

### AIM Announcement

# 26 September 2024

# Reese Ridge Zinc-Lead-Silver (-Gallium) Project

Sunrise Resources plc is pleased to announce further high-grade zinc, lead and silver analytical results from recent sampling at its Reese Ridge Zinc-Lead-Silver (-Gallium) Project in Nevada, USA.

#### **HIGHLIGHTS:**

- Short field programme carried out during the summer to locate additional areas of high-grade base-metal and silver mineralisation at surface.
- Field portable x-ray fluorescence ("pXRF") analyser used to locate mineralisation in real time.
- New area of high-grade zinc, lead and silver mineralisation discovered 260m west of previously reported high-grade samples.
- Field pXRF results confirmed by laboratory analysis of samples with highest silver and lead values found to-date:
  - 24.5% combined lead-zinc and 383g/t silver in sample 24RR-AL19.
  - 18.6% combined zinc-lead and 51g/t silver in sample 24RR-AL18.
- Additional samples of iron-rich gossans contain zinc in the range 0.1%-3.2% zinc.
- Widespread barite mineralisation also reported, typical of Carbonate Replacement Deposit ("CRD") style of mineralisation.

Detailed information and photographs follow.

#### Commenting today, Patrick Cheetham, Executive Chairman, said:.

"These latest results are very encouraging. This new area is some distance from the previously reported high-grade samples, but all of these samples lie above the large low resistivity zone that has been defined as a primary drill target for CRD mineralisation by the Company's interpretation of historical airborne geophysical surveys. CRD style mineralisation is an attractive target as economic deposits tend to be large and high-grade. New discoveries of CRD style mineralisation include the Ruby Hill deposits near Eureka in Nevada and the now producing Taylor deposit in the adjacent state of Arizona.

"Given the scale of the opportunity presented at Reese Ridge it makes sense that the Board considers Reese Ridge to be a priority asset for exploration alongside the commercialisation of our high-quality industrial mineral assets. Further work could include ground geophysics and drilling as resources allow."

## **Detailed Information**

The Company's wholly owned Reese Ridge Project is located on the south side of the prospective Humboldt Structural Zone, 52 miles south-southwest of Battle Mountain, Nevada.

The project covers a ridge-forming fault-bounded horst block of limestones/shales faultjuxtaposed against younger shales all bounded to the east and west by Tertiary age volcanosedimentary basins.

The limestone is host to numerous conspicuous iron-rich gossans derived from massive and semi-massive sulphides which also attracted the Company's attention and that of early prospectors looking for silver. These gossans have exotic geochemistry and consistently anomalous zinc, lead and silver with values up to 6.8% zinc, 3.3% lead and 51g/t silver. Forty-three samples taken from these gossans and old workings averaged 0.86% zinc.

Subsequently, prospecting by the Company yielded a sample of unremarkable limestone containing a few spots of the lead sulphide mineral galena and a high-grade analysis of 15.9% zinc (alongside 0.3% lead and 17ppm silver). Follow-up sampling yielded high-grade samples containing up to 29.6% zinc, 0.3% lead, 7ppm silver, 68ppm gallium. These high-grade samples tend to be iron-poor in comparison and the zinc is contained as oxide and/or carbonate minerals that are difficult to identify in the field in an area where the rocks are significantly altered and do not have the stand-out characteristics of iron-rich gossans and are easily overlooked.

Recently, in July, the Company contracted geological consultants, Big Rock Exploration, to carry out a 3-day field reconnaissance programme using a pXRF analyser to gather real-time field information on the zinc, lead and silver levels across different parts of the project area. Extreme summer temperatures were experienced during the fieldwork (+40°C) which adversely affected the operation of the pXRF and the accuracy of readings. The pXRF did, however, help direct the collection of field samples for subsequent laboratory geochemical analysis.

Laboratory analytical results are now available and have highlighted an area some 260m west of the previously identified high-grade samples where two rock samples yielded very high lead, zinc and silver results as follows:

- +24.5% combined lead-zinc and 383g/t silver in sample 24RR-AL19.
  (4.5% zinc and greater than 20% lead, the upper instrument detection limit for the chosen analytical method)
- 18.6% combined zinc-lead and 51g/t silver in sample 24RR-AL18. (11.7% zinc and 6.9% lead)

Sample 24RR-AL18 was taken from an old mine dump whereas sample 24RR-AL19 was taken from a rock outcrop (see Photos 1 & 2 following). Outcrop in the project area is generally very poor due to the extensive scree deposits.

Consistent with the analytical results from previously reported high-grade samples, the above samples have a relatively low iron content. Additional samples of the more iron-rich gossans collected during the recent sampling programme contained consistently anomalous zinc

contents in the range 0.1-3.2% zinc. Widespread barite was also reported from scree by Big Rock Exploration.

Previous samples from Reese Ridge have shown high levels of gallium, up to 69ppm. Gallium is an essential mineral in the production of semi-conductors and is increasingly used in the production of solar panels and high frequency computer chips. It is extracted from some zinc ores and approximately 80% of the world's gallium is produced in China. China has placed some restrictions on the export of gallium and gallium compounds. The analytical method used for the most recent samples had a lower detection limit for gallium that was too high (50ppm) to give meaningful results.

In its news release of 31 October 2023, the Company announced that modelling of historical airborne geophysical data had confirmed a large annular zone of low resistivity (high conductivity) below the surface mineralisation that extends from just below near surface to a depth of nearly 1,000m. This annular zone surrounds a core of high resistivity which the Company interprets as a granitic intrusion. All of the high-grade mineralisation found to date overlies this low resistivity zone which the Company believes could be indicative of a significant zone of sulphide mineralisation.

The geological setting and geological features of the target are consistent with a Carbonate Replacement Deposit ("CRD") style of mineralisation. These can be large and high-grade. A relevant example is the Hermosa Project in the neighbouring State of Arizona which was acquired by South32 in a US\$1.3 billion takeover and which includes the Taylor Deposit (138 million tonne Mineral Resource with a zinc equivalent grade of 8.61%) now under development. A more recent CRD discovery has been made in Nevada by i-80 Gold at the Ruby Hill Project where spectacular zinc and silver drill intersections have been reported.

The Reese Ridge project represents a significant opportunity for the Company. Further work is justified to include ground geophysics and drilling.

#### Further information

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#### Shares in the Company trade on AIM. EPIC: "SRES".

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#### **Nominated Adviser**

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#### Market Abuse Regulation (MAR) Disclosure

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 which forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ('MAR'). Upon the publication of this announcement via Regulatory Information Service ('RIS'), this inside information is now considered to be in the public domain.



Photo 1: Sample 24RR-AL19: >20% lead, 4.5% zinc, 383g/t silver.

Sample taken from outcropping zone under hammer in photo. (>upper limit of detection for lead in analytical method used)



Photo 2: Sample 24RR-AL18 – Taken from old mine dump: 11.75% zinc, 6.9% lead and 51g/t silver



Photo 3: Oxidised carbonate replacement mineralisation in exploratory adit 80m south of previously reported high-grade lead and zinc values. Sample 24RR-AL16: 3.2% zinc

#### Note:

The information in this release has been compiled and reviewed by Mr. Patrick Cheetham (MIMMM, MAusIMM) who is a qualified person for the purposes of the AIM Note for Mining

and Oil & Gas Companies. Mr. Cheetham is a Member of the Institute of Materials, Minerals & Mining and also a member of the Australasian Institute of Mining & Metallurgy.

### Glossary:

**Barite:** a mineral chemically composed of barium sulphate, an ore of barium and a common minerals in a variety of minerals deposit types including CRDs.

**Carbonate Replacement Deposit (CRD):** A high-temperature carbonate (limestone)-hosted Ag-Pb-Zn deposit formed by the replacement of carbonate rock, by metal-bearing solutions in the vicinity of igneous intrusions.

**Gossan:** an iron rich rock, the residual product of oxidation by weathering and leaching of rocks originally containing high levels of sulphide minerals and often representing the exposed upper part of a mineral deposit or mineral vein.

ppm: parts per million.

**XRF**: an acronym for X-ray fluorescence spectroscopy, a non-destructive analytical technique used to determine the elemental composition of materials. Handheld portable XRF analysers (pXRF) work by measuring the fluorescent (or secondary) X-rays emitted from a sample when excited by a primary X-ray source. Each of the elements present in a sample produces a set of characteristic fluorescent X-rays, or "unique fingerprints" which allows a quantitative measurement of the concentration of that element in a sample.