



# LLAHUIN – “ONE OF THE WORLD’S NEXT LONG-LIFE COPPER MINES”

July 2024 ASX: SUH FWB: NK4

[www.shmining.com.au](http://www.shmining.com.au)

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ASX releases referred to or source of data used in this presentation are as follows:

#### Llahuin Copper/Gold/Moly Project

18 July 2011, 2 Feb 2012, 3 July 2013, 15 Feb 2022, 28 April 2022, 4 Oct 2022, 8 Nov 2022, 29 Nov 2022, 18 Jan 2023, 3 Feb 2023 19 April 2023, 15 Jan 2024, 29 April 2024.

Llahuin Copper/Gold/Moly Project: Total Measured and Indicated Resources - JORC (2004) Compliant. As announced to the market on 18 August 2013

#### Los Pumas Manganese Battery Metals Project:

Total Measured and Indicated Resources - JORC (2012) Compliant. As announced to the market on 3 May 2023

ASX release 25 March 2011 - Resources & ASX 2 February 2011 – PEA Coffey Mining and SNC Lavlin

A large low grade indicated and inferred resource of 264mt @ 2.4% Mn (resource published ASX 10 May 2010 – Coffey Mining)

ASX 23 March 2023

#### Lago Lithium Brine Project

ASX 13 July 2023 -Lago Lithium Project

The Company confirms in this presentation that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

# LARGE COPPER/GOLD MINE EMERGING IN CHILE

Llahuin is Southern Hemisphere Mining's flagship copper/gold project, located 350km North of Santiago, Chile

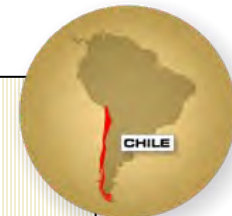
**Los Pumas**  
Battery Metals  
Manganese Project

**Llahuin**  
Copper Gold Moly Project  
680,000t CuEq Resource

**Lago**  
Lithium Brine  
Project

- **LLAHUIN COPPER/GOLD PROJECT(100%)**
- **Flagship project: Increasing open pit resources to 20+ year mine life**
- **Large ~7km porphyry system, under explored and in a low altitude excellent mining location**
- **LAGO LITHIUM BRINE PROJECT (100%)**
- **Exploration advancing**
- **LOS PUMAS BATTERY MANGANESE (100%)**
- **Off-take partner engagement in progress for equity funding to advance to DFS for Manganese, Metallurgical Manganese and/or HPMSM product**

# Board and Management: Our Team Knows Copper Mining

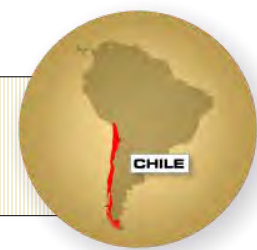


Over 40 years combined mine discovery, development and / or operating experience internationally; including two of the world's more significant copper mines; Dikulushi - located in DRC Africa & Grasberg Mine - located in West Papua

<p><b>Mark Stowell</b> B.Bus CA</p>	<p><b>Chairman</b></p>	<p>Internationally experienced resource sector executive. Founding Chairman of Mawson West Ltd; an international copper producer &amp; explorer which completed an IPO on the Toronto Stock Exchange in one of the largest base metal IPO's of 2011. A founder of Incremental Petroleum Limited and Anvil Mining Ltd.</p>
<p><b>David Frances</b> BSc Geol (Hons)</p>	<p><b>Director</b></p>	<p>Managing Director of Province Resources Ltd (ASX:PRL). Mr. Frances led Mawson West (TSX: MWE) from 2006 – 2012; he was instrumental in developing into a significant international copper producer, developer, &amp; explorer in the DRC.</p>
<p><b>Natalie Dawson</b> B.Com CPA MBA</p>	<p><b>Director</b></p>	<p>Significant Australian &amp; international experience as a Director / CFO / Major Projects Commercial Director Experience includes boots on the ground - West Papua Grasberg copper/ gold mine, multi-national publicly listed companies (Including: Rio Tinto, MacMahon, Clough Engineering).</p>
<p><b>Richard Caldwell</b> B.Ec LLB F.Fin</p>	<p><b>Director</b></p>	<p>Formerly Head of Corporate Finance &amp; Equity Capital Markets at StoneBridge, Head of Equity Capital Markets at Burdett Buckridge &amp; Young; before holding several senior management positions with Citibank Sydney, JP Morgan London.</p>
<p><b>Adam Anderson</b> B.Sc Geol (Hons) MAusIMM</p>	<p><b>Exploration Manager</b></p>	<p>Australian and international expertise including; discovery team on the Golden Cities gold project in Australia, taking the project to prefeasibility; Certej Deeps Gold Porphyry in Romania, planning and drilling the discovery hole which ultimately saw the resource increase from 2Mozs to over 4Mozs; and responsible for seven JORC compliant copper resources in the DRC for Mawson West and others.</p>



# Capital Structure



## Summary

Fully paid ordinary shares	736,240,044
Unlisted options (mgt)	13,750,000
Unlisted Opts (broker) (10c, 17/06/27)	1,000,000
Cash and receivables*	~\$7.7m
Market cap at \$0.03	\$22m

### Substantial Shareholders

Pictet Asset Mgt (Singapore) Pte Ltd 9.8%

Merchant Holdings Pty Ltd (mgt) 9.4%

Others: 6.5% and 5%

### Notes

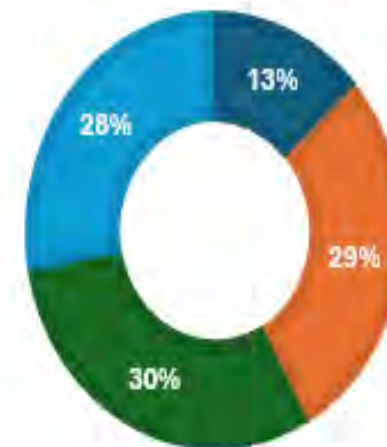
Unlisted Options Exercisable Nil (Performance KPI) , Expiry 30 Jul '26

Currency is AUD

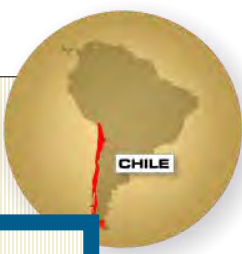
\* Cash at 30 June \$4.6m and net VAT refund net-ref March 24 Quarterly report

## SHAREHOLDER DISTRIBUTION

■ Board & Mgt ■ Institutions ■ Top 20 ■ Retail



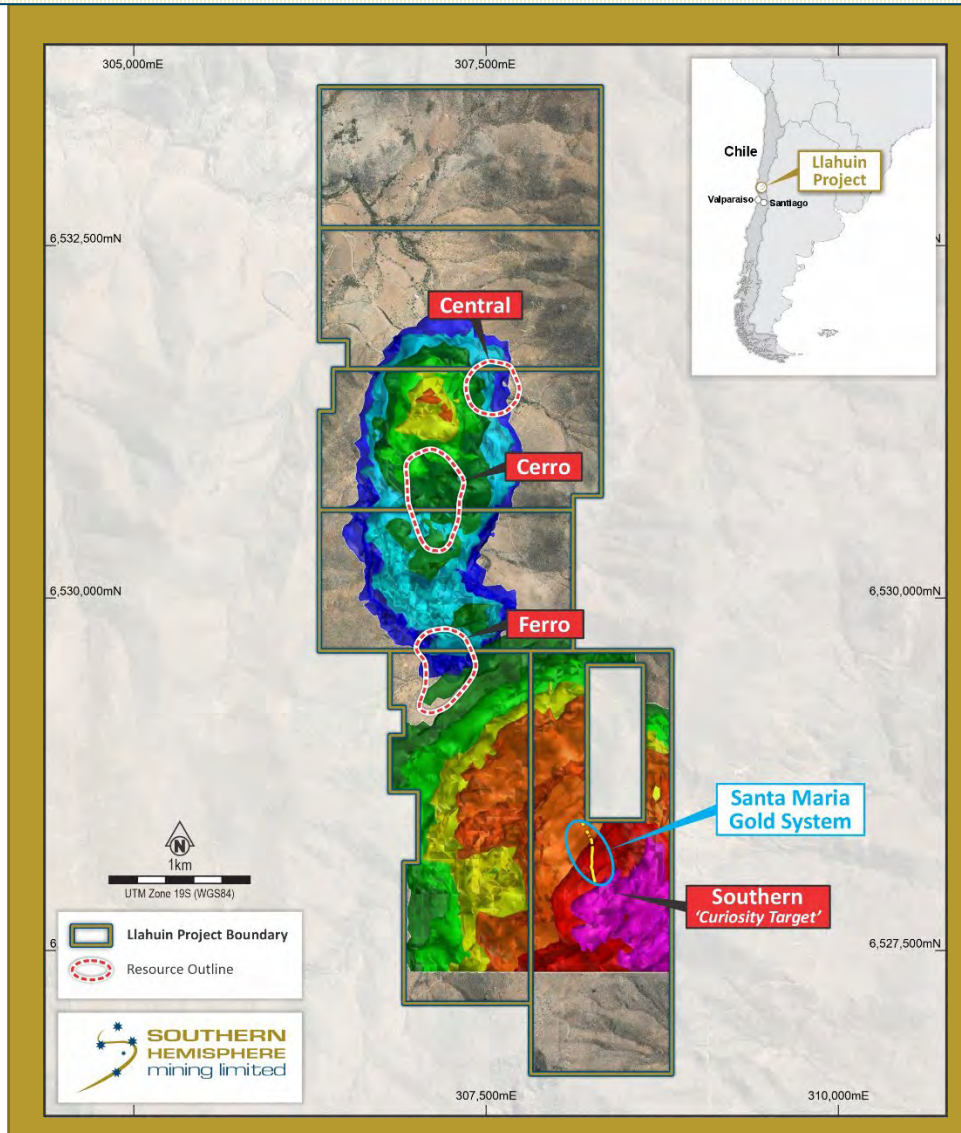
# Llahuin Copper-Gold: Straight Forward Investment Metrics



- ✓ **Chile has an International Credit Rating of A**
- ✓ Geopolitical trends favouring resource investment in Australia and South America
- ✓ **Excellent Location**
  - ❖ Low altitude at 1,300m
  - ❖ ~5km to grid power, 200km to Coquimbo Port
  - ❖ Combarbala town 24km (13,000popn), Santiago 350km
  - ❖ Sealed airstrip 20km
  - ❖ A historical railway traverses the property
  - ❖ Not in a water vulnerable area (minimal ESG impact)
- ✓ **ESG**
  - ❖ Low population area
  - ❖ Long term community agreement in place
  - ❖ Local workforce

*Map Showing Llahuin location in relation to Santiago and Andacollo  
Copper mine (Teck)*

# Llahuin Copper/Gold Project 169Mt @ 0.4% CuEq M+I+I and Growing

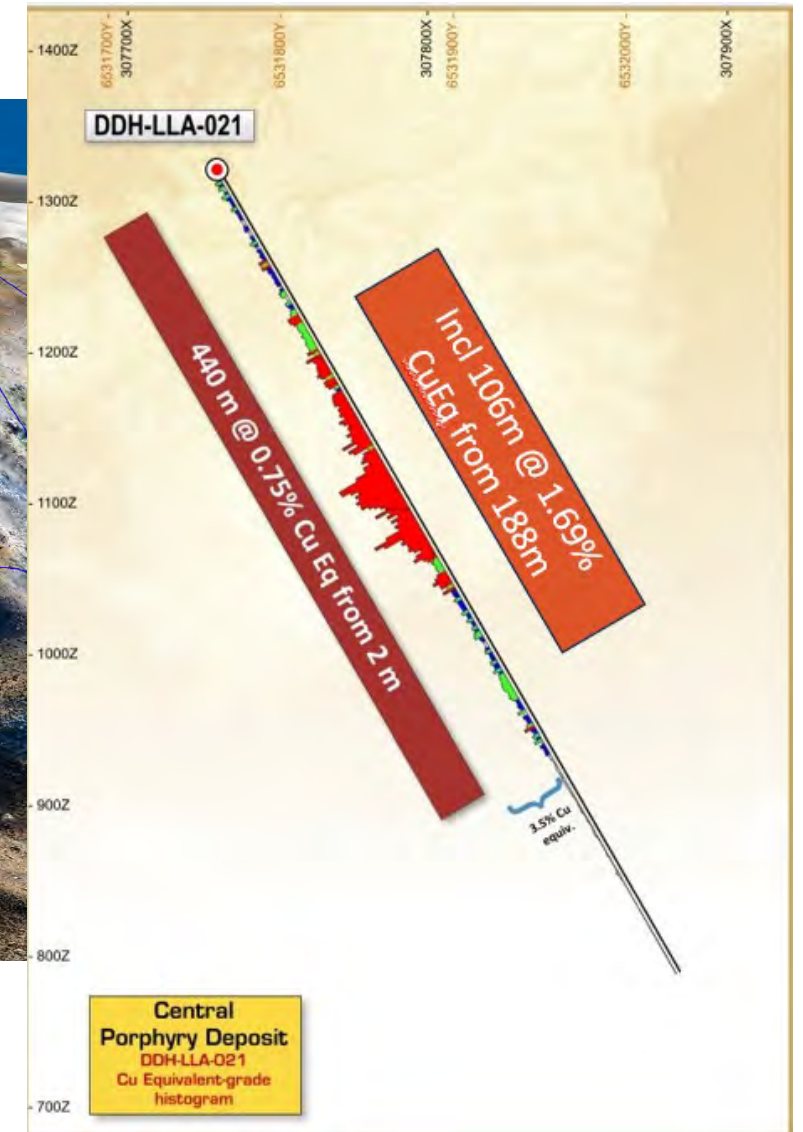
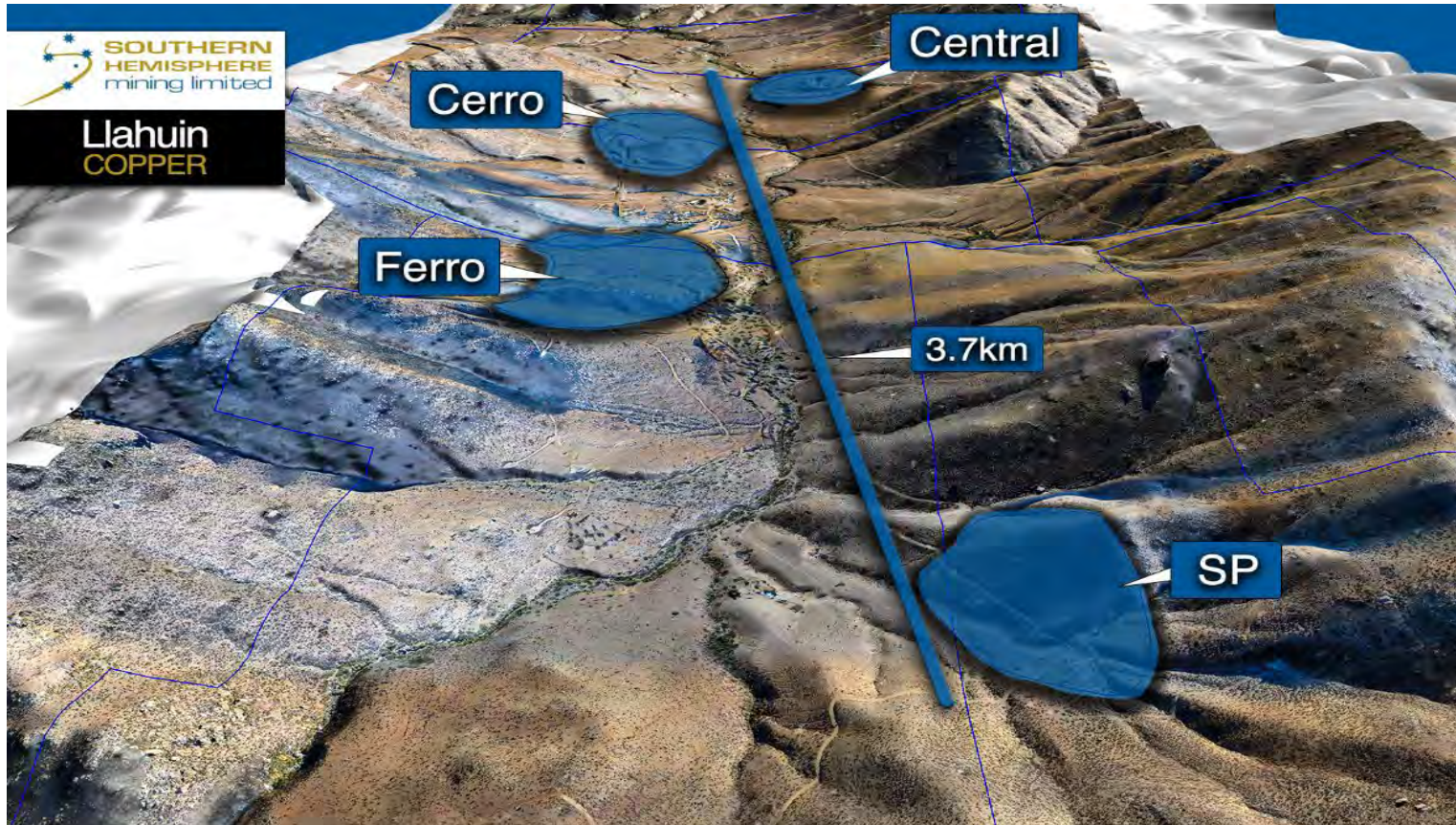


## What's New?

1. Geochemistry works-+2000 samples
2. Full surface mapping and sampling program instigated identifying the vein structures and orientations
3. Relogged +20km of core, vein density, multi-element assay, pulp composites etc
4. Underground adit sampling and surveying
5. New drone mag
6. Re-interpretation of geophysics data
7. Derivation of a new geological model identifying major scope for expansion and higher grades deeper
8. AI and modern tools used to advance location of higher grade mineralised zones

**DRILLING FOR MAJOR RESOURCE GROWTH**  
**2024 -82m @ 0.67%CuEq from 46m:**  
**23LHRD027**

# The Llahuin Valley Hosting a Cluster of Copper/Gold Deposits With More to Discover





# Top Drill Results and Rock Chip Samples



HOLE ID	From	To	Width m	CuEq %	LOC
21LHRC003	0	90	90	0.62%	CENTRAL
21LHRC009	0	69	69	0.47%	CERRO
DDHLLA021	2	440	438	0.75%	CENTRAL
Incl	182	288	106	1.69%	CENTRAL Higher grade at depth
DDHLLA025	102	468	366	0.63%	CENTRAL
DDHLLA026	168	422	254	0.52%	CENTRAL
DDHLLA027	70	396	326	0.56%	CENTRAL
DDHLLA043	416	450	34	1.49%	CENTRAL Higher grade at depth
23LHRC027	0	156	156	0.51%	CERRO
23LHRC028	32	168	136	0.47%	CERRO
23LHRC042	0	48	48	0.45%	FERRO

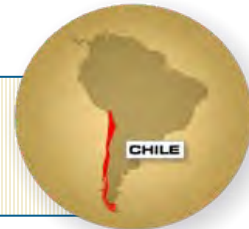
Several veins in areas outside known resources demonstrate very high-grade copper ± gold ± silver veins occur in the project area

Sample ID	WGS Easting	WGS Northing	RL	Cu %	Au_ppm	Ag_ppm
22LHR000092	307803	6531901	1382	17.5	0.23	2
22LHR000105	306685	6530575	1503	16.58	0.94	1
22LHR000106	306686	6530666	1491	16.27	1.13	4
22LHR000087	307826	6532092	1437	11.3	0.84	8
22LHR000088	307898	6532089	1458	6.99	0.46	2
22LHR000090	307837	6532105	1447	4.88	0.53	2
22LHR000184	306542	6531924	1354	4.12	0.36	1495
22LHR000086	307591	6532644	1326	4.12	0.7	238
22LHR000013	307913	6528823	1544	3.15	0.06	22
22LHR000183	306558	6531935	1356	2.74	0.58	1045
22LHR000158	306889	6531811	1336	2.43	4.39	345
22LHR000214	306694	6532311	1287	1.66	4.53	3
22LHR000103	307430	6532136	1318	1.39	6	24



Central Porphyry underground adit samples showing chalcocite and chalcopyrite (within JORC Resource ASX 13 Aug 2013)

# Mineral Resource Estimate Independently Certified 2013, Upgrade in Progress for H1 2025



## Total Measured and Indicated Resources at Llahuin Cu-Au-Mo Project

Cu Equiv % Cutoff	Tonnes Million	Cu %	Au g/t	Mo %	Cu Equiv %
0.26	173	0.28	0.12	0.007	0.39
0.28	149	0.29	0.12	0.008	0.41
0.30	127	0.3	0.13	0.008	0.43

## Total Inferred Resources at Llahuin Cu-Au-Mo Project

Cu Equiv % Cutoff	Tonnes Million	Cu %	Au g/t	Mo %	Cu Equiv %
0.26	26	0.19	0.17	0.005	0.34
0.28	20	0.20	0.19	0.005	0.36
0.30	15	0.21	0.21	0.005	0.38

## Totals Resources per Zone at Llahuin Cu-Au-Mo Project

Zone	Measured (Mt)	Indicated (Mt)	Total Mea + Ind (Mt)	Inferred (Mt)
Central Porphyry	101.2 @ 0.43%	7.3 @ 0.34%	108.5 @ 0.42%	2.8 @ 0.32%
Cerro de Oro	10.8 @ 0.39%	15.2 @ 0.38%	26.0 @ 0.38%	15.6 @ 0.37%
Ferrocarril		14.4 @ 0.37%	14.4 @ 0.37%	1.5 @ 0.34%
<b>Total</b>	<b>112 @ 0.42%</b>	<b>37 @ 0.37%</b>	<b>149 @ 0.41%</b>	<b>20 @ 0.36%</b>

Zone tonnage at 0.28% CuEq Cutoff included in Resource Estimate - Grades are shown in Cu Equiv %

## Contained Metal Summary at Llahuin Cu-Au-Mo Project

Resource Category	Copper (t)	Cu %	Gold oz	Au g/t
Measured	344,000	0.31	433,000	0.12
Indicated	86,000	0.23	165,000	0.14
Inferred	40,000	0.20	119,000	0.19

## Higher Grade Core Resources at Llahuin (Measured + Indicated Cat)

Cu Equiv % Cutoff	Tonnes Million	Cu %	Au g/t	Mo %	Cu Equiv %
0.34	70.6	0.34	0.14	0.008	0.48
0.36	60.3	0.35	0.15	0.008	0.50
0.38	52.0	0.37	0.16	0.008	0.52

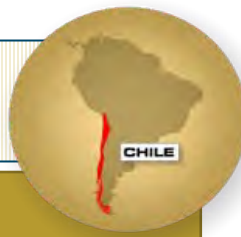


Llahuin  
COPPER

Refer to SUH August 2013 ASX Release

- Total Copper tonnes: 686,000t CuEq
- Measured Indicated and Inferred at 0.28% cut-off\*
- From surface, open pit style mining and growing
- *Resource upgrade in progress, due H1 2025 to include all work and drilling since 2013*

# Llahuin Central Deposit 108mt @ 0.42% CuEq Measured and Indicated



## Resource drilling complete for open pit mining

- ✓ ~1:1 Strip ratio, ore from surface
- ✓ Defined depth of drilling limit (open pit) ~400m vertical

## Highlight Drill Results

\*Note higher grades at depth

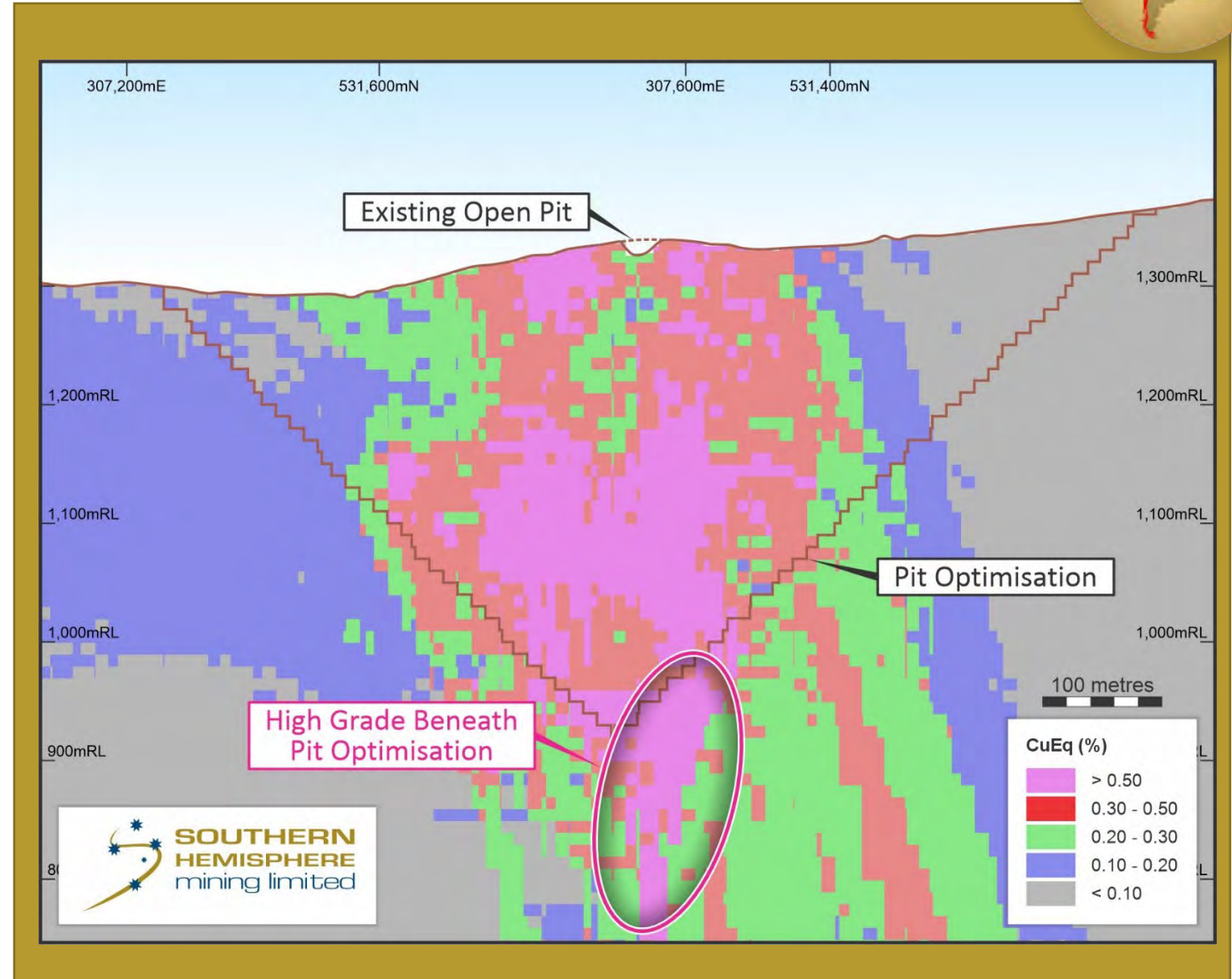
RC-LLA-010: 496m @ 0.45%CuEq from surface, incl 126m @ 0.7% CuEq from 210m

DDH-LLA-021: 440m @ 0.75% CuEq from 2m, incl: 106m @ 1.69% CuEq from 182m

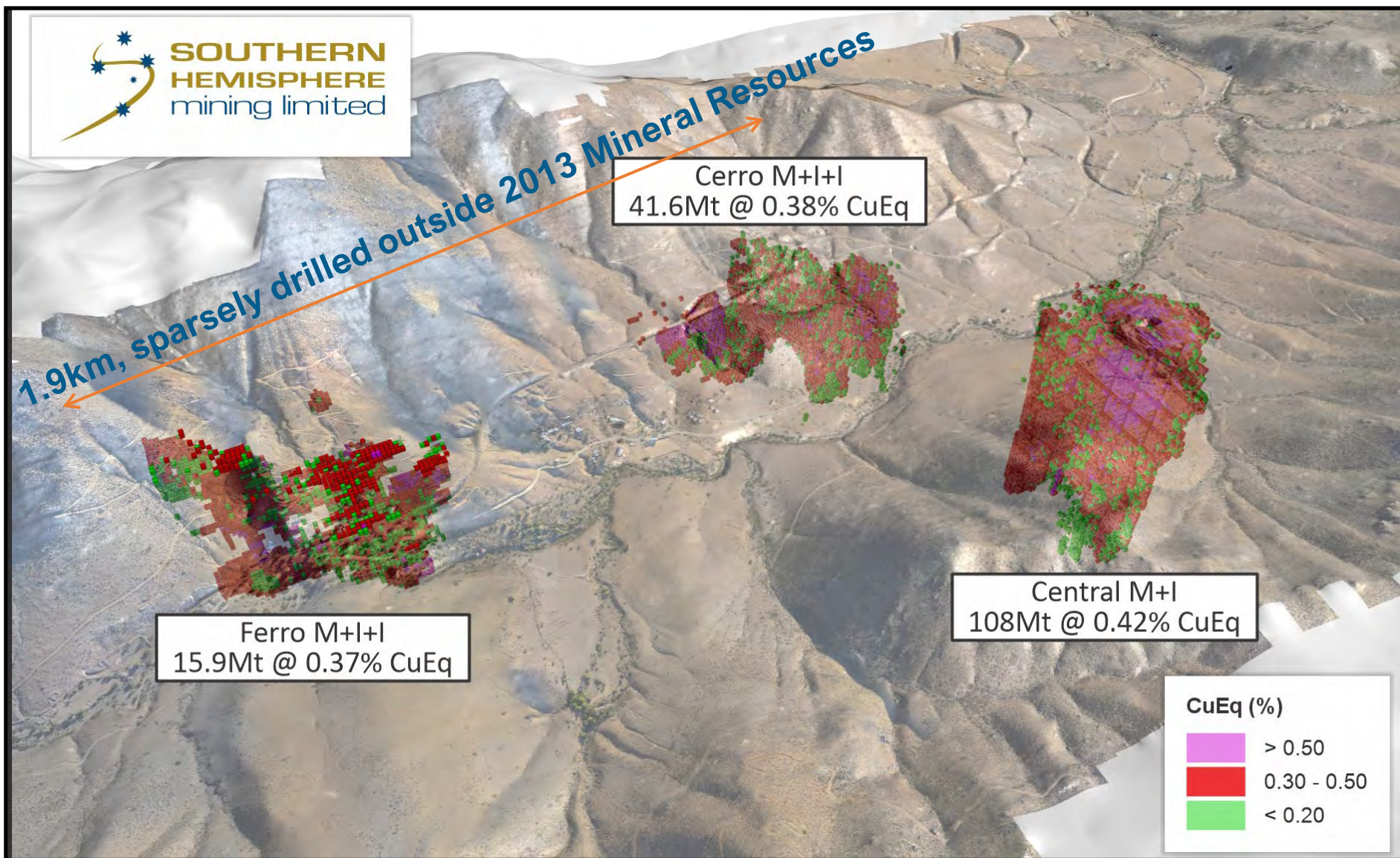
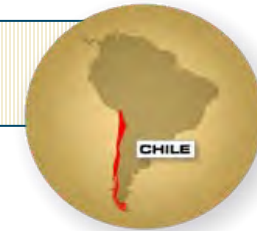
DDH-LLA-025: 366m @ 0.63% CuEq from 102m

DDH-LLA-026: 326m @ 0.56% CuEq from 70m, incl:

126m @ 0.80% CuEq from 200m

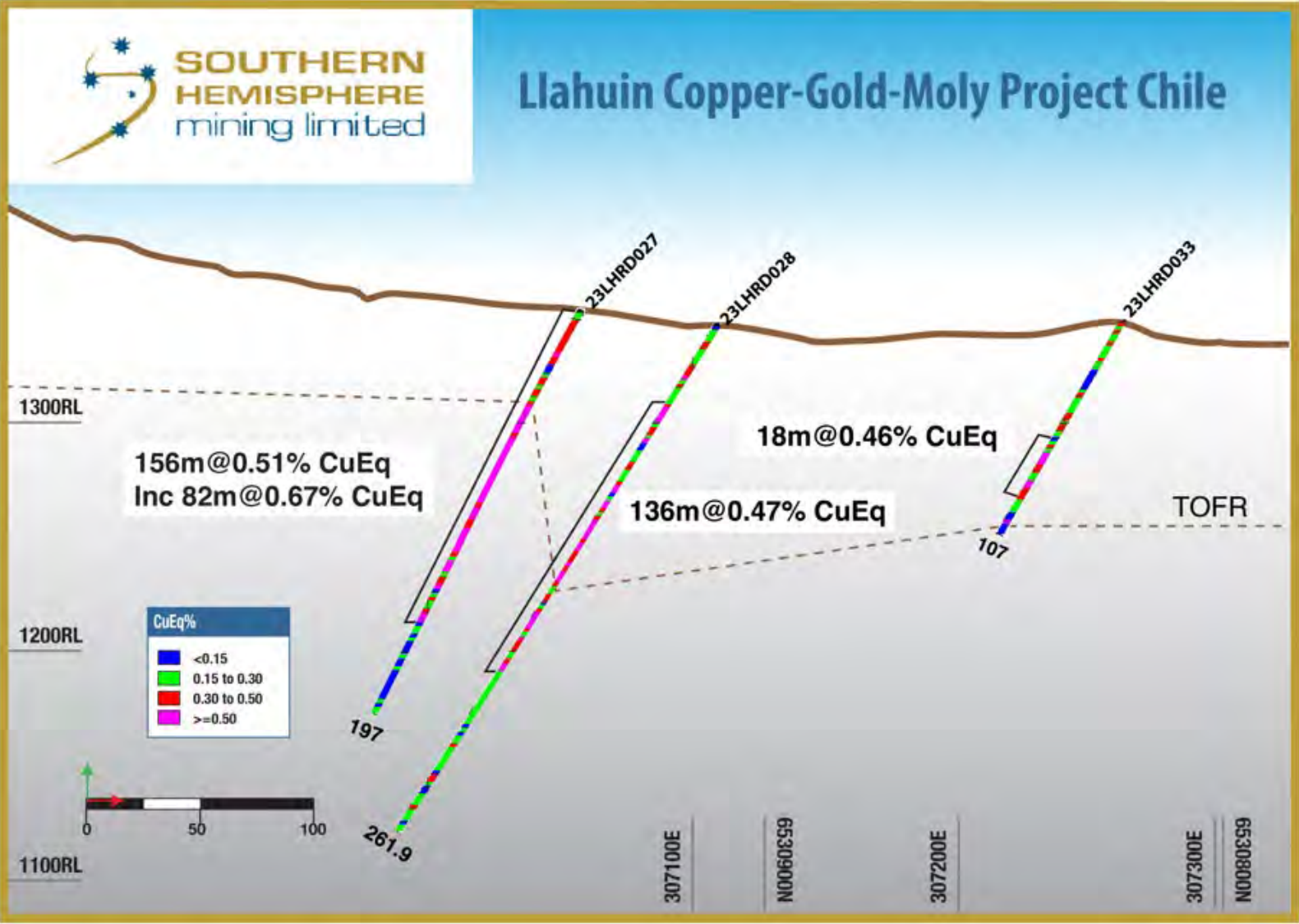


# Llahuin Block Model and Topography-Good Mining Configuration



# Recent Drill Results from Cerro-Ferro

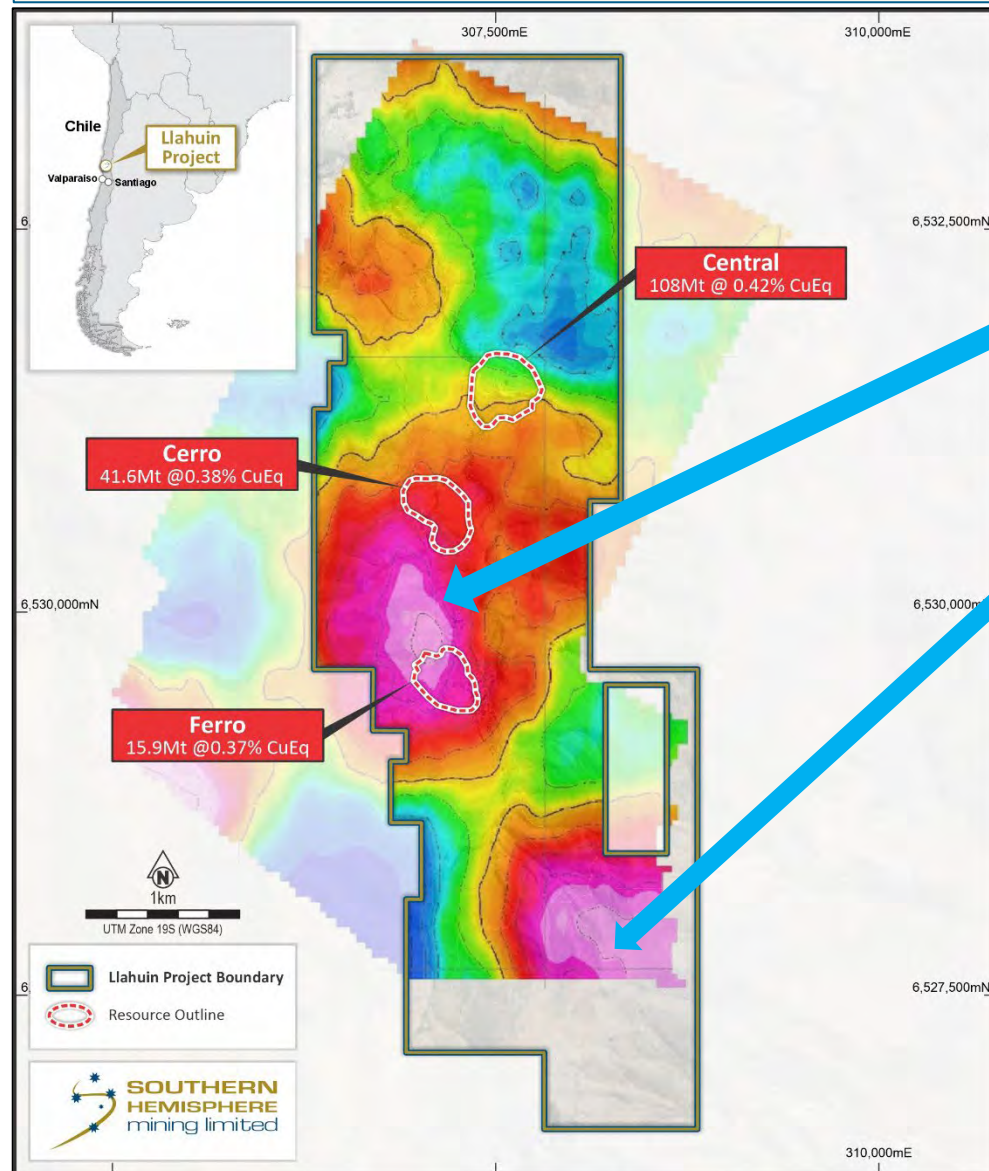
82m@0.67%CuEq from 46m



- 23LHRD0027: 156m @ 0.51% CuEq from surface,
- incl 82m @ 0.67%CuEq from 46m
- 23LHRD0028: 136m @ 0.47%CuEq from 32m

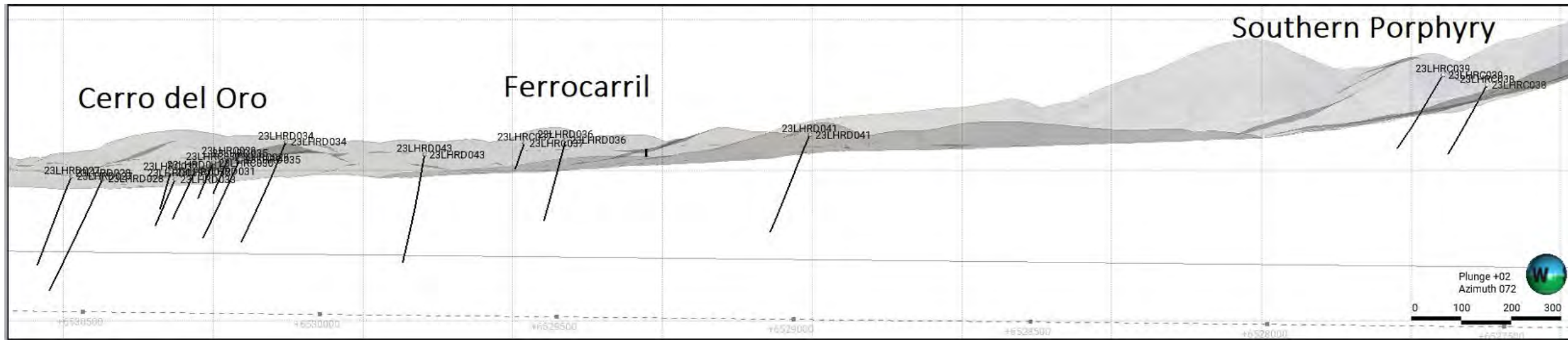
Note that historical holes are omitted from the cross section for the purpose of clarity, as they are oblique to the section, at a sub optimal angle to interpreted mineralisation

# Cerro-Ferro Deep Target at 1,200m



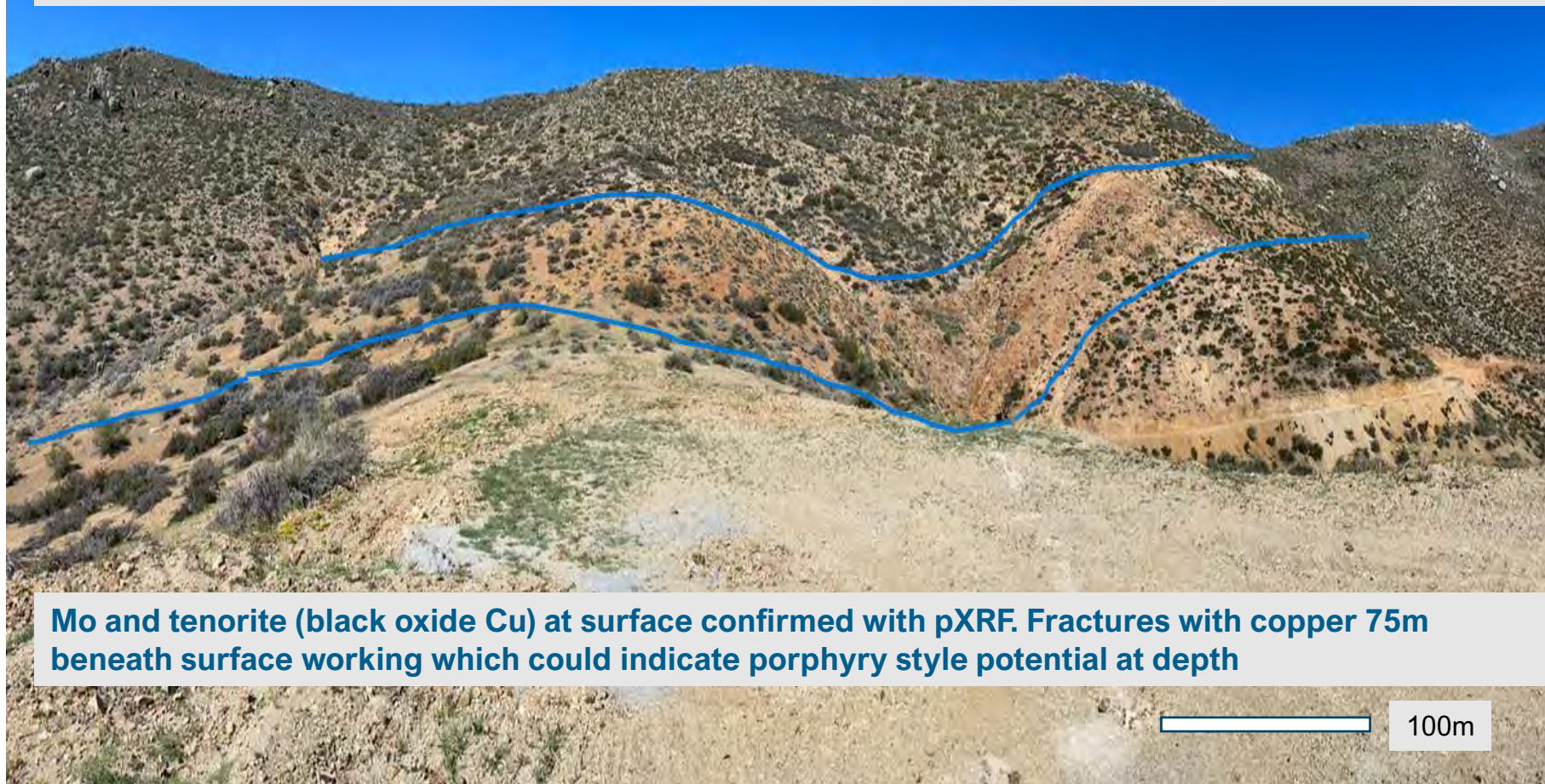
- The 100mRL (1200m deep) 3D Magnetic Inversion Model (MIM) slice shows the three deposits are from the same porphyry rootstock at depth shown in magenta
- The Southern Porphyry (SP) is associated with a different porphyry stock

# Long Section of Cerro-Ferro to SP and 2023 Drill Traces



# Southern Porphyry –Curiosity Large Copper/Gold Target

Subvertical Santa Maria epithermal vein system with no drilling (Looking ESE)  
Outcrops for 500m - 35 to 50m wide with several historical workings which sit directly above the Curiosity Target 3D footprint model –shown on next slide





# Southern Porphyry Curiosity Target- Large 1-2km Wide



- 3D soil geochemical footprint modelling has identified two large drill targets at the Llahuin Copper-Gold porphyry system
- The Curiosity target at Southern Porphyry is located 550m below the Santa Maria epithermal vein system
- Workings and diameter of over 1km expanding to over 2km diameter at depth
- Deep drill testing of the Curiosity target looming
- Two near surface targets at Cerro and Ferro are confirmed by drilling
- Further data acquisition and modelling is in progress
- 3D drone magnetic inversion completed, further supporting the targets (shown in grey)

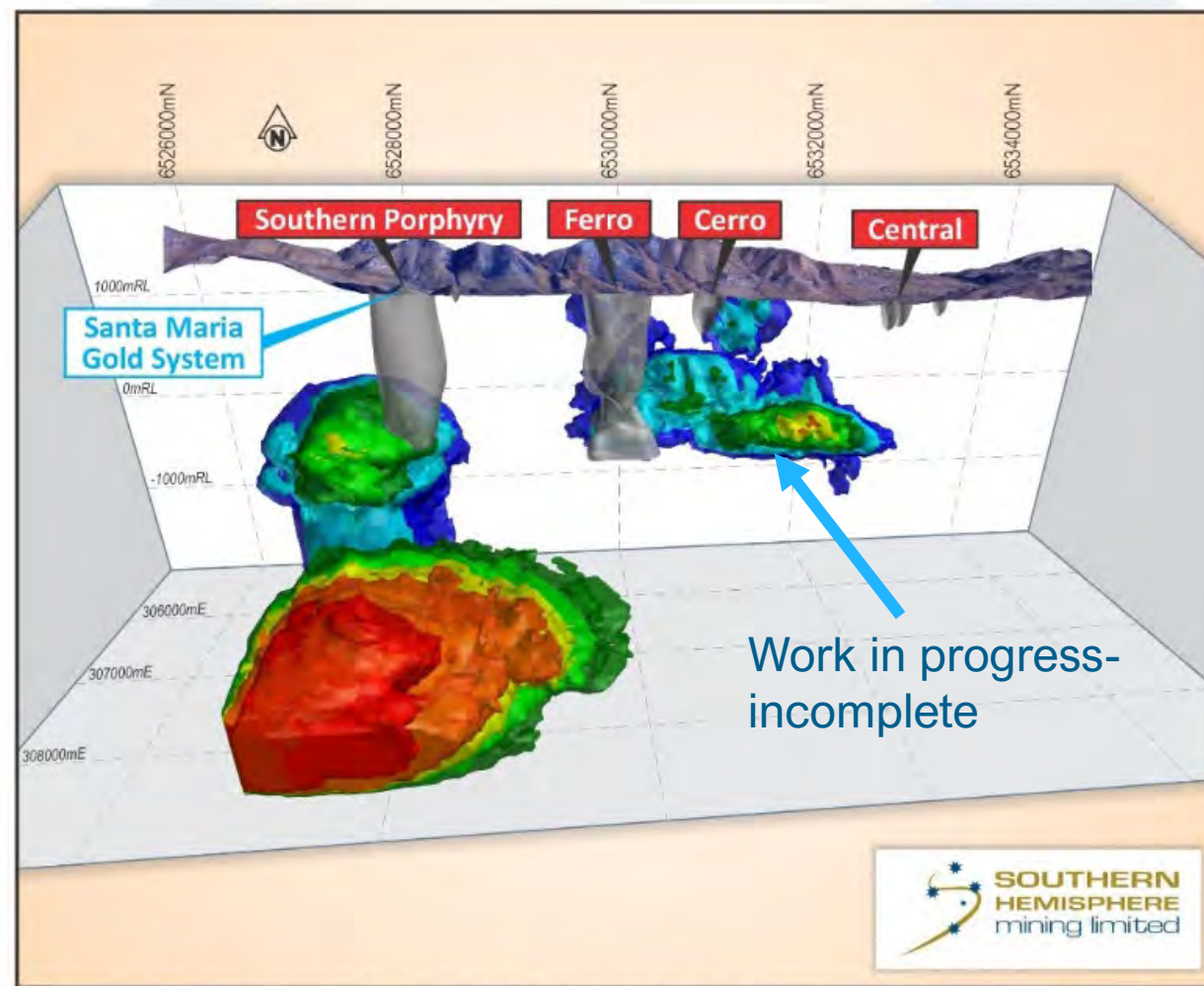


Figure 1. 3D view showing geochemical footprint models thematically colour scaled from blue (moderate probability) through to reds and magentas (high probability). Drone magnetic inversion models are in silvery grey.

# Cerro-Ferro Large Target- 2km length below ore blocks



Cerro-Ferro Modelling is working as it is identifying resources where we have JORC resources. Significant further sampling is in progress to improve the drill targets for open pit and depth

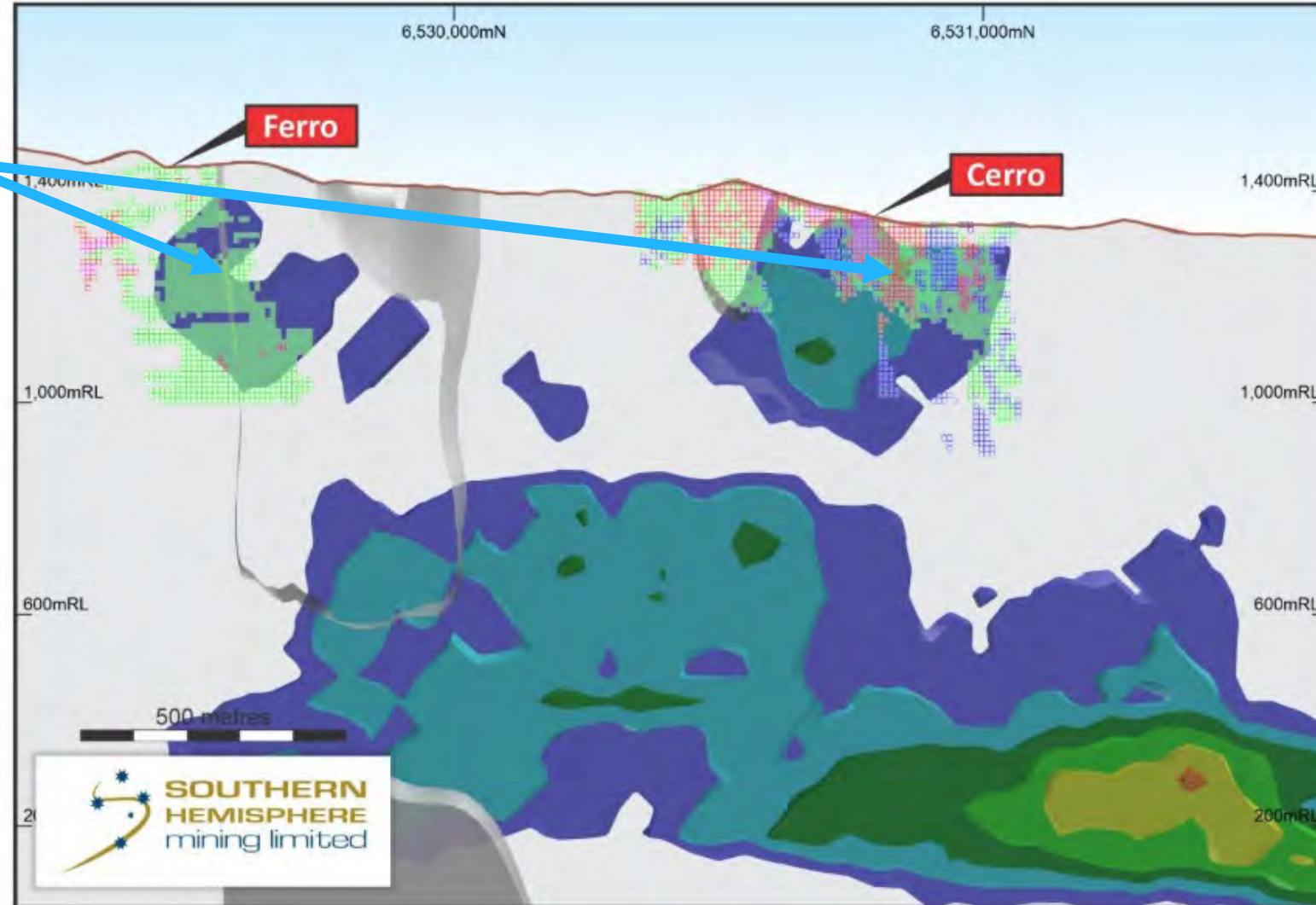


Figure 5. Long section of Ferro and Cerro, showing the thematically coloured footprint models, drone magnetic and current Mineral Resources.

# Upcoming Newsflow



- 1. Assays of more detailed litho-Geochem 3D modelling for drill targets for upcoming drill program and large deep upside targets at Curiosity and Cerro-Ferro**
- 2. Assays of new zones of elevated Molybdenum not assayed in prior historical resource calculation**
- 3. Metallurgical testwork in progress**
- 4. Drilling contracts and drilling commencing ~September 2024**
- 5. Upgrade JORC Resource towards mining studies (last JORC in 2013 so lots of drilling, relogging and modelling completed since then) ~H1 2025**
- 6. Deep target drill testing (Curiosity and/or Cerro-Ferro)**
- 7. Ongoing project marketing**

# Clear Direction Forward

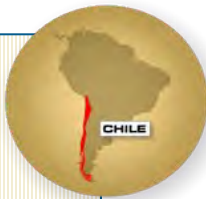


## Open Pit Resources Expansion

- Drilling a major expansion of the Llahuin resource towards a ~20+ year open pit style mine. +12 years already in M+I+I resources
- Studies in progress to refine modelling of current mineralised zones for potential increase in grade and fewer tonnes

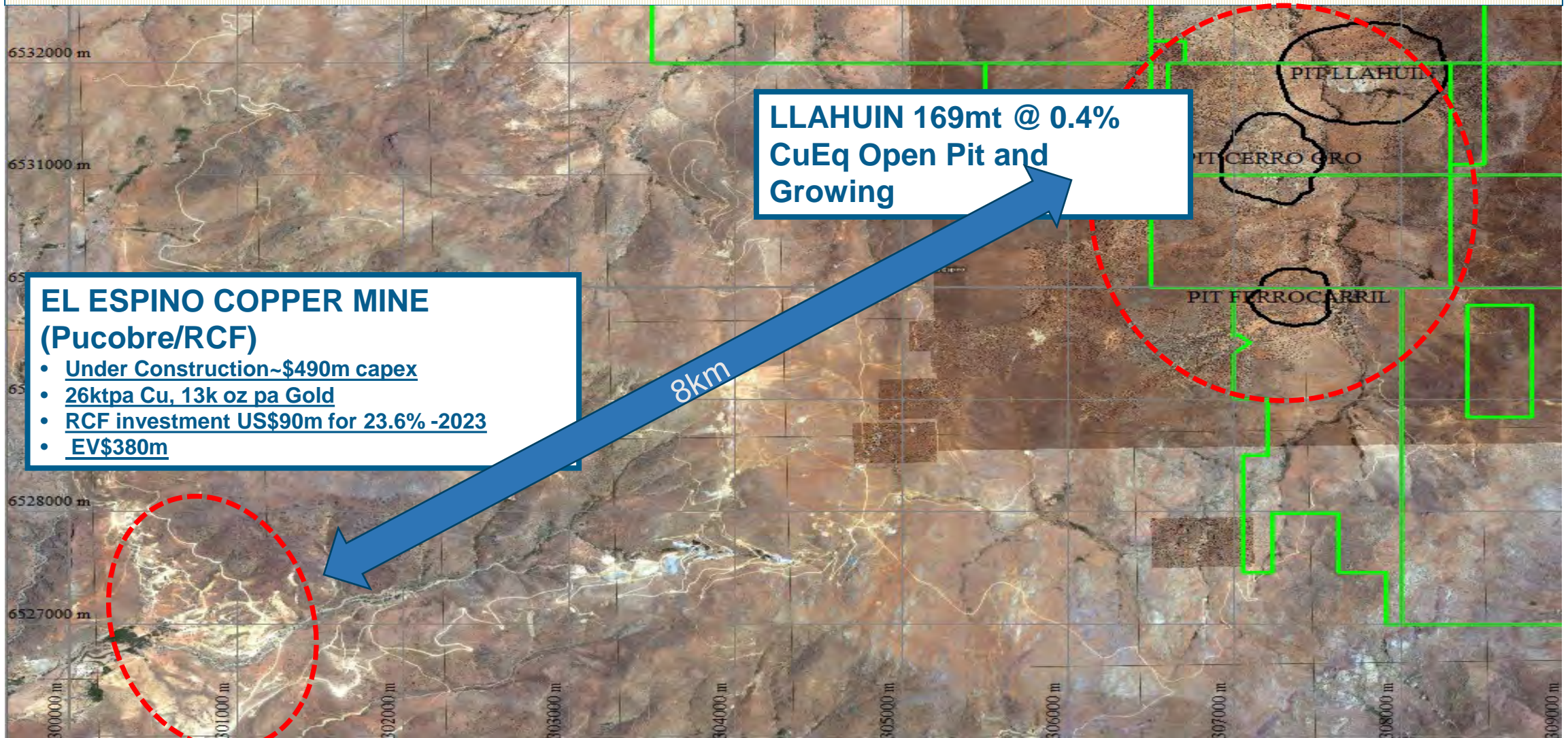
## High Grade Copper Feeder Zones

- Underground style high grade copper/gold target is significant: ~6km copper corridor
- AI, Geophysics, and Geochem in progress to refine targets and define new targets
- Diamond holes to intersect potential high grade feeder zones with chalcocite/chalcopyrite
  - Below current Cerro-Ferro deposits ~800m depth, and
  - Large Southern Porphyry Curiosity copper gold target ~550m depth



# Coquimbo Region Emerging

## New El Espino Copper Mine in Construction 8km West of Llahuin



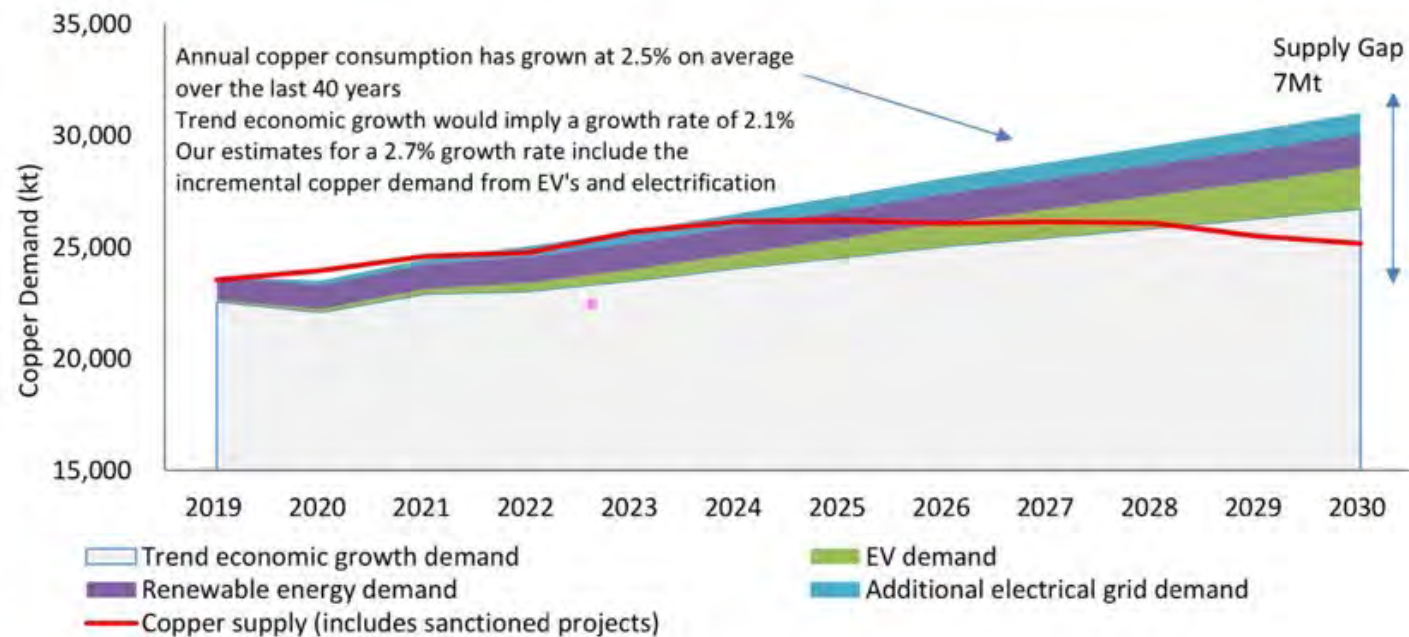
# Copper Market Showing a Major Deficit Ahead

## Electrification adds a new layer of demand

We assume an average of 2.7% demand growth from 2022-2030 which is slightly ahead of the annual average for the past 40 years of 2.5%. This factors in slowing demand growth in China as the economy transitions towards services and away from large infrastructure builds but is more than offset by growth in other Asian countries and from electrification.

The chart shows the potential impact on demand from EV penetration and other green electrification initiatives.

Significant new copper supply likely required over and above our base case (which includes already sanctioned projects)

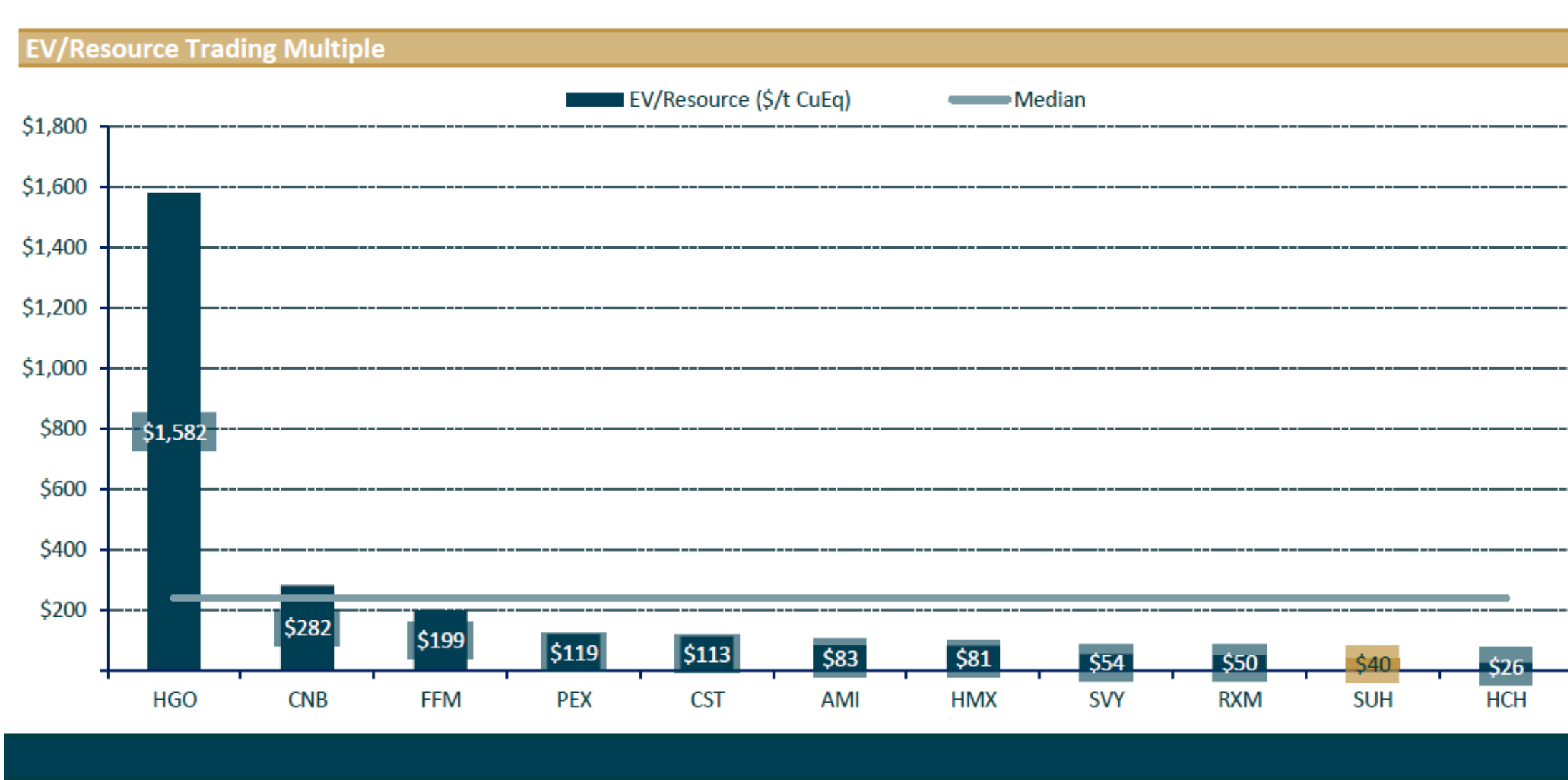


Source: Bloomberg, Wood Mackenzie, RBC Capital Markets estimates



# ASX Copper Explorers EV/Resource Trading Multiple

Source: Eurozhartleys



# Lago Lithium Brine Project -Lithium Triangle -Atacama Region Chile



- Acquired 2023
- Salar feeding into the World Class Atacama lithium Brines operations
- Unexplored
- Excellent access
- Large land position (all surrounding tenure now held by Li operators)





# Los Pumas HPMSM Battery Manganese Project- Chile



- 100% owned- located Northern Chile
- Advancing discussions with potential development/offtake partners for Project Equity Funding to DFS
- Indicated and inferred resource 30.3Mt @ 6.24% Mn (2.5% Mn COG)
- Large low grade inferred 264mt @ 2.4% Mn
- Opportunity for high grade feeder zone grade increase
- Low iron and phosphorous, high silica (beneficial)
- Outcropping at Surface
- Simple Mining ~ 2.5mtpa plant
- Strip ratio circa 1:1
- Excellent logistics and near mine infrastructure- incl recent refurbishment of Arica Railway
- Plan: Production of Manganese and Battery Grade HPMSM, at site, utilise hydro and solar power and minimise carbon footprint
- Chile Free Trade Agreement with USA, potential USA Inflation Reduction Act benefits





# Appendix 1: Chile and Comparative Country Credit Ratings

## Fitch's Country Credit Rating

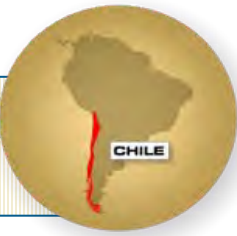
<b>Chile</b>	<b>A- (Dec 23)</b>
• <b>Australia</b>	<b>AAA (May 23)</b>
• <b>Argentina</b>	<b>CC (May 23)</b>
• <b>Columbia</b>	<b>BB+ (Dec 23)</b>
• <b>Brazil</b>	<b>BB (Nov 23)</b>
• <b>Ecuador</b>	<b>CCC+ (Dec 23)</b>
• <b>Mexico</b>	<b>BBB- (Dec 23)</b>
• <b>Peru</b>	<b>BBB- (Oct 23)</b>

Large copper mines require long term investments (20 year + mine life target)

Country risk for major companies and financiers is paramount

Most global copper miners operate in Chile- A Credit rating!

# Thankyou



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