

# EXPLORING FOR CHILE'S NEXT MAJOR COPPER DISCOVERY

Advancing the Buenavista target at Block 4 along the world's premier copper mining belt

Investor Summary | CSE: PM

Q2 2023



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**QUALIFIED PERSON.** Technical information in this Investor Summary has been approved by Mario Orrego G, Geologist and a Registered Member of the Chilean Mining Commission and a Qualified Person as defined by National Instrument 43-101. Mr. Orrego is a consultant to the Company.

# Board & Management



Joseph van den Elsen

President, CEO & Director



**Timothy Beale, M.Sc** VP - Exploration



Adrian Manger, CPA Non-Executive Chairman & Director



Juilan Bavin, M.Sc. Non-Executive Director



**Bill Tsang, CPA, CA** CFO

## Pampa Metals' Directors and Management bring:

- Multiple decades of experience in Latin America and Chile
- Exceptional track record of discovery in South America
- Intimate, working knowledge of Chilean Copper Porphyry deposits
- Major mining company experience incl. BHP, Rio Tinto, Anglo
- Track record monetizing junior explorers
- Extensive capital markets and fund-raising experience



- The ~600km core of the Domeyko and Palaeocene copper belts of ٠ northern Chile represents the world's single most important copper producing district, contributing >15% of total global copper production
- Across 7 Projects along these belts, Pampa Metals holds a 100% ٠ interest in a ~47,400 hectare land package
  - Substantial and unique property holding in the heart of Northern Chile's copper belts
- Desert terrain, easy to moderate access ٠
- Portfolio approach multiple targets ٠
  - **Block 4 Priority Buenavista Target** 6,600 Ha

7,000 Ha

Cerro Buenos Aires – Co Chiquitin Target 

<ul> <li>Arrieros</li> </ul>	900 Ha
<ul> <li>Redondo-Veronica</li> </ul>	6,600 Ha
<ul> <li>Block 3</li> </ul>	10,100 Ha
Cerro Blanco	7,200 Ha
<ul> <li>Morros Blancos</li> </ul>	9,000 Ha





## Strong news-flow expected

- Block 4 Buenavista target
  - Compelling untested porphyry copper-molybdenum target
  - Defined by geology, geophysics, trenching and geochemistry completed in 2021- 2022
  - 2,100 m diamond drill program commenced end Q1 2023
  - Assays expected early Q3 2023 (indicative)
- Cerro Buenos Aires Cerro Chiquitin target
  - Expanded IP surveys 2H 2023 (indicative)
  - Drilling planned 2H 2023 (*indicative*)
- Other Project Joint Ventures
  - Morros Blancos Project under option to Austral Gold
  - Pursuing additional third-party farm-outs
- Possible new project acquisitions





Pampa Metals	Shares	Market Cap (\$0.15)
Pampa Metals - Issued & Outstanding	72,793,275	~\$10.9m
Warrants – avg. exercise price \$0.24	25,577,815	
Stock Options – avg. Exercise price \$0.28	7,000,000	
Fully Diluted	105,371,090	
Large Shareholders	Shares	%
Board & Management	3,848,981	5.3%
Austral Shareholding	3,800,000	5.2%



#### 1. LA ESCONDIDA DISTRICT – Cu-Mo-Au

- BHP / Rio Tinto / Jeco / Antofagasta / Barrick
  - > 144Mt fine Cu contained (sulphide & oxide)
  - > 1Mt fine Cu production / year (2021)
- World's single largest copper producing district
- 3 mines
  - La Escondida / Escondida Norte / Zaldivar
- 2 undeveloped deposits
  - Pampa Escondida / Chimborazo

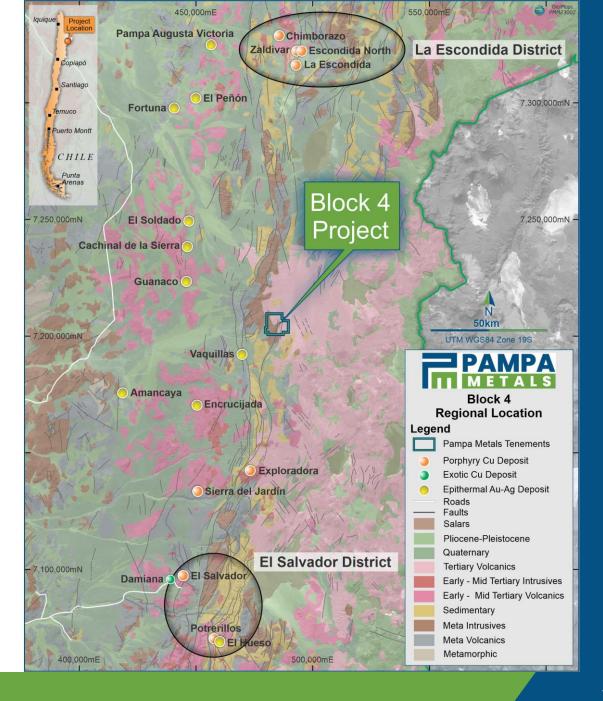
#### 2. BLOCK 4 PROJECT – PAMPA METALS

- Buenavista target Cu-Mo (-Au)
- 2 covered geophysical targets
- Other potential targets for follow-up

#### 3. EL SALVADOR DISTRICT – Cu-Mo

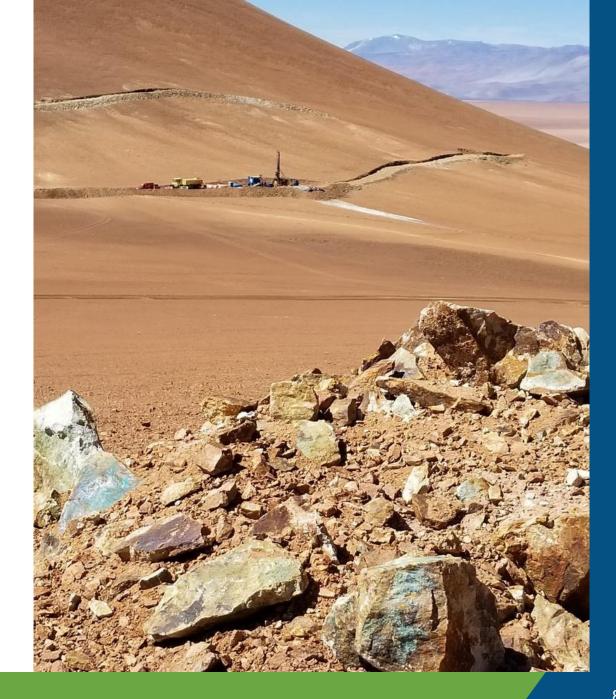
- Codelco
- > 20Mt fine Cu contained (sulphide & oxide)
- > 52Kt fine Cu production / year (2021)
- 3 mines
  - Mina Inca / Campamento Antiguo / Damiana
- 1 closed mine
  - Potrerillos

(\*) Production & Contained Metals Figures from Cochilco, Company Websites & Academic Publications



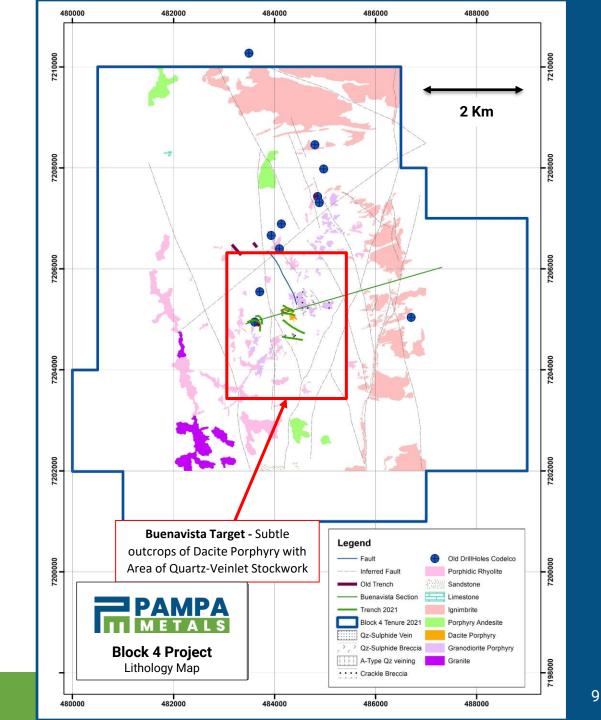


- Block 4 Pampa's priority project
  - Characteristics indicative of a large, fertile porphyry coppermolybdenum system
  - Located along the world's preeminent porphyry copper belt in northern Chile (Domeyko Belt)
- Multiple datasets show internal consistency
  - Surface geology, magnetometry, induced polarisation (IP), geochemistry, age dating, other data
- Anomalous soil geochemical values of Mo, Cu, Au
  - Heavily supergene leached desert environment
- Several geological, geochemical, and geophysical anomalies on the Block 4 property
  - Including priority Buenavista target
  - Suggestive of a potential "cluster" of porphyry coppermolybdenum systems
- Buenavista footprint comparable to major discoveries
  - ~1.5 km E-W x 1 km N-S





- 6,600 Ha centered 110 Km S of giant Escondida-Zaldivar copper mining complex
- Extensive post-mineral covered "pampa" to N and E
- Small topographic feature in center with subtle sub-crops of dacite porphyry with intense porphyry-style quartz-veinlet stockwork
  - New discovery Never drilled
  - Cu-oxides and breccia around periphery to west and north
- Historic drilling (unknown provenance) to N and W
- Exploration completed by Pampa Metals
  - Geology & magnetics (October 2021)
  - Trenching & sampling (February 2022)
  - IP geophysics (June 2022)
  - Geochemical soil sampling (September 2022)
  - Maiden drill test of Buenavista target (~2,100m) started end Q1 2023



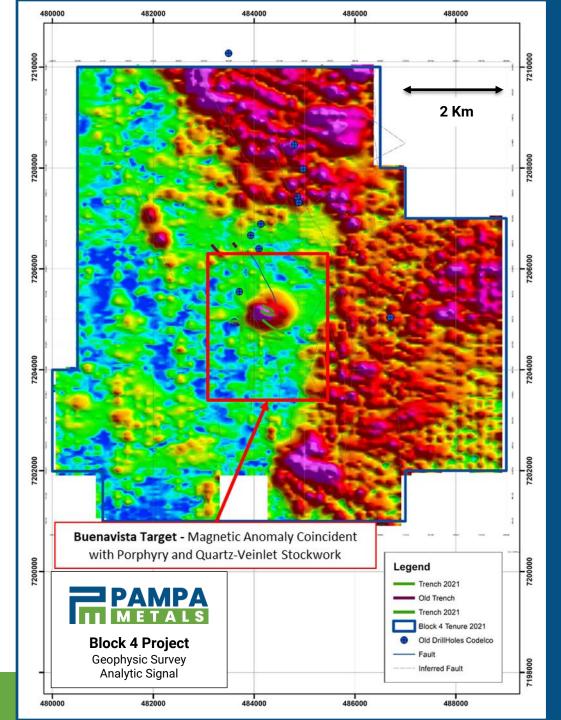
#### Pampa Metals | Corporate Presentation



- Newly discovered dacite porphyry
  - Associated with discrete magnetic high
  - Intense porphyry-style quartz-veinlet stockwork
  - Multiple veinlet events including "A" type veins
  - Fragmental rocks identified macroscopically and in thin section
  - Dacite porphyry dated as Early Tertiary (~60Ma)
- Magnetics highlights further anomalies of interest under cover to the East, Southeast, and North



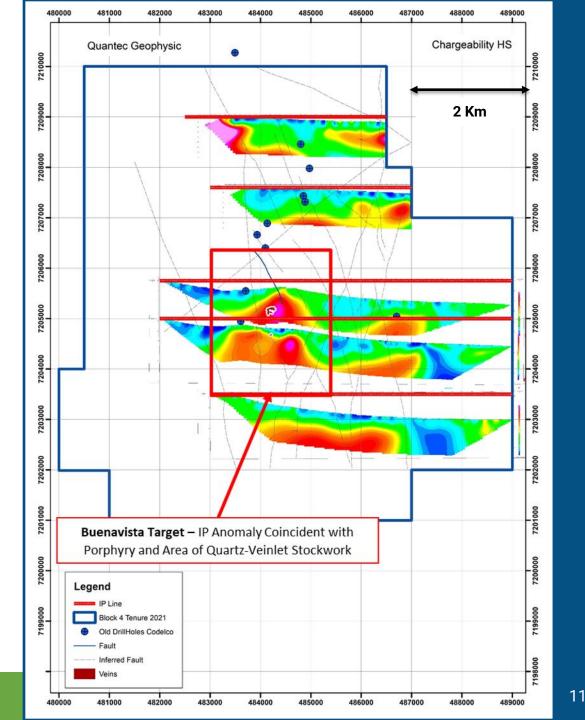




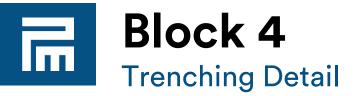
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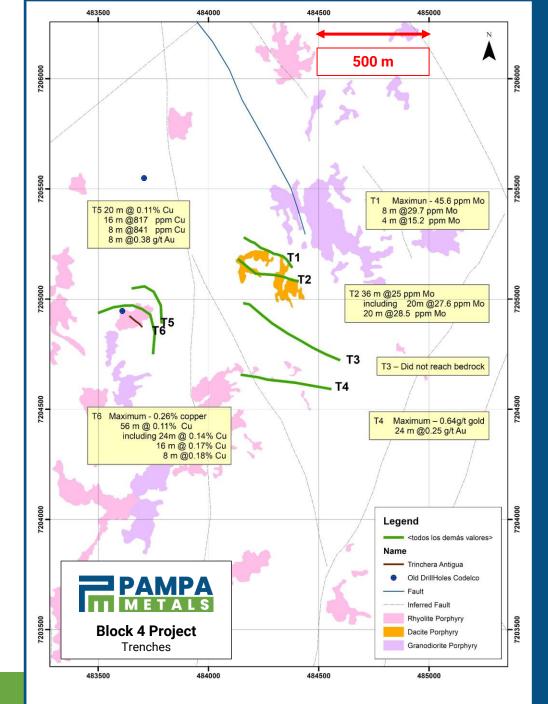
- Buenavista IP chargeability anomaly is coincident with discrete magnetic high
  - Compelling drill target
  - Dacite porphyry with quartz-veinlet stockwork
  - · Cu-oxides immediately to west and north
  - Evidence of oxidized chalcopyrite (pitch limonite)
  - Evidence for fragmental host rocks (diatreme?)
  - 2,100m drilling started end Q1 2023
- Other magnetic anomalies with coincident IP chargeability anomalies under cover to east, southeast and north of Buenavista
  - Future drill targets
- Exploration upside
  - New Cu-oxide occurrences found further to the west, within property boundary



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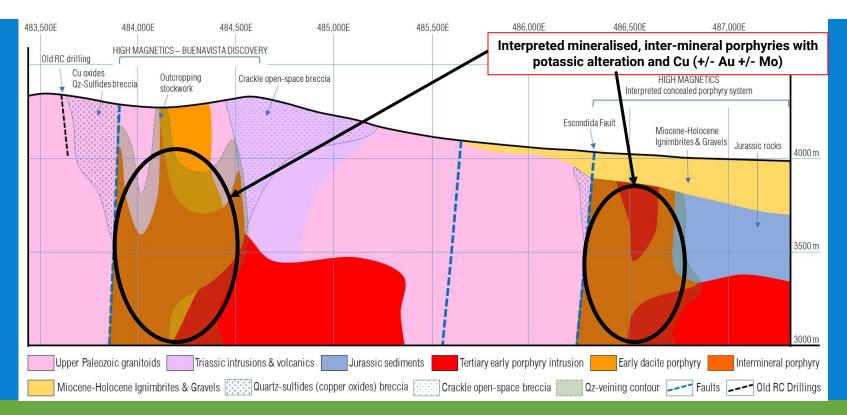
- Trenching at Buenavista returned:
  - Up to 0.26% copper, including 24m @ 0.14% Cu
  - Up to 0.64g/t gold, including 24m @ 0.25g/t Au
  - Highly anomalous Molybdenum coincident with central quartz veinlet stockwork and directly above magnetic anomaly
- Geochemistry suggests Buenavista porphyry system is fertile
- Upper levels of hydrothermal system preserved (shallow phyllic)
- Surface oxidation/leaching of sulphides is intense
- Pitch limonite after chalcopyrite at surface in quartz-sulphide breccia immediately west of central porphyry



## **Block 4** Schematic Section of Buenavista and Adjacent Targets

## Buenavista Drill Target and Additional Targets to E, SE & N

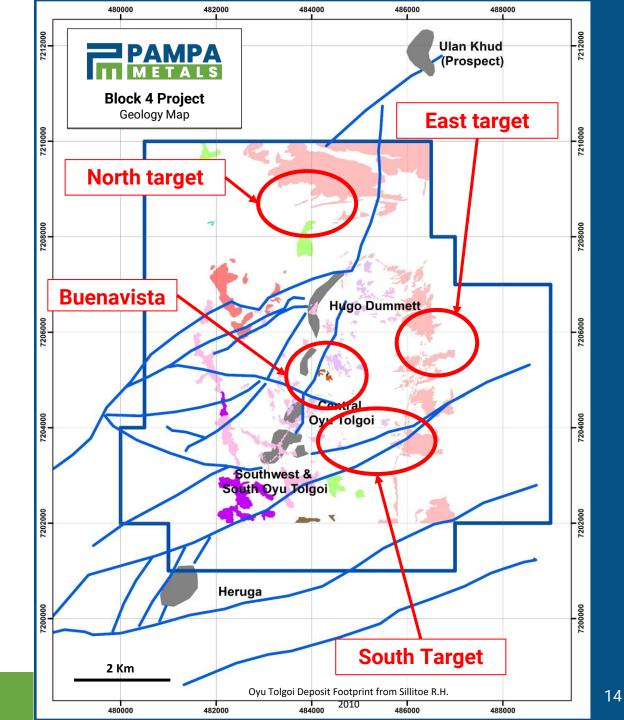
- Interpretative cross section (W-E) combining geology, geophysics and geochemistry
  - Highly compelling targets with geological, geochemical, geophysical support
  - 2,100m diamond drill program commenced Q1 2023





## **Block 4 – Target Footprint Compared**

- Compared to Oyu Tolgoi District Mongolia
- One of world's largest copper deposit districts
  - Rio Tinto 66% / Mongolian Government 34%
  - Open pit + Underground block cave
  - +/- 500Kt fine Cu / year
- Oyu Tolgoi principal deposits footprints (grey) and faults (blue) superimposed on Block 4 data and targets at same scale
  - Hugo Dummett & Central Oyu Tolgoi principal deposits





#### Projects: Portfolio Breadth & Depth with 7 projects along proven Chilean copper belts

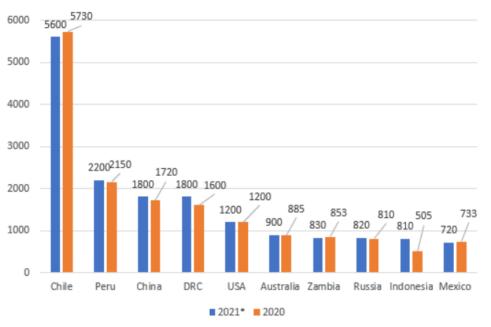
- 100% Interest in all Projects (~ 47,400 ha) Significant and Unique
- High Priority Projects
  - Block 4 including Buenavista target Drilling Commenced Q1 2023
  - Cerro Buenos Aires / Co Chiquitin Drill Ready

- Morros Blancos Project Farmed Out to ASX/TSX Listed Austral Gold
- Additional projects available for farm out



## **Copper – Supply Crunch – Chile is Key**

- Copper supply is challenged by a lack of new projects and increasing demand
- Chile: > 26% of Global Production / 3 of World's Top 5 Copper Mining Districts



**Top 10 Copper Producing Countries** 

Source: Kitco News (February 2022)

#### **Top 10 Copper Producing Companies**

Company	Attributable Copper Production 2021 (K- tonnes)	Ranking	Operating Mine(s) in Chile
Codelco	1,728	1	Yes
Freeport McM'	1,407	2	Yes
Glencore	1,196	3	Yes
ВНР	1,022	4	Yes
Southern Copper	958	5	-
First Quantum	816	6	-
КСНМ	754	7	Yes
Rio Tinto	494	8	Yes
Antofagasta Min'	464	9	Yes
Anglo American	463	10	Yes

#### Source: Kitco News (April 2022)

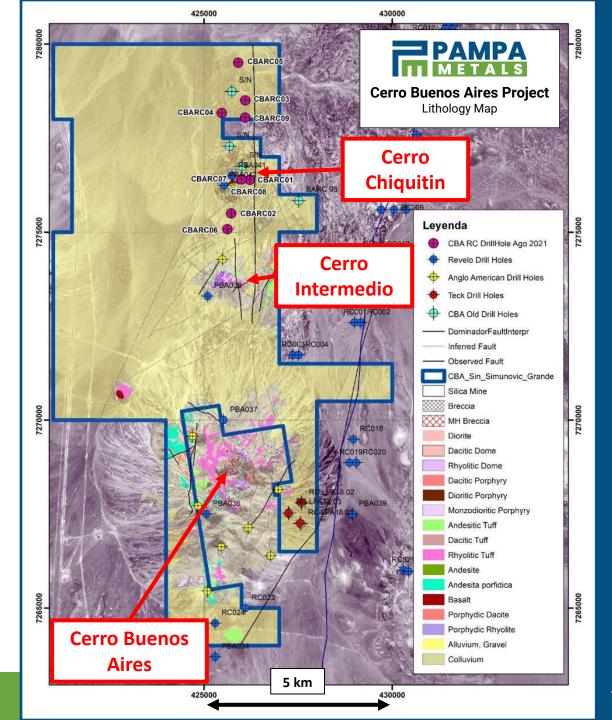


# APPENDIX Additional Projects



## Cerro Buenos Aires - 7,000 Ha

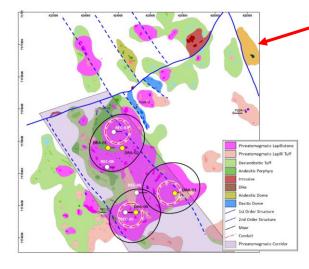
- Located along prime Cu-Au mineral belt of N Chile Paleocene Mineral Belt
  - Located 35km SW of El Peñon (Au-Ag) & 215km SSW of Spence (Cu-Mo)
- Project characterized by widespread hydrothermal alteration
  - Extending over > 12 Km N-S
  - High-level alteration typical of HS Au-Ag (-Cu) deposits
  - Tourmaline breccia & porphyry-style quartz veinlets typical of porphyry Cu deposits, at Cerro Chiquitin
- Significant post-mineral cover around outcrops provides untested upside potential focus on Cerro Chiquitin
- Significant and extensive geochemical and geophysical anomalies further targets
- Limited historic drilling supportive of porphyry copper targets



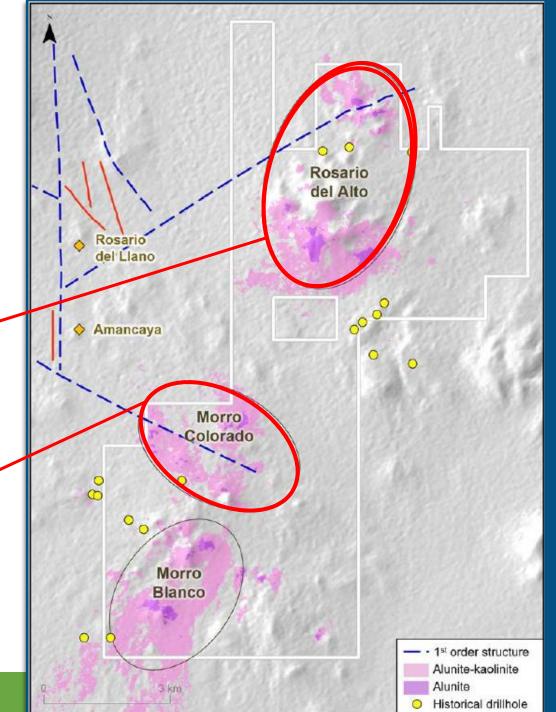


### Morros Blancos – 9,000 Ha

- Located along prime Cu-Au mineral belt of N Chile Paleocene Mineral Belt
  - Located adjacent to Amancaya Au-Ag mine
- Maar-diatreme complexes, widespread phreatomagmatic events, advanced argillic alteration, good host rocks & geochemistry
- Porphyry-style quartz-veinlet stockwork with anomalous Mo geochemistry at Morro Colorado
- Focus on Rosario del Alto & Morro Colorado



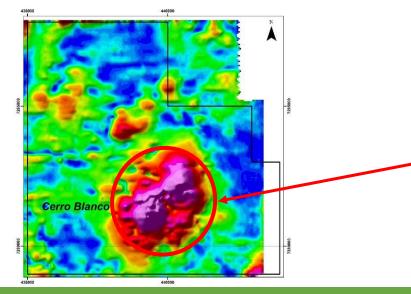


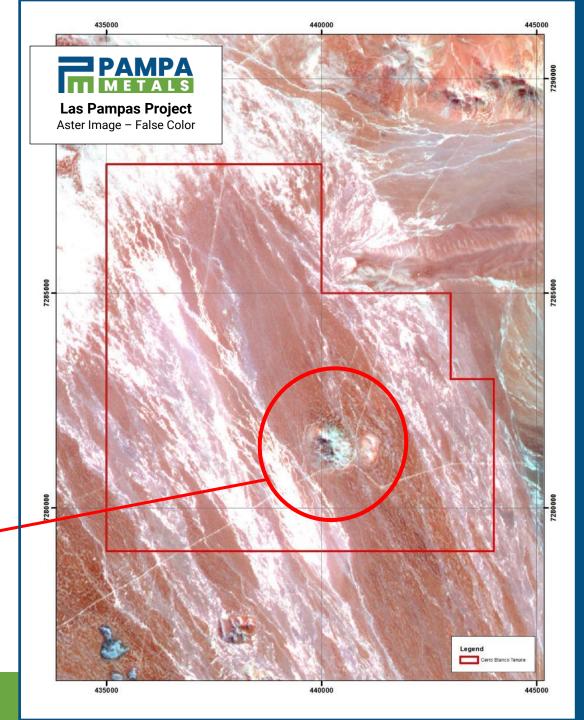




## Cerro Blanco – 7,200 Ha

- Located along prime Cu-Au mineral belt of N Chile Paleocene Mineral Belt
  - Located 22km SW of El Peñon Au-Ag mine
- Intense advanced argillic alteration in volcanic rocks
- Significant magnetic anomaly related to covered feature (porphyry?) to N of outcrops
- Other magnetic anomalies of interest

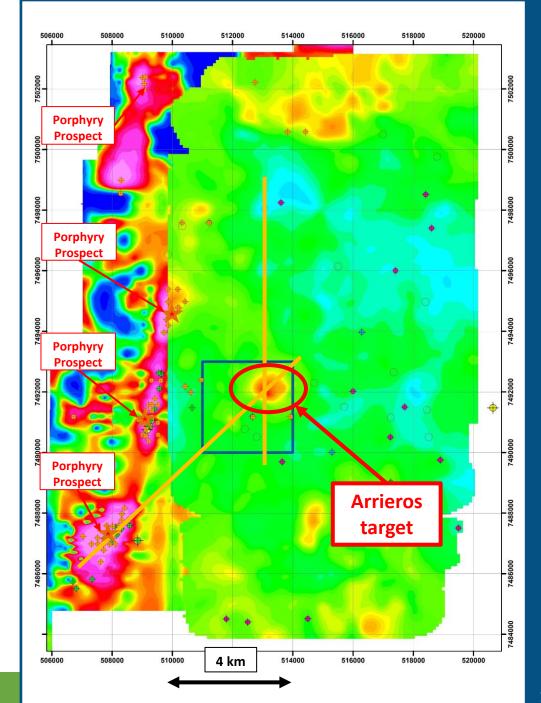






### Arrieros – 900 Ha

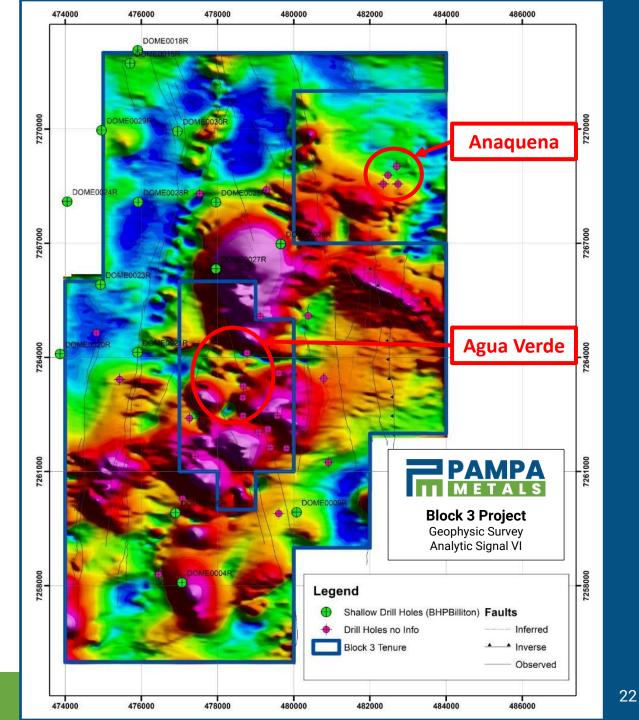
- Located along world's most prolific copper mineral belt in northern Chile – Domeyko (Eocene-Oligocene) Belt
  - Located 40km S of Chuquicamata & midway between Chuquicamata and Centinela copper mining districts
- Post-mineral gravel (pampa) cover
- Middle Eocene (dated) porphyry-style hydrothermal alteration and mineralization adjacent to the west (outside the property)
- Geophysics is the only practical targetting tool IP and Magnetics
  - Significant, undrilled, IP anomaly detected through cover to E of historically drilled porphyry copper targets





## Block 3 - 10,100 Ha

- Located along world's most prolific copper mineral belt in northern Chile – Domeyko (Eocene-Oligocene) Belt
  - Located 50km SSW of La Escondida
- Project characterized by widespread post-mineral gravel cover "pampa"
  - 2 known porphyry targets in immediate vicinity both subject to historic drilling
    - > Agua Verde / Victoria (Anglo American)
    - > Anaquena (Boroquim)
- Multiple magnetic features of interest from new drone-flown survey
- Significant post-mineral cover provides untested upside potential
- Wide-spaced, shallow historic drilling leaves significant space for discovery

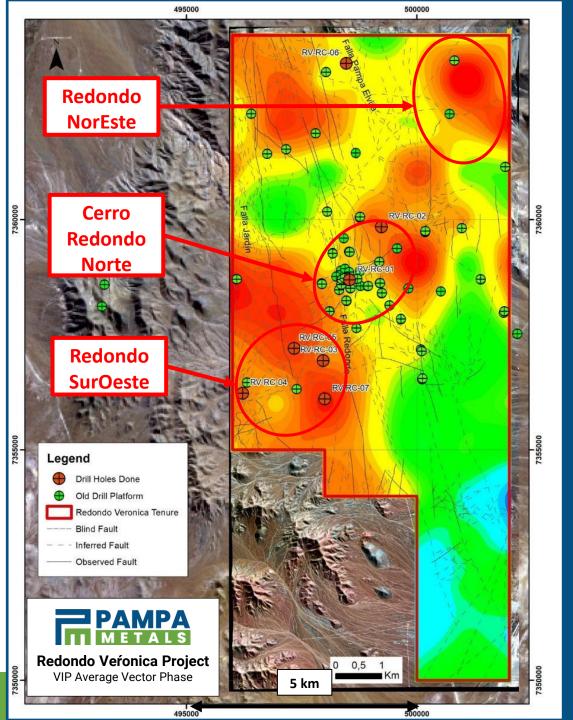


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## Redondo-Veronica – 6,600 Ha

- Located along world's most prolific copper mineral belt in northern Chile – Domeyko (Eocene-Oligocene) Belt
  - Located 45km NNE of La Escondida
- Project characterized by widespread hydrothermal alteration
  - 5 separate zones mapped at surface
  - Varies from high-level advanced argillic to sericitic
  - Quartz veinlets typical of porphyry copper environment in several areas
- One area subject to significant, historical, shallow drill campaign Cerro Redondo Norte
  - Unknown results
- Wide-spaced drilling by Pampa Metals (2021) showed significant further potential at Redondo SurOeste
  - Other targets require further work



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