

# SILVER CITY MINERALS LIMITED

## Quarterly Report

## September 2018

### ASX Code: SCI

Issued Shares: 246.2M  
Unlisted Options: 28.0M  
Cash Balance: \$0.7M  
ABN: 68 130 933 309

### DIRECTORS

Bob Besley  
Chris Torrey  
Greg Jones  
Josh Puckridge

### TOP SHAREHOLDERS

(At 8 October 2018)

L&M Group Limited	5.4%
Inkex Super Fund	3.7%
Upsky Equity Pty Ltd	3.4%
Calm Holdings Pty Ltd	2.5%
HSBC Custody Nominees:	2.3%
L Kalazich	2.2%
<b>Top 20:</b>	<b>38.9%</b>

### Head Office

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### HIGHLIGHTS

Drilling at Copper Blow near Broken Hill continued with two diamond holes completed. Assay results for both are pending.

- Hole 18CB071 tested the Copper Blow shear zone at depth
  - Magnetite-quartz-sulphide rock was intersected over 70 metres downhole
  - Structure persistent to 400 metres below surface
- Hole 18CB072 tested the Southern IP anomaly 800 metres to SE of Copper Blow
  - Intersected 230 metres of disseminated and veinlet sulphide in two broad zones
  - Hosts copper, iron and molybdenum sulphides
- Reconnaissance IP surveys indicate extensive sub-surface sulphides over 2-3 square kilometres
- Large intrusion-related iron oxide copper-gold IOCG mineral system identified

### OUTLOOK

#### *Copper Blow*

- Drill results from Holes 18CB071 and 72
- Drilling at Copper Blow and Northern Targets
- Extensive soil and/or RAB geochemical surveys over IP anomalies

#### *Razorback West*

- Follow-up of new western targets

#### *Regional Copper-Gold-Cobalt Sampling*

- Prospect ranking and more detailed geochemical assessment

#### *Yalcowinna Creek*

- IP program over gossans and copper anomalies at Yalcowinna Creek

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## OVERVIEW

During the quarter the Company continued to assess the Copper Blow project south of Broken Hill (Figure 1). Copper-gold mineralisation is intimately associated with magnetite (ironstone) which can be easily detected under cover using an existing aeromagnetic survey. A magnetically anomalous zone extends over 4.5 kilometres. Copper-gold mineralisation has only been systematically tested over a strike length of 1 kilometre in the southwestern part of the anomaly (Figure 2).

The Company has completed a fourth round of drilling to test the depth extent of copper-gold mineralisation outlined in the North Zone as well as a new induced polarisation (IP) geophysical target to the southeast of Copper Blow.

Regional geophysical and geochemical surveys indicate the magnetic ironstone is only part of a much larger sulphide-mineralised complex. While strong anomalies occur in association with ironstones, other anomalies to the northeast and southeast of Copper Blow suggest widespread sulphide mineralisation at depth. This has been confirmed by an initial test of the southeast IP target by hole 18CB072.

The current geological thinking is that copper-gold and cobalt mineralisation is related to magmatic fluids derived from large iron-magnesium igneous intrusions at depth.

## OPERATIONS

***Copper Blow (EL 8255, EL 8629, EL 8076; Joint venture with SCI 75%, CBH 25%)***

### ***Drilling***

In the September quarter the Company drilled 879.7 metres in two diamond holes bringing the total for the project drilled by SCI to approximately 8500 metres (ASX Release 4 October 2018). Results for both holes are pending.

The first hole, 18CB071 was designed to test the depth extensions to the Copper Blow North Zone hosted in magnetic ironstone (Figures 3 to 5). It was drilled to a depth of 502.1 metres and encountered the target between 367 and 439 metres.

The zone consists of a high strain shear with abundant fine magnetite, quartz and biotite. Fine sulphides comprising 1% of the rock include pyrite, pyrrhotite and chalcopyrite. The shear zone is cut by a series of late quartz veins with localised coarse sulphides similarly including pyrite, pyrrhotite and chalcopyrite. The largest vein extends down hole from 400.1 metres to 410.9 metres.

The second hole (18CB072) was designed to test an IP chargeability anomaly coincident with anomalous soil geochemistry located approximately 800 metres to the southeast of Copper Blow. There had been no previous exploration drilling in this area.

The hole drilled to 377.6 metres and intersected a sequence of biotite and chlorite altered, garnet-rich, highly metamorphosed sedimentary and volcanic rock. From the top of the hole to 308 metres it contains a mixture of siltstones and sandstones with minor volcanic layers. From 308 to the end of the hole at 377.6 metres the rock comprises a mixture of siltstone and sandstone with abundant volcanic rock (Figure 6). The metamorphosed volcanic rock referred to as amphibolite was probably originally a basalt.



Sulphide mineralisation is widespread and occurs in two main zones for a cumulative total of 230 metres. The first extends from 40 to 200 metres (a total of 160 metres downhole). Sulphides in this intersection include chalcopyrite, pyrite and pyrrhotite. The sulphides occur as very fine grained disseminations and veinlets and are associated with strong biotite (potassium and iron mica) alteration.

An estimate of total sulphide content ranges from 0.5 to 1%. Localised late calcite-sulphide and chlorite-sulphide veins also occur.

A second zone extends from 308 metres to the end of the hole at 377.6 metres (69.6 metres downhole) and coincides with the rocks which host abundant volcanic layers. Disseminated sulphides including chalcopyrite, pyrite and pyrrhotite occur preferentially in fine volcanic layers (amphibolite).

This deeper zone also hosts narrow veins of coarsely crystalline quartz-chlorite-calcite which contain the above sulphides and locally sphalerite. This intersection is similarly enriched in biotite and chlorite. An estimate of total sulphide content for this zone is 0.5 to 2%.

A high strain shear zone occurs between 239 and 252 metres and hosts a quartz-pyrite-molybdenite vein (Figure 6).

This hole contains a remarkable amount of very fine grained, disseminated and stringer sulphide which accounts for the IP anomaly. IP responds particularly well to this style of mineralisation. The volcanic-rich sequence in the lower part of the hole may explain the gravity anomaly in this zone because these rocks have a higher specific gravity than the enclosing sediments (they are comparatively dense).

## ***Geophysics***

The Company has released several announcements with respect to the use of the induced polarisation geophysical technique as a guide to copper sulphide mineralisation at Copper Blow (ASX Releases 2 May 2018, 12 June 2018 and 23 July 2018).

Surveys at Copper Blow show the gradient array IP configuration to be an excellent screening tool and the follow-up dipole-dipole configuration enhances and defines targets for drilling. Surveys completed by the Company suggests that sulphide mineralisation occurs in both magnetic ironstone and non-magnetic metasediments. This has been recently confirmed by drilling in hole 18CB072.

The initial gradient array survey highlighted areas of known mineralisation (in ironstone) and new targets to the southeast of Copper Blow. This was followed up by a high-resolution dipole-dipole survey which further detailed these targets for follow-up drilling (Southern Targets; Figure 2).

Based on initial positive results, the Company decided to extend the gradient array survey to the northeast of Copper Blow to fully cover the 4.5-kilometre-long prospective magnetic horizon.

During the quarter the Company outlined an elongate chargeability anomaly at least 4 kilometres long. The northern and southern parts of the anomaly encompass both magnetic ironstone and adjacent non-magnetic rocks (ASX Release 3 September 2018). Collectively the area of IP anomalism and interpreted subsurface sulphide is approximately 2 to 3 square kilometres in extent and is largely untested by drilling.

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## *Synopsis*

At Copper Blow the Company has discovered a large mineral system which has the geological characteristics of an iron oxide copper gold deposit (IOCG). Two styles of mineralisation related to this system have been identified.

One is a magnetic ironstone-hosted copper-gold style located in a major crustal structure; the Copper Blow shear zone. The other is a broad, disseminated and stringer zone of copper and iron sulphides hosted in rocks apparently unrelated to a major shear zone (hole 18CB072; southern IP anomaly) but partly related to the presence of iron-rich volcanic rocks.

It is the view of Company geologists that major crustal structures such as the Copper Blow shear zone, have a higher propensity to host significant copper-gold mineralisation compared to those zones which are devoid of structural breaks.

Geophysical surveys suggest sulphides are widespread and that they are not solely encountered in magnetic ironstones. Geophysical anomalies close to, or within the shear structure remain untested.

The Company will continue to focus work close to the main structure and to that end will test geophysical and geochemical anomalies in the Northern Target zone (Figure 2) as soon as possible.

## ***Razorback West (EL 8077 100% SCI)***

During the quarter new gravity data was acquired and evaluated with respect to all historic geochemistry and drilling. The Company has identified several new targets based on coincident lead geochemistry, IP chargeability and gravity. These targets coincide with a prospective part of the rock sequence interpreted to be the Hores Gneiss. At Broken Hill, located 15 kilometres to the south, this rock hosts, or occurs close to Broken Hill ore zones.

All drilling in the area to date has focussed on zinc anomalies with no drilling in lead zones (Figure 7).

More detailed investigation of the western lead anomaly is planned.

## ***Copper-Gold-Cobalt Exploration***

Copper and cobalt-bearing mineralisation occurs throughout the Broken Hill district. Except for the Thackaringa Cobalt-Pyrite deposit ([www.cobaltblueholdings.com](http://www.cobaltblueholdings.com)) and Copper Blow, very little systematic exploration for these metals has been undertaken. Most exploration activity in the district has focussed on the discovery of lead-zinc-silver deposits like the famous Broken Hill Deposit.

In the last two years there has been a significant upsurge in exploration by explorers for these elements, especially cobalt, with respect to demand for energy storage and electric vehicles.

Silver City has shown that copper, gold and cobalt occur at the Copper Blow project located to the south of Broken Hill. Early rock chip sampling by SCI and historic trench data record high grade copper at surface (**up to 6.9% copper and 1.85 g/t gold in rock samples and up to 3 metres of 8.9% copper and 0.13 g/t gold in trenches**; ASX Releases 19 June 2107 and 27 September 2017).

While drilling has predominantly intersected copper-gold mineralisation (for example **41.2 metres at 1.3% copper and 0.4 g/t gold**; ASX Release 22 February 2018), there have also been several significant cobalt-rich intersections associated with pyrite mineralisation.

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- **5.2 metres at 0.14% cobalt in hole 17CB042 from 400 metres**
- **2 metres at 0.08% cobalt in hole 17CB049 from 48 metres**
- **0.75 metres at 0.29% cobalt in hole 17CB043 from 333.6 metres**
- **10.78 metres at 0.09% cobalt and 0.3% copper in hole 17CB046 from 288.36**

(ASX Releases 26 October 2017 and 27 February 2018)

The Company has also presented a review of historic surface rock chip data for its Yalcowinna exploration licence to the northeast of Broken Hill. It shows that both copper and cobalt occur throughout. Prospects with significant copper and cobalt occur in several belts within the licence and one belt is over 25 kilometres long. Significant results from prospects are shown in Figure 8 (ASX Release 17 October 2017).

## ***Recent Geochemical Sampling by Silver City***

The Company is conducting a rock chip geochemical survey within its tenements throughout the Broken Hill district. Work has concentrated on sampling iron oxide-rich rocks. Many of the samples are gossan and others are magnetite-bearing shear zones and sediments.

During the quarter two hundred and fifty-seven (257) samples were collected as part of an ongoing geochemical prospecting survey.

The analytical technique used in the current survey was chosen for its broad range of trace elements at low detection limits. These samples augment others previously collected by SCI on several prospects.

Results indicate widespread copper and cobalt across SCI tenements. The samples highlight several prospects with potential for copper and cobalt mineralisation (ASX Release 17 September 2018; Figure 9).

- Mt Brown and Mt Brown Creek returned copper values to **10.4% and 4.2%** respectively in zones peripheral to Broken Hill type lead-zinc-silver mineralisation. Copper zones have not been drilled.
- Yalcowinna Creek returned **2.9% copper and 0.15% cobalt (historic samples returned 11.9% and 0.17% respectively)**. The copper-rich zone extends for 1.2 kilometres in historic rock chip and RAB data. Historic drilling indicates a moderately, east-dipping structure hosts copper mineralisation. The structure has had limited drilling to date.
- Parnalleroo is a quartz-rich hematite rock hosting anomalous cobalt samples **to 0.21%**. The zone is 1 to 5 metres wide and extends for 150 metres along strike.
- Smiths Well is a quartz-rich hematite rock interpreted over 1 kilometre in strike. Samples contain **0.57% copper and 0.12% cobalt**. Historic RAB data indicates copper and cobalt anomalism over 1 kilometre in strike in a zone 20 metres wide.
- Manola is a zone of quartz-rich hematite rock and quartz veins which extends over 1 kilometre in strike with thicknesses locally to 8 metres. Limited sampling of gossans has returned **0.2% copper and 0.13% cobalt**.

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- The northeastern extensions to Copper Blow are poorly exposed but magnetic ironstone in old workings has returned **0.15% cobalt and 0.39 g/t gold**. This sample is located within an IP anomaly referred to as the Northern Targets (ASX Release 3 September 2018).

## ***Further Work***

The Company anticipates a more detailed program of evaluation of each of the prospects identified. This will include a re-assessment of previous work (if any), more detailed rock and soil sampling, geological mapping and ground geophysics. At Yalcowinna Creek the Company has initiated a trial induced polarisation survey to map copper sulphide mineralisation.

## ***Cobar Tenements (ELs 8579, 8494 and 8136)***

The Company controls 100% of two exploration licences (ELs 8579, Tindery and 8494 White Tank) and is earning an interest in a third licence EL 8136 (Wilga Tank). These are part of the Cobar mineral province and are prospective for base metals and gold (Figure 9).

The licences host several geophysical anomalies and SCI has conducted geophysical surveys and drilling at Wilga Tank in the past (Annual Report 2017). Follow-up drilling is planned at Wilga Tank to test a series of magnetic anomalies which may host copper-gold mineralisation.

During the quarter preliminary assessments were made of several airborne electromagnetic (EM) anomalies within the Tindery licence. Reconnaissance geological mapping and rock chip sampling were undertaken. Outcrop in the EL is poor and anomalies will require further geochemical assessment by RAB drilling.

## **BUSINESS DEVELOPMENT**

The Broken Hill district remains of significant focus for the Company. The Company has discovered a copper-gold project at Copper Blow near Broken Hill that has the characteristics of large scale copper-gold systems. It has identified numerous copper-cobalt prospects within the Yalcowinna tenement. It intends to pursue these with targeted exploration in the coming months.

## **CORPORATE**

Net operating expenditure for the Quarter was \$468k. This included \$417k expenditure on projects held by the Company, \$170k on administration, offset by \$4k received in interest income, \$112k received from JV income and \$3k received from consulting and rental income. Cash on hand at the end of the Quarter was approximately \$0.7 million.



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## Annexure 1 Figures

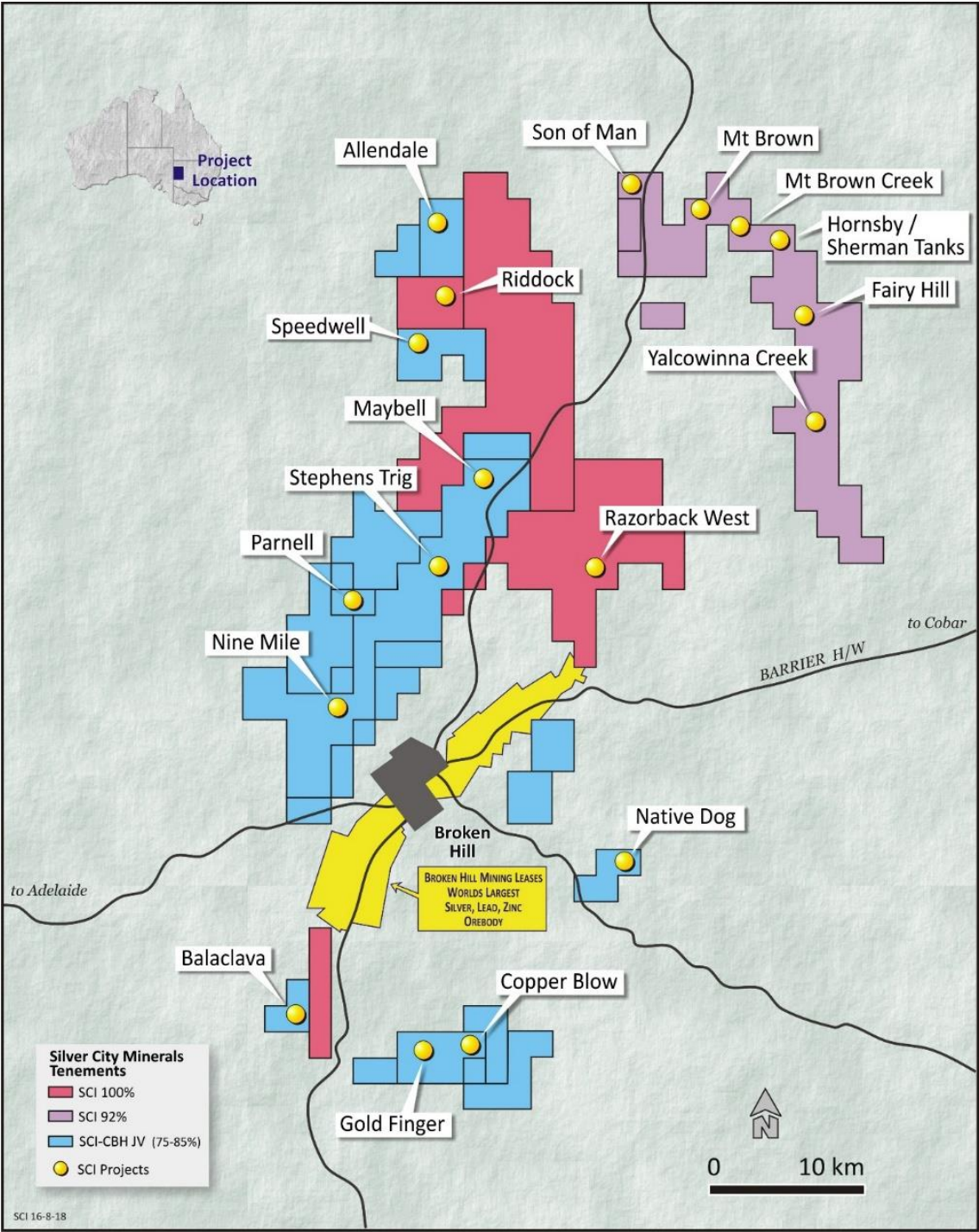


Figure 1. Silver City tenements at Broken Hill



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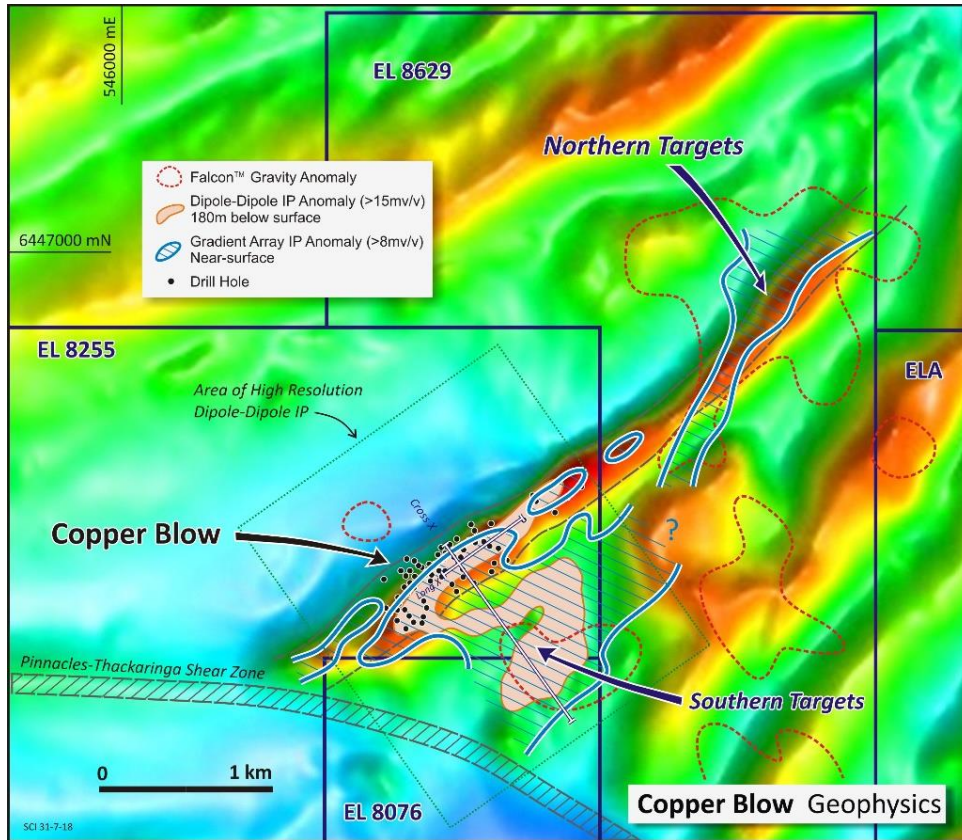


Figure 2. Simplified geophysical map showing background image of reduced-to-pole magnetics, gradient array contour at 8mv/v, the extent of the dipole-dipole IP survey, a horizontal slice of the IP model at 180 metres below surface (15mv/v contour) and Falcon TM gravity anomalies. Diagram shows that the location of interpreted sulphide-bearing rock defined by the 8mv/v contour is significantly larger than the linear magnetic anomaly which host known copper-gold mineralisation at Copper Blow. The Southern target has been tested by hole 18CB072 and results are pending. No significant work has been undertaken at the Northern Target zone.

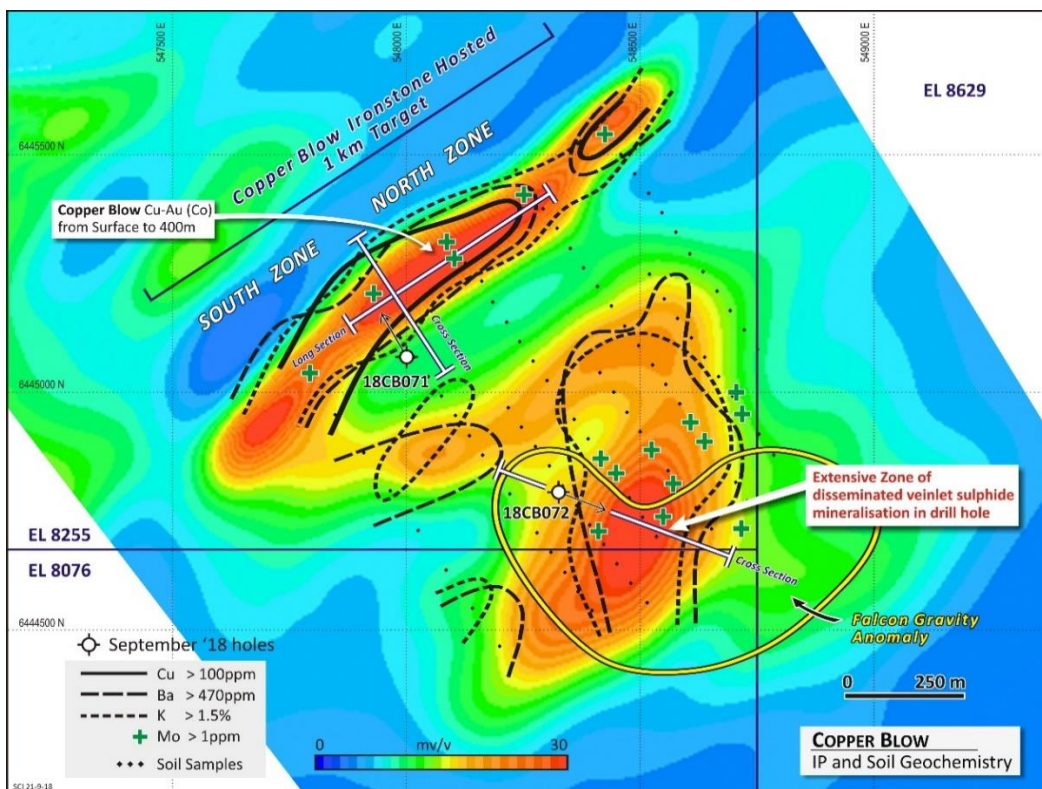


Figure 3. Plan view of the dipole-dipole model depicting a horizontal slice of IP chargeability at 180 metres below surface. The Copper Blow magnetic ironstone shows elevated chargeabilities as does the new anomaly to the southeast. Both display anomalous geochemistry in soils. Recent holes 18CB071 and 72 are shown.



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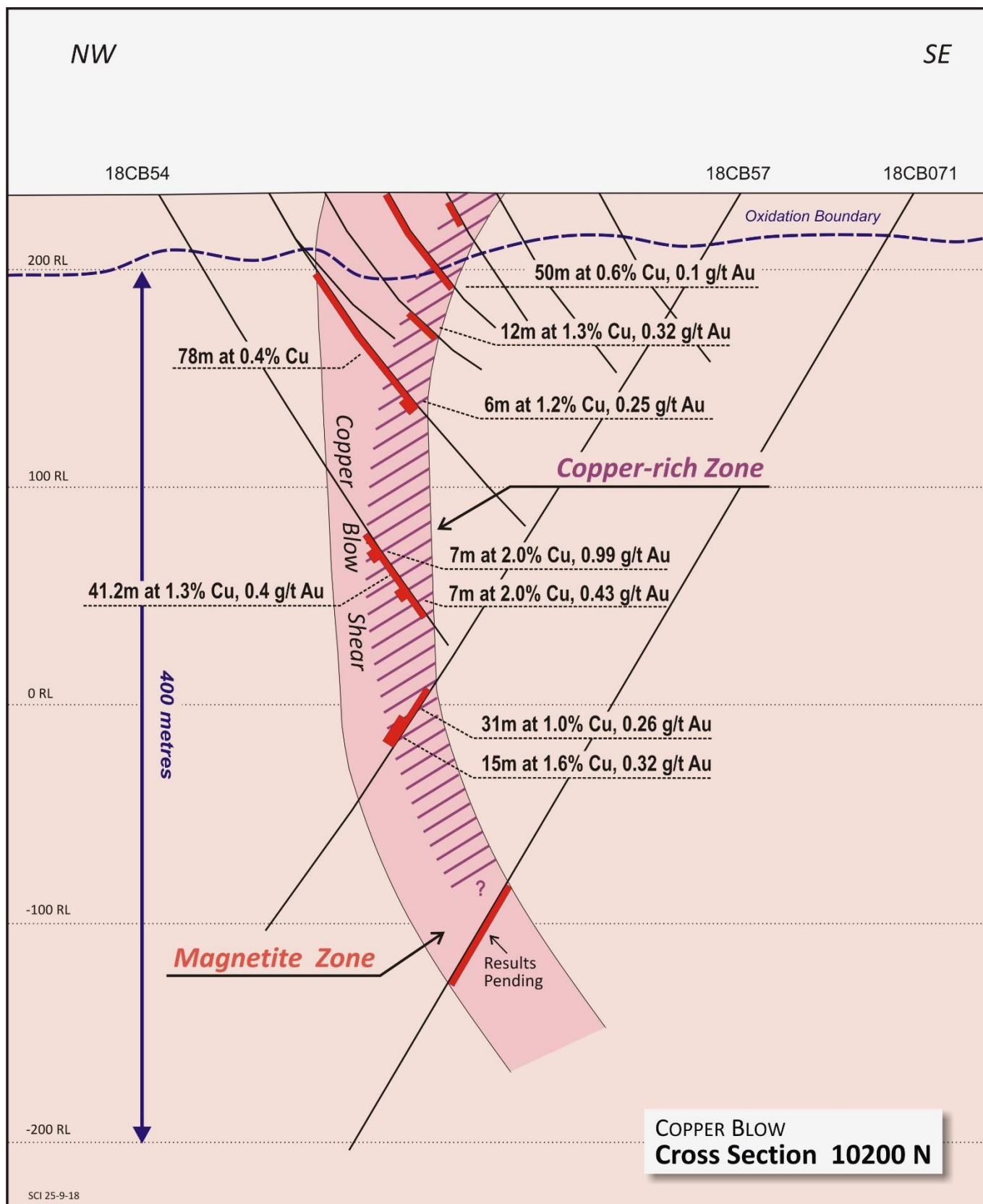


Figure 4. Cross-section 10200N showing position of recent hole 18CB071 and the intersection of the Copper Blow shear zone. Results for this intersection are pending.

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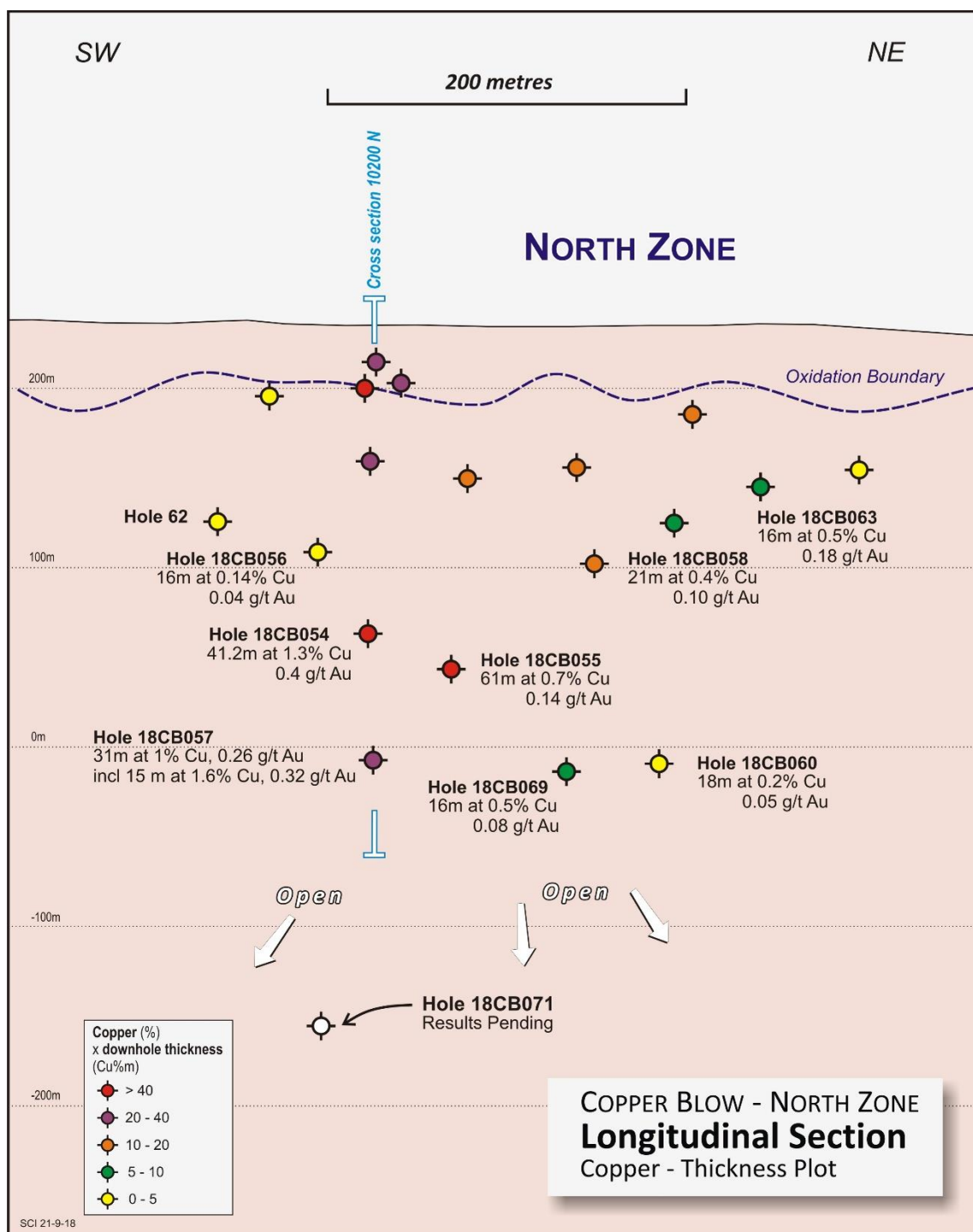


Figure 5. Copper Blow longitudinal section showing grade x thickness plot. Points depict the centre-points of the mineralised intersection on a vertical plain. Copper-gold mineralisation remains open at depth and along strike. The piercement point for hole 18CB071 is shown. Results for this hole are pending.

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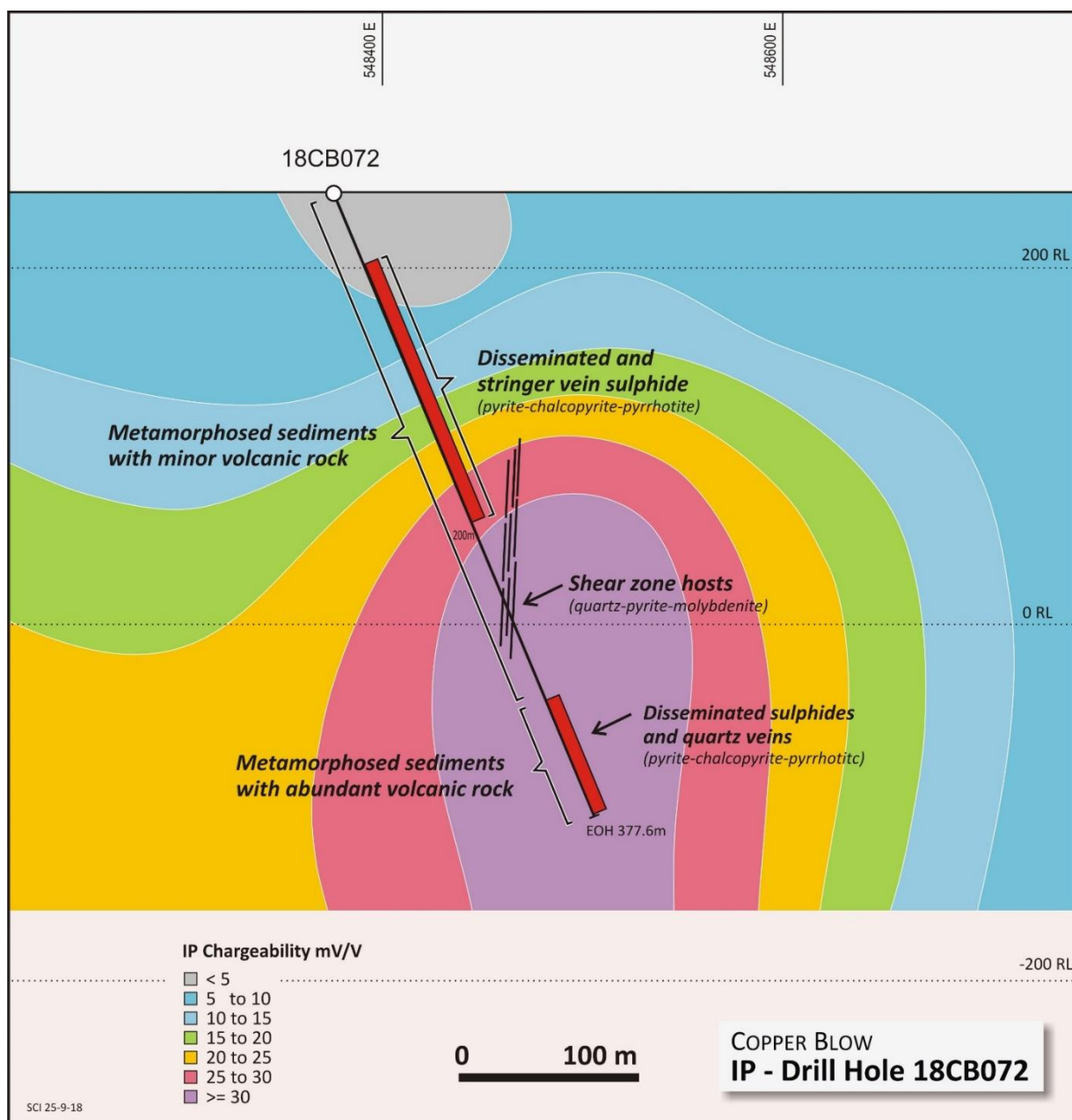


Figure 6. Cross-section Hole 18CB072 (refer to Figure 3) showing broad zones of geology and disseminated and veinlet sulphide mineralisation. Background image is a slice through the IP chargeability model along the trace of the hole.

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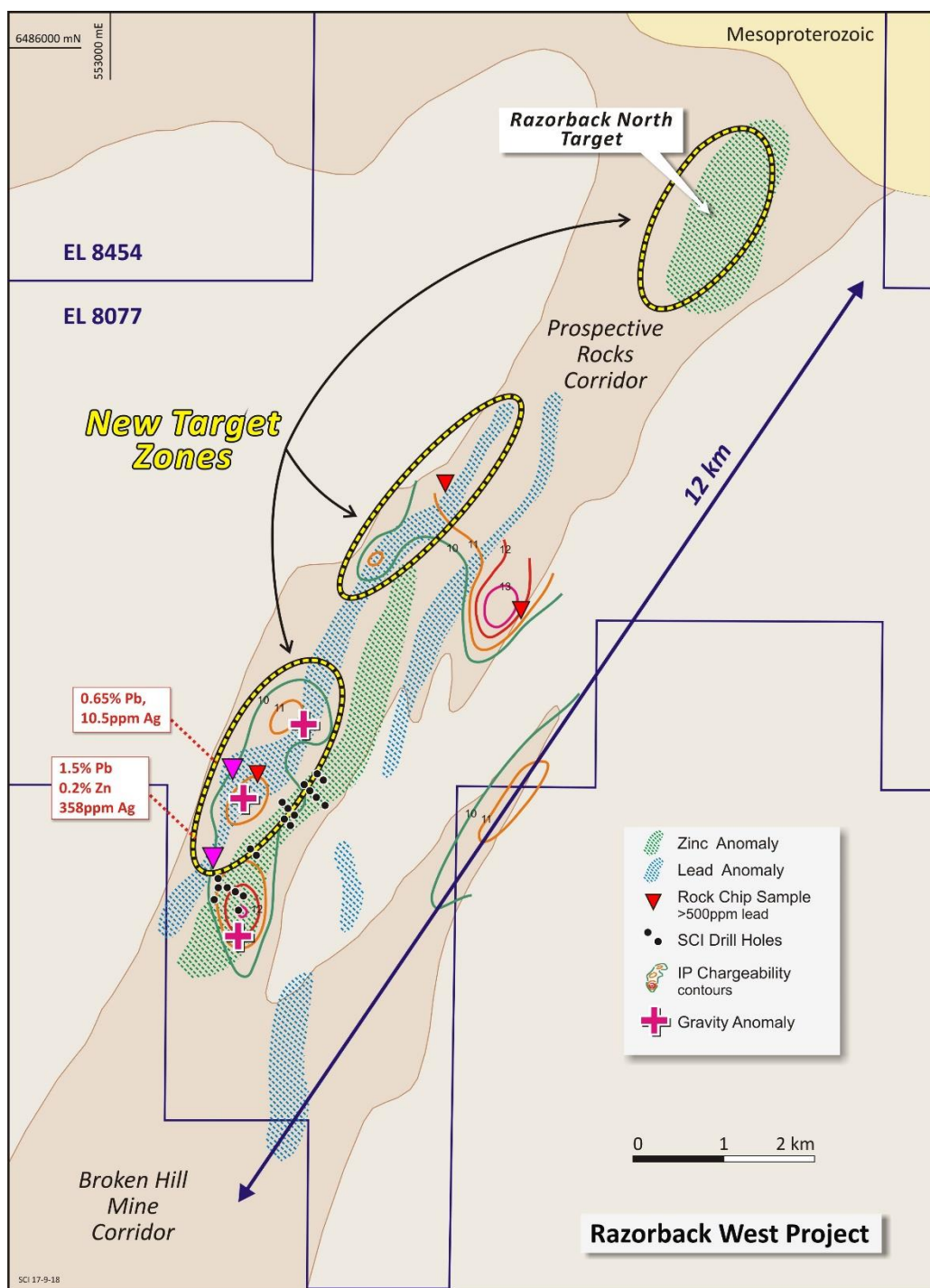


Figure 7. Razorback West. New targets.



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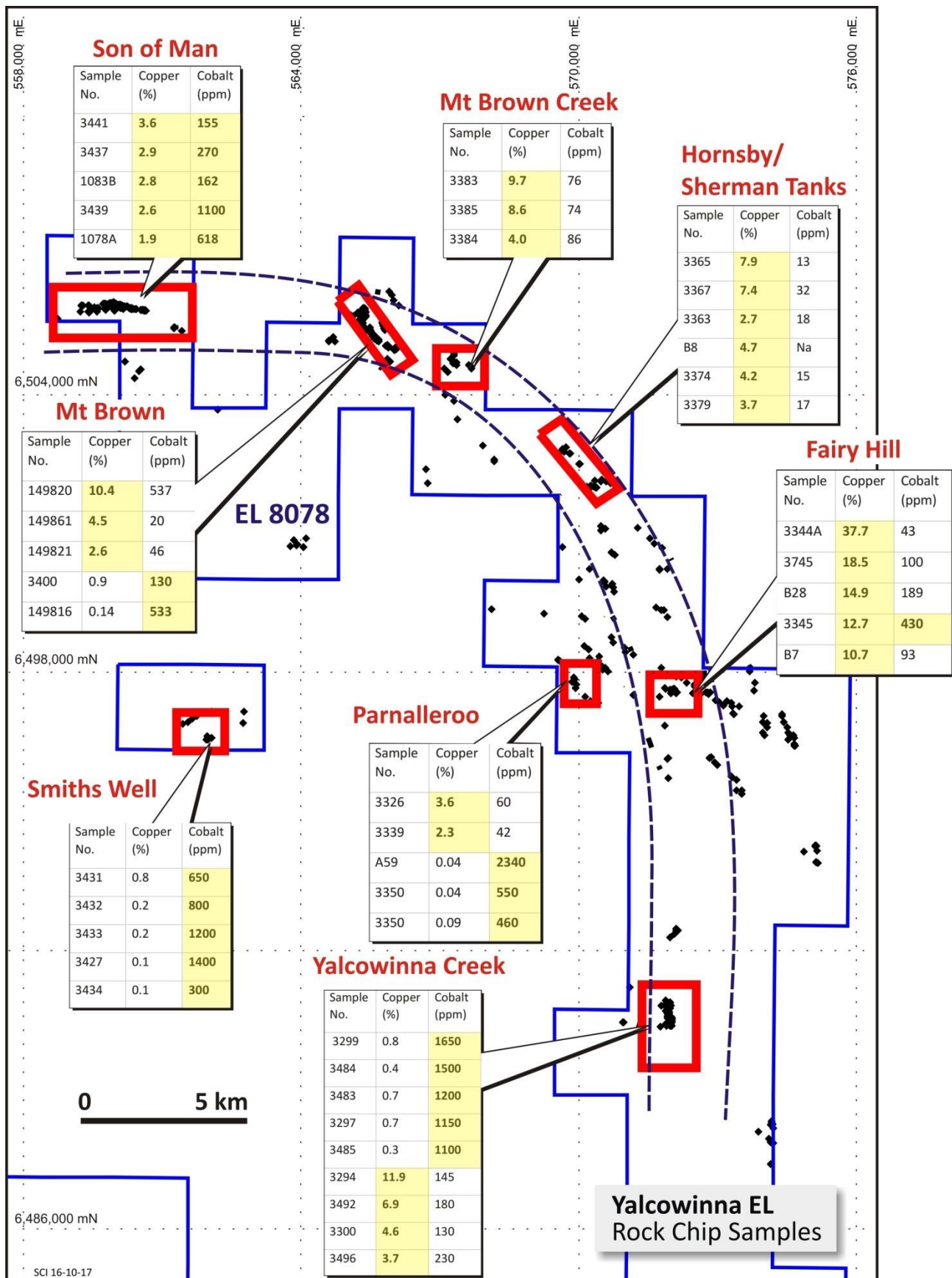


Figure 8. Historic rock chip samples in Yalcowinna tenement.

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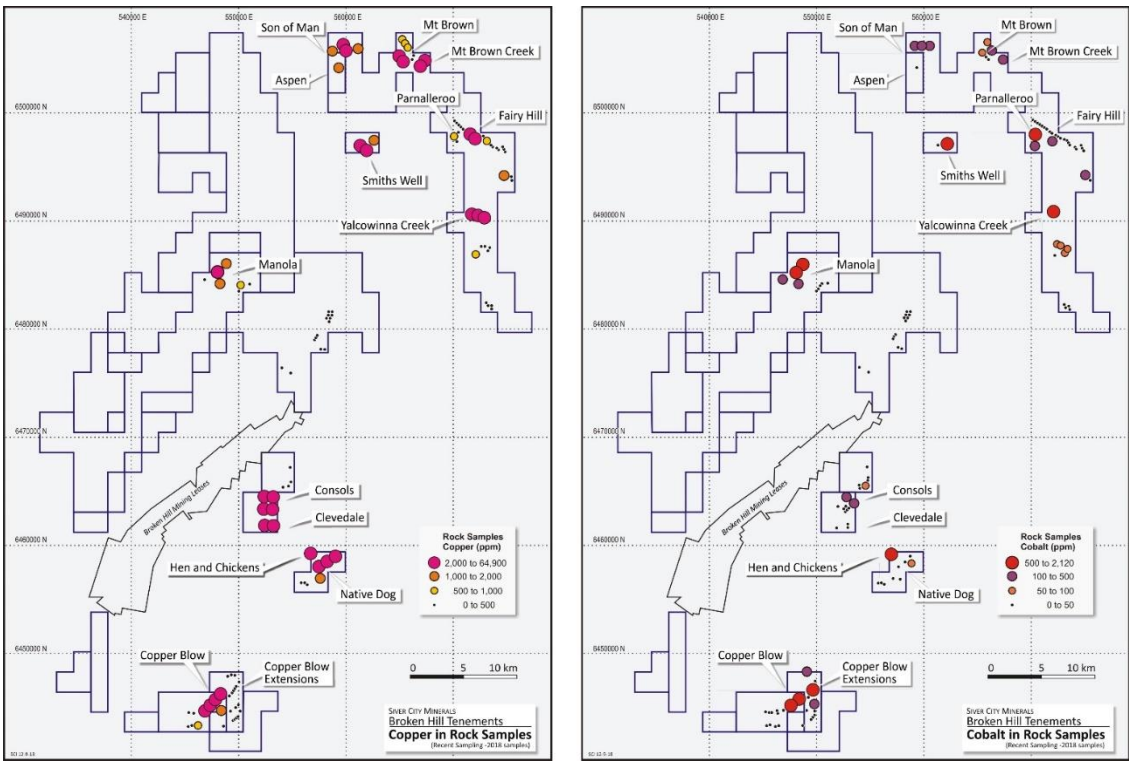


Figure 9. Preliminary rock chip sampling of iron-rich rocks in SCI Broken Hill tenements

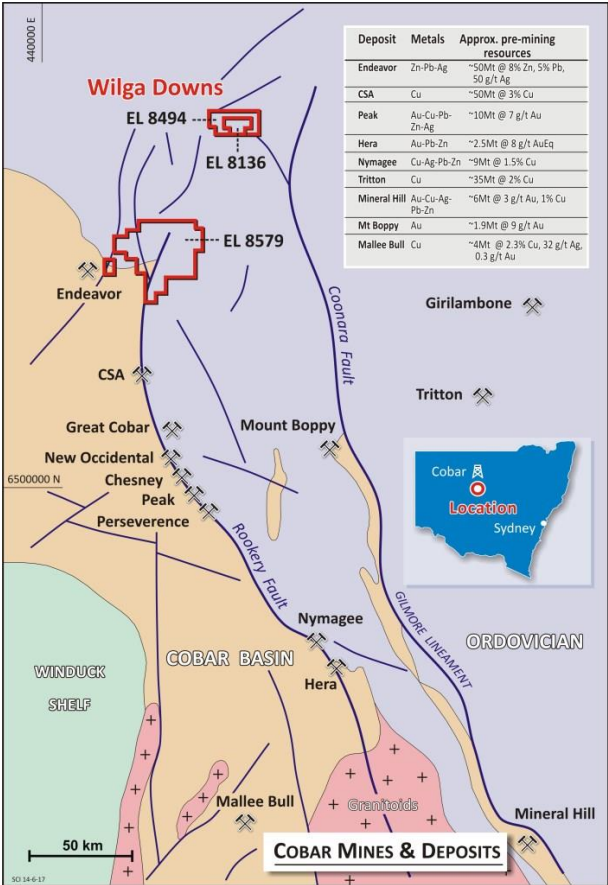


Figure 10. SCI tenements at Broken Hill

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**Christopher Torrey**  
Managing Director

### **ABOUT Silver City Minerals Limited**

Silver City Minerals Limited (SCI) is a base and precious metal explorer focused on the Broken Hill District of western New South Wales, Australia. It takes its name from the famous Silver City of Broken Hill, home of the world's largest accumulation of silver, lead and zinc; the Broken Hill Deposit. SCI was established in May 2008 and has been exploring the District where it controls Exploration Licences through 100% ownership and various joint venture agreements. It has a portfolio of highly prospective projects with drill-ready targets focused on high grade silver, gold and base-metals.

### **Caution Regarding Forward Looking Information**

*This document contains forward looking statements concerning Silver City Minerals Limited. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes. Forward looking statements in this document are based on Silver City's beliefs, opinions and estimates of Silver City Minerals as of the dates the forward-looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future development.*

### **Competent Person**

*The information in this report that relates to Exploration Results is based on information compiled by Christopher Torrey (BSc, MSc, RPGeo.) who is a member of the Australian Institute of Geoscientists. Mr. Torrey is the Managing Director, a shareholder and full-time employee of Silver City Minerals Limited. Mr. Torrey has sufficient experience relevant to the styles of mineralisation and type of deposits under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Torrey consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.*

*This report contains information extracted from reports cited herein. These are available to view on the website [www.silvercityminerals.com.au](http://www.silvercityminerals.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.*