Generation Mining: Modelled NPV**











Introduction



# **Sensitivity Analysis**

### Profitability is incredibly sensitive to changes in OPEX, CAPEX, and commodity prices

			NPV (\$M)	Sensitivity	v to Increas	se/ Decreas	se in Operating	g and Capital	Cost's	
			(4)		,	Capex	, o <b>p</b>	<b>9</b>		
	\$711.68	70%	80%	90%	100%	110%	115%	125%	130%	135%
	70%	1,718.18	1,636.94	1,555.69	1,474.45	1,393.21	1,352.59	1,271.35	1,230.72	1,190.10
	80%	1,578.26	1,497.02	1,415.78	1,334.53	1,253.29	1,212.67	1,131.43	1,090.81	1,050.19
OPEX	90%	1,438.34	1,357.10	1,275.86	1,194.62	1,113.37	1,072.75	991.51	950.89	910.27
	100%	1,298.43	1,217.18	1,135.94	1,054.70	973.46	932.84	851.59	810.97	770.35
	110%	1,158.51	1,077.27	996.03	914.78	833.54	792.92	711.68	671.06	630.44
	115%	1,088.55	1,007.31	926.07	844.82	763.58	722.96	641.72	601.10	560.48
	125%	948.63	867.39	786.15	704.91	623.67	583.04	501.80	461.18	420.56
	130%	878.68	797.43	716.19	634.95	553.71	513.09	431.84	391.22	350.60
	135%	808.72	727.48	646.23	564.99	483.75	443.13	361.89	321.26	280.64

\$ 2.88	\$ 1	,696.32	\$ 1	,785.60	\$ 1,	984.00	\$ 2,	083.20	\$ 2,	187.36
6%	\$	2.35	\$	2.79	\$	3.74	\$	4.22	5	4.72
7%	\$	2.00	\$	2.40	\$	3.29	\$	3.73	5	4.20
8%	\$	1.68	\$	2.05	\$	2.88	\$	3.30	\$	3.73
9%	\$	1.40	\$	1.74	\$	2.52	\$	2.90	\$	3.31
10%	\$	1.14	\$	1.47	\$	2.19	\$	2.55	\$	2.93
11%	\$	0.91	\$	1.21	\$	1.89	\$	2.23	\$	2.58

Sensitized model demonstrates Generation's ability to withstand unfavorable cyclical conditions











# **DCF Valuation**



DCF Scenario: Base Case Flagship Project: Marathon Palladium Deposit

8% Selected WACC Payback Period After Tax NPV (\$M) \$711.68 Project IRR 23%

Key Assumptions:	Modelled C		<b>Current Price</b>	Total Initial Capex (M)	(1,218.44)
	Paladium Price	\$1,984.00	\$2,225.92	PEA Initial Capex Estima	(\$600.00)
	Copper Price :	\$5.76	\$5.70	Closure Costs	(509.75)
	Project Life	14 Years		Exchange Rate	1.28

Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Revenue (\$M)	0.00	0.00	267.36	829.77	752.73	628.65	582.90	642.08	598.93	485.91	532.58	412.60	486.60	547.46	506.82	57.13
%growth			•	67.78%	-10.23%	-19.74%	-7.85%	9.22%	-7.20%	-23.26%	8.76%	-29.08%	15.21%	11.12%	-8.02%	-787.17%
EBITDA	\$0.00	\$0.00	\$168.36	\$583.37	\$505.23	\$374.55	\$325.70	\$388.08	\$348.13	\$243.91	\$286.18	\$177.20	\$253.40	\$329.66	\$318.72	\$25.23
(-) Initial Capital	(268.75)	(453.75)	(77.50)	-	-	-	-	-	-	-	-	-	-	-	-	-
(-) Contingency Costs	(31.25)	(41.25)	(21.25)	-	-	-	-	-	-	-	-	-	-	-	-	-
(-) Sustaining Capital	-	(1.00)	(80.00)	(85.00)	(35.00)	(40.00)	(41.25)	(27.50)	(43.75)	(27.50)	(51.25)	(23.75)	(10.00)	(41.25)	(2.50)	-
(-) Closure Costs	-	-	-	-	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(55.00)
(-) Change in NWC	(3.00)	(15.00)	(29.00)	(50.00)	26.00	8.00	3.00	(2.00)	3.00	10.00	(3.00)	8.00	(6.00)	(5.00)	3.00	52.00
Equip Financing Drawdowns	43.00	25.00	32.00	-	-	-	-	-	-	-	-	-	-	-	-	-
Equip Financing Costs	(5.00)	(9.00)	(14.00)	(19.00)	(19.00)	(22.00)	(14.00)	(12.00)	(4.00)	(1.00)	-	-	-	-	-	-
Taxes																
FCFF	-\$265.00	-\$495.00	-\$22.39	\$327.37	\$358.23	\$228.55	\$189.45	\$250.58	\$215.38	\$170.41	\$163.93	\$121.45	\$177.40	\$205.41	\$248.22	\$21.23
Free Cash Flow growth		-46.46%	2110.67%	106.84%	8.62%	-56.74%	-20.64%	24.39%	-16.34%	-26.39%	-3.95%	-34.98%	31.54%	13.64%	17.25%	-1069.31%
WACC	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Projection Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FV FCFF	-\$265.00	-\$495.00	-\$22.39	\$327.37	\$358.23	\$228.55	\$189.45	\$250.58	\$215.38	\$170.41	\$163.93	\$121.45	\$177.40	\$205.41	\$248.22	\$21.23
_Discount Factor	0.93	0.86	0.79	0.74	0.68	0.63	0.58	0.54	0.50	0.46	0.43	0.40	0.37	0.34	0.32	0.29
PV FCFF (\$M)	-\$245.37	-\$424.38	-\$17.78	\$240.62	\$243.81	\$144.03	\$110.54	\$135.38	\$107.74	\$78.93	\$70.31	\$48.23	\$65.23	\$69.93	\$78.25	\$6.20

Equity Value	\$691.73
Shares outstanding (M)	240
Value (\$ CAD)	\$2.88

# **Comparable Company Analysis**



(CAD)	Price	Market Cap (M)	Enterprise Value (M)	P/NAV
Clean Air Metals Canada Thunder Bay North Project	\$ 0.13	29	200.67	0.15
Granit Creek Copper Carmacks Project	\$ 0.08	45	300	0.15
Copper Mountain Mining Corp. Copper Mountain Project	\$ 2.16	454	1245	0.36
Argonaut Gold Margino Gold Project	\$ 0.63	527	538.88	0.98
IAMGOLD Côté Gold Project	\$ 3.58	1710	1109	1.54
Average	\$ 1.32	553	678.71	0.64
Generation Mining Marathon Project	\$ 0.67	121	1068	0.11

Upside		463%
Derived Stock Price	\$	3.77
Outstanding Shares (M)	_	180.4
Derived Market Cap		680
P/NAV Average		0.64

### Key Takeaway

Compared to other junior mining companies in the development phase, Generation Mining is undervalued.

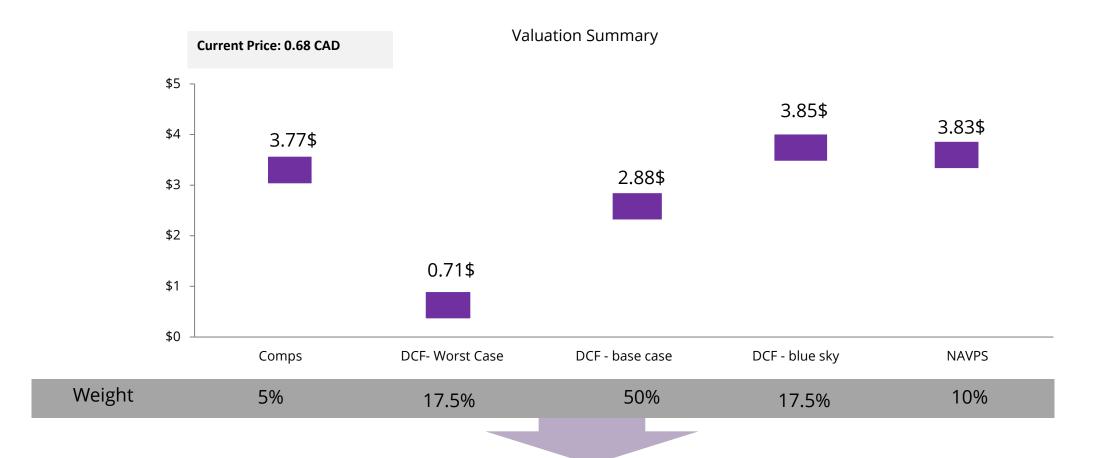




Introduction

## **Valuation Summary**





Weighted average: \$ 2.80







### **RISKS**

#### **Permit Delays**



Lack of permits would result in the project ending

#### Inflation





Inflation could significantly increase initial CAPEX

#### **Access to Financing**







Lack of financing could disrupt timeline/project

#### **CATALYSTS**

#### **Continued Geopolitical instability**



Position Canadian Pallidum positively

#### **Rapid Financing**





Lower time to production

#### **Nearby Mine construction ends**







Easy acquisition of workforce

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Conclusion

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**Introduction** Compa

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## Conclusion

## **GENERATION MINING**













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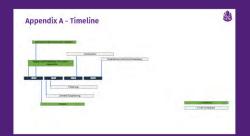
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# Thank You Questions?









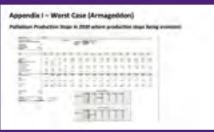






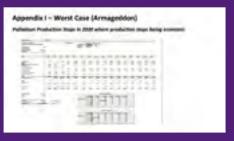








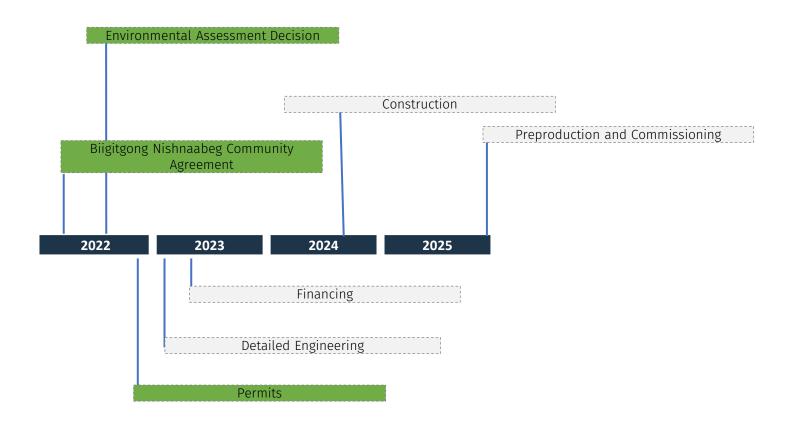






## **Appendix A - Timeline**

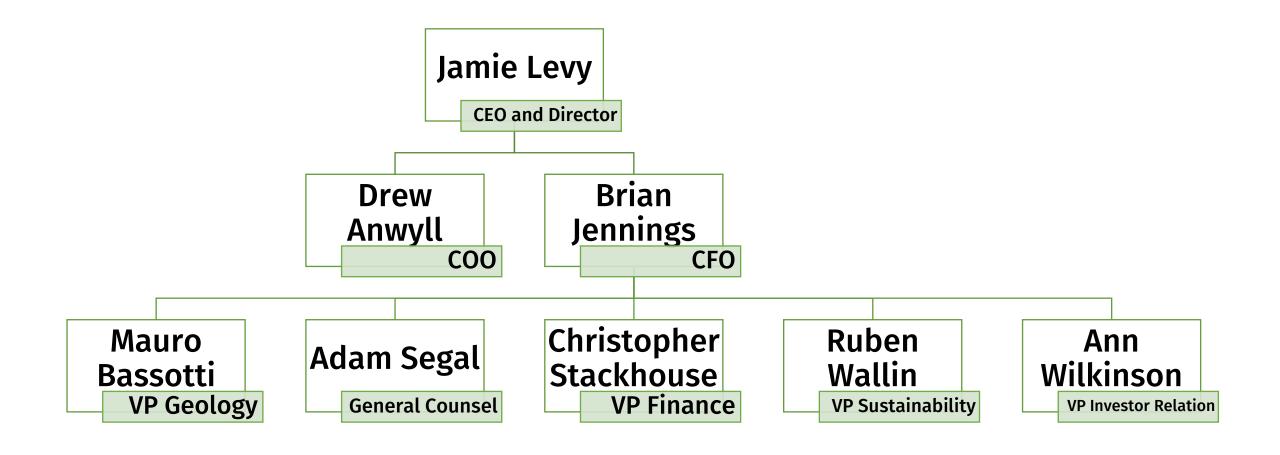














## Appendix C - Management







Diligent, disciplined and creative



Partnering Collaboratively



#### **Team Expertise**

Geologists, mining engineers, analysis, investment bankers and financiers

#### Methodology

De-risk investments by analyzing geological, technical, social, business and political risks

#### **Long-term Value**

Dundee group structures their deals with the purpose of delivering LT, sustainable value.

#### **High-quality assets**

That can be profitable at any point in the cycle

#### **Partnership**

Sharing findings from evaluations and due diligence with investees for mutual benefit

#### **Hands-on**

Dundee stays involved alongside capital partners

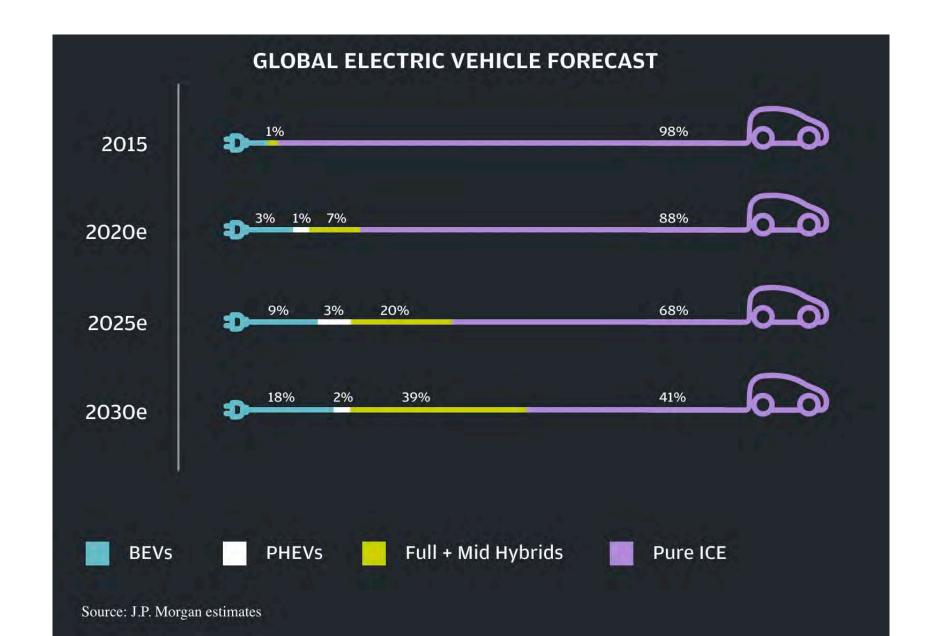
#### **Purpose**

Best available practices in place

#### **Anti-speculative**

Deliberate investment decisions – no exorbitant feeds on the deals Dundee structures

## **Appendix D – Global Electric Vehicle Forecast**

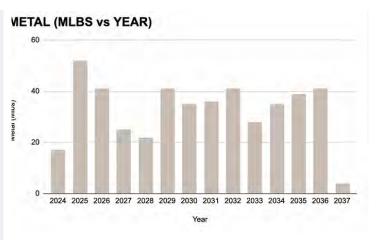


#### APPENDIX E - KEY FIGURES

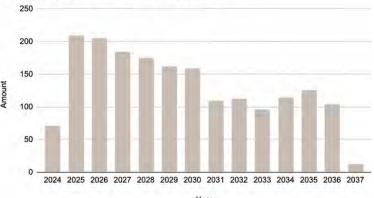


#### Mineral Reserve Estimates

MINERAL RESERVES	TONNES		Pd		Cu		Au		Pt		Ag	
	К	%	g/t	k oz	%	M	g/t	k oz	g/t	k oz	g/t	k oz
Proven	85,09 1	72%	0.660	1,805	0.202	379	0.070	191	0.212	581	1.359	3,719
Provable	32,61 0	28%	0.512	537	0.213	153	0.061	64	0.168	176	1.541	1,616
Prov. and Prob.	117,7 01	100%	0.619	2,342	0.205	532	0.067	255	0.200	756	1.410	5,336



#### **PALLADIUM - PAYABLE METALS**



Pitch Introduction

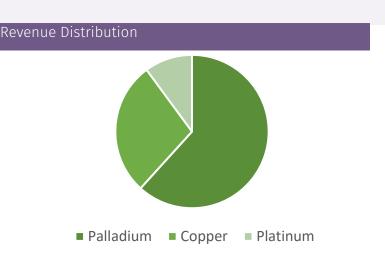




#### Company Highlights

- Robust Feasibility Study and infrastructure
- Favorable Metals: Palladium and Copper (EV batteries use lithium-ion technology, hydrogen is produced using special membranes, hydrogen can be stored using palladium nanoparticles, and the EU plans to reduce emissions by 50% in 2027 through new laws.)
- Leadership Team
- Trading at discount to NPV
- Operations for 13 years in a location with favorable mining regulations, producing 245,000 oz of palladium-equivalent per year at a low cost of \$809 per oz of palladium-equivalent.









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The minerals mined through this project, mainly palladium and copper, will play an important role in Canada's transition to a low-carbon economy.

**-**Honourable Steven Guilbeault

Minister of Environment and Climate Change



## **Appendix H - CORE VALUES**

Charitable Giving

Educational Support

Environmental Management Collaborative Community Relationships

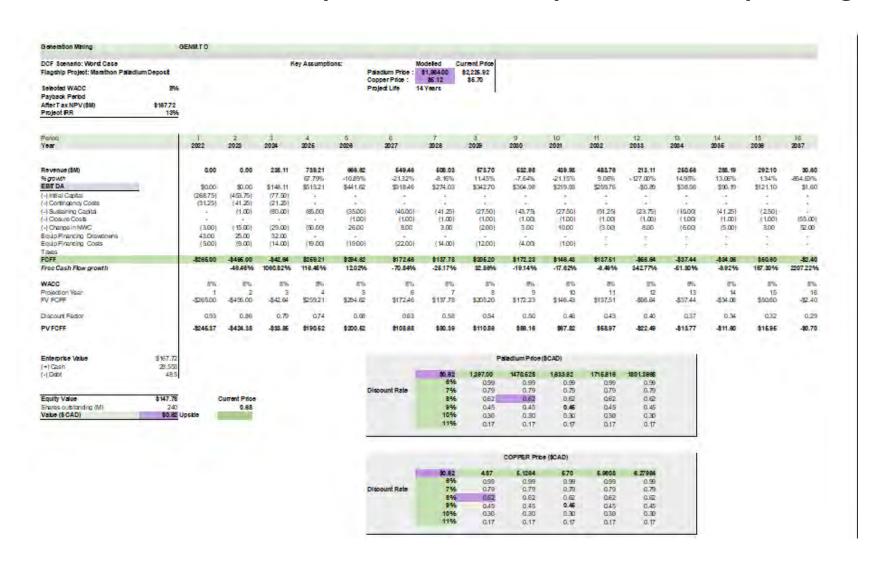
Health and Safety Social Accountability

## **Appendix J– Cash Flows**

Generation Mining	Total	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Marathon Palladium Project Cash Flow		Half Year Adjus	stment														
Production																	
Mill Feed Total (Kt)	454.6	3.0	10.4	24.0	40.0	40.0	40.0	39.8	40.0	39.2	40.0	40.2	35.2	29.3	18.7	7.4	7.4
Strip Ratio																	
Mill Feed- Pt Grade (g/t)		17.00%	15.00%	23.00%	25.00%	19.00%	14.00%	12.00%	24.00%	19.00%	22.00%	23.00%	19.00%	21.00%	22.00%	26.00%	
Mill Feed- Cu Grade (g/t)		59.00%	125.00%	75.00%	81.00%	154.00%	164.00%	141.00%	113.00%	139.00%	181.00%	137.00%	135.00%	149.00%	173.00%	199.00%	
Mill Feed- Pd Grade (g/t)		6.00%	7.00%	7.00%	6.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	6.00%	7.00%	6.00%	6.00%	7.00%	
Mill Feed- Pd Grade (g/t)		17.00%	21.00%	19.00%	19.00%	23.00%	26.00%	27.00%	22.00%	19.00%	15.00%	15.00%	19.00%	15.00%	17.00%	18.00%	
Mill Feed- Pd Grade (g/t)		60.00%	62.00%	70.00%	73.00%	67.00%	70.00%	72.00%	67.00%	64.00%	50.00%	46.00%	52.00%	52.00%	53.00%	53.00%	
Capital Costs (CA\$ million)																	
Contigency Costs	(93.75)	(31.25)	(41.25)	(21.25) -	-	-	-	-	-	-	-	-	-	-	-	-	
Initial Capital	(800.00)	(268.75)	(453.75)	(77.50)													
Total Initial Capital	(893.75)	(300.00)	(495.00)	(98.75)													
Sustaining Capital	(509.75)	0.00	(1.00)	(80.00)	(85.00)	(35.00)	(40.00)	(41.25)	(27.50)	(43.75)	(27.50)	(51.25)	(23.75)	(10.00)	(41.25)	(2.50)	0.00
Salvage value	0.00																
Closure Costs	(66.00)		0.00	0.00	0.00	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(55.00)
Capex % Increase	1.25																
Total Capital Costs	(1,469.50)	(375.00)	(620.00)	(223.44)	(106.25)	(45.00)	(51.25)	(52.81)	(35.63)	(55.94)	(35.63)	(65.31)	(30.94)	(13.75)	(52.81)	(4.38)	(68.75)
Operating Costs (CA\$Million)																	
Mining Costs	(1,173.70)			(42.90)	(107.80)	(103.40)	(103.40)	(103.40)	(99.00)	(101.20)	(97.90)	(103.40)	(96.80)	(90.20)	(73.70)	(44.00)	(6.60)
Processing	(1,151.70)			(33.00)	(85.80)	(92.40)	(92.40)	(92.40)	(92.40)	(92.40)	(92.40)	(92.40)	(92.40)	(92.40)	(92.40)	(92.40)	(16.50)
G&A	(316.80)			(7.70)	(16.50)	(16.50)	(28.60)	(30.80)	(31.90)	(28.60)	(24.20)	(25.30)	(23.10)	(26.40)	(26.40)	(26.40)	(4.40)
Transport/ Refining	(196.90)			(7.70)	(20.90)	(19.80)	(16.50)	(15.40)	(16.50)	(15.40)	(14.30)	(14.30)	(12.10)	(13.20)	(14.30)	(14.30)	(2.20)
Concrete Transport & Insurance	(160.60)			(6.60)	(15.40)	(15.40)	(13.20)	(13.20)	(13.20)	(13.20)	(13.20)	(11.00)	(11.00)	(11.00)	(11.00)	(11.00)	(2.20)
Royalties	(4.10)			(1.10) -	-	-		(2.00)	(1.00)	0.00 -	-	-	-	-	-	-	ļ
Opex % Increase	1.10																
Total Operating Costs	(3,003.80)			(99.00)	(246.40)	(247.50)	(254.10)	(257.20)	(254.00)	(250.80)	(242.00)	(246.40)	(235.40)	(233.20)	(217.80)	(188.10)	(31.90)
Metal Price Deck																	
Selected Exchange Rate: USD to CAD 1	.28																
Copper				5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76
Palladium				1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,984.00	1,785.60	1,785.60
Platinum				1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56	1,314.56
Gold				1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00	1,792.00
Silver				25.60	25.60	25.60	25.60	25.60	25.60	25.60	25.60	25.60	25.60	25.60	25.60	25.60	25.60
Revenue Breakdown (CA \$million)																	
Copper Revenue	2632.42421			95.05	299.90	236.92	143.39	127.44	234.58	202.27	207.77	240.94	160.79	198.26	225.09	235.57	24.45
Palladium Revenue	3674.56379			140.88	436.06	406.08	365.11	346.79	321.63	314.77	217.20	224.80	191.93	228.01	249.76	205.98	25.56
Platinum Revenue	688.96965			21.83	67.26	77.33	86.19	80.27	59.02	53.38	34.98	42.41	37.77	38.05	45.88	40.07	4.55
Gold Revenue	264.14332			8.81	24.01	26.15	26.95	23.05	22.87	22.84	18.60	18.93	17.34	16.35	19.03	17.47	1.74
Silver Revenue	71.4256308			0.80	2.53	6.26	7.01	5.36	3.98	5.67	7.36	5.50	4.77	5.92	7.70	7.74	0.82
Gross Revenue	\$7,331.53			\$267.36	\$829.77	\$752.73	\$628.65	\$582.90	\$642.08	\$598.93	\$485.91	\$532.58	\$412.60 57.05%	\$486.60	\$547.46	\$506.82	\$57.13
Operating Margin (%) EBITDA	40.97% \$4.327.73	\$0.00	\$0.00	-270.06% \$168.36	29.70% \$583.37	32.88% \$505.23	40.42% \$374.55	44.12% \$325.70	39.56%	41.87% \$348.13	49.80% \$243.91	46.27% \$286.18		47.92% \$253.40	39.78% \$329.66	37.11% \$318.72	55.84% \$25.23
	<b>4</b> 1,0=111 0				******	•		•	\$388.08	•		•	\$177.20	<b>+</b> =++++	•		
(-) Initial Capital	-\$800.00	(268.75)	(453.75)	(77.50)	-	-	-	-	-	-	-	-	-	-	-	-	-
(-) Contingency Costs	-\$93.75	(31.25)	(41.25)	(21.25)	(0E 00)	(2E 00)	(40.00)	(44.05)	(27 50)	(40.75)	(27.50)	(E4.0E)	(22.75)	(40.00)	(44.05)	/O EO\	
(-) Sustaining Capital	-\$509.75	-	(1.00)	(80.00)	(85.00)	(35.00)	(40.00)	(41.25)	(27.50)	(43.75)	(27.50)	(51.25)	(23.75)	(10.00)	(41.25)	(2.50)	(EE 00)
(-) Closure Costs	(66.00)	- (2.00)	(45.00)	(20.00)	(FO OO)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(1.00)	(55.00)
(-) Change in NWC	400	(3.00)	(15.00)	(29.00)	(50.00)	26.00	8.00	3.00	(2.00)	3.00	10.00	(3.00)	8.00	(6.00)	(5.00)	3.00	52.00
Equip Financing Drawdowns	100	43	25	32	40	40	20	4.4	40	4	4	^					
Equip Financing Costs	-119 \$2.839.23	-5 -\$265.00	-9 -\$495.00	-14 #24.20	-19	-19	-22 \$319.55	-14	-12 \$345.58	-4 \$302.38	-1	0 \$220.02	£400.45	f000 40	\$282.41	<b>#240.00</b>	<b>#</b> 00.00
Pre Tax Cash Flow	\$2,839.23			-\$21.39	\$429.37	\$476.23		\$272.45			\$224.41	\$230.93	\$160.45	\$236.40		\$318.22	\$22.23
Accumalated Cash Flow (pre tax)		-\$265.00	-\$760.00	-\$781.39	-\$352.03	\$124.21	\$443.76	\$716.21	\$1,061.79	\$1,364.17	\$1,588.58	\$1,819.52	\$1,979.97	\$2,216.36	\$2,498.77	\$2,817.00	\$2,839.23
Taxes	-944	0	0	-1	-102	-118	-91	-83	-95	-87	-54	-67	-39	-59	-77	-70	-1
Operating Cash Flow	\$1,895.23	-\$265.00	-\$495.00	-\$22.39	\$327.37	\$358.23	\$228.55	\$189.45	\$250.58	\$215.38	\$170.41	\$163.93	\$121.45	\$177.40	\$205.41	\$248.22	\$21.23
Payback Period	04.005.55	<b>***</b>	AT00.00	A=00.5=	A 455 00	000 ==	040476	0004.07	A==4 ==	0707.4-	0057.55	04 404 5-	04.040.6=	<b>0.4.400.0</b> 7	<b>*</b> 4 <b>*</b> 00 <b>* *</b> -	04.074.57	A4 00F
Accumalated Cash Flow` (after tax)	\$1,895.23	-\$265.00	-\$760.00	-\$782.39	-\$455.03	-\$96.79	\$131.76	\$321.21	\$571.79	\$787.17	\$957.58	\$1,121.52	\$1,242.97	\$1,420.36	\$1,625.77	\$1,874.00	\$1,895.23

## **Appendix I – Worst Case (Armageddon)**

Palladium Production Stops in 2030 where production stops being economic



## Appendix J – Supply and Demand

## Refined Product against Intensity of Use and Recycling Palladium in koz

	2018	2019	2020	2021	2022*						
REGIONAL SUPPLY											
South Africa	2,500	2,555	2,170	2,425	2,655						
South Africa (adjusted)	2,500	2,555	1,845	2,655	2,630						
Adjustments			-325	230	-25						
Zimbabwe	380	385	405	415	445						
Russia	2,670	2,870	2,810	2,585	2,710						
Canada	575	515	480	500	535						
USA	460	460	470	500	530						
Other	395	395	385	335	335						
Refined production	6,975	7,180	6,395	6,990	7,185						
Growth	-1.2%	2.9%	-10.9%	9.3%	2.8%						

A TOTAL CONTRACTOR	D	EMAND									
Autocatalysts											
Gross autocatalyst demand	8,260	8,410	7,360	7,650	8,495						
Non-road demand	35	35	40	40	40						
Recycling	2,035	2,175	2,010	2,305	2,585						
Net autocatalyst demand	6,260	6,275	5,390	5,380	5,950						
Growth	0.7%	0.2%	-14.1%	-0.2%	10.6%						
	Jo	wellery									
Gross jewellery demand	215	215	200	215	225						
Recycling	60	60	55	60	65						
Not jewellery demand	155	155	145	155	160						
Growth	0.0%	-1.3%	-5.8%	5.1%	5.2%						
Industrial											
Industrial	1,845	1,730	1,620	1,635	1,525						
Recycling	370	365	330	415	365						
Net industrial demand	1,475	1,365	1,290	1,220	1,165						
Growth	-0.3%	-7.5%	-5.4%	-5.6%	-4.3%						
		Total									
Gross demand	10,355	10,390	9,220	9,535	10,290						
Growth	1.4%	0.3%	-11.2%	3.4%	7.9%						
Recycling	2,465	2,595	2,395	2,780	3,015						
Growth	4.6%	5.4%	-7.8%	16.2%	8.4%						
Net demand	7,890	7,790	6,825	6,750	7,280						
Growth	0.5%	-1.3%	-12.4%	-1.1%	7.8%						
MARKET BALANCE	-915	-615	-435	235	-90						

## Exploration Upside Sally Deposit

#### **Extreme high grade PGE and Cu targets**

- 24.8 Mt Indicated open pit resource
  - 278 Koz Pd, 160 Koz Pt, 56 Koz Au and 93 Mlb Cu
  - · Resource defined by 82 drillholes totaling 16,975 m
- Explore for source of high grade samples using 2019 and 2020

