

## ASX ANNOUNCEMENT

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# Brumby Project Update

## Initial test work returns promising recoveries, paving way for bulk sample

### HIGHLIGHTS

- The initial orientation round of bioleaching of Brumby hyper-enriched black shale ('HEBS') mineralisation has confirmed critical and strategic mineral recovery
- Preliminary analysis has confirmed Zinc, Vanadium, Copper, Silver, Nickel, Molybdenum and Yttrium, amongst others, are reporting to the leachate in the initial trials
- Detailed mineral analysis, including umpire analysis at a commercial laboratory, is underway to quantify recovery percentages and to determine the best experimental conditions to maximise recovery from the Brumby mineralisation
- Next steps will require a targeted shallow drilling program (anticipated to commence in Q4) to collect a bulk sample to scale-up the bioleaching experiments to column tests (emulates bio-heap leaching conditions)
- Further surface sampling of the HEBS horizon across Bellavista's Edmund Basin, including Brumby, is also being planned; this includes the uraniferous sediments sampled in early 2024 at Kiangi to confirm the bioleach recovery technique can be considered for all targets styles across the Basin
- Bellavista's out-of-pocket costs associated with this bioleaching study are expected to qualify for future R&D Tax claims.

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Bellavista Executive Director Mick Wilson said: *"These are important initial outcomes which augur very well for the outlook at Brumby. In light of this, we will start preparations to establish a bulk sample for a round of up-scaled column tests."*

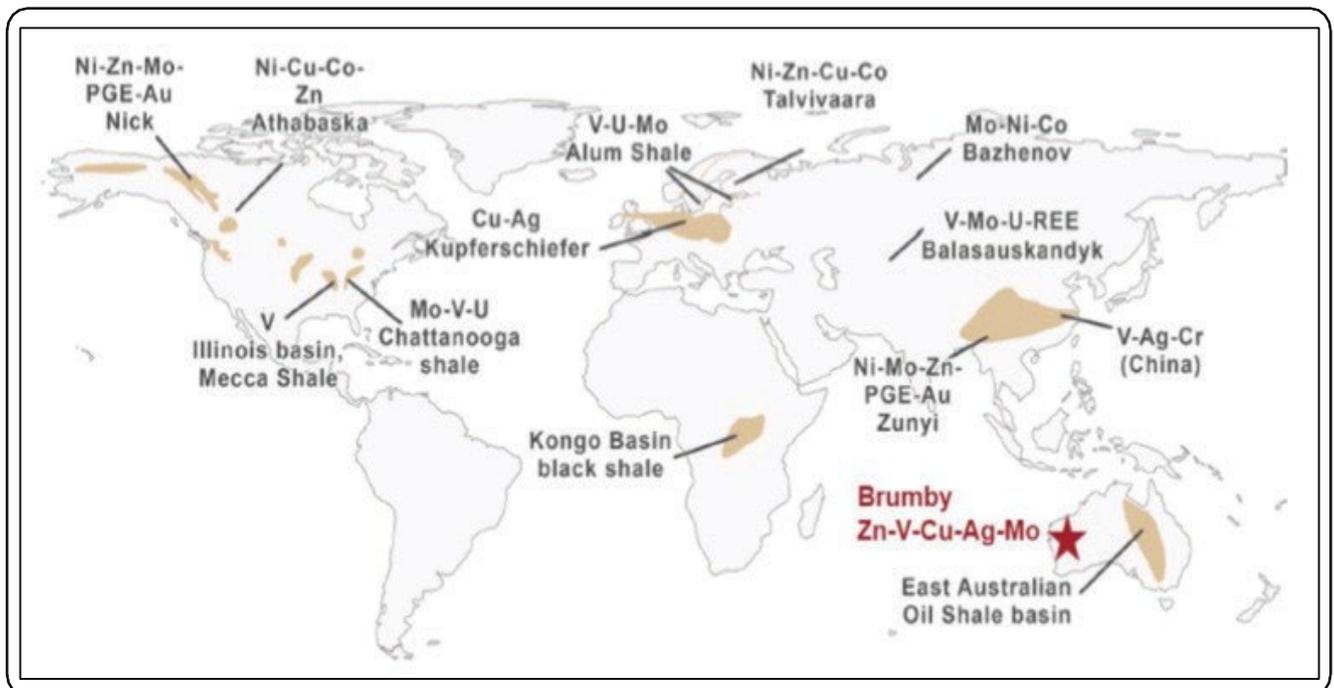
*"Critical and Strategic minerals, including Zinc, Vanadium, Copper, Silver and others, have reported to a majority of these initial post-leach liquors, confirming that Brumby HEBS mineralisation is amenable to bioleaching. Ongoing analysis is required to determine which set of conditions for the oxidant and acid producing bacteria returned the best recoveries, with a preference for low-cost additives, Brumby site temperatures and local water quality to emulate local conditions."*

*"This study is a collaboration between the Research Schools of Geoscience and Biology at ANU and Federal and State Government science organisations".*

Bellavista Resources Limited (ASX:BVR) is pleased to advise that the initial round of bioleaching experiments of hyper-enriched black shale (“HEBS”) mineralisation at the Brumby Project has confirmed critical and strategic minerals are present in the post experiment leachates.

In late 2024, Bellavista was approached to participate as an Industry partner in the recently-formed Critical Resources Research Centre (“CRR”) at the University of Western Australia (“UWA”). The CRR is a collaboration between Australia’s preeminent Federal and State science institutions, and Science Research Schools at Australian National University (“ANU”), UWA, Queensland University and University of South Australia, with support from the National and State based Mineral divisions and Industry sponsors.

The Brumby Project was identified as a candidate project to study innovative mineral processing techniques, after Bellavista’s initial exploration activities quickly recognised that the mineralisation was a HEBS, similar to other super-giant critical and base metal deposits found globally (refer Figure 1).



**Figure 1: Major black shale districts (brown areas) and a selection of significant deposits across the world. Compiled after Convey and Pašava, 2004 and Large, 2012.**

Our PhD candidate is examining the potential extraction of the contained metals from Brumby HEBS mineralisation using bioleaching techniques (similar to those used at Terrafame’s Talvivaara Mine in Finland), under the guidance of expert research supervisors.

## Bioleaching Study Update

Shake flask experiments were conducted at eight different conditions with additional duplicate flasks to evaluate the effects of microbial seeding, substrate adjustments and incubation temperatures to maximise target element recovery.



***Photo 1. Bioleaching flasks with Brumby HEBS material mixed in various substrates and microbe content to identify the most effective conditions and temperature for leaching.***

Note that the material used for these initial experiments by the PhD candidate is a homogenised sample of Brumby HEBS percussion residues and crushed drill core collected from Bellavista drilling, and is considered broadly representative of the previously reported drill intercepts at Brumby.

Leach liquor samples were collected weekly from the shake flask experiments for a period of 28 days for analysing soluble elements by inductively coupled plasma (ICP) – optical emission spectrometry (OES) (Note: more accurate mass spectrometry (MS) analysis is underway).

Preliminary analysis (un-quantified) has confirmed concentrations of target elements such as V, Zn, Cu, Ag, Ni, Mo and Y are present and appear to increase in concentration over time in the leachates. Leaching yields appear generally higher for flasks seeded with biomining microbes than in corresponding un-seeded flasks under the same conditions (chemical leaching only). Most elements of interest appear to be returning improved leaching responses with the inclusion of microbes, with some target elements un-responsive to leaching without microbes present.

Experiment substrate adjustments and varying temperatures appear to also influence the leaching of some elements more than others.

This is the first important step in the experimental testing process, confirming the target elements are in fact being leached using the bacteria cultures, and this confirmation justifies moving to the next step of quantification of the elements via accurate mineral analysis (discussed below).

Ongoing bioleaching work will now target the effect of this media composition and temperature on the extraction yields, to refine to an optimal set of conditions for future trials.

Importantly, the aim here is to best emulate the atmospheric conditions and water quality of the Brumby site and to minimise the requirement of additives, so upscaling of the biomining process matches real-world conditions.

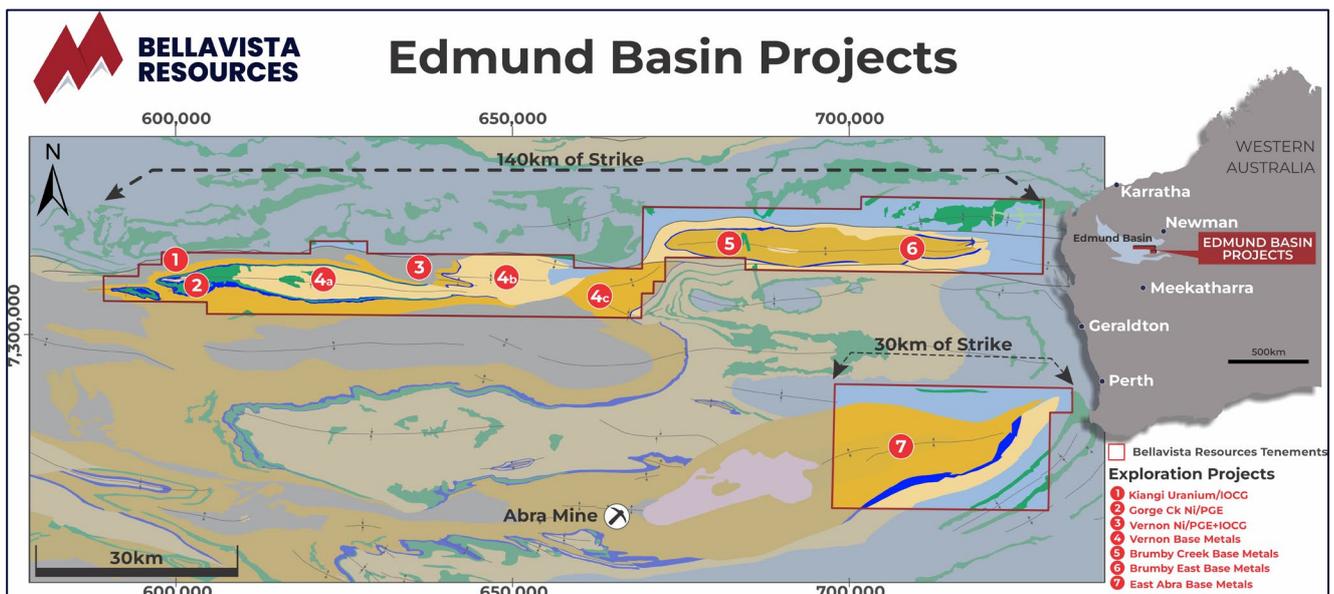
Mineral analysis, including umpire analysis at a commercial laboratory is underway, to quantify recovery percentages in these initial trials and to identify the best experimental conditions that maximise recovery from the Brumby HEBS mineralisation.

### Next Steps

Following the receipt of the mineral analysis, umpire samples and review of the recoveries of the target elements, the next phase of experimentation requires column tests, which emulate the conditions of a heap bioleaching pad, the ultimate scale that is needed to process the Brumby mineralisation in a mining scenario.

Plans for a targeted shallow drilling program to collect a bulk sample for the column tests are underway, and further sampling of the HEBS horizon across Bellavista's Edmund Basin projects is planned. This sampling will include the uraniferous sediment horizon sampled by Bellavista in early 2024 at Kiangi (refer ASX Announcement dated 27 March 2024), to confirm the bioleach recovery technique is scalable for use on a number of target horizons across the project portfolio.

Bellavista's out of pocket expenses relating to these biomining studies are expected to qualify for future R&D Tax claims.



**Figure 2: Bellavista Resources' Edmund Basin tenure and projects location on regional geology.**

### Media

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For and on behalf of the Board.

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## About Bellavista Resources

Bellavista Resources Ltd (ASX: BVR) is an emerging mineral exploration company focused on finding world-class sediment hosted base metals, IOCG and sulphide related precious and base metal deposits in the Upper-Gascoyne Region of Western Australia.

The Edmund Basin Projects cover approximately 170km of strike of this highly prospective basin. The Projects include Brumby Deposit, Vernon Base Metals, Vernon Nickel/PGE, Gorge Creek and East Abra. The properties are prospective for Large to Super-Large sedimentary base metal deposits, IOCG Cu-Ag-Au deposits, sulphide related Nickel/PGE's deposits in sediments sourced from Mafic/Ultramafic Intrusions and possible sediment hosted Uranium.

## Disclaimers

References to previous ASX announcements should be read in conjunction with this release.

Photos or commentary in this announcement regarding initial experiment observations are included in this report for metallurgical technique and conditions context and are not to be considered by the reader as a substitute for analytical assays or quantified recoveries.

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This release may contain certain forward-looking statements and projections, including statements regarding Bellavista's plans, forecasts and projections with respect to its mineral properties and programs. Although the forward-looking statements contained in this release reflect management's current beliefs based upon information currently available to it and based upon what management believes to be reasonable assumptions, such forward looking statements are estimates for discussion purposes only and should not be relied upon. They are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors many of which are beyond the control of the Company. The forward-looking statements are inherently uncertain and may therefore differ materially from results ultimately achieved. For example, there can be no assurance that Bellavista will be able to confirm the presence of Mineral Resources or Ore Reserves, that any plans for development of mineral properties will proceed, that any mineralisation will prove to be economic, or that a mine will be successfully developed on any of Bellavista's mineral properties.

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