



**Cabaçal is Brazil's premier advanced Gold-Copper VMS  
with potential upside of over 50KM belt scale exploration**

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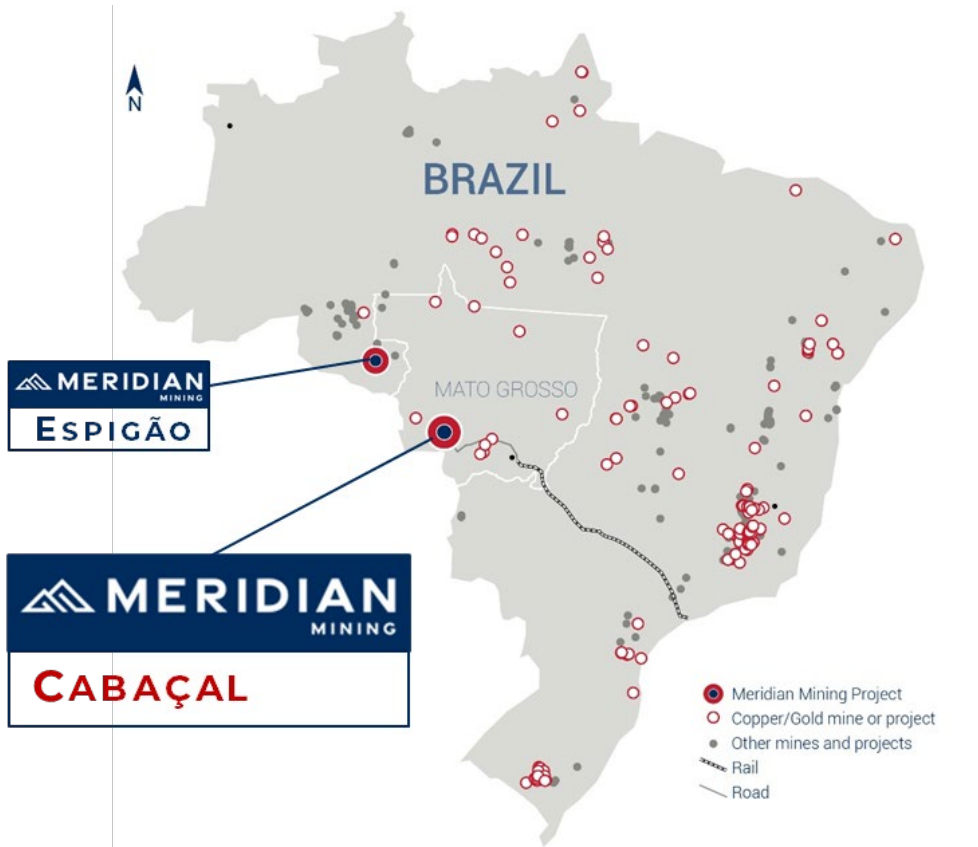
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The Cabaçal Gold-Copper Project NI 43-101 Technical Report and Preliminary Economic Assessment, Mato Grosso, Brazil, and dated March 30, 2023 (with an effective date of March 1, 2023) (the “2023 Cabaçal PEA”) was prepared for the Meridian by Tommaso Roberto Raponi, P. Eng., of Ausenco Engineering Canada Inc., Scott Eifen, P. Eng., of Ausenco Engineering Canada Inc., Simon Tear, P. Geo., of H&S Consultants Pty Ltd, Marcelo Batelochi, MAusIMM (CP Geo), of MB Geologia Ltda. Joseph Keane, P. Eng., of SGS North America Inc. and Guilherme Gomides Ferreira (Mine Engineer MAIG), of GE21 Consultoria Mineral. All authors of the 2023 Cabaçal PEA are independent “qualified persons” as defined by NI 43-101. The 2023 Cabaçal PEA may be found on the Company’s website at [www.meridianmining.co](http://www.meridianmining.co) or under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com). Readers are encouraged to read the entire 2023 Cabaçal PEA.

Readers are cautioned that the 2023 Cabaçal PEA is preliminary in nature and is intended to provide an initial assessment of the Cabaçal’s economic potential and development options. The 2023 Cabaçal PEA mine schedule and economic assessment includes numerous assumptions and is based on inferred mineral resources. Inferred resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the 2023 Cabaçal PEA results will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Additional exploration will be required to potentially upgrade the classification of the inferred mineral resources to be considered in future advanced studies.

Dr Adrian McArthur, Chief Executive Officer of Meridian and director, a QP as defined in NI43-101, has reviewed the 2023 Cabaçal PEA on behalf of Meridian and is responsible for other technical information in this presentation (information not directly related to the 2023 Cabaçal PEA).



## CABAÇAL:

### Development Priority:

- Largest Cu-Au VMS project in Brazil
- On-going exploration of 50km VMS belt

### Preliminary Economic Assessment (Base Case After-Tax):

- NPV<sub>5</sub> USD 573 M & IRR 58.4%

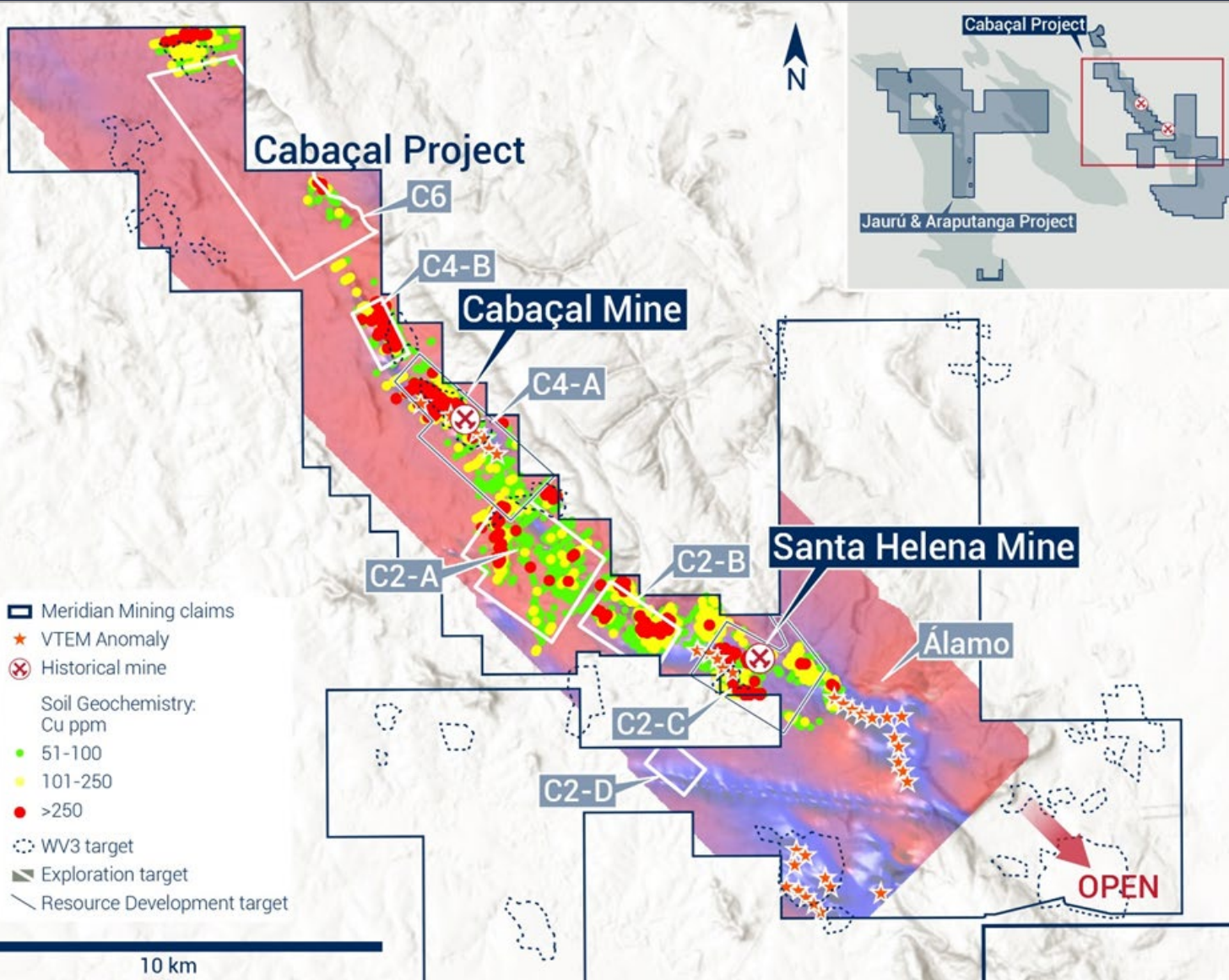
### PEA superior economics, driven by:

- High-grade starter pit
- Simple processing
- High metallurgical recoveries
- Low strip ratio
- Low-cost hydroelectric power
- Brazil's low-cost operating environment

## ESPIGÃO:

### Exploration Upside:

- Large IOCG exploration target
- Comparable to Carajás and Olympic Dam



**Cabaçal Discovered in 1980's**

**+50km Belt Scale Target Strike**

**Multiple Resource Development Projects**

**2 Historic High-Grade Underground Mines**

**PEA Defines Standalone Potential Mine at Cabaçal**

**Limited Historic Exploration**

**Newly Generated Open-Pit Targets**

**PEA demonstrates an exceptional potential open-pit mining operation capable of supplying both base and precious metals to the global market**

## **BASE CASE**

**Au \$1,650 / Cu \$3.59 / Ag \$21.35**

**USD 573 M**  
After-Tax NPV<sub>5</sub>

**58.4 %**  
After-Tax IRR

**USD 180 M**  
Low Initial Capex

**10.6 months**  
Payback After-Tax

**USD 671 / oz**  
AISC (Y1-5)

**3.2 X**  
NPV<sub>5</sub> to Capex Ratio



Notes:

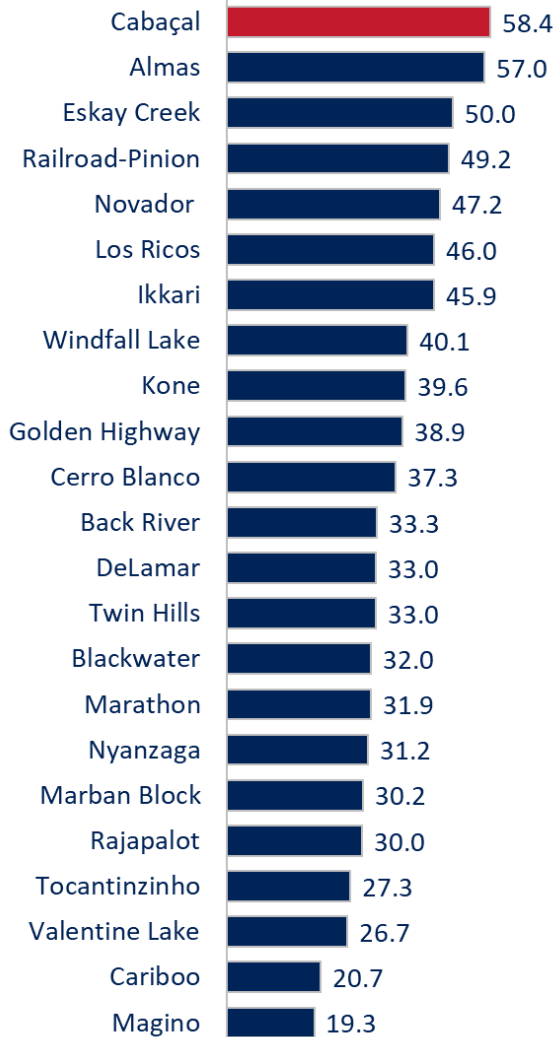
<sup>1</sup> See News Release 6<sup>th</sup> March 2023


 ▼ Post Tax NPV<sub>5</sub> (USDm) & IRR Sensitivity to Metals Prices

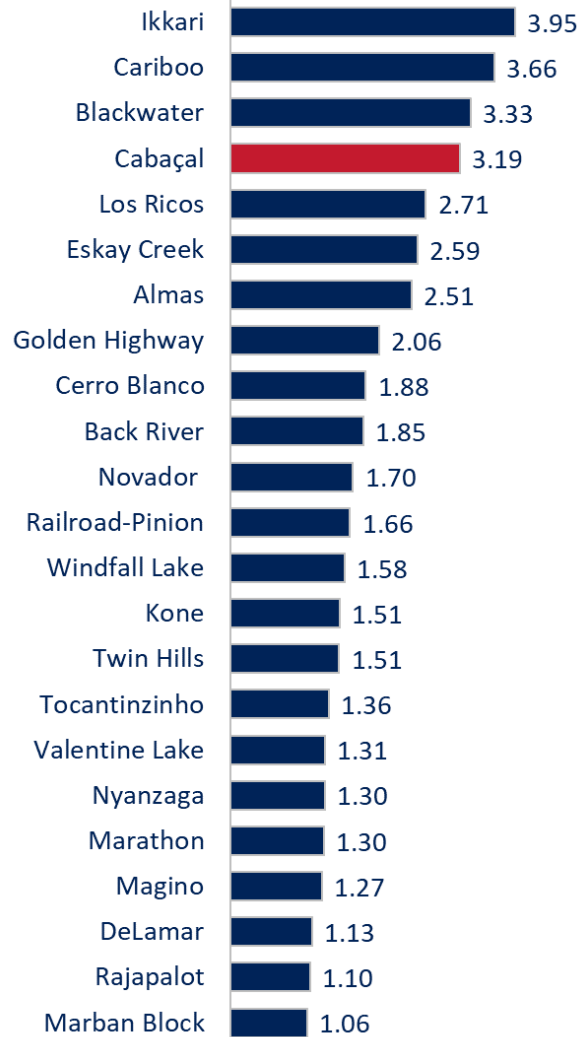
		Copper Price											
		Downside 3.50		Base 3.59		4.00		Spot 4.13		4.50		Upside 5.00	
		NPV	IRR	NPV	IRR	NPV	IRR	NPV	IRR	NPV	IRR	NPV	IRR
Gold Price	1,550	\$510 m	53.5%	\$523 m	54.2%	\$582 m	57.0%	\$600 m	57.9%	\$654 m	60.3%	\$726 m	63.5%
	Base 1,650	\$560 m	57.8%	\$573 m	58.4%	\$632 m	61.1%	\$650 m	62.0%	\$704 m	64.4%	\$776 m	67.4%
	1,750	\$609 m	62.0%	\$622 m	62.6%	\$681 m	65.2%	\$700 m	66.0%	\$753 m	68.3%	\$825 m	71.3%
	Spot 1,841	\$655 m	65.7%	\$668 m	66.3%	\$727 m	68.9%	\$745 m	69.7%	\$799 m	71.9%	\$871 m	74.8%
	1,850	\$659 m	66.1%	\$672 m	66.7%	\$731 m	69.2%	\$750 m	70.0%	\$803 m	72.2%	\$875 m	75.1%
	Upside 1,950	\$709 m	70.1%	\$722 m	70.7%	\$781 m	73.1%	\$799 m	73.9%	\$853 m	76.0%	\$925 m	78.9%

**BASE CASE**
**USD 204 M**
**Year 1 Free Cash Flow**
**USD 2.9 Bn**
**LOM Revenue**
**3.2 X**
**NPV<sub>5</sub> to Capex Ratio**
**SPOT CASE**
**USD 234 M**
**Year 1 Free Cash Flow**
**USD 3.3 Bn**
**LOM Revenue**
**4.1 X**
**NPV<sub>5</sub> to Capex Ratio**
**PROJECT COSTS**
**USD 21.25/t Milled**
**Total Operating Costs**
**USD 180 M**
**Initial Capex**
**USD 108 M**
**LOM Sustaining Capex**

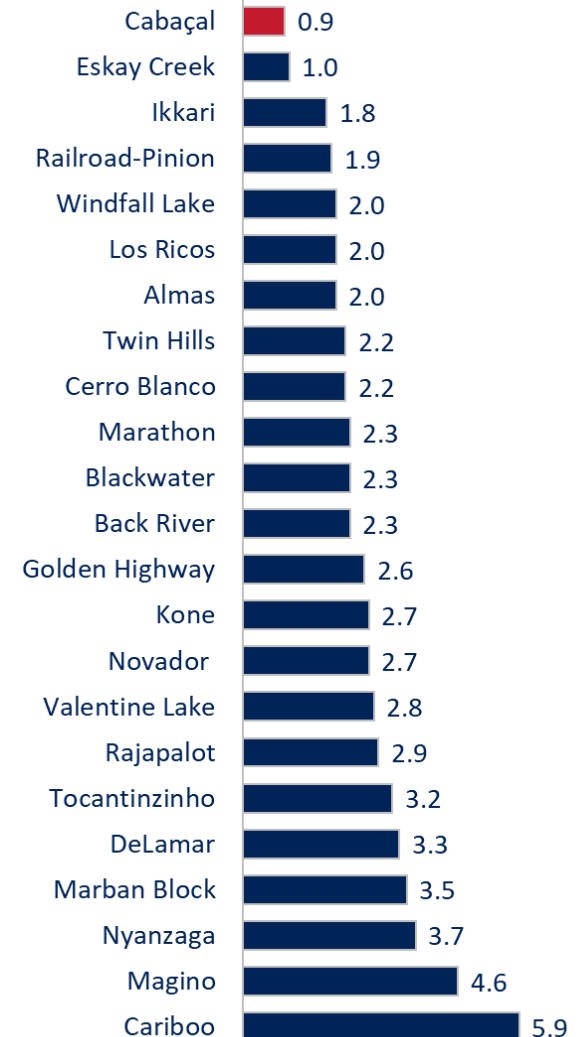
▼ After-Tax Unlevered IRR (%)



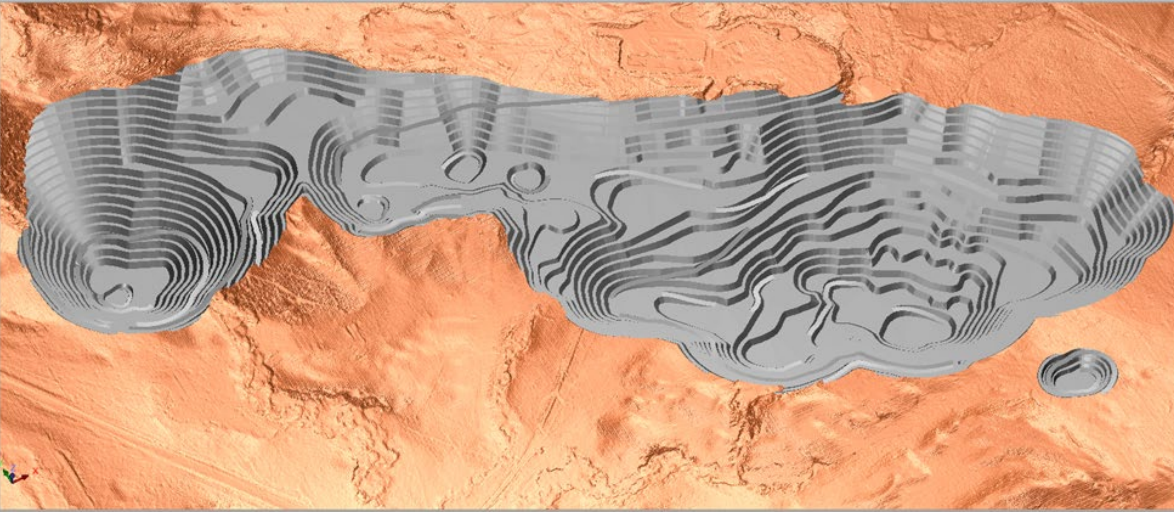
▼ After-Tax NPV<sub>5</sub> / Initial Capex (USDm)



▼ Payback Period (Years)



Notes:  
<sup>1</sup> See News Release 6<sup>th</sup> March 2023  
<sup>2</sup> Source CIBC Data, Market Data / Company Data – 10<sup>th</sup> May 2023



Notes:  
¹ See News Release 6<sup>th</sup> March 2023

**1.8 Moz AuEq**  
Total Production

**22.3 Year**  
Life of Mine

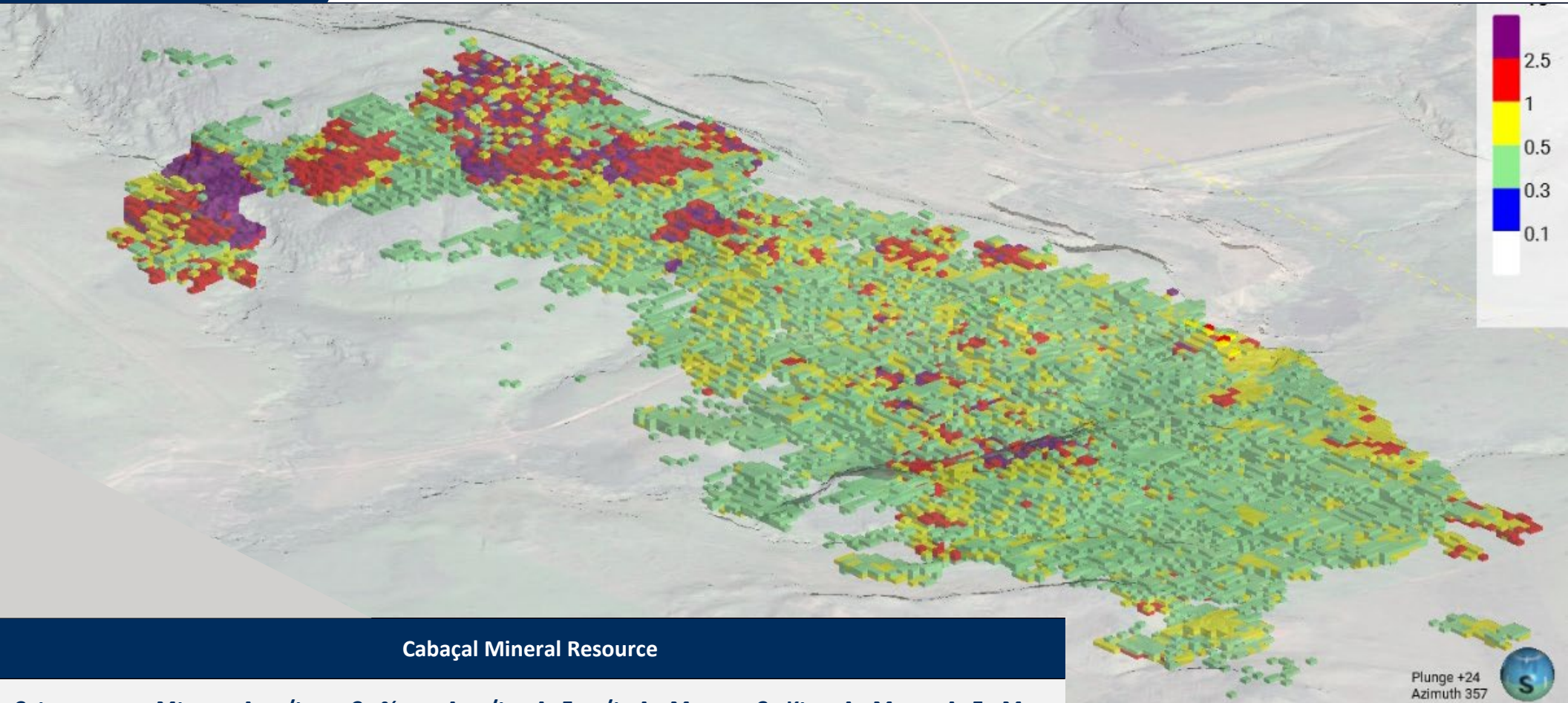
**55.6 Mt**  
Total Milled

**2.1x**  
Strip Ratio

**2.5 Mtpa**  
Throughput Rate

**131 koz AuEq**  
Ave. Y1-5 Production





**Cabaçal Mineral Resource**

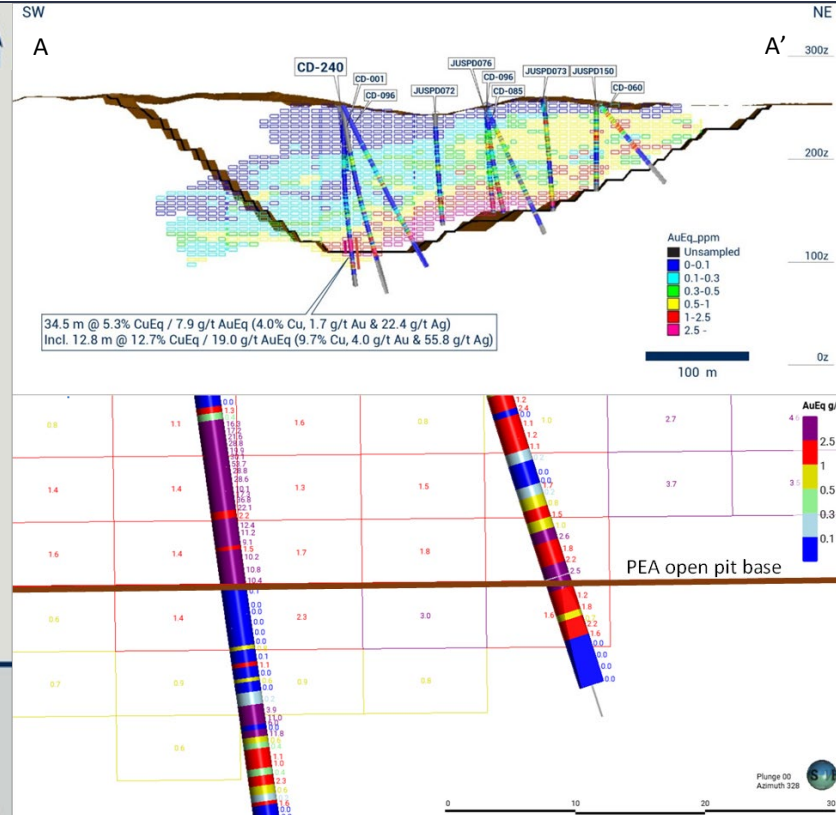
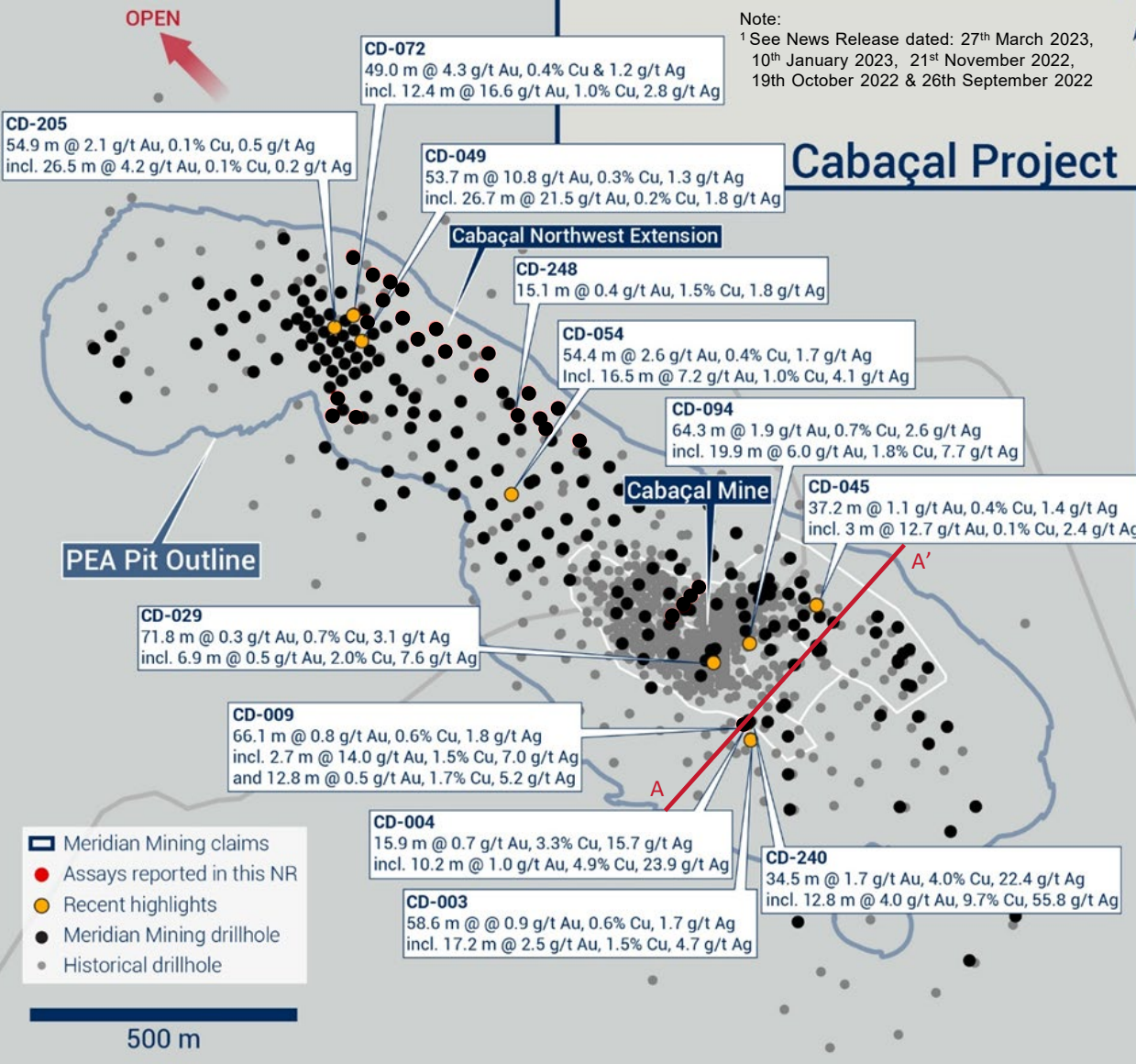
Category	Mt	Au g/t	Cu %	Ag g/t	AuEq g/t	Au Mozs	Cu Kt	Ag Mozs	AuEq Mozs
Indicated	52.9	0.64	0.32	1.4	1.05	1.1	168	2.4	1.8
Inferred	10.3	0.68	0.24	1.1	0.96	0.2	24.5	0.4	0.3

Note:  
<sup>1</sup> See News Release dated 26th September 2022



Note:  
<sup>1</sup> See News Release dated: 27<sup>th</sup> March 2023,  
 10<sup>th</sup> January 2023, 21<sup>st</sup> November 2022,  
 19<sup>th</sup> October 2022 & 26<sup>th</sup> September 2022

**Cabaçal Project**



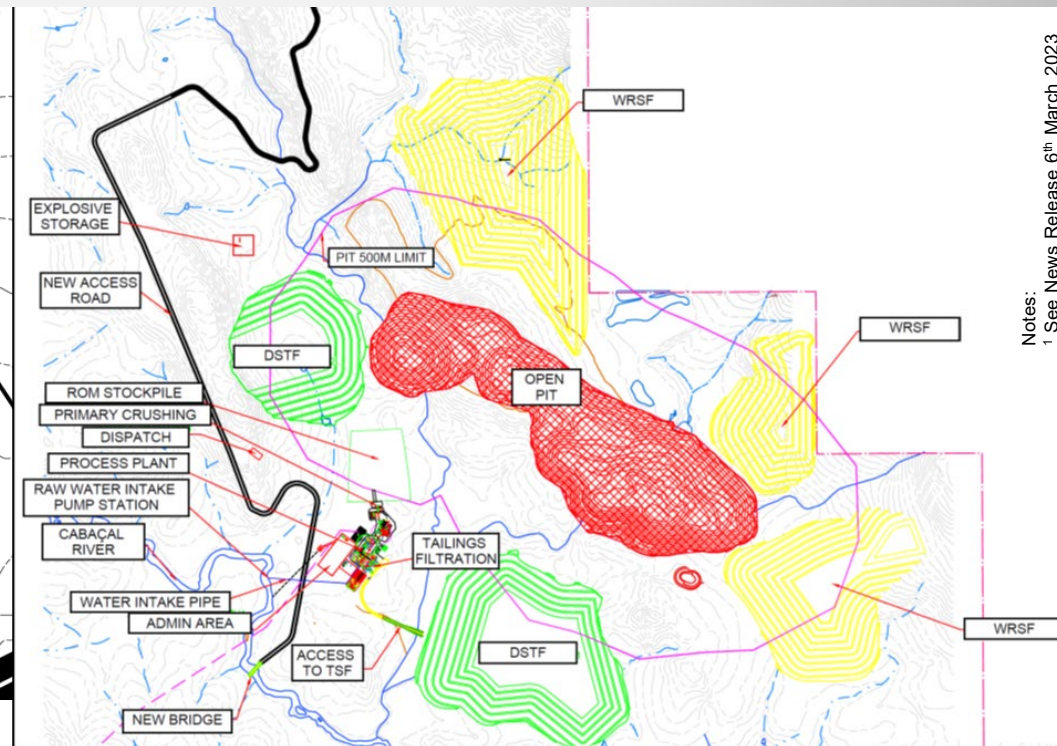
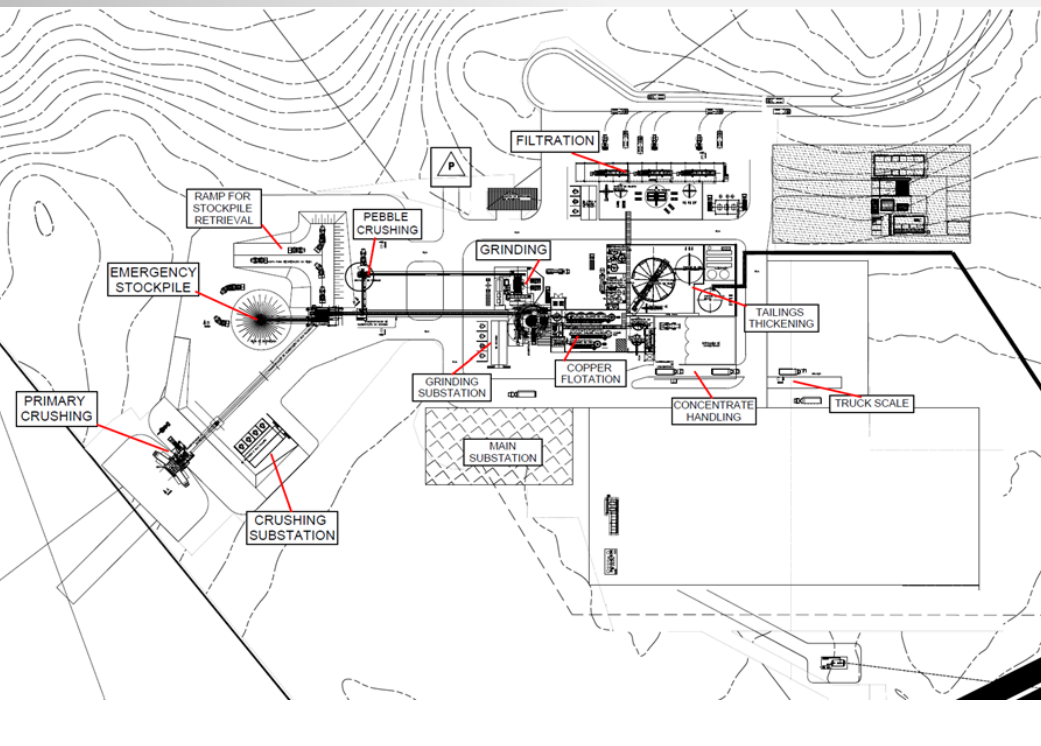
**Drilling the deposit's upside  
 Further defining high-grade  
 structures**

Open Pit ~2,000m x 500m

Optimized mine site design to minimise transport distances

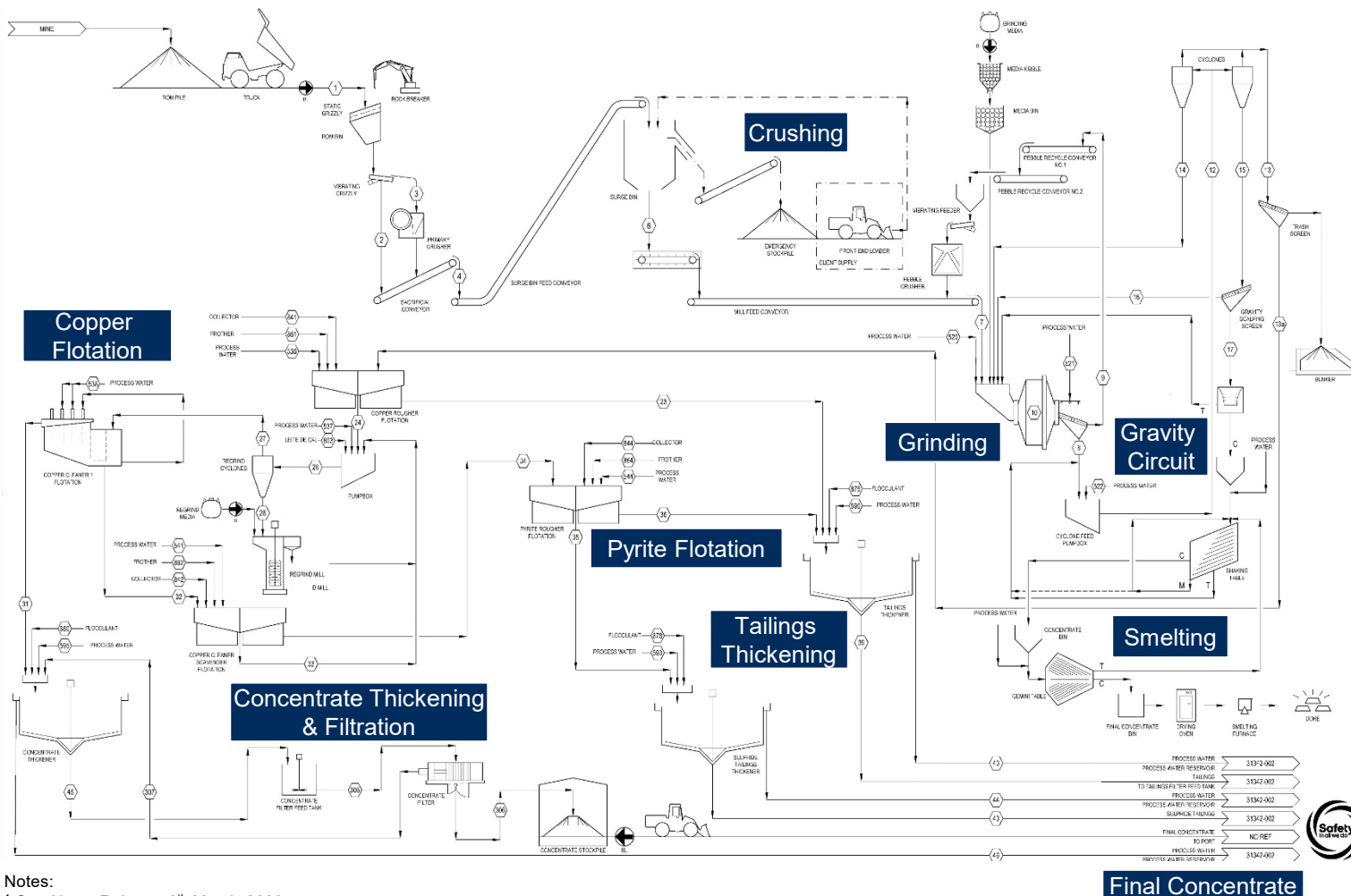
Plant site design flexible for expansion opportunities

Potential to minimise cost by using depleted open pit for waste storage



Notes:  
1 See News Release 6<sup>th</sup> March 2023

# Simple process flowsheet with high recoveries

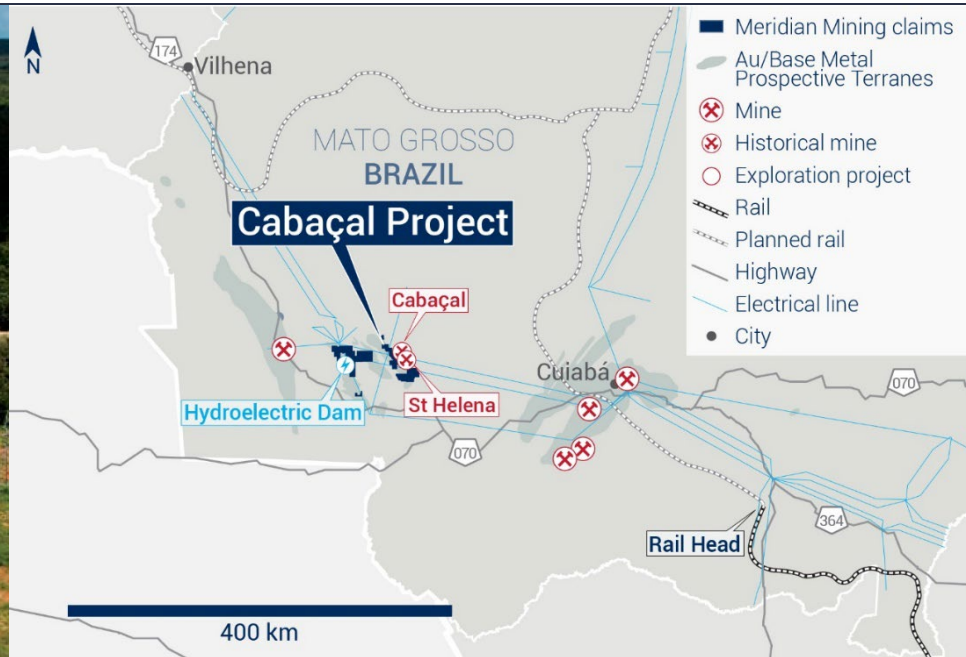


**Jaw Crusher**  
**Primary Grind**  
 ~200 microns  
**Gravity Circuit**  
 – 30% Au  
**First Cu Flotation**  
**Re-Grind**  
 ~40 microns  
**Cleaner Circuit total**  
 recovery up to  
 ~ 90% Au & ~ +93% Cu  
**Cu Concentrate Grade**  
 28.4%  
**Mill Tailings**  
**Non-Acid Generating**

Notes:  
 1 See News Release 6<sup>th</sup> March 2023

**Final Concentrate**





**PEA assumes USD 0.075 / kWh power cost with significant potential for optimization**

**Regional Hydroelectric Generation ~375 MW in 10 Facilities**

**On-going run-of-river and solar power evaluation**

Notes:

<sup>1</sup> See News Release 6<sup>th</sup> March 2023

<sup>2</sup> [www.frontiersin.org/articles/10.3389/fenvs.2020.579031/full](http://www.frontiersin.org/articles/10.3389/fenvs.2020.579031/full)



## Key areas for near-term upside opportunities and optimization

**Evaluating potential increase**

**Throughput rate ~3.5 - 4.0 mtpa**

**Incorporate Santa Helena**

**Potential for high-grade feed**

**Cabaçal Resource Upgrade**

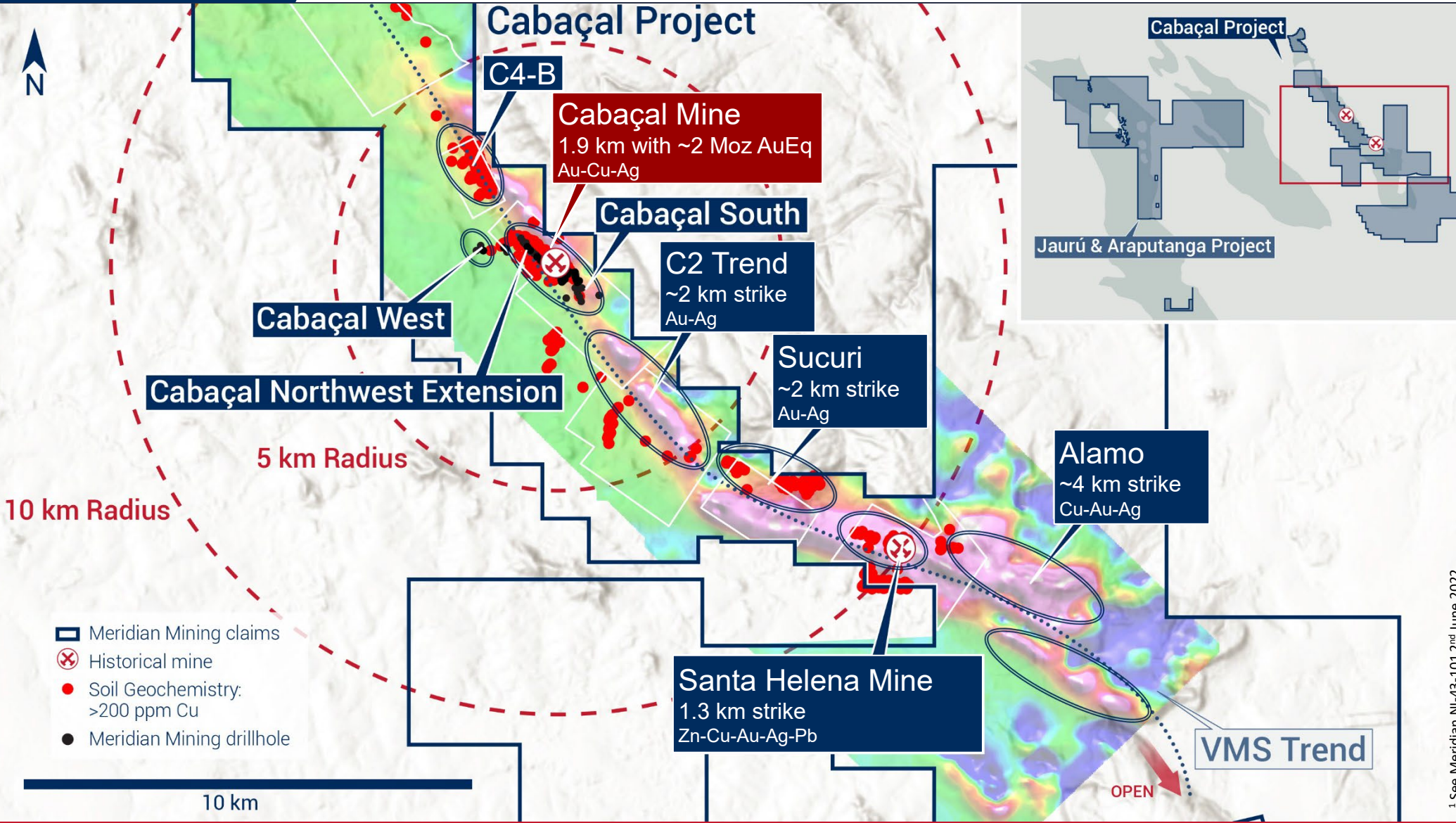
**Expand resource**

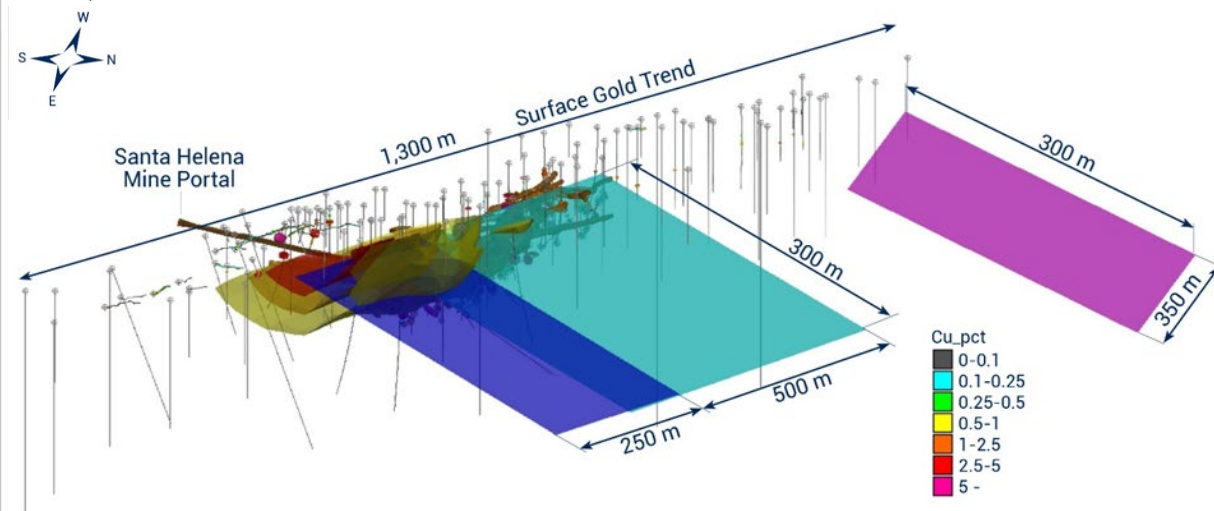
**Mine corridor upside**

**Sucuri & Alamo Cu/Au targets**

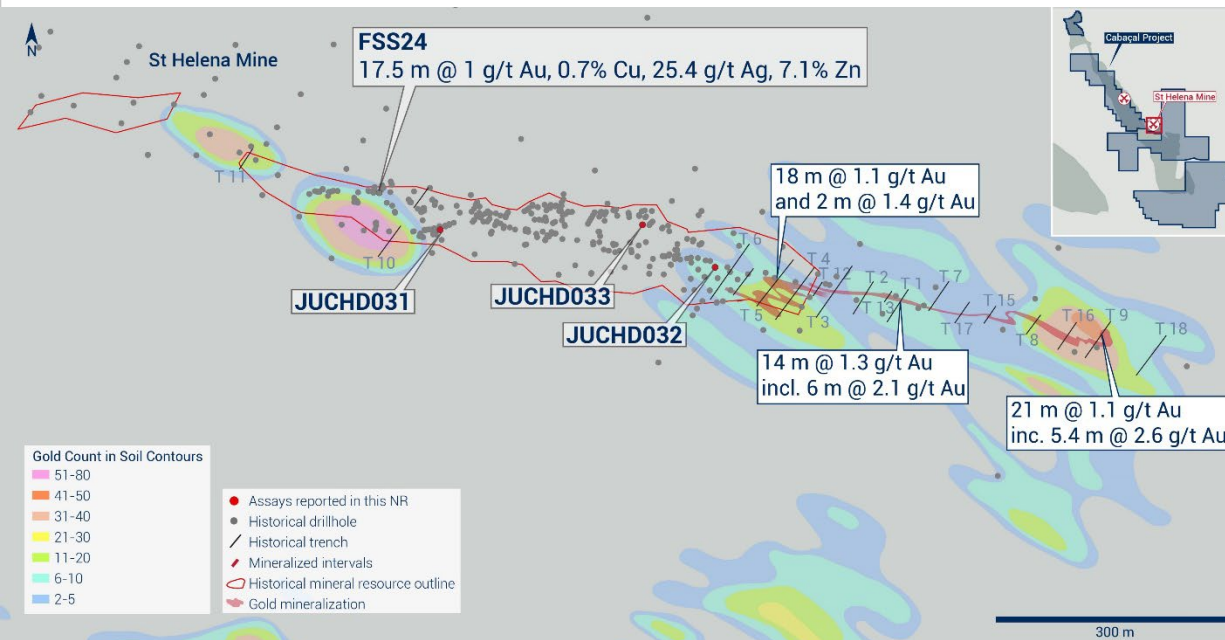
Notes:

<sup>1</sup> See News Release 6<sup>th</sup> March 2023





**Historic Drill Core – JUCHD031**



**Initial Meridian drill program contractor engaged**

**Re-assaying historic core confirms high-grade mineralization**

**Multiple new EM plates extending out from Santa Helena Mine**

**Untested targets for further Cu-Zn-Au-Ag zones**

**Open anomaly of Gold in soils to East**





2021

2022

2023



Initial drilling at Cabaçal



Initial NI 43-101 resource



PEA (Released)



Cabaçal twin drilling program



Defines ~2m oz AuEq in pit



Cabaçal infill drilling for higher grades



CNWE drilling - 26.7m @ 21.5 g/t Au



Top tier metallurgical results



Testing near mine open zones



Multiple high-grade gold trends at CNWE



New Au-Ag system discovered



Test Multiple Resource Development Targets



Acquired Cabaçal (November 2020)



Increase landbank to 928 km<sup>2</sup>



Espigão further gravity survey results

De-risking, expanding, and driving project value



**Corporate Structure<sup>1</sup>**

Shares Outstanding	239.6 m
Compensation Warrants	2.2 m (CAD 0.35-0.50)
Options	18.1 m (CAD 0.07-1.10)
Fully Diluted	259.9 m
Share Price	CAD 0.46 (19 May 2023)
Market Capitalization	CAD 110.2 m
Cash <sup>2</sup>	CAD 21.8 m

**Analyst Coverage**

Institution	Analyst
Beacon Securities	Mike Curran
Cormark Securities	Stefan Ioannou
Raymond James	Craig Stanley

**Meridian Mining UK S**

<b>TSX</b> <b>MNO</b>	<b>OTCQX</b> <b>MRRDF</b>	<b>Frankfurt</b> <b>2MM</b>
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Notes:

<sup>1</sup> Corporate Structure as of 10<sup>th</sup> May 2023 unless otherwise stated

<sup>2</sup> Cash Balance Assumes:

2<sup>nd</sup> May 2023 – Net Proceed from Equity Raise of CAD 18.4 million & includes USD 1.0 million in Escrow per option agreement

31<sup>st</sup> March 2023 – Financial Reports Cash Balance & Exchange Rate 1.3533 (Source - Bank of Canada)



# Developing the next polymetallic mining belt in Brazil

Notes:  
1 See News Release 6th March 2023



**Base Case PEA**  
After Tax NPV<sub>5</sub> USD 573 M & IRR 58.4%



**Low Initial Capital Cost**  
USD 180 M



**Low All-in-Sustaining-Costs (AISC)**  
USD 671 / oz (Year 1-5)



**Industry leading Payback**  
10.6 months (0.9 Years)



**Low strip open pit mine – Simple process flowsheet – Green Hydroelectricity**



**Evaluating potential to increase throughput rate potential to ~4mtpa**



**Spot Metals Price PEA**  
After Tax NPV<sub>5</sub> USD 745 M (CAD 1.01 B)



**Standalone asset within 50km VMS belt**

A landscape photograph of a river flowing through a green valley under a dramatic, cloudy sky at sunset or sunrise. The word 'APPENDIX' is overlaid in large white letters.

# APPENDIX



**The Management**



**GILBERT CLARK**  
Executive Chairman  
+25 years experience



**ADRIAN MCARTHUR**  
CEO & Director  
+25 years experience



**MARTIN MCFARLANE**  
President  
+30 years experience



**SORAIA MORAIS**  
Chief Financial Officer  
+15 years experience



**MARIANA BERMUDEZ**  
Company Secretary  
+15 years experience



**KATHERINE MACLEAN**  
Sustainability & Comms  
+15 years experience



**JAMES MCLUCAS**  
Corp. Development  
+15 years experience

**The Brazilian Based Management**



**JOEL BRANDAO**  
Director of Brazil  
+40 years experience



**FRED VANDEROOST**  
Geology Manager  
+25 years experience



**ANTONIO ALMEIDA**  
Senior geologist  
+40 years experience



**RODRIGO SALVI**  
Inhouse Counsel  
+10 years experience



**VITOR BELO**  
Mining Consultant  
+30 years experience



**MARCELO AMORIM**  
Project Dev. Manager  
+15 years experience



**BARBARA SOUZA**  
Enviro. Engineer  
+10 years experience



**FABIO KOLAS**  
Accountant  
+15 years experience

**The Directors**



**GILBERT CLARK**  
Executive Chairman  
+25 years experience



**ADRIAN MCARTHUR**  
CEO & Director  
+25 years experience



**CHARLES RIOPEL**  
Independent Director  
+25 years experience



**JOHN SKINNER**  
Independent Director  
+35 years experience



**MARK THOMPSON**  
Independent Director  
+25 years experience



**SUSANNE SESSELMANN**  
Independent Director  
+25 years experience



## Cabaçal History

### BP Minerals

**Discovery**  
1980-1984

**Development**  
1984-1986

**Production**  
1986-1991

**Rio Tinto**  
**Acquisition**  
1989-2005



**AFONSO FIGUEIREDO**  
Geologist  
+ 50 years experience



**ROCKY OSBORNE**  
Geologist  
+ 40 years experience



**GILSON TEIXEIRA**  
Geologist  
+ 40 years experience



**JOHN WAGHORN**  
Geologist  
+ 50 years experience

Industry leading expertise  
in metallurgy and base  
metals concentrates



Capital Markets Expertise



**PHILLIP MACKAY**  
Metallurgist  
+ 50 years experience



**MIKE OUNPUU**  
Geological Engineer  
+ 40 years experience



**TOMMY HUMPHREYS**  
Capital Markets  
+ 15 years experience





**Regional Hydroelectric Generation<sup>1,2</sup>**

**Jaurú Cascade**  
235.9 MW  
(6 Facilities)

**Juba Cascade**  
139.4 MW  
(4 Facilities)

**Governing ESG Philosophies**

LONG TERM EMPLOYMENT

CLEAN SOILS

CLEAN WATER

CLEAN AIR

CLEAN ENERGY

Source: <sup>1</sup> www.quebecengenharia.com.br/complexo-juruena <sup>2</sup> www.frontiersin.org/articles/10.3389/fenvs.2020.579031/full



## Protects Meridian Shareholders Equity and provides Vendors an Interest Going Forward

Payments	Payment Schedule (Months)	Requirements	Vendor Payment (USD)	Vendor Payment (Shares)	Comments	Status
1	On signing	MNO will have exclusivity during the Due Diligence period	25,000	—	Payment due 5 business days from signing; permits a 90-day Due Diligence period	Complete
2	4	Positive Due Diligence; Filing of Title Transfer	275,000	—	Second instalments is payable up to 30 days from Positive Due Diligence and filing of Assignment Requests at ANM	Paid
3	16	1st phase drilling program, subject to statutory approvals & access agreements, with independent QP review	1,750,000	—	Verification and extensional drilling; DDH & geophysics database validation. Third Instalment is 12 months from Second Instalment	Payment Escrowed
4	22	Completion of NI 43-101 resource estimation	—	1,000,000*	* or option for CAD 300,000	
5	31	Positive Feasibility Study concluded	1,850,000	1,500,000*	* or option for CAD 450,000	
6	est. 41	Installation Permits (LI) granted by Mato Grosso State	2,250,000	2,000,000*	* or option for CAD 600,000	
7		Cabaçal mine construction finance has been secured	2,600,000	—	Seventh instalment is payable 45 days after signing of Binding Project Finance documents	
<b>Total Financial Consideration (USD)</b>			<b>8,750,000</b>	<b>4,500,000</b>	<b>* Option for cash or shares at vendor's discretion</b>	

**As Meridian advances Cabaçal its value increases, the investment risk decreases, and milestone related payments are made**

<sup>1</sup> See News Release 28<sup>th</sup> January 2022, 26<sup>th</sup> August, 3<sup>rd</sup> September 2020, & most recent MD&A



Item		
Plant Feed Mined	Mt	55.6
Waste Mined	Mt	118.1
Total Mined	Mt	173.7
Mill Throughput	Mt/annum	2.5
Total gold production	ounces	1,021,320
Total copper production	tonnes	159,926
Total silver production	ounces	1,758,923

Item		
Milled tonnes	Mt	55.6
Mill throughput	Mt/ annum	2.5
Strip Ratio	Waste: Mineralized Material	2.1
Average metallurgical recovery - Gold	%	89.7%
Average metallurgical recovery - Copper	%	92.4%
Average metallurgical recovery - Silver	%	75.2%

Item		Year 1-5	LOM
Average annual gold production (AuEq)	000 Ounces	131.1	81.2
Recovered Gold (AuEq)	000 Ounces	655.3	1,811.2
Total Cash Cost	USD/oz	644.3	804.4
Sustaining capital	USD/oz	26.4	61.8
All in Sustaining Costs ("AISC")	USD/oz	670.7	864.2

Notes:

<sup>1</sup> See News Release 6<sup>th</sup> March 2023


**Cabaçal Initial Capital Costs**

Item	US\$mm
Equipment & Packages	39.93
Materials	9.67
Construction And Erection	36.51
Others	32.14
Indirects Costs	31.43
Contingency	29.94
<b>Total Initial Capital</b>	<b>179.62</b>

**Cabaçal Sustaining Capital Costs**

Item	US\$mm
Process	30.53
Tailings	47.73
Indirect Costs	7.83
Owner Costs	3.91
Contingency	18.00
<b>Total Sustaining Capital</b>	<b>108.00</b>

**Cabaçal Operating Costs Breakdown**

Item	USD/t milled	USD/oz
Mining Costs	9.31	296.43
Labor	1.63	51.78
Power	2.07	65.80
Reagents & Consumables	2.61	82.96
Maintainence	0.97	30.72
Water/sewage	0.00	0.07
Access maintainance	0.06	1.96
Laboritory	0.38	12.13
Dry stack	2.12	67.33
G&A	2.11	67.06
<b>Total Operating Costs</b>	<b>21.25</b>	<b>676.25</b>

Notes:

<sup>1</sup> See News Release 6<sup>th</sup> March 2023

Item		Base Case		Spot Case	
Life of mine	Years		22.3		22.3
NPV(5%)	USD million		572.5		745.2
IRR	%		58.4%		69.7%
Payback	Days		321		279
Initial Capital Expenditure	USD million		180		180
Sustaining Capital Expenditure	USD million		108		108
Item		Average Year 1-5	Total LOM	Average Year 1-5	Total LOM
Revenue	USDmillion	208.6	2,882.1	234.9	3,254.1
Operating Costs	USDmillion	67.7	1,181.2	67.7	1,181.2
Free cash (after Tax)	USDmillion	107.3	939.8	128.7	1,216.4

Item		Base Case	Spot Case
Gold Price	USD/oz	1,650	1,841
Copper Price	USD/lb	3.59	4.13
Silver Price	USD/oz	21.35	21.35
Exchange Rate	BRL:USD	5.3	
Corporate Tax Rate	%	25%	
Social tax	%	9%	
SUDAM Tax Reduction	%	75%	
SUDAM Rax Reduction	Years	10.00	
Gold Royalty Rate	%	1.5%	
Copper Royalty Rate	%	2.0%	
Silver Royalty Rate	%	2.0%	

Notes:

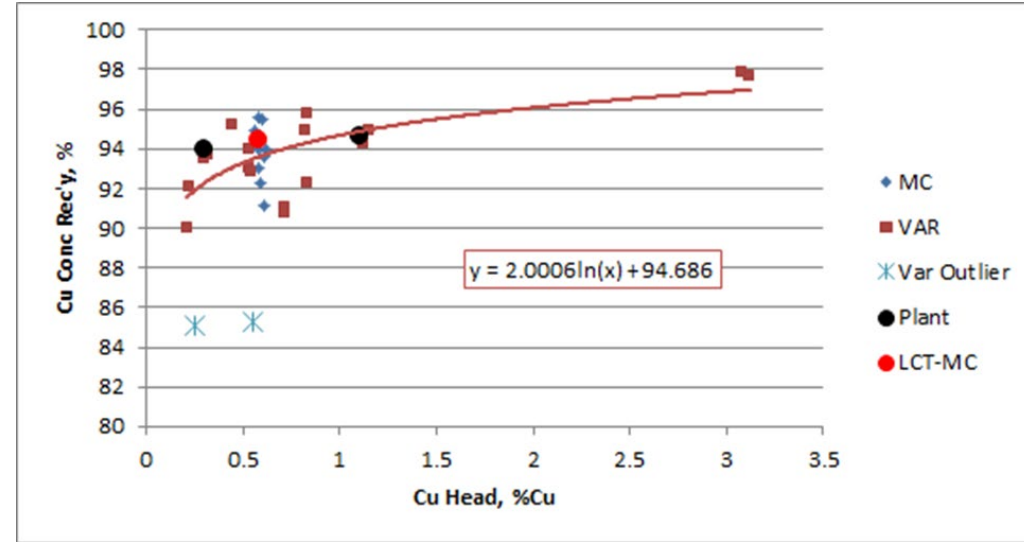
<sup>1</sup> See News Release 6<sup>th</sup> March 2023



# +94% Copper Recoveries

## Copper Recovery

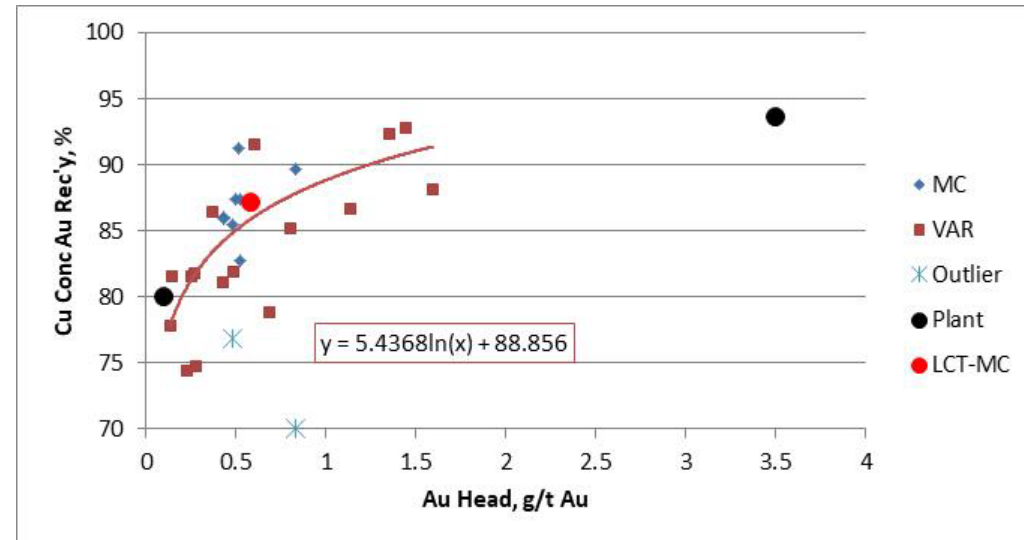
- Copper recovery exceeds 90% from 0.1% to >3% Cu head grade
- While copper recovery declines with head grade the slope is very moderate
- Consideration will therefore be given to the viability of processing lower grade mineralization
- Historic plant data fits the trend



# +87% Gold Recoveries

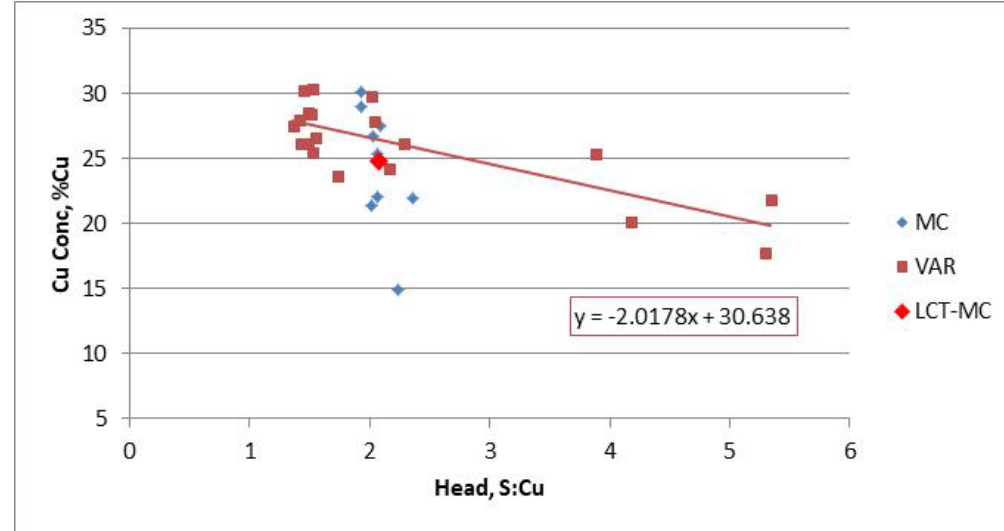
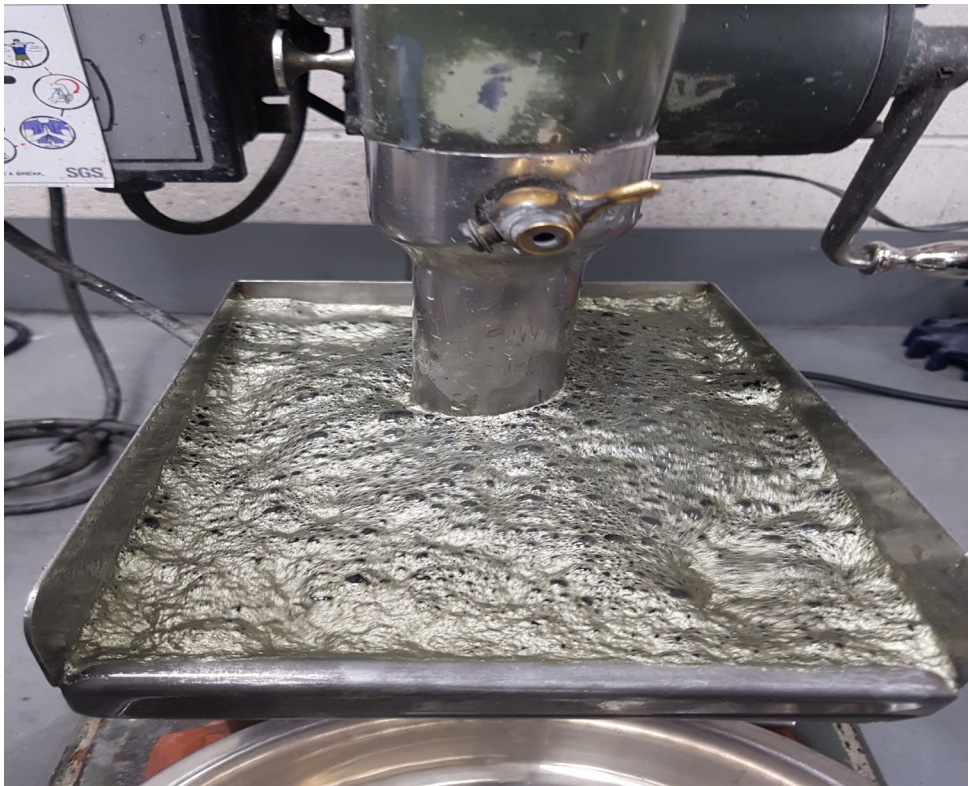
## Gold Recoveries

- Gold recovery increases with head grade with recoveries of 85% for gold head grade of 0.5g/t
- Historic plant feeds of >3g/t yield recoveries close to 95%



Note: <sup>1</sup> See News Release

# 25-29% Copper Concentrate



## High-grade Copper Concentrate

- ▲ Copper concentrate grade correlates well to Sulphur : Copper feed grade ratio
- ▲ Concentrate grades varied up to 30% Cu with average mineralization expected to yield 25 – 29% Cu concentrate grade
- ▲ Copper concentrate grades can be managed to requirements with modest impact to recovery

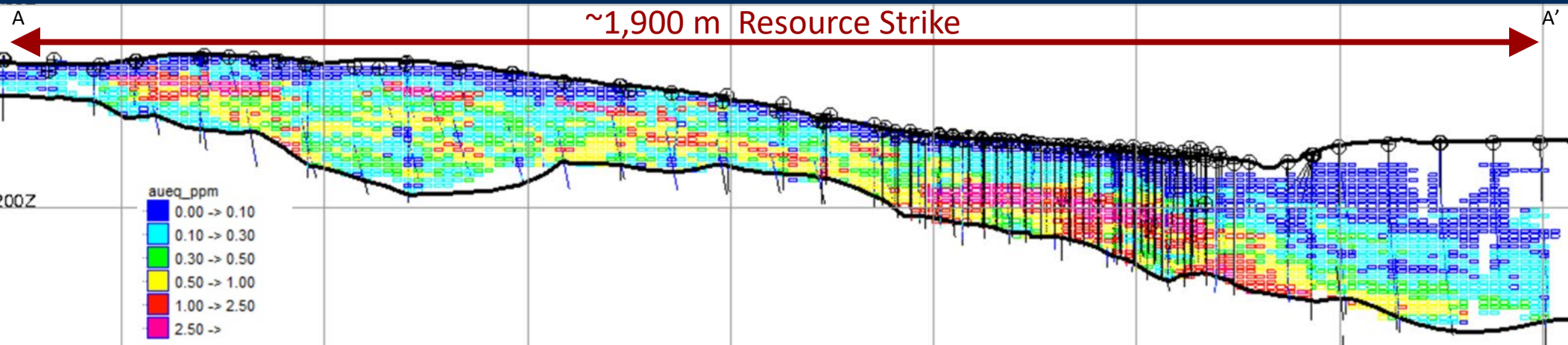
## Next Steps

- ▲ On-going test work for high-grade course gold zones recovery
- ▲ Representative concentrate samples to be made available for smelter performance analysis

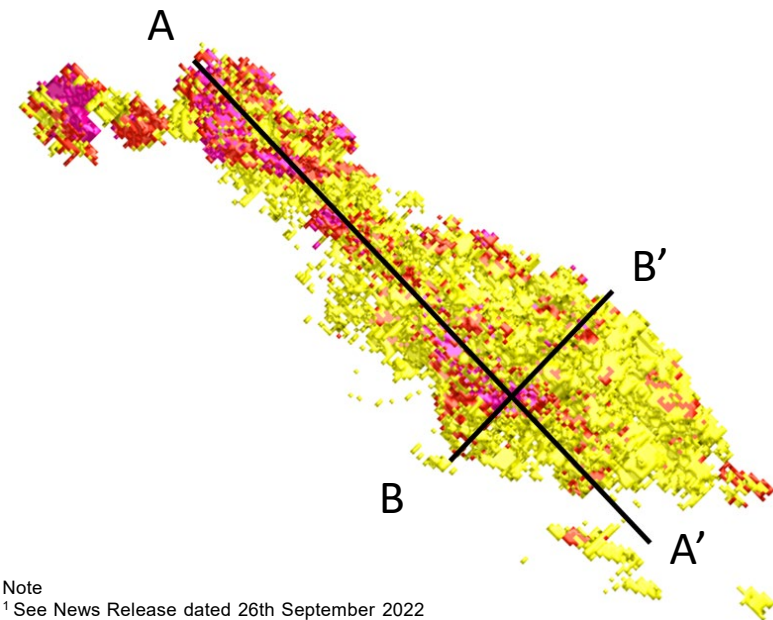
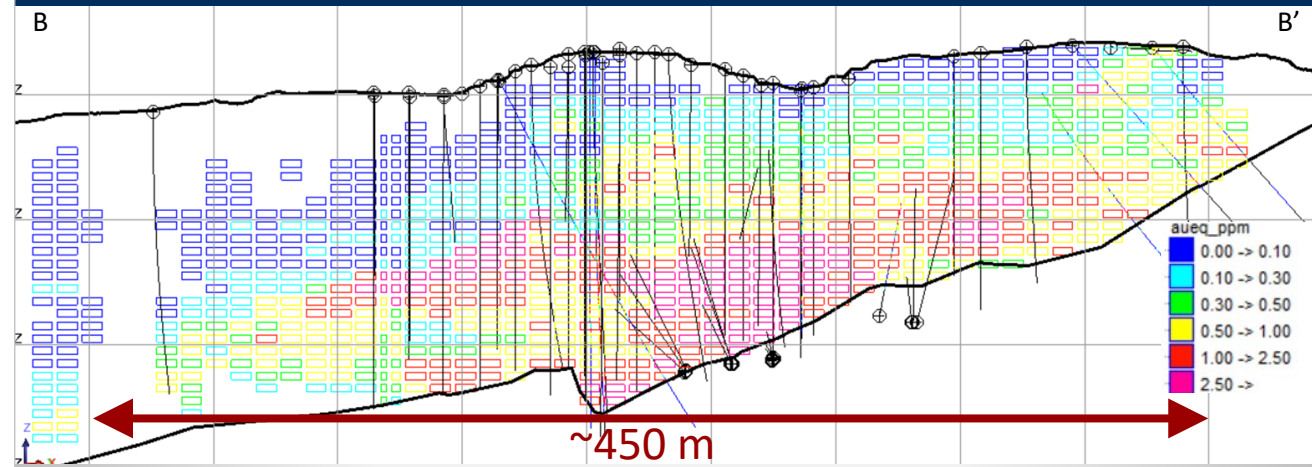
Note: <sup>1</sup> See News Release



▼ A-A' - LONG SECTION THROUGH CABAÇAL LOOKING NORTHEAST



▼ B-B' - CROSS SECTION THROUGH CABAÇAL MAIN LOOKING NORTHWEST



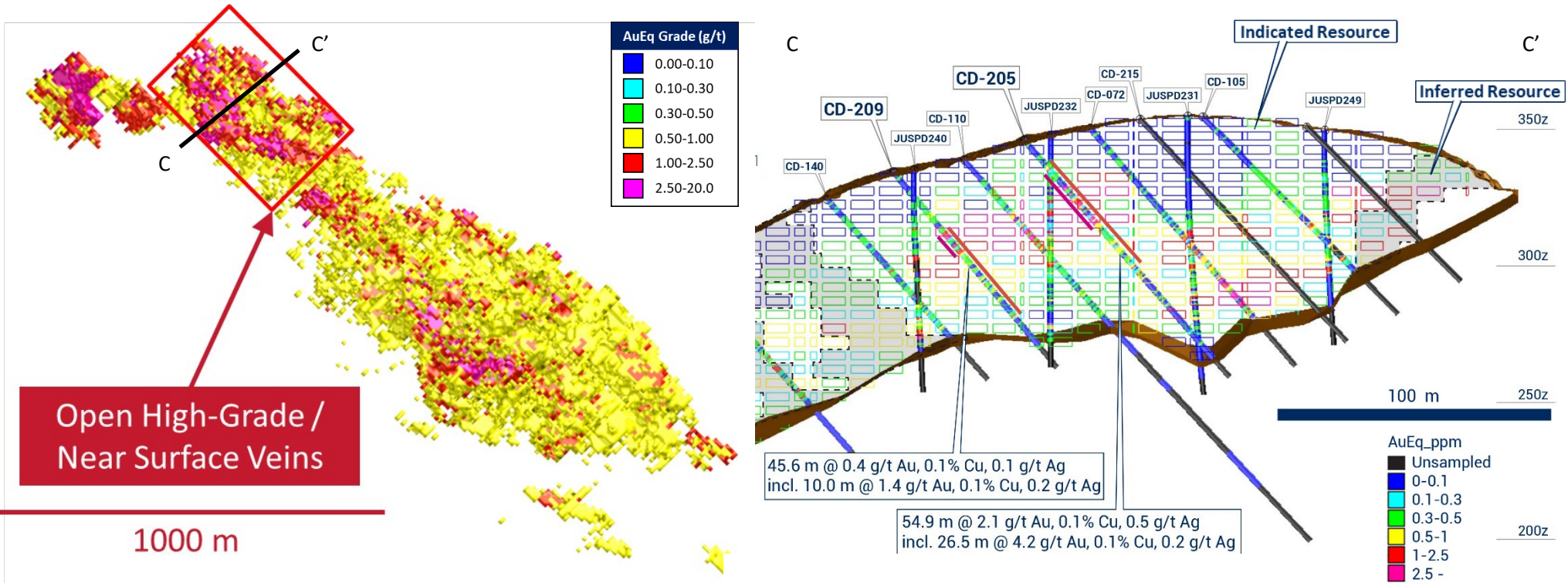
**Wide copper-gold VMS package cut by later stage high-grade gold veins**  
**Excellent geometry for open pit with low stripping ratio**

Note  
<sup>1</sup> See News Release dated 26th September 2022



Open high-grade shallow gold zone on Cabaçal ridge - Potential to become a starter pit in a development scenario

Expansion through ongoing resource definition and belt-scale exploration



Note: 1 See News Release



# Cabaçal Project

**Cabaçal Mine**  
Peak Cu: 56 ppm  
Cabaçal Resource:  
Indicated: 52.9Mt @ 0.6g/t Au, 0.3% Cu and 1.4g/t Ag  
Inferred: 10.3Mt @ 0.7g/t Au, 0.2% Cu & 1.1g/t Ag

**Santa Helena Mine**  
Peak Cu: 36 ppm  
Santa Helena Historical Resource  
Measured and Indicated:  
1.12Mt @ 6.2% Zn, 1.2% Cu, 1.3g/t Au, 41.7g/t Ag  
Inferred: 37kt @ 5.8% Zn, 1.3% Cu, 1.3g/t Au, 40.9g/t Ag  
Production: 440kt @ 6.6% Zn, 1.6% Cu, 1.8 g/t Au, and 43.0g/t Ag

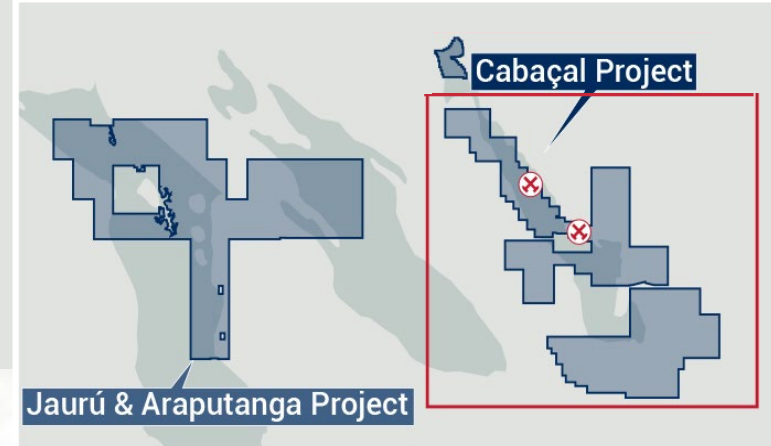
Alluvial Au Workings

**Alvorada**  
Peak Cu: 164 ppm

- Meridian Mining claims
- Historical mine
- BP Copper Anomalies
- World View Target



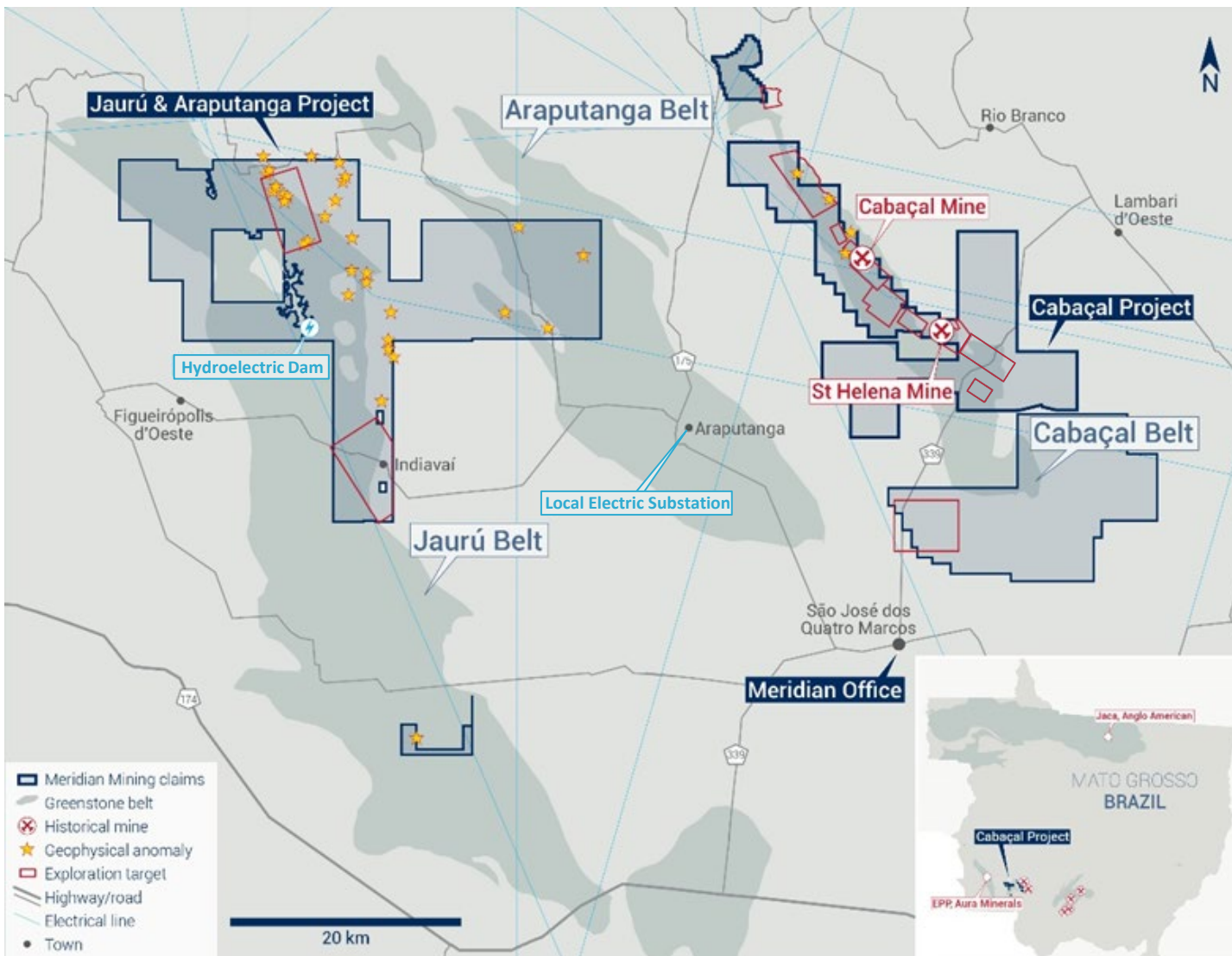
## Alvorada uncovered as Cabaçal's most significant copper in stream anomaly



The Historical Resource for the Monte Cristo (Santa Helena) Zn Deposit was published by SRK a report dated 30 May 2007 (Michael et al, 2007). The estimation procedure consisted of using three iterations of the inverse distance squared method on composited drillhole data using progressively longer search ranges. A Zn Equivalent % calculation was applied for reporting the estimates ( $ZnEq \% = Zn\% + (2.14 * Cu\%) + (0.39 * Au\ ppm) + (0.007 * Ag\_ppm)$ ); Metallurgical Recovery = 89% Zn, 89% Cu, 65% Au, 61% Ag; Au price USD 570 / oz; Ag price USD 11 / oz, Cu price USD 3.36/ lb; Zn price = 1.57 / lb) The Mineral Resource was reported in accordance with NI-43-101 rules, but has not been updated to account for final mining depletion and is therefore not considered a current Mineral Resource by MNO.

<sup>1</sup> See Meridian News Release 14<sup>th</sup> February 2023





**928 km<sup>2</sup> tenements**

**Regional Exploration by BP Minerals**

**Historical Cu-Au-Zn geochemical anomalies**

**Potential extensions of VMS belt stratigraphy**

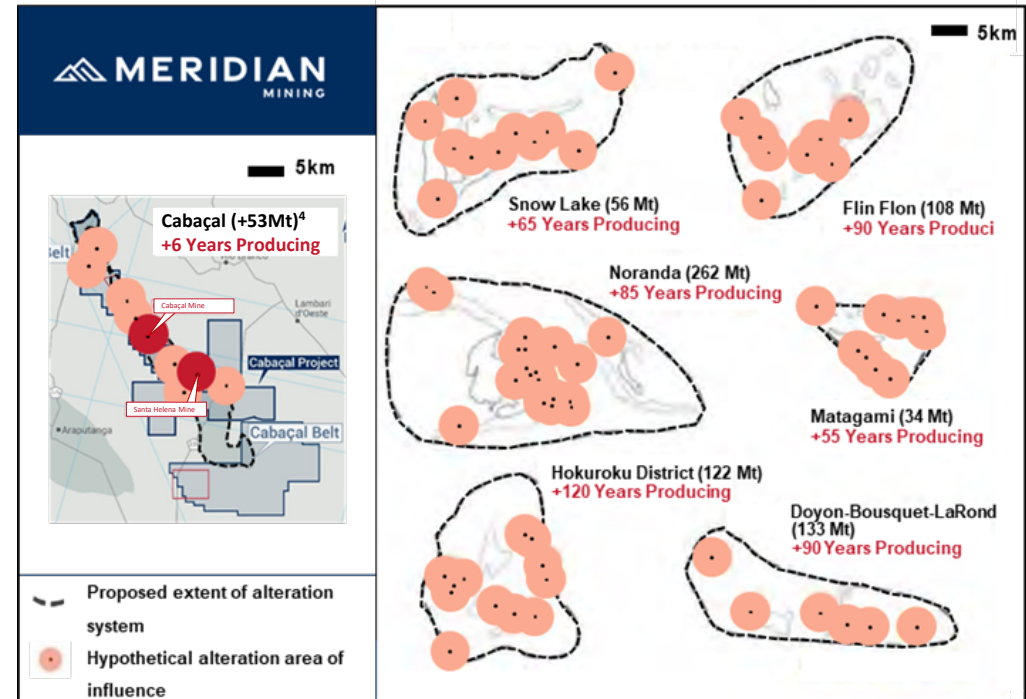
**Jaurú & Araputanga Greenstone belts potential to repeat discovery success at Cabaçal**

<sup>1</sup> See News Releases: 20<sup>th</sup> June 2022, 5<sup>th</sup> Jan 2022 & 12<sup>th</sup> April 2021

## Cabaçal VMS Project Analogues

- ▲ Cabaçal is a camp scale VMS project underexplored and under-developed compared to analogue camps
- ▲ Cabaçal has already one giant VMS deposit defined
- ▲ VMS deposits tend to form periodically, related to hydrothermal convection cells on the ocean floor at ~4km spacings
- ▲ Cabaçal's multiple targets are consistent with deposit clustering, with potential for blind repeats
- ▲ VMS deposits are well known for their base and precious metal production
- ▲ Cabaçal VMS district has many similarities to other VMS districts such as Flin Flon (Manitoba), and Matagami (Quebec)

**A junior company acquiring ownership of a VMS belt on a camp scale is a rare opportunity**



▲ MAJOR VMS MINING DISTRICTS

**“We are excited about the potential for more ore discovery around Cabaçal and in the belt as a whole... In a Canadian context the Cabaçal belt would be a prime long-term target for VMS type mineralization, with strong competition for ground holdings.”<sup>3</sup>**

Notes:

<sup>1</sup> Source: Akita University, Galley et al. (2007); Mercier-Langevin et al. (2007) S1P Global, Hudbay 2020 See Meridian Announcement of 26<sup>th</sup> August, 2020

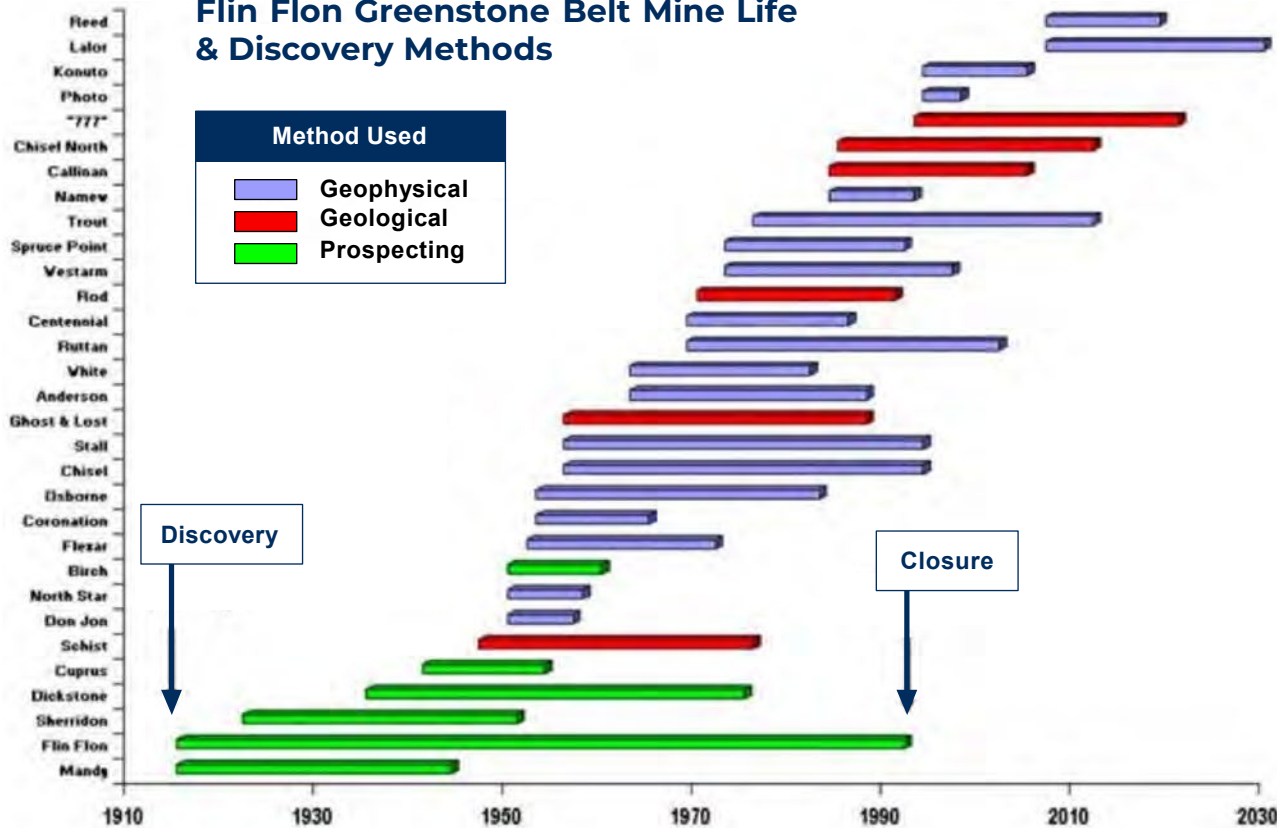
<sup>2</sup> See News Release dated 26<sup>th</sup> September

<sup>3</sup> Cabaçal-1 Mine Mato Grosso State, Brazil. Report by Dr Robert Mason and Mr David Kerr. Queens University, Ontario, Canada

<sup>4</sup> See News Release 26<sup>th</sup> September 2022



**Flin Flon Greenstone Belt Mine Life & Discovery Methods**



**The Technical Evolution**

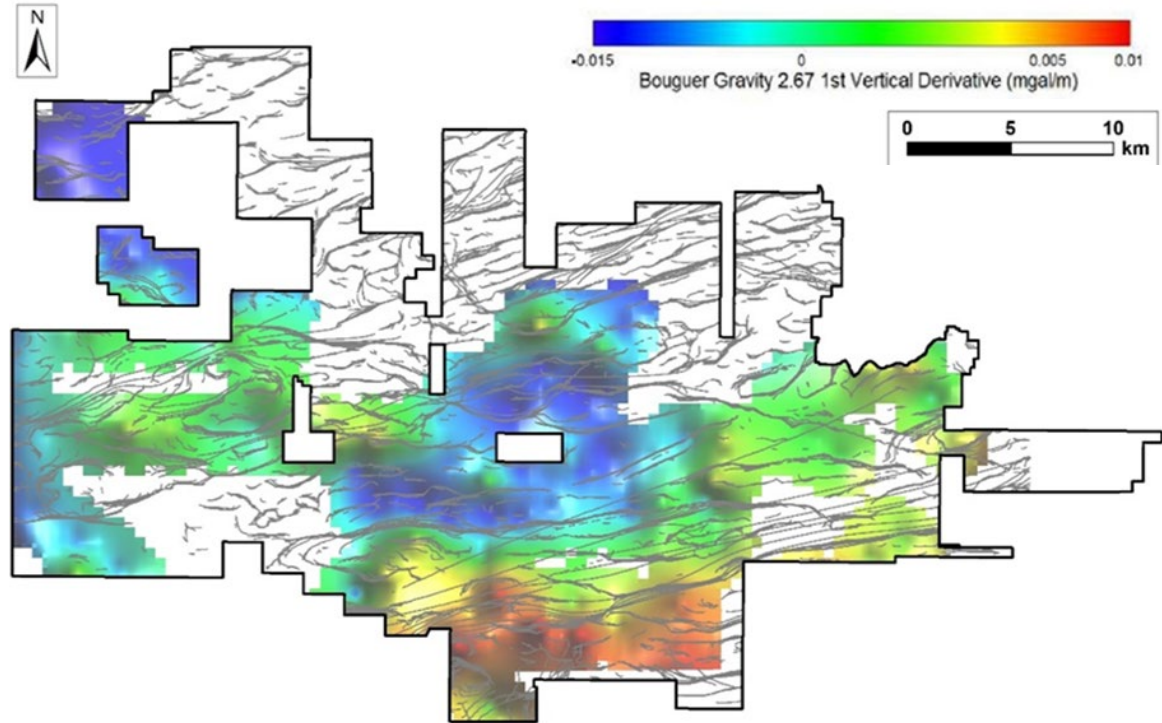
- △ First discovery identified through prospecting (David Collins - Tom Creighton, 1914)
- △ Early mapping and geochemistry may identify hydrothermal centers. Economic mineralization not necessarily present at surface
- △ Cyclical nature of metal prices can influence sustained exploration effort
- △ Modern geophysical exploration methods have successfully expanded the discovery window, through surface and down-hole survey techniques
- △ Improved analytical methods add increasingly sophisticated criteria for geochemical vectoring to mineralization
- △ Geochemical methods are supplemented by alteration mapping, maximizing information from deeper drilling to map fluid pathways, and model the hydrothermal system in 3D

△ FLIN FLON: FROM THE PROSPECTOR TO VTEM

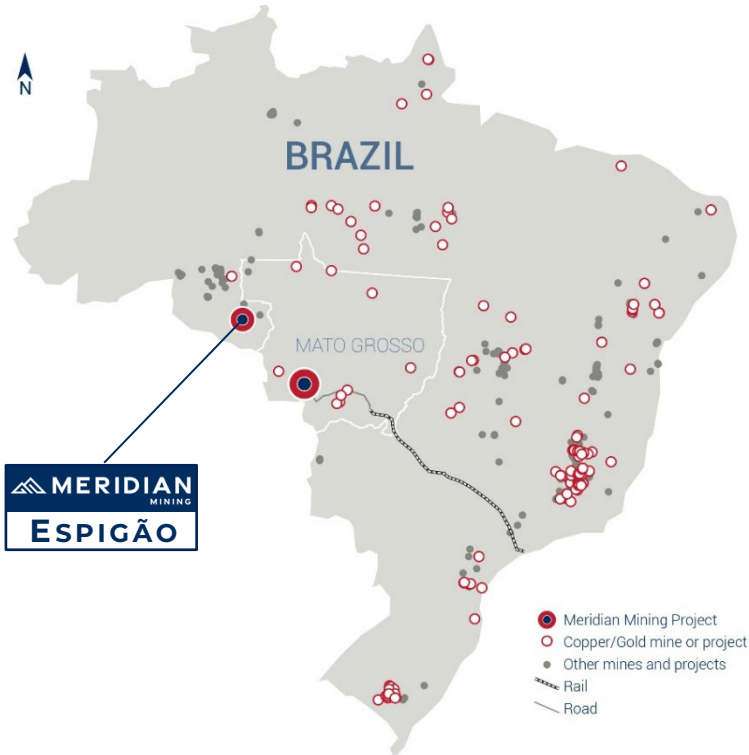
<sup>1</sup> Source: Gilmore and Wood, 2012 / Hudbay <https://csegrecorder.com/articles/view/geophysical-explorant-beneath-the-phanerozoic-cover-of-the-flin-flon>

## Espigão Project

- Iron Oxide-Copper-Gold (“IOCG”) type deposits host the giant Cu-Au mines of Brazil and some of the biggest Cu-Au mines internationally e.g. Salobo and Olympic Dam
- Espigão hosts the prospective geochemistry comparable to large-scale IOCG type deposits
- First gravity survey 2km centered stations and testing for scale – more results pending



	Magnetic Anomaly Amplitude	Magnetic Anomaly Amplitude	Gravity Anomaly Amplitude	Gravity Anomaly Amplitude
Units	nT	km	Mgal	Km
Espigão Project	Pending	Open	15	Open
Deposit				
Olympic Dam	1,400	8 km across	17	8 km across
Wirrda Well	1,800	6 * 9 km	6	6 * 9 km
Carapateena	200-300	1.5 * 1.0 km	2 - 2.5	2 * 2 km
Prominent Hill	7,000	0.7 * 0.5 km	5	2.5 * 1 km
Ernest Henry	7,000 – 10,000	1.2 * 0.7 km	2 - 3	1.2 * 0.7 km
Eloise	1,100	0.75 * 0.25 km	1.0	1.0 * 0.5 km



1 See News Release 5th May 2022  
2 Table 1 International IOCG and associated

The background of the slide is a photograph of a mining site. A large piece of heavy machinery, likely a drill rig, is the central focus. It has a long, angled mast extending upwards. Several workers in orange safety gear and white hard hats are positioned around the machine. The site is in a rural, hilly area with green grass and some trees under a cloudy sky. The Meridian Mining logo, consisting of a stylized mountain range icon, is positioned to the left of the company name.

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**Dr Adrian McArthur**

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**Gilbert Clark**

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