



## Endeavor Mine Valuation Report

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**Polymetals Resources Ltd**

**Endeavor Lead/Zinc Mine**

**March 2023**

**Job Number:3939.01**



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## 1 EXECUTIVE SUMMARY

Como Engineers has completed a valuation of the 1.2MTPA Endeavor Mine which includes a vertical haulage system, process plant and supporting infrastructure. All equipment and infrastructure are generally in good condition and are more than adequate for processing the 1.2 million tonnes per annum of typical Endeavor ore.

Como estimates the cost to replace a 1.2MTPA mine, mill and supporting infrastructure to be \$280 million.

As a “going concern”, the current value of the Endeavour mine, process plant and infrastructure is estimated to be \$140 million which includes a “ballpark” value of \$40 million for the vertical shaft and decline.

The estimated cost to re-establish the mine as a going concern is \$4 million of which 50% is attributed to refurbishment of the Process plant.

The auction value of removable and salvageable equipment is \$15.5 million.

The value of ore resources and reserves is excluded from this estimation.

## 2 INTRODUCTION

The Endeavor Lead/Zinc mine (previously the Elura Lead Zinc mine) is located about 40 km north of Cobar, NSW, in a province well known for high grade base metal and gold discoveries.

It was shut down by the owners, CBH Resources, in 2020, and has since been on care and maintenance.

Polymetals Resources Ltd are considering purchase of the mine and associated infrastructure, and their Chairman, David Sproule, has commissioned Como Engineers to prepare a valuation report on the mine.

## 3 SITE VISIT

On the 8, 9 & 10 of February 2023, the author, Richard Ladyman, Principal Engineer, visited the site and was shown around (including underground) by Patrick Mukwindidza, the Mine Manager, and Jason Creighton, director of Cobar Metals Pty Ltd.

## 4 PLANT AND INFRASTRUCTURE

The mine has access from both a 6m diameter by 380m deep vertical shaft, and 2 declines totaling about 10 km.

The vertical shaft has a 50m headframe and Koepe winder, equipped with 2 ore skips, and alternatively with man cage. This system is in excellent condition.

The declines are generally 6m high by 5.5m wide, and at a 1:7 grade.

There is an underground crushing station on the 300m level, with loading pockets for vertical shaft haulage.

There are two underground pumping stations, on the 300m level, currently unused, and on the 930m level which is operational.

These are accessed via the decline.

Ventilation is provided by 2 x 900 kW fans on the surface, plus about 10 smaller fans that were installed underground, but have recently been removed and stored on the surface.

There is a surface single stage crushing plant, and a ROM pad with a reclaim tunnel and conveyors to feed the SAG mill.

The SAG mill is in open circuit with the secondary ball mill, and classification is by cyclones and a trash screen.

There is also a tertiary ball mill, installed in 2007, this was only used for harder ores.

Cyclone overflow is fed to the rougher flotation cells, then progressively to cleaner cells, recleaner cells, then concentrate thickeners, pressure filters, and the concentrate storage shed.

Flotation tailings are thickened and pumped to the tailings dam, about 2km south of the plant.

Grid power is supplied via a 132 kV, 15 MW sub-station adjacent to the mine, owned and maintained by Essential Energy.

Process water is supplied by the Cobar Water Board.

A standard gauge railway adjacent to the concentrate shed takes the concentrates via the CSA mine to Cobar, and then to the selected port or smelter.

Infrastructure includes substantial offices, laboratory, workshops, stores, etc, all more than adequate.

Further details can be found in the attached Equipment List, Appendix B

## 5 REFURBISHMENT

Allowances have been made in the Valuation Spreadsheet, Appendix B for estimated refurbishment where appropriate. Most of the equipment and infrastructure is in good condition, and refurbishment will mostly be routine maintenance items. However, it is likely that the Honeywell SCADA plant control system and associated computers & PLCs will need to be replaced with modern units. A CITEC system is recommended.

The existing Courier OSA system may need to be upgraded.

The stores warehouse appears to be well stocked, and there are several capital spares, including large motors, gearboxes, and girth gears on site.

It is noted that the SAG and Ball mills still hold their ball charge. These mills are rotated by “inching” once a month to prevent the charge freezing.

## 6 VALUATION METHODOLOGY

The valuation estimate is based on the current New Cost of equivalent equipment.

Second-hand equipment is generally valued at 50% of the new cost, but this has been reduced in some cases because of the condition of the equipment to estimate Market Value. The 50% of “New Value” estimate is that expected from a buyer who wants to use the equipment rather than for resale.

Auction Value is usually about 15% of the New Cost, depending on the type of equipment and its condition. Auctions are generally only conducted if a satisfactory sale cannot be completed, or the assets must be sold quickly.

The Valuation Spreadsheet, Appendix C, provides an itemised Equipment List, with individual cost estimates shown.

## 7 VALUATION

The new replacement cost of the mine shafts, haulage system, process plant & infrastructure is estimated at \$280 million.

Valuation as a going concern is estimated at \$140 million.

The whole of mine refurbishment cost allowance is estimated at \$4 million, with an allocation of 50% for the process plant.

Auction value, for all infrastructure and equipment (down to concrete footings) to be removed from site, is estimated at \$15.5 million.

See details in the Valuation Spreadsheet, Appendix C.

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# Appendix A

## Photos



### Appendix A – Photos





**Photo 1 – Surface Crusher**



**Photo 2 - ROM & Grinding**



**Photo 3 - Headframe & Surface Crusher**

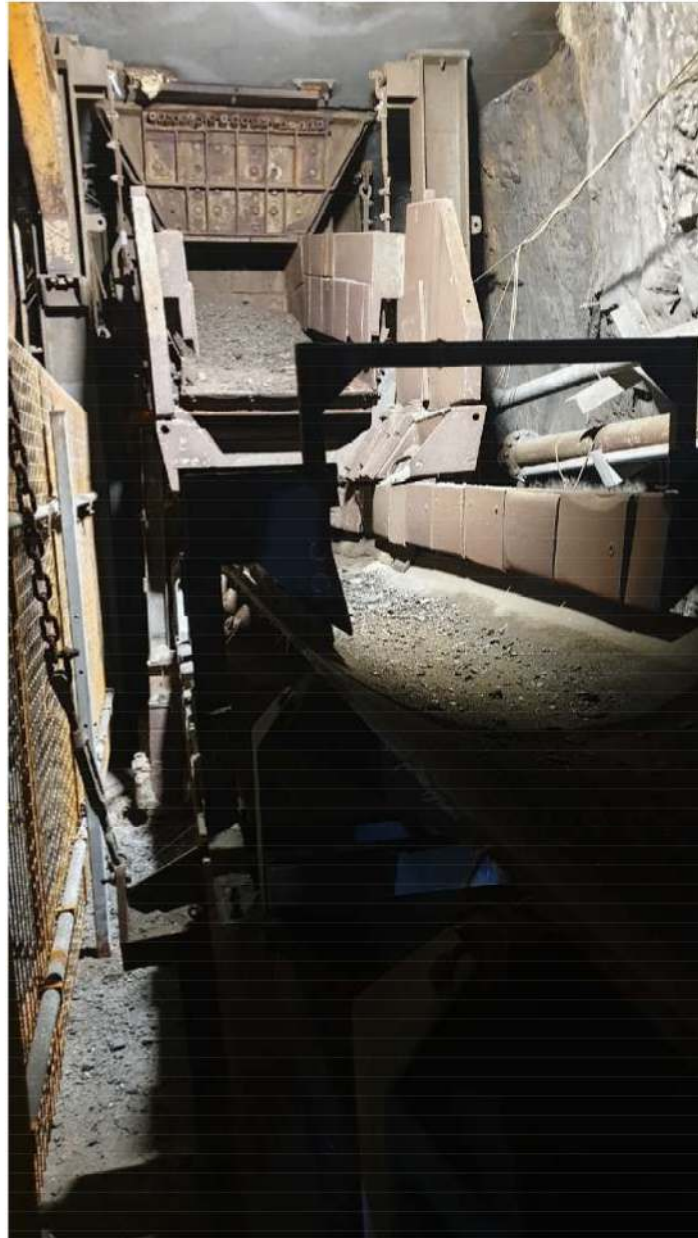




**Photo 4 - Grinding, Flotation & Concentrate Areas**

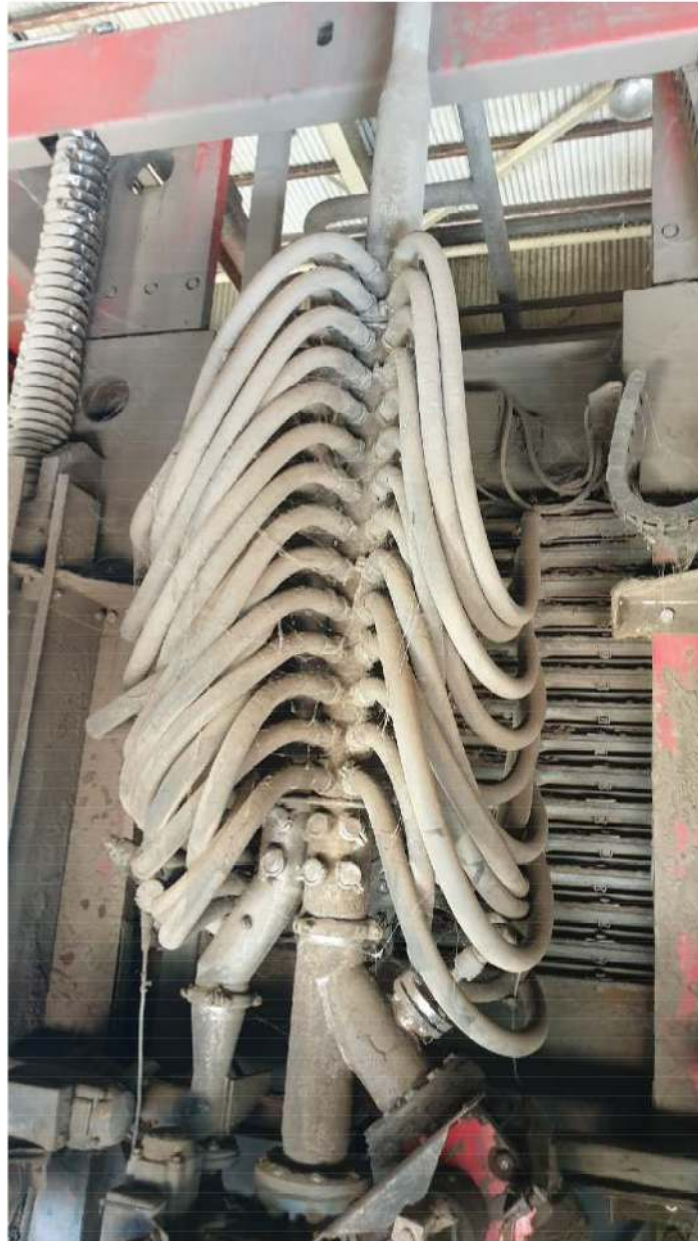


**Photo 5 - Lead & Zinc Concentrates Thickeners**



**Photo 6 - Underground Crushing Station**





**Photo 7 - Larox Pressure Filter**



**Photo 8 - 930m Pump Station**



**Photo 9 - Main Sub Station**





**Photo 10 - Tails Thickener & Dam**



**Photo 11 - Capital Spares**



Photo 12 - Spare Motors



## Appendix B

### Equipment List

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#### Appendix B – Equipment List

Refer to <https://polymetals.com/>

## Appendix C

### Valuation Spreadsheet

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#### Appendix C – Valuation Spreadsheet

Refer to <https://polymetals.com/>

## Appendix D

### Cost estimates and Quotes

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#### **Appendix D – Cost estimates and Quotes**

Please contact Polymetals for further information.