

# Large 500m x 500m 'Bulls-Eye' Resistivity Anomaly Identified by AMT at Breccia Sinter Prospect, Bauloora

### Highlights

Compelling audio-frequency magnetotelluric (AMT) results returned from the initial survey phase at the Breccia Sinter Prospect at Bauloora:

- A strongly resistive anomaly (~9,000 ohm\*m) has been identified.
- The anomalous feature is depth extensive (>1,000m) and comes to within 300m of the surface.
- The anomaly is 500m x 500m and sits directly beneath mapped outcropping sinter.

The strongly resistive body supports the interpretation of a feeder structure at depth and the <u>potential boiling zone</u> which may host significant gold and silver mineralisation.

## Sinter and high-grade gold on surface up to 32.2g/t Au above anomaly

- The AMT anomaly coincides with pathfinder elements associated with low-sulphidation systems.
- It is interpreted to be down dip of the recently announced 500m x 250m >20ppb Au soil anomaly where rock chips have graded up to 32.2g/t Au and 290g/t Ag<sup>i,</sup> (see Endnotes Page 8).
- It shows indications of being structurally controlled by NS and NW-SE orientations, which reflects mapped vein orientations, and trends identified in ground magnetics and gradient array induced polarisation geophysical surveys.

## **Next Steps – Drilling this quarter**

This high priority target will be drill tested immediately with a drill program planned for Q3 2023.



Figure 1: 3D Model Cross section showing resistive anomaly at the Breccia Sinter Prospect, drill intercept results, and highlight rock chip and (looking north).



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Legacy Minerals Holdings Limited (ASX: LGM) (Legacy Minerals or "the Company) is pleased to announce the results of the recently completed audio-magnetotelluric survey over completed on the Bauloora Project located in New South Wales (NSW), Australia.

#### Management comment - Legacy Minerals CEO & Managing Director, Christopher Byrne said:

"We are extremely pleased to report the positive initial results from the AMT survey conducted at Bauloora. The geophysical results highlight a large, undrilled, 'bulls-eye' resistivity anomaly at the Breccia Sinter Prospect.

AMT is a well-regarded survey technique used to identify zones of intense silicification and resistivity, and it has proved successful in guiding companies towards discoveries.

The AMT anomaly is compelling for a number of reasons. It sits 300m beneath a mapped sinter terrace which, according to Buchannans Model, is where you would expect the boiling zone and high-grade gold and silver mineralisation to increase. The anomaly is also adjacent to a gold soil anomaly and is below high-grade gold bearing low-sulphidation veins grading up to 32.2g/t Au and 290g/t Ag.

*This is a textbook example of what we hope to see in a low-sulphidation target, and we're excited to be drilling it imminently. "* 

## Audio-frequency Magnetotelluric Geophysical Survey

The Company has completed Phase 1 of a large-scale, 80 line-km AMT survey over the Bauloora Vein Field. Geophysical contractors Quantec Geoscience and AGS were engaged to complete this work. The total survey area including Phase 2 will cover approximately 10km<sup>2</sup> with approximately 200m spaced lines and infill to 100m spaced lines at the Breccia Sinter Prospect. The objective of the survey was to identify and target large, potentially deeper and strike extensive resistivity anomalies that may represent zones of silicification associated with epithermal veining. The survey provided very high-quality datasets to approximately 1,000m depth.

Magnetotelluric surveys such as AMT are a proven technique that has globally delivered success in the delineation of subsurface zones of silicification, even beneath areas of high-level silica and steam-heated clay alteration, which can be expected in the upper portions of a completely preserved epithermal system such as that interpreted at Bauloora.



Figure 2: Breccia Sinter terrace and high-grade rock chips

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Figure 3: Geological Model (adapted from Buchannans Model) Breccia Sinter Prospect.



Figure 4: Geological model overlain on the 3D modelled AMT.

The AMT survey expands upon the knowledge gained from the Company's Gradient Array Induced Polarisation survey, which demonstrated that linear resistive trends at Bauloora are commonly associated with mapped quartz veins and silicic alteration on surface<sup>II</sup>. The AMT survey provides depth and dip parameter to previously identified resistive trends and adds further clarity to the magnitude of these trends and mapped zones of silicification. The resistive features and trends at the Breccia Sinter Prospect show indications of being structurally controlled by NS and NW-SE orientations, which roughly match some of the orientations the Company has observed in the vein mapping, ground magnetic survey, and gradient IP survey.





The survey is being undertaken in two phases. Phase 1 focused on acquiring data over the Breccia Sinter Prospect which was tightened to 100m spaced lines over the main area of geochemical anomalism. Phase 2 will cover the broader Bauloora vein field including the Mee Mar vein trend where wide and strike extensive epithermal veins were intercepted in diamond drilling early this year. This will include the new discovery made at the Bluecap Prospect which returned 13m at 1.66g/t Au, 6.68g/t Ag, 0.14% Cu and 4.23% Pb+Zn from 57m, including 6m at 3.56g/t Au, 10.95g/t Ag, 0.22% Cu and 6.47% Pb+Zn.

The 3D modelling of the AMT survey results over the Breccia Sinter Prospect were prioritised to increase the Company's understanding of the geology and refine the low-sulphidation epithermal gold exploration model and targets for drilling this quarter. The subsequent study of the results has defined a highly resistive anomaly starting at the approximate depth the Company would expect a potential boiling zone level (Buchanan's precious metal interval) to commence and extends to the limit of the survey's depth resolution, therefore possibly greater than 1,000m from surface.

#### **Next Steps**

The Company is now finalising drill plans to test these compelling geochemical and geophysical targets at the Breccia Sinter Prospect. A minimum of 1,200m of diamond drilling is planned at the prospect. The drilling will focus on testing the "bulls-eye" resistivity anomaly and beneath the large geochemical anomalism and mapped low-sulphidation veins at surface.



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## **About the Bauloora Project**

Legacy Minerals' Bauloora Project is located in the Lachlan Fold Belt of New South Wales which is host to world-class copper-gold orebodies including the Cadia-Ridgeway, Northparkes, and Cowal Mines. In 2023, Newmont Exploration Pty Ltd entered into a Farm-In and Joint Venture on the Project. It covers a large hydrothermal alteration zone 27km<sup>2</sup> in size, within which is an anomalous gold zone currently mapped to 15km<sup>2</sup>. Rock chip and soil samples collected by the Company from the project area have highlighted several priority areas of anomalous precious metal values with highly anomalous values of epithermal pathfinders<sup>iii</sup>. The drilling of the first of these targets resulted in the discovery of the Bluecap Prospect returning 13m at 1.66g/t Au, 6.68g/t Ag, 0.14% Cu and 4.23% Pb+Zn from 57m<sup>iii</sup>.

Extensive epithermal alteration exists on the project, including widespread zones of high-level chalcedonic veins, clay alteration and local sinter formations. The project has seen very limited exploration drilling and the Company believes the results from work to date strongly support the assessment that there is significant potential for a major low-sulphidation epithermal-style gold-silver deposit at the Bauloora Project.



Figure 5: Regional setting of the Bauloora Project<sup>iv, v, vi, vii, viii</sup>



#### Approved by the Board of Legacy Minerals Holdings Limited.

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#### **DISCLAIMER AND PREVIOUSLY REPORTED INFORMATION**

Information in this announcement is extracted from reports lodged as market announcements referred to above and available on the Company's website <u>https://legacyminerals.com.au/</u>. The Company confirms that it is not aware of any new information that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

This announcement contains certain forward-looking statements. Forward looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside of the control of Legacy Minerals Holdings Limited (LGM). These risks, uncertainties and assumptions include commodity prices, currency fluctuations, economic and financial market conditions, environmental risks and legislative, fiscal or regulatory developments, political risks, project delay, approvals and cost estimates. Actual values, results or events may be materially different to those contained in this announcement. Given these uncertainties, readers are cautioned not to place reliance on forward-looking statements. Any forward-looking statements in this announcement reflect the views of LGM only at the date of this announcement. Subject to any continuing obligations under applicable laws and ASX Listing Rules, LGM does not undertake any obligation to update or revise any information or any of the forward-looking statements in this announcement to reflect changes in events, conditions or circumstances on which any forward-looking statements is based.

## **COMPETENT PERSON'S STATEMENT**

The information in this Report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Thomas Wall, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Wall is the Technical Director and a full-time employee of Legacy Minerals Pty Limited, the Company's wholly-owned subsidiary, and a shareholder of the Company. Mr Wall has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Wall consents to the inclusion of the matters based on his information in the form and context in which it appears in this announcement.



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# **About Legacy Minerals**

Legacy Minerals is an ASX listed public company that has been involved in the acquisition and exploration of gold, copper, and base-metal projects in the Lachlan Fold Belt since 2017. The Company has six projects that present significant discovery opportunities for shareholders.

Au-Cu (Pb-Zn) Cobar (EL9511)	Au Harden (EL8809, EL9257)
Undrilled targets next door to the Peak Gold Mines.	Large historical high-grade quartz-vein gold
Several priority geophysical anomalies and gold in	mineralisation. Drilling includes <b>3.6m at 21.7g/t Au</b>
lag up to <b>1.55g/t Au.</b>	116m and <b>2m at 17.17g/t Au</b> from 111m.
Au-Ag Bauloora (EL8994, EL9464) Newmont JV	Au-Cu Fontenoy (EL8995) Earth Al-Alliance
One of NSW's largest low-sulphidation epithermal	An 8km long zone of Au and Cu anomalism defined
systems with a 27km <sup>2</sup> epithermal vein field and	in soil sampling and drilling. Significant drill
15km <sup>2</sup> gold zone.	intercepts include <b>79m at 0.27% Cu</b> from 1.5m.
Cu-Au Rockley (EL8296)	Au-Ag Black Range (EL9466, ELA6613)
Prospective for porphyry Cu-Au and situated in the	Extensive low-sulphidation epithermal system with
Macquarie Arc Ordovician host rocks with historic	limited historical exploration. Epithermal
high-grade copper mines that graded up to 23% Cu.	preservation across 7km <sup>2</sup> of intense silicification

#### Cu-Au Drake (EL6273, ELA6640)

Large collapsed caldera (~150km2) and associated mineralisation bears similar geological characteristics to other major pacific rim settings and deposits.





### **Endnotes**

<sup>i</sup> ASX: LGM November 2021 New High-Grade Gold Assays Returned Across Bauloora

<sup>II</sup> ASX LGM: 16 March 2022 Large Low Sulphidation System Highlighted by GA-IP Survey

<sup>III</sup> ASX LGM: 10 May 2023 Drilling Assays Confirm New Epithermal Discovery at Bauloora

<sup>iv</sup> CMOC Northparkes Mining and Technical Information, <u>http://www.northparkes.com/wp-content/uploads/2022/05/northparkes-mining-and-technical-information.pdf</u>

 $^{\rm v}$  Alkane Resources Kaiser Resource Estimate of ~4.7M Gold Equivalent 27 February 2023

<sup>vi</sup> Newcrest Mining Annual Mineral Resources and Ore Reserves Statement 17 February 2022

- <sup>vii</sup> Regis Resources Annual Mineral Resource and Ore Reserve Statement 8 June 2022
- viii Evolution Mining 2022 Annual Report

Table 1: Major Mineral Resources of NSW

Project & Company	Mineral Resource	Measured Resource	Indicated Resource	Inferred Resource
Boda-Kaiser, NSW (Alkane Resources Ltd)	7.26Moz Au, 1.38Mt Cu	-	-	7.26Moz Au, 1.38Mt Cu
Tomingley, NSW (Alkane Resources Ltd)	1.75Moz Au	0.13M Au	1.019Moz Au	0.59Moz
McPhillamys, NSW (Regis Resources Ltd)	2.29Moz Au		2.28Moz Au	0.001Moz Au
Cadia-Ridegway, NSW (Newcrest Mining Ltd)	33.31Moz Au, 7.9Mt Cu	0.31Moz Au, 0.041Mt Cu	33Moz Au, 7.3Mt Cu	0.75Moz, 1.1Mt Cu
Cowal, NSW (Evolution Mining Limited)	9.618Moz Au	0.367Moz Au	7.33Moz Au	1.92Moz Au
Nth Parkes, NSW (CMOC Mining Pty Ltd	3.09Moz Au, 2.63Mt Cu	1.64Moz Au, 1.2Mt Cu	1.1Moz Au, 1.1Mt Cu	0.35Moz Au, 0.33Mt Cu



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# Appendix 2 – JORC Code, 2021 Edition Table 1

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
		No subsampling has been undertaken with the current works.
		Data collection is limited to the audio- frequency magnetotelluric geophysical (AMT) surveying.
Sampling Techniques	Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.	The AMT survey was conducted by Quantec Geoscience and AGS. An approximately total of 5km <sup>2</sup> has been surveyed to date with a total of 522 TITAN MT sites across along 28 line profiles, for approximately 25.5km. The data component is MT Resistivity with a layout configuration for MT Profiles as TeTm mode. The acquisition units are RT-160 (12 units - 6 channels) Coils were a maximum 250m away from dipoles. The E-field dipole size were Ex=50m; Ey=50m. The minimum station recording time was 12 hrs (overnight). The frequency range target was between 10kHz to .001Hz with low frequency (LF) series sampling LF1: 40 sample/s. The high frequency (HF) time series sampling wa HF1: 48,000 sample/s; HF2: 12,000 sample/s. HF Time Recording Time: HF1: minimum 2 events @ 30s, HF2: minimum 2 event @ 4 minutes. The line lengths were variable, though generally around 1.1km in length with line spacing of 200m, with infill to 100r line spacing at the Breccia Sinter Prospect.
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diametre, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	Not Applicable. No drilling conducted.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Not Applicable. No drilling conducted.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Not Applicable. No drilling conducted.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Not Applicable. No drilling conducted.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Not Applicable. No logging.







	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Not Applicable. No logging.
	The total length and percentage of the relevant intersections logged.	Not Applicable. No drilling conducted
Sub-sampling	If core, whether cut or sawn and whether quarter, half or all core taken.	
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	
	For all sample types, the nature, quality and appropriateness of the sample preparation technique	
techniques and sample preparation	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	Not Applicable. No drilling conducted
<i>p. c.p.a.</i> anon	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the	
Quality of assay data and laboratory tests	technique is considered partial or total. For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not Applicable. No drilling conducted
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	
	The verification of significant intersections by either independent or alternative company personnel.	
Verification of	The use of twinned holes.	
sampling and assaying	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Not Applicable. No drilling conducted
	Discuss any adjustment to assay data.	
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	A handheld Garmin GPSmap 65 was used to pick up locations of samples with an averaged accuracy of 1m.
	Specification of the grid system used.	The grid system used is GDA94, MGA Zone 55 and WGS 84, UTM Zone 55SH
	Quality and adequacy of topographic control.	Using government data topography a 2017 DTM data. A topographic surfac has been created using this elevation data.
Data spacing	Data spacing for reporting of Exploration Results.	MT data was collected from stations
and distribution	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve	with dipole lengths Ex:50m and Ey:50 The spacing is believed adequate to support interpolation of resistive and conductive features associated with the





	estimation procedure(s) and classifications applied. Whether sample compositing has been applied. Whether sample compositing has been applied.	interpreted and understood Bauloora geology.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Survey lines were E-W. This is considered the best orientation to assess alteration localized along NNW to NW and NE striking structures. The orientation of key structures may be locally variable and any relationship to mineralisation has yet to be identified.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Orientation of the mineralisation and structural trends is constrained by previous drilling and outcrop. The orientation of sampling is considered appropriate for the current geological interpretation of the mineral style. No sample bias due to drilling orientation is known.
Sample security	The measures taken to ensure sample security.	No samples were collected. The Company has in place protocols to ensure data security.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling techniques and procedures are regularly reviewed internally, as is data. To date, no external audits have been completed on the drilling programme. Internal reviews of the data by the companies geologists have found the data to be of high quality.

#### Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding section)

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Status	Type, name/reference number, location and ownership including agreements or material issues with third parties including joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Bauloora Project is comprised of EL8994 and EL9464. The license is owned 100% by Legacy Minerals Pty Ltd (a fully owned subsidiary of Legacy Minerals Holdings Limited). The Company has signed a Farm-In and Joint Venture Agreement with Newmont Exploration in April 2023. There are no royalties or encumbrances over the tenement areas. The land is primarily freehold land. There are no native title interests in the license area.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	Teck Exploration - conducted mapping, IP geophysics, rock chip sampling, diamond and RC drilling. BP Minerals/MM&S - conducted detailed mapping, geochemical sampling and AC drilling. Billiton Australia - conducted mapping, IP geophysics, rock chip sampling. North Limited – rock chip sampling, soil sampling, drilled AC and RC holes. Robust





		Resources – soil sampling diamond and RC drilling. Bushman Resources – Rock chip sampling.
Geology	Deposit type, geological setting and style of mineralisation	Known mineralisation at the Bauloora project sits within the Silurian Frampton Volcanics and Devonian Bethungra Formation, Cowcumbala Rhyolite and Deep Gully Creek Conglomerate. The project is considered prospective for low-sulphidation epithermal style gold-silver and base-metal mineralisation.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including tabulation of the following information for all Material drill holes:</li> <li>Easting and northing of the drill hole collar</li> <li>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>Dip and azimuth of the hole</li> </ul>	Not Applicable. No drilling.
	<ul> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul>	
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Not Applicable. No drilling.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	Not applicable. No aggregation.
	Where aggregated intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not applicable. No aggregation.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable. No aggregation.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of exploration results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect.	Not applicable. No drilling.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plane view of drill hole collar locations and appropriate sectional views.	Refer to Figures in body of text. A prospect location map and plan view are shown in the report. Other relevant maps are shown in the Company's Prospectus dated 28 July 2021.





Balanced Reporting	Where comprehensive reporting of all Exploration Results is not practical, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	See body of the report. Reports on historical exploration can be found in the Company's Prospectus dated 28 July 2021.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observation; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All material or meaningful data collected has been reported. The geological results are discussed in the body of the report.
Further Work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large – scale step – out drilling).Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	See body of report. See figures in body of report. Further exploration will be planned based on ongoing drill results, geophysical surveys and geological assessment of prospectivity.



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